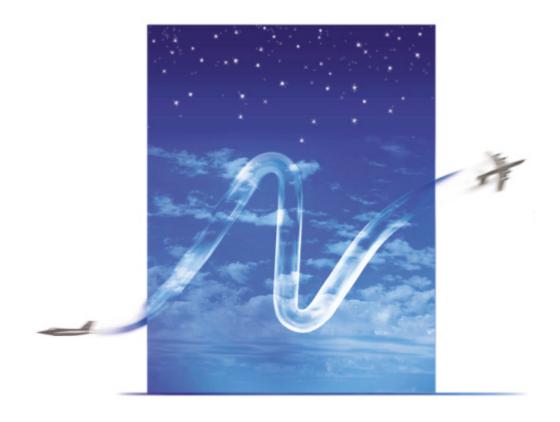
# **√**exans



# Aircraft Wires and Cables





#### Introduction

Since 1938 and the creation of Filotex in Draveil (France), Nexans has been a driving force in the world of aerospace cables. Today, Nexans is proud to be able to offer a complete range of aircraft wires and cables – which is also the largest in the industry.

From high temperature cables to low-loss coaxial cables and from data-buses for In Flight Entertainment Systems to fire resistant engine wires, Nexans covers every aircraft electrical application with a range so wide that you will be able to rationalize your purchasing policy.

It goes without saying that our only concern is to provide you with the cable solution you need and –thanks to a combined expertise in the USA and Europe in technologies as diverse as extruded cables (e.g. irradiated ETFE) and tape wrapped cables (eg. Polyimide/PTFE composites) – we can do it.

#### **About Nexans**

Nexans is the worldwide leader in the cable industry. The Group brings an extensive range of advanced copper and optical fiber cable solutions to the infrastructure, industry and building markets.

Nexans cables and cable systems can be found in every area of people's lives, from telecommunications and energy networks to aeronautics, aerospace, building, automobile, petrochemicals, medical applications, etc.

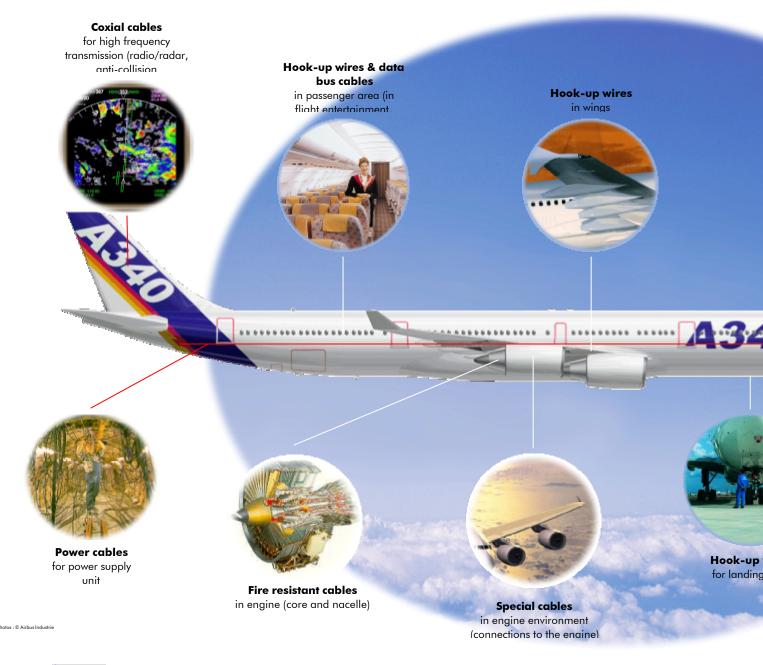
Operating in 28 countries, Nexans employs 17 150 people and had sales of euros 4.3 billion in 2002. Nexans is listed on the Paris stock exchange.

More information at <a href="https://www.nexans.com">www.nexans.com</a>

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### A comprehensive offer







#### **Content**

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# Guideline for aerospace cables

140 – 146 rue E. Delacroix / BP 1 F – 91211 Draveil cedex – FRANCE Tel : + 33 1 69 83 78 00



# Hook-up wires for Civil, Military Aircraft and Helicopters Voltage rating: 600 Volts RMS / Maximum operating frequency: 2000 Hz

Specifications	Description	Mo		ım op	oerati ture	ing	Arc tracking	Single	Multi-	Screened	Sheathed	Page
opeaeae	<b>2</b> 3331. <b>p</b> 0	150				260	resistant	core	core		onoumou	. ugo
JN 1007	Arc tracking resistant, Flexible light weight wires.	•					•	•				19
JN 1018	<ul><li> Arc tracking resistant,</li><li> Flexible light weight wires.</li></ul>	•					•		•		•	21
JN 1019	<ul><li> Arc tracking resistant,</li><li> Flexible light weight wires.</li></ul>	•					•	•		•	•	23
JN 1026	<ul><li>Arc tracking resistant,</li><li>Flexible light weight wires with EMI protection.</li></ul>						•	•			•	25
VG 95218-20 type H (FX 5301)	<ul><li>Arc tracking resistant,</li><li>Flexible light weight wires,</li><li>Silver plated conductors.</li></ul>						•	•				29
VG 95218-22 type E VG 95218-23 type D (FX 5303)	<ul><li> Arc tracking resistant,</li><li> Single core and multicore.</li></ul>	•										31
<b>ABS 0949 AD</b> AWG 24 to 4	<ul><li>Arc tracking resistant,</li><li>Light weight wires,</li><li>Nickel copper clad aluminium.</li></ul>		•									33
<b>ABS 0949 AD</b> AWG 3 to 000	<ul><li> Arc tracking resistant,</li><li> Light weight wires,</li><li> Nickel aluminium.</li></ul>		•				٠	•				35
ABS 1354 ADA, ADB, ADC, ADD	<ul> <li>Arc tracking resistant,</li> <li>Light weight wires,</li> <li>Non UV markable,</li> <li>Nickel copper clad aluminium,</li> <li>Single core and multicore.</li> </ul>											37
ABS 1356	<ul> <li>Arc tracking resistant,</li> <li>Single core and multicore,</li> <li>UV laser printable,</li> <li>Nickel copper clad aluminium.</li> </ul>		•							·		41
BAS 8710	<ul> <li>Cable for airframe, general purpose.</li> </ul>							•				43
BAS 8711, 8712, 8713	Cable for airframe, general purpose.			•				•	•		•	45
ASN-E0261 CF / EN 2266	<ul><li>Flexible light weight wires,</li><li>Polyimide insulation.</li></ul>											47
ASN-E0264 PF ASN-E0266 QF ASN-E0268 RF / EN 2266	<ul><li>Flexible light weight wires,</li><li>Polyimide insulation.</li></ul>								•			49
ASN-E0270 SJ ASN-E0272 TK ASN-E0274 UD / EN 2713	<ul><li>Flexible light weight cables,</li><li>Polyimide insulation,</li><li>UV markable jacket,</li><li>Single core and multicore.</li></ul>											51
PFG, QFG, RFG	<ul> <li>Flexible light weight wires,</li> <li>Polyimide insulation,</li> <li>UV markable jacket.</li> </ul>								•			53

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# Hook-up wires for Civil, Military Aircraft and Helicopters Voltage rating: 600 Volts RMS / Maximum operating frequency: 2000 Hz

Specifications	Description	Me		ım op	erati ture	ng	Arc tracking	Single	Multi-	Screened	Sheathed	Page
-	-	150	180	210	200	260	resistant	core	core			
SJB, TKB, UDB, VLB	<ul> <li>Flexible light weight wires,</li> <li>Polyimide insulation,</li> <li>UV markable jacket,</li> <li>Single core and multicore.</li> </ul>											55
EN 2267-008A DM	<ul><li>Arc tracking resistant,</li><li>UV laser printable,</li><li>Medium weight,</li><li>Composite insulation.</li></ul>					•	•	•				57
EN 2267-007 PN, QL, RK	<ul><li>Arc tracking resistant,</li><li>UV laser printable,</li><li>Medium weight,</li><li>Composite insulation.</li></ul>								٠			59
EN 2714-011 GJ, MH, UU, VV	<ul> <li>Arc tracking resistant,</li> <li>UV laser printable,</li> <li>Medium weight ,</li> <li>Composite insulation,</li> <li>Single core and multicore.</li> </ul>					٠	·	٠	٠			61
EN 2267-010A DR	<ul><li>Arc tracking resistant,</li><li>UV laser printable,</li><li>Light weight,</li><li>Composite insulation.</li></ul>							•				63
EN 2267-009 DRB, DRC, DRD	<ul><li>UV laser printable,</li><li>Light weight,</li><li>Arc tracking resistant,</li><li>Composite insulation.</li></ul>											65
EN 2714-013 MLA, MLB, MLC, MLD	<ul> <li>UV laser printable,</li> <li>Light weight,</li> <li>Arc tracking resistant,</li> <li>Composite insulation,</li> <li>Single core and multicore.</li> </ul>					•						67
EN 2714-014 MME, MMF, MM6	<ul><li>UV laser printable,</li><li>Light weight,</li><li>Arc tracking resistant,</li><li>Composite insulation.</li></ul>					•			•		•	69
MIL-W-16878/4 to 28 MIL-W-22759/5 to 31 MIL-W-22759/32 to 46 MIL-W-22759/80 to 92 MIL-DTL-81381/7 to22	Aerospace composite wires (see MIL-SPEC Product Selection Catalogue)											-

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# Cables for power transmission Voltage rating: 600 Volts RMS

Specifications	Description	0	aximu peratii nperat	ng	Screened	Sheathed	Page
		150	180	260			
BMS 13-35	Polyimide insulated aluminium wire		•		No	No	73
	Flexible nickel plated aluminium light weight wires, single core, large sizes		•		No	No	75
NSA 935 308 YU	Flexible aluminium light weight wires, polyamide insulation	•			No	No	77

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# Nacelles and engines:

high temperature, fire resistant/fire proof cables
Voltage rating: 600 Volts RMS (except for ESW 1100,1101, 1102, 1700, 1701, 1702: 200 Volts)
Maximum operating frequency: 2000 Hz

	Name			Max			<b>6</b> :	AAla:			
Specifications	Nexans reference	Description		empe		re 300	Single core	Multi- core	Screened	Sheathed	Page
			250	260	280	+					
VG 95218-20 type J	FX 5400	<ul><li>Single wire,</li><li>High temperature,</li><li>General purpose.</li></ul>									81
NSA 935 131 DG / EN 2854		<ul><li>Single wire,</li><li>High temperature,</li><li>General purpose.</li></ul>		•			•				83
BMS 13-58 Type 1 & Type 5		<ul><li>Single wire,</li><li>High temperature,</li><li>General purpose.</li></ul>		•			•				85
2100		Flexible cables for high ambient temperatures.	•				•				87
2102		<ul><li>Flexible cables for high ambient temperatures,</li><li>Lighweight cables.</li></ul>	•				•				89
2103		Flexible cables for high ambient temperatures.		•			•				91
1050		<ul> <li>Screened cables for high ambient temperatures,</li> <li>Single core and multicore.</li> </ul>	•				•	•			93
1052		<ul> <li>Screened cables for high ambient temperatures,</li> <li>Single core and multicore.</li> </ul>	•					•	•		95
1053		<ul><li>Screened cables for high ambient temperatures,</li><li>Single core and multicore.</li></ul>		•							97
MIL W 25038/1 (QPL) (mono) (multi on request)	TMF	High temperature fire resistant wires.		•			•				99
MIL W 25038/3 (QPL) (mono) (multi on request)	TMF VRA-US TMF VR-US	High temperature fire resistant cables.		•			•				101
MIL W 25038/3 (QPL) (mono) (multi on request)	FRM-A-US FRM-US	High temperature fire resistant cables.		•			•				103
MIL W 25038/3, MIL DTL 27500	M27500A**J F + 1 N 06	<ul><li>High temperature fire resistant,</li><li>Single core and multicore.</li></ul>		•			•	•	•	•	105
MIL W 25038/3, MIL DTL 27500	M27500A**J F + N 24	<ul> <li>High temperature fire resistant shielded and jacketed cables.</li> </ul>		•			٠	•	•	٠	107
BMS 13-55 Type 2 Class 1		High temperature fire resistant wires.		٠			•				109
ASN-E0437 DL / EN 2346-003		<ul><li>Fire resistant wire,</li><li>Normal weight.</li></ul>		٠			•				111
EN 2346-005 / DW		<ul><li>Fire resistant wire,</li><li>Light weight.</li></ul>		•			•				113

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# Nacelles and engines: high temperature, fire resistant/fire proof cables

	Nexans			opei eratu	rating re	Single	Multi-			_
Specifications	reference	Description	260		300	core	core	Screened	Sheathed	Page
EN 4608-004 / GPA, GPB, GPC		<ul><li>Fire resistant cable,</li><li>Light weight,</li><li>Single core and multicore.</li></ul>			·					115
ESW 1100-010-XXX		<ul><li>Filter effect cable,</li><li>High temperature wire.</li></ul>	•			•				117
ESW 1101-++-XXX		<ul><li>Filter effect cable,</li><li>High temperature wire.</li></ul>					•			119
ESW 1102-++-XXX		<ul><li>Filter effect cable,</li><li>High temperature wire,</li><li>Single core and multicore.</li></ul>				•	•	•	•	121
ESW 1700-010-XXX		<ul><li>Thermocouple,</li><li>Filter effect cable,</li><li>High temperature wire.</li></ul>	•			•				123
ESW 1701-010-XXX		<ul><li>Thermocouple,</li><li>Filter effect cable,</li><li>High temperature wire.</li></ul>	•			•				125
ESW 1702-022-XXX		<ul><li> Thermocouple extension,</li><li> Filter effect cable,</li><li> Twin core.</li></ul>					•			127
ESW 1200-010-XXX ESW 1201-010-XXX		Fire resistant cable.	•			•				129
ESW 1202-+++-XXX ESW 1203-++-XXX		<ul><li>Fire resistant cable,</li><li>Single core and multicore.</li></ul>	•			•	•	•	•	131
ESW 1250-010-XXX ESW 1251-010-XXX		<ul><li>Fireproof cable,</li><li>Single core.</li></ul>	•			•				133
ESW 1252-+++-XXX ESW 1253-++-XXX		<ul><li>Fireproof cable,</li><li>Single core and multicore.</li></ul>	•			•	•	•		135
ESW 1254-010-002		<ul><li>Fireproof cable,</li><li>Single core.</li></ul>	•			•				137
ESW 1254-022-002		<ul><li>Fireproof cable,</li><li>Two twisted cores.</li></ul>	•				•	•	•	139
ESW 1600-010-XXX ESW 1601-010-XXX		<ul><li>Thermocouple,</li><li>Fire resistant cable.</li></ul>	•			•				141
ESW 1602-022-XXX		<ul><li> Thermocouple,</li><li> Fire resistant cable,</li><li> Two twisted cores.</li></ul>				•				143
RMS 302, 322, 323, 324, 326, 327, 328, 329, 332		<ul> <li>Wire electric fluorocarbon insulated abrasion resistant for nacelle.</li> </ul>				•			•	145
3000A		• Fire resistant cable.				•				149
BMS 13-67	TMF 350-A FLEX SBJ	<ul><li>Very high temperature,</li><li>Fire resistant.</li></ul>			٠	•	•			151
	ET 124585	<ul><li>Very high temperature,</li><li>Fire resistant.</li></ul>			•	•		•	•	153

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# Coaxial cables for high frequency transmission For information on KX/RG coaxial cables and MIL C17 specifications, see our standard catalogue.

Specifications	Nexans reference	Description		um ope	_	Impe	dance	Maximum Operating	Maximum Operating	Page
	reference		150	200	250	50	75	frequency (MHz)	voltage	
SP 124962	ET 124962	Laser UV miniature coaxial cable	•			•		3000	250	157
SP 124963	ET 124963	Laser UV miniature coaxial cable	•				•	3000	250	159
SP 124964	ET 124964	Laser UV miniature triaxial cable				•		3000	250	161
SP 124965	ET 124965	Laser UV miniature triaxial cable						3000	250	163
EN 4604-003 WZ		50 ohms coaxial cable		•		•		3000	1700	165
EN 4604-004 WS		50 ohms coaxial cable		•		•		3000	1300	167
EN 4604-005 WL		75 ohms coaxial cable		•			•	3000	900	-
EN 4604-006 WM		50 ohms coaxial cable		•		•		5000	750	169
EN 4604-007 WN		50 ohms coaxial cable		•		•		5000	1000	171
EN 4604-008 WD		50 ohms coaxial cable				•		8000	1000	-
PAN 6422		50 ohms coaxial cables, UV laser markable		•		•	•	1000	From 750 to 3700	173
ASN-E0293 XF		50 ohms coaxial cable		•		•		3000	1400	175
NSA 935 344 XE		50 ohms coaxial cable			•	•		3000	900	177

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# Data bus and high speed transmission cables Voltage rating: from 250 to 1600 Volts RMS

Specifications	Nexans	Description		imum empe	•	_	lm	oedan	ce (oh	ms)	Maximum Operating	Page
Specifications	reference	Bescription	125	150	200	260	75	77	100	125	voltage	•
ABS 0972 KB 24	ET 2PC236	100 ohms, shielded quad	•						•		-	181
SP 124960	ET 124960	Data bus cable		•							250	183
SP 124961	ET 124961	Data bus cable		•				•			250	185
SP 96770 ASNE 0479 WJ	ET 96770-01 ET 96770-02	Data bus cable		•				•			250	187
PAN 6421 ZA002	ET 65529	Data bus cable		•				•			600	189
ASNE 0259 HE	ET 63247	Data bus cable		•						•	-	191
ASN-E0849 HJ 26		Twinaxial cable high immunity			•		•				600	193
SP 554	ET 61333	Data bus cable			•		•				600	195
SP 69899 ASNE 0811 WY	ET 69899-01 ET 69899-02	Data bus cable			•			•			250	197
ABS 0386 WF	ET 96897	Data bus cable			•				•		1600	199
ASNE 0290 XM		Data bus cable						• (78)			600	201
SP 69794 EN 3375-004-C WJ	ET 69794-01 ET 69794-02	Data bus cable			٠			•			600	203
EN 4608-005-B 002		Data bus cable				•				• (120)	600	205

### **Special cables**

Specifications	Nexans reference	Description	oper	mum ating rature	Maximum Operating	Page
		200	260	voltage		
	ET 124401	Low noise screened pair cable, transmission cable		•	600	209
NSA 935306 YK	ET 86891	Low noise screened pair cable, transmission cable		•	600	211
IMBBN 3320 YH +++	ET 96532 ET 96533	Thermocouple extension. Nickel chromium/nickel aluminium		•	600	213
ASN-E0409 BG ASN-E0410 SU ASN-E0411 TV ASN-E0412 VF		Flight test wire, UV laser printable.	•		600	215
SATCOM CORDS		Available on request : application at 1.6 GHZ	=	-	-	-

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#### **Optical cable**

Maximum operating temperature: 125°C

Spe	ecifications	Nexans reference	Description	Insulation	Sheath	Page
ABS (	0963-003 LF	ET 132126	Multimode fibre optic cable	Zero halogen copolymer, high temperature	Polymer aromatic fibre braid + zero halogen	219

#### **Space cables**

#### See Space catalogue

Maximum operating temperature: 200°C

Hook-up wires

nook-up wires							
Specifications	Nexans reference	Description	Maximum operating temperature	Single core	Multi- core	Screened	Sheathed
SP 359 3901/001	1871 - 871	Space cables polyimide insulated normal weight	200	•	•	•	•
SP 358 3901/002	1872 - 872	Space cables polyimide insulated light weight	200	•	•	•	•
SP 199 3901/013	MTV - BTV	Flexible space cables PTFE insulated	200	•	•	•	•
SP 773 5691	1995 - 995	Space cables PTFE insulated	200	•		•	
SP 776 5685	1996	Space cables PTFE insulated	200	•			

#### **Coaxial cables**

Specifications	Nexans reference	Description	Maximum operating temperatur e	Impedance (ohms)	Operating voltage (volts)
SP 189 3902/001.01	50 CIS	Flexible space coaxial cable	200	50	900
SP 781 3902/001.02	50 CIS DTR	Flexible space coaxial cable	200	50	900
SP 727 3902/001.03	50 CIS BLG	Flexible space coaxial cable	200	50	900

These examples represent an overview of our expertise. Indeed, our development and design engineers are at your disposal to provide their experience in customising any of our products to meet your specific requirements.

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### Part 1

# Hook-up wires for Civil, Military Aircraft and Helicopters









#### Type " JN 1007 "



#### Flexible Light Weight Wires Unscreened and Unsheathed Single Core Types 150°C Operating Temperature Light Weight Arc Tracking Resistant Cables

#### **Characteristics**

- □ Voltage rating : 600 Volts RMS
- ☐ Operating temperature : -65°C to +150°C.(Ambient + Rise)
- Operating frequency: up to 2000 Hz
- Dimensions and weight: see table on reverse of this data sheet
- □ Very Good Resistance to Aircraft Fluids
- □ Arc Tracking Resistant

#### Identification

□ Colours : White (Size 004 : Pale blue)

 $\square$  Marking: JN1007 CH \*\*\* FR F ++

\*\*\* = Size code

FR = Country of Origin (FR = France)
F = Manufacturer (F = Filotex)
++ = Year of Production (i.e. 99 = 1999)

#### **CONSTRUCTION**

PRODUCT REFERENCES

#### **CONDUCTOR**

JN1007

JN1018 JN1019

① Stranded Conductor Made up of Nickel plated Copper. Size code 002 is High strength copper alloy conductor.

#### **INSULATION**

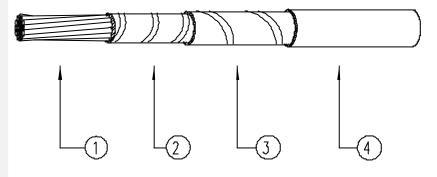
- ② PTFE Tape
- 3 Polyimide Tape
- UV Laser markable FEP Lacquer Top coat

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications.

#### **Specifications**

- □ EUROFIGHTER SPE-J-920-A-0061 issue KY (March 1999)
- □ EFA: J61.010



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**M**exans

PART NUMBERS		Cor	nductor			Finishe	ed Wire	
	US	Stranding	Dian	neter	Maximum DC	Dia	meter	Maximum
JN 1007	AWG	(Nbr x Diam.	Mini.	Maxi.	Resistance at	Mini.	Max.	Weight
		of Strands in mm)	(mm)	(mm)	20°C (68°F) (Ohms/Km)	(mm)	(mm)	(g/m)
JN 1007 CH 002	24	19 x 0.12	0.55	0.59	114	0.93	1.03	2.75
JN 1007 CH 004	22	19 x 0.15	0.70	0.74	60	1.08	1.18	4.05
JN 1007 CH 006	20	19 x 0.20	0.94	0.99	33.20	1.30	1.41	6.70
JN 1007 CH 010	18	19 x 0.25	1.18	1.24	21.10	1.54	1.66	9.90
JN 1007 CH 012	16	19 x 0.30	1.41	1.49	14.50	1.78	1.91	13.8
JN 1007 CH 020	14	19 x 0.25	1.65	1.74	10.90	2.02	2.16	18.3
JN 1007 CH 030	12	37 x 0.32	2.12	2.22	6.80	2.47	2.62	29.0

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#### Type " JN 1018 "



Flexible Light Weight Wires Unscreened and Sheathed multicore Types 150°C Operating Temperature Light Weight Arc Tracking Resistant Cables

#### **Characteristics**

- □ Voltage rating: 600 Volts RMS
- □ Operating temperature : -65°C to +150°C.(Ambient + Rise)
- □ Operating frequency : up to 2000 Hz
- Dimensions and weight: see table on reverse of this data sheet
- Very Good Resistance to Aircraft Fluids
- ☐ Arc Tracking Resistant

#### **Identification**

- □ Core Colours
- ☐ Sheat colours and Marking : see table on reverse of this data sheet
  FR = Country of Origin (FR = France)

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications

#### CONSTRUCTION

PRODUCT REFERENCES

#### **CORES**

JN1018

JN1007 JN1019

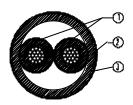
① Type JN 1007

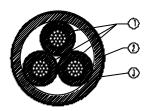
#### **JACKET**

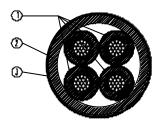
- ② Polyimide Tapes
- 3 UV Laser markable FEP Lacquer Top coat

#### **Specifications**

- EUROFIGHTER SPE-J-920-A-0061 issue KY (March 1999)
- ☐ EFA: J61.014







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					Finished	Cable
PART NUMBERS	US	Nbr of	Dian	neter	Weight	Resistance at 20°C (68°F)
JN 1018	AWG	Cores	(m	m)	(Kg/Km)	of Cores (Ohms/Km)
			Min	Max.	Max.	Max.
JN 1018 PC 002	24	2	2.14	2.30	6.95	116.28
JN 1018 PC 004	22	2	2.44	2.60	9.80	61.2
JN 1018 PC 006	20	2	2.90	3.06	15.40	33.9
JN 1018 PC 010	18	2	3.38	3.55	22.30	21.5
JN 1018 PC 012	16	2	3.86	4.04	30.50	14.8
JN 1018 PC 020	14	2	4.34	4.53	39.70	11.1
JN 1018 PC 030	12	2	5.26	5.46	62.10	6.94
JN 1018 QC 002	24	3	2.29	2.47	9.95	116.28
JN 1018 QC 004	22	3	2.61	2.77	14.20	61.2
JN 1018 QC 006	20	3	3.11	3.27	22.50	33.9
JN 1018 QC 010	18	3	3.63	3.80	32.70	21.5
JN 1018 QC 012	16	3	4.15	4.33	44.90	14.8
JN 1018 QC 020	14	3	4.66	4.85	58.70	11.1
JN 1018 QC 030	12	3	5.66	5.86	91.80	6.94
JN 1018 RC 002	24	4	2.52	2.68	13.00	116.28
JN 1018 RC 004	22	4	2.88	3.04	18.60	61.2
JN 1018 RC 006	20	4	3.44	3.60	29.70	33.9
JN 1018 RC 010	18	4	4.01	4.18	43.10	21.5
JN 1018 RC 012	16	4	4.59	4.77	59.40	14.8
JN 1018 RC 020	14	4	5.17	5.36	77.80	11.1
JN 1018 RC 030	12	4	6.28	6.48	122.00	6.94

#### **Core identification Colours:**

Two cores : Red - Blue

Three cores: Red - Blue - Yellow

Four cores: Red - Blue - Yellow - Green.

#### **External identification:**

White with exception of size 004 : Pale blue)

Marking: JN1018  $\times \times^{***}$  FR F ++

 $xx = Type \ code \ (PC \ or \ QC \ or \ QC \ )$   $FR = Country \ of \ Origin \ (FR = France)$   $++ = Year \ of \ Production \ (i.e. \ 99 = 1999)$ \*\*\* = Size code (002,004,006...etc...)  $F = Manufacturer \ (F = Filotex)$ 

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#### Type " JN 1019 "



#### Flexible Light Weight Wires Screened and Sheathed single and multicores Types 150°C Operating Temperature Light Weight Arc Tracking Resistant Cables

#### **Characteristics**

- □ Voltage rating: 600 Volts RMS
- ☐ Operating temperature : -65°C to +150°C.(Ambient + Rise)
- Operating frequency: up to 2000 Hz
- Dimensions and weight: see table on reverse of this data sheet
- Very Good Resistance to Aircraft Fluids
- ☐ Arc Tracking Resistant

#### **Identification**

- □ Core Colours
- Sheat colours and Marking: see table on reverse of this data sheet
   FR = Country of Origin (FR = France)

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications

#### **Specifications**

- EUROFIGHTER SPE-J-920-A-0061 issue KY (March 1999)
- ☐ EFA: J61.015

#### **PRODUCT REFERENCES**

### JN1019

JN1007 JN1018

#### CONSTRUCTION

#### <u>cores</u>

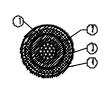
① Type JN 1007

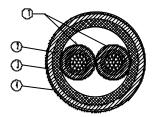
#### **SCREEN**

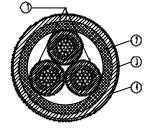
Nickel Copper Braided Screen

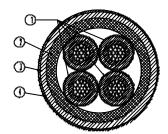
#### **JACKET**

- 3 Polyimide Tapes
- UV Laser markable FEP Lacquer Top coat









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			Screen		Finished Cable				
PART NUMBERS	US	Nbr of	Strands	O.D.	Dian	neter	Weight	Resistance at 20°C (68°F)	
JN 1019	AWG	Cores	AWG Size	(mm)	(m	m)	(Kg/Km)	of Cores (Ohms/Km)	
				Nom.	Min	Max.	Max.	Max.	
JN 1019 SK 002	24	1	40	1.32	1.56	1.70	6.95	114	
JN 1019 SK 004	22	1	40	1.47	1.71	1.85	8.85	60	
JN 1019 SK 006	20	1	40	1.77	1.94	2.08	12.20	33.20	
JN 1019 SK 010	18	1	38	2.01	2.18	2.33	16.30	21.10	
JN 1019 SK 012	16	1	38	2.26	2.42	2.58	21.00	14.50	
JN 1019 SK 020	14	1	38	2.50	2.66	2.80	26.30	10.90	
JN 1019 SK 030	12	1	38	2.98	3.12	3.26	38.50	6.80	
JN 1019 TB 002	24	2	40	2.32	2.49	2.67	12.00	116.28	
JN 1019 TB 004	22	2	40	2.62	2.79	2.97	15.60	61.2	
JN 1019 TB 006	20	2	38	3.14	3.25	3.44	22.40	33.9	
JN 1019 TB 010	18	2	38	3.62	3.73	3.93	30.20	21.5	
JN 1019 TB 012	16	2	38	4.12	4.21	4.42	39.50	14.8	
JN 1019 TB 020	14	2	38	4.60	4.69	4.91	49.80	11.1	
JN 1019 TB 030	12	2	38	5.56	5.61	5.84	74.10	6.94	
JN 1019 UJ 002	24	3	40	2.47	2.64	2.82	16.00	116.28	
JN 1019 UJ 004	22	3	40	2.79	2.96	3.14	21.10	61.2	
JN 1019 UJ 006	20	3	38	3.35	3.46	3.64	30.60	33.9	
JN 1019 UJ 010	18	3	38	3.86	3.98	4.18	42.00	21.5	
JN 1019 UJ 012	16	3	38	4.40	4.50	4.72	55.60	14.8	
JN 1019 UJ 020	14	3	38	4.91	5.02	5.26	70.60	11.1	
JN 1019 UJ 030	12	3	38	5.95	6.01	6.28	106.00	6.94	
JN 1019 VG 002	24	4	40	2.72	2.87	3.07	20.00	116.28	
JN 1019 VG 004	22	4	40	3.08	3.23	3.43	26.50	61.2	
JN 1019 VG 006	20	4	38	3.69	3.79	3.99	39.00	33.9	
JN 1019 VG 010	18	4	38	4.26	4.37	4.59	54.00	21.5	
JN 1019 VG 012	16	4	38	4.86	4.97	5.16	71.90	14.8	
JN 1019 VG 020	14	4	38	5.44	5.52	5.76	91.70	11.1	
JN 1019 VG 030	12	4	38	6.59	6.63	6.90	139.00	6.94	

#### **Core identification Colours:**

One core (SK): White with exception of size 004: Pale blue

Two cores (TB): Red - Blue

Three cores (UJ): Red - Blue - Yellow

Four cores (VG): Red - Blue - Yellow - Green.

**External identification:** White with exception of size 004: Pale blue

Marking: JN1019  $xx^{***}$  FR F ++

xx = Type code (SK, TB, UJ or VG) FR = Country of Origin (FR = France) ++ = Year of Production (i.e. 97 = 1997) \*\*\* = Size code (002,004,006...etc...)
F = Manufacturer (F = Filotex)

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### Filotex®

### Screened and Sheathed single and multicores Types 260°C Operating Temperature

#### **Characteristics**

- □ Voltage rating: 600 Volts RMS
- ☐ Operating temperature : -65°C to +260°C.(Ambient + Rise)
- ☐ Operating frequency: up to 2000 Hz
- $\ \square$  Dimensions and weight: see table on page 2
- ☐ Transfer Impedance : see table on page 3
- □ Very Good Resistance to Aircraft Fluids

#### **Identification**

☐ Core Colours and marking: see on page 3

#### **Applications**

 Designed for general Purpose Aircraft Wiring Applications when ECM is required

#### **CONSTRUCTION**

**PRODUCT REFERENCES** 

#### **CORES**

**JN1026** PAN 6411

① Type PAN 6411

#### **SCREEN**

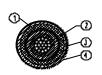
② Optimized Nickel Copper Braided Screen

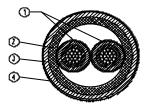
#### **JACKET**

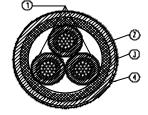
- 3 Polyimide Tapes
- UV Laser markable PTFE tape

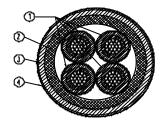
#### **Specifications**

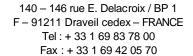
- □ PANAVIA SPECIFICATION SP-P-99300-00-P
- EUROFIGHTER JN 1026/J61.016
- □ EUROFIGHTER J61.011 (Basic core)
- □ EUROFIGHTER J56.010 (EMC Requirement)













			Scr	een			Finished	Cable
PART NUMBERS	US	Nbr of	Strands	O.D.	Dian	neter	Weight	Resistance at 20°C (68°F)
JN 1019	AWG	Cores	AWG Size	(mm)	(m	m)	(Kg/Km)	of Cores (Ohms/Km)
				Nom.	Nom.	Max.	Max.	Max.
JN 1026 SV 002	24	1	40	1.41	1.74	2.03	8.80	114.7
JN 1026 SV 004	22	1	40	1.55	1.88	2.19	10.8	58.80
JN 1026 SV 006	20	1	40	1.78	2.11	2.46	14.9	32.80
JN 1026 SV 010	18	1	38	2.11	2.44	2.72	19.4	20.80
JN 1026 SV 012	16	1	38	2.35	2.68	2.98	24.7	14.40
JN 1026 SV 020	14	1	38	2.59	2.92	3.35	31.7	10.60
JN 1026 SV 030	12	1	38	3.07	3.44	3.83	44.6	6.60
JN 1026 PV 002	24	2	38	2.58	2.91	3.18	15.5	116.99
JN 1026 PV 004	22	2	38	2.86	3.19	3.52	19.7	60
JN 1026 PV 006	20	2	38	3.32	3.65	4.04	27.6	33.5
JN 1026 PV 010	18	2	38	3.82	4.19	4.57	36.4	21.2
JN 1026 PV 012	16	2	38	4.30	4.67	5.09	47.0	14.7
JN 1026 PV 020	14	2	38	4.78	5.15	5.89	61.9	10.8
JN 1026 PV 030	12	2	36	5.82	6.19	6.86	88.3	6.73
JN 1026 QV 002	24	3	38	2.75	3.08	3.36	19.8	116.99
JN 1026 QV 004	22	3	38	3.05	3.38	3.72	25.7	60
JN 1026 QV 006	20	3	38	3.55	3.92	4.28	36.5	33.5
JN 1026 QV 010	18	3	38	4.09	4.46	4.84	49.4	21.2
JN 1026 QV 012	16	3	36	4.67	5.04	5.41	64.6	14.7
JN 1026 QV 020	14	3	36	5.19	5.56	6.26	85.7	10.8
JN 1026 QV 030	12	3	36	6.22	6.59	7.30	124	6.73
JN 1026 RV 002	24	4	38	3.05	3.36	3.65	24.3	116.99
JN 1026 RV 004	22	4	38	3.37	3.74	4.06	31.9	60
JN 1026 RV 006	20	4	38	3.92	4.30	4.69	46.1	33.5
JN 1026 RV 010	18	4	36	4.61	4.98	5.32	62.8	21.2
JN 1026 RV 012	16	4	36	5.19	5.56	6.02	83.6	14.7
JN 1026 RV 020	14	4	36	5.77	6.14	6.91	110	10.8
JN 1026 RV 030	12	4	36	6.93	7.30	8.07	160	6.73

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#### **BASIC CORE PAN 6411/J61.011**

		4		Conduc	tor dia.	Fi	ire	Resistance	
Wire type PAN 6411	Cond. Size mm <sup>2</sup>	N° of strands	Diameter of strands			Diameter		Mass kg/km	Ohms/km
PAN 0411				Min.	Max.	Min.	Max.	Max.	Max.
DP 002	0.208	19	0.118	0.59	0.63	1.00	1.16	3.55	114.7
DP 004	0.336	19	0.15	0.75	0.79	1.16	1.32	4.90	58.80
DP 006	0.597	19	0.20	1.00	1.04	1.35	1.55	7.70	32.80
DP 010	0.933	19	0.25	1.25	1.29	1.60	1.80	11.30	20.80
DP 012	1.34	19	0.30	1.50	1.55	1.85	2.05	15.80	14.40
DP 020	1.82	37	0.25	1.75	1.81	2.10	2.40	21.00	10.60
DP 030	2.91	37	0.315	2.21	2.27	2.55	2.90	32.00	6.60

#### MAXIMUM TRANSFER IMPEDANCE VALUES (mO/m)

Size code	Single core	Two core cable	Three core cable	Four core cable
JN 1026	(SV)	(PV)		(RV)
			(QV)	
002	70,00	60,00	50,00	45,00
004	65,00	50,00	45,00	35,00
006	55,00	35,00	30,00	25,00
010	50,00	35,00	25,00	25,00
012	40,00	25,00	20,00	20,00
020	35,00	20,00	18,00	18,00
030	35,00	20,00	18,00	18,00

#### **Core identification Colours:**

One core (SV): White
Two cores (PV): Red - Blue

Three cores (QV): Red - Blue - Yellow

Four cores (RV): Red - Blue - Yellow - Green.

#### **External identification:**

Outer jacket colour : White

Marking green colour : JN1026 xx \*\*\* FR F ++

xx = Type code (SV, PV, QV or RV)

\*\*\* = Size code (002,004,006...)

FR = Country of Origin (FR = France)

F = Manufacturer (F = Filotex)

++ = Year of Production (i.e. 03 = 2003)

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### FX 5301 VG 95218-20 type H Single wire

#### PRODUCT REFERENCES

#### FX 5301

FX 5303 FX 5400

FX 5401

FX 5403

#### **CONSTRUCTION**

#### CONDUCTOR

① Stranded conductor Made of Silver Plated Copper or High Strength copper alloy (size 002)

#### **INSULATION**

- ② PTFE tape
- 3 Polyimide tape
- ④ UV Laser markable FEP Lacquer Top coat.

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications.

#### Main data

☐ Temperature rating : -65°C /+150°C (Ambiant. + Rise.)

□ Voltage rating : 600 Volts RMS.□ Operating frequency : up to 2000 Hz.

Dimensions and weights : see table on this data sheet.

□ Very good resistance to Aircraft Fluids.

☐ Arc Tracking Resistant

#### Identification

□ Colours : White (Size 004 : Pale Blue)

☐ Marking : VG95218T020H\*\*£ F 0241 ++ AC

\*\* = Dash N°

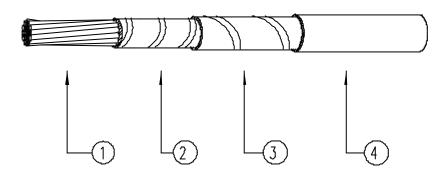
 $\mathfrak{L} = \text{Colour}$  (  $9 = \text{White} \quad A = \text{Pale blue}$ ) ++ = Year of production (ie. : 00 = 2000)

AC = Cable code according to TR 6058

F 0241 = Manufacturer's Cage code

#### **Specifications**

- □ VG 95218-2 (May 1998)
- □ VG 95218-20 (Feb 2000)





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**TYPE H:** Single core silver plated copper or copper alloy conductor.

					Con	ductor	
VG	NEXANS	Dash	Size	AWG	Stranding	Dian	neter
Reference	Part Number	Number	Code	(1)	Nbr x Diam of strands Min.		Max.
		(VG)	(NEXAN S)		(mm)	(mm)	(mm)
VG 95218T020H019	FX 5301-002	01	002	24	19 x 0.12	0.55	0.62
VG 95218T020H02A	FX 5301-004	02	004	22	19 x 0.15	0.70	0.80
VG 95218T020H039	FX 5301-006	03	006	20	19 x 0.20	0.94	1.04
VG 95218T020H049	FX 5301-010	04	010	18	19 x 0.25	1.18	1.29
VG 95218T020H059	FX 5301-012	05	012	16	19 x 0.30	1.39	1.53
VG 95218T020H069	FX 5301-020	06	020	14	37 x 0.25	1.68	1.82
VG 95218T020H079	FX 5301-030	07	030	12	37 x 0.32	2.12	2.28

<sup>(1) =</sup> For Information only.

	Finished Wire										
Dian	neter	Weight	Maximum DC								
Min.	Max.	Max.	Resistance at 20°C (68°F)								
(mm)	(mm)	(g/m)	(Ohms/Km)								
0.98	1.08	3.23	106								
1.12	1.24	4.59	55.3								
1.33	1.47	7.29	31								
1.58	1.72	10.69	19.6								
1.81	1.97	14.86	13.6								
2.07	2.19	19.43	10.2								
2.53	2.69	30.83	6.4								

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FX 5303
VG 95218-22 type E
Single core shielded and jacketed
VG 95218-23 type D
Multi core shielded and jacketed

#### **PRODUCT REFERENCES**

FX 5303

#### **CONSTRUCTION**

#### **CORES**

① FX 5301

#### **SCREEN**

Silver Plated copper Braided screen

#### **JACKET**

- 3 Polyimide tapes
- ④ UV Laser markable FEP Lacquer Top coat.

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications.

#### Main data

☐ Temperature rating : -65°C /+150°C (Ambiant. + Rise.)

□ Voltage rating : 600 Volts RMS.
 □ Operating frequency : up to 2000 Hz.
 □ Dimensions and weights : see table on page 2.

□ Very good resistance to Aircraft Fluids.

☐ Arc Tracking Resistant

#### Identification

☐ Core colour }

□ Jacket colour } see page 2.

☐ Marking

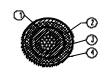
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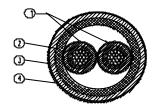
#### **Specifications**

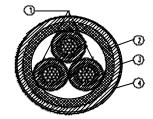
□ VG 95218-2 (May 1998)

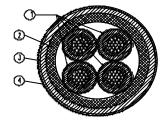
J VG 95218-22 (October 1999)

□ VG 95218-23 (October 1999)











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TYPE E: Single core shielded and jacketed TYPE D: Multi cores shielded and jacketed

			•			Diam.of		Fini	shed Wire	
VG	NEXANS	Nbr.	Dash	Size	AWG	Screen	Diame	ter	Weight	Max. DC
Reference	Part Number	Of	Number	Code	(1)	strand	Min.	Max.	Max.	Resistance at 20°C (68°F)
		Cores	(VG)	(NEXANS)		(mm)	(mm)	(mm)	(g/m)	(Ohms/Km)
VG 95218T022E001	FX 5303-1-002	1	001	002	24	0.08	1.52	1.68	7.04	106
VG 95218T022E002	FX 5303-1-004	1	002	004	22	0.08	1.66	1.85	8.85	55.3
VG 95218T022E003	FX 5303-1-006	1	003	006	20	0.08	1.87	2.08	12.2	31
VG 95218T022E004	FX 5303-1-010	1	004	010	18	0.10	2.21	2.39	17.56	19.6
VG 95218T022E005	FX 5303-1-012	1	005	012	16	0.10	2.44	2.64	22.59	13.6
VG 95218T022E006	FX 5303-1-020	1	006	020	14	0.10	2.70	2.86	27.94	10.2
VG 95218T022E007	FX 5303-1-030	1	007	030	12	0.10	3.16	3.36	41.06	6.4
VG 95218T023D001	FX 5303-2-002	2	001	002	24	0.08	2.47	2.73	12.27	109.2
VG 95218T023D002	FX 5303-2-004	2	002	004	22	0.08	2.76	3.05	15.77	57
VG 95218T023D003	FX 5303-2-006	2	003	006	20	0.10	3.25	3.59	23.97	31.9
VG 95218T023D004	FX 5303-2-010	2	004	010	18	0.10	3.76	4.08	32.29	30.2
VG 95218T023D005	FX 5303-2-012	2	005	012	16	0.10	4.22	4.58	42.20	14.0
VG 95218T023D006	FX 5303-2-020	2	006	020	14	0.10	4.73	5.03	52.81	10.5
VG 95218T023D007	FX 5303-2-030	2	007	030	12	0.10	5.66	6.02	78.85	6.6
VG 95218T023D008	FX 5303-3-002	3	800	002	24	0.08	2.61	2.89	16.44	109.2
VG 95218T023D009	FX 5303-3-004	3	009	004	22	0.08	2.93	3.23	21.45	57
VG 95218T023D010	FX 5303-3-006	3	010	006	20	0.10	3.45	3.81	32.85	31.9
VG 95218T023D011	FX 5303-3-010	3	011	010	18	0.10	4.00	4.34	44.90	30.2
VG 95218T023D012	FX 5303-3-012	3	012	012	16	0.10	4.50	4.88	59.32	14.0
VG 95218T023D013	FX 5303-3-020	3	013	020	14	0.10	5.04	5.36	74.82	10.5
VG 95218T023D014	FX 5303-3-030	3	014	030	12	0.10	6.05	6.43	113.00	6.6
VG 95218T023D015	FX 5303-4-002	4	015	002	24	0.08	2.86	3.16	20.61	109.2
VG 95218T023D016	FX 5303-4-004	4	016	004	22	0.08	3.20	3.54	27.13	57
VG 95218T023D017	FX 5303-4-006	4	017	006	20	0.10	3.78	4.18	41.74	31.9
VG 95218T023D018	FX 5303-4-010	4	018	010	18	0.10	4.41	4.77	57.51	30.2
VG 95218T023D019	FX 5303-4-012	4	019	012	16	0.10	4.96	5.38	76.43	14.0
VG 95218T023D020	FX 5303-4-020	4	020	020	14	0.10	5.58	5.92	96.83	10.5
VG 95218T023D021	FX 5303-4-030	4	021	030	12	0.10	6.69	7.11	147.14	6.6

(1) = For Information only

#### **COLOUR and MARKING:**

SINGLE CORE SHIELDED AND JACKETED (TYPE E):							
Core colour	Marking on Jacket :						
	White (with exception of size 004 : Pale Blue)						
White (with exception of size 004 : Pale Blue)	Marking:						
,	VG95218T022E*** F 0241 ++ GE						

MULTI CORE SHIELDED AND JACKETED (TYPE D) :							
Core Identification	Marking on Jacket :						
White (with exception of size 004 : Pale Blue)	White (with exception of size 004 : Pale Blue)						
Marking with coloured arabic digits printed on the core and a dash placed under-neath it.:	Marking :						
Core number 1 : digit = $\underline{1}$ - Core number 2 : digit = $\underline{2}$ and so on	VG95218T023D*** F 0241 ++ ##						

<sup>\*\*\* =</sup> Dash number (VG)

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<sup>++</sup> = Year of production (ie. : 00 = 2000)

<sup>## =</sup> Cable code according to TR 6058  $^{\prime}$ : GF = 2 cores  $^{\prime}$  GG = 3 cores  $^{\prime}$  GH = 4 cores





# ABS 0949 - AD AWG 24 to 4

## Nickel Copper Clad Aluminium Alloy Conductors UV laser printable

#### PRODUCT REFERENCES

ABS 0949 AD \*\*

#### **CONSTRUCTION**

#### **CONDUCTOR**

① AWG 24 and 22

1 nickel plated copper alloy wirer +6 nickel copper clad aluminium alloy wire AWG 20 to 8

Nickel copper clad aluminium alloy concentric conductor AWG 6 and 4

Nickel copper clad aluminium alloy rope-lay conductor

#### **INSULATION**

- Wigh performance polyimide tape
- 3 Special UV PTFE Tape

#### **Characteristics**

- Voltage rating: 600 Volts RMS.
- ☐ Operating temperature : -65°C to +180°C.(Ambient.+ Rise.)
- Operating frequency: up to 2000 Hz
- Dimensions and weights : see table on this data sheet
- Very Good Resistance to Aircraft Fluids
- □ Mould and Fungus Resistant
- □ Arc Tracking Resistant

#### **Identification**

- □ Standard Colour : Grey
- Marking: Green for AWG22, Blue for other gauges
- ☐ Wording : AD \*\* FRF++

FR = Country of origin (FR = France)

F = Manufacturer (F = Nexans)

++= Year of Production (ie. 00=2000)

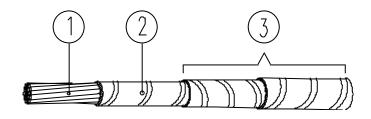
#### **Applications**

☐ Designed for general Purpose Aircraft Wiring Applications

#### **Specifications**

- □ ABS 0957 (conductors)
- ☐ ABS 0958 (Technical specification)
- □ ABS 0949 AD (Product specification)

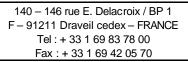
#### Filotex<sup>a</sup> ABS 0949 AD



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		Co	onductor			Fini	shed wire		
Nexans		Stranding	Diar	neter	Maximum DC Resistance at	Diam	eter	Maximum Weight	
References	AWG	(Nlbr v mm)	Mini.	Maxi.	20°C (68°F)	Mini.	Max.	Nom.	Max.
		(Nbr x mm)	(mm)	(mm)	(Ohms/Km)	(mm)	(mm)	(g/m)	(g/m)
ABS 0949 AD 24	24	7 x 0.20	0.56	0.58	145	0.85	0.96	1.70	1.75
ABS 0949 AD 22	22	7 x 0.25	0.71	0.73	90.2	1.00	1.10	2.37	2.50
ABS 0949 AD 20	20	19 x 0.20	0.94	0.97	49.6	1.22	1.34	3.55	3.65
ABS 0949 AD 18	18	19 x 0.25	1.19	1.22	33.2	1.46	1.61	5.14	5.45
ABS 0949 AD 16	16	19 x 0.30	1.41	1.45	23	1.76	1.92	7.37	7.60
ABS 0949 AD 14	14	37 x 0.25	1.69	1.73	15.5	2.04	2.24	9.91	10.94
ABS 0949 AD 12	12	37 x 0.32	2.13	2.18	10.9	2.50	2.70	14.12	15.10
ABS 0949 AD 10	10	61 x 0.32	2.73	2.77	5.8	3.09	3.33	22.20	24.02
ABS 0949 AD 8	8	7 X 19 X 0.30	3.55	3.85	3.8	4.10	4.40	37.94	39.00
ABS 0949 AD 6	6	7 x 10 x 0.51	4.8	5.2	2.3	5.30	5.70	62.52	63.70
ABS 0949 AD 4	4	7 x 15 x 0.51	5.90	6.30	1.5	6.60	7.40	93.50	96.30







### Filotex<sup>®</sup>

#### ABS 0949 - AD AWG 3 to 000

### Nickel Plated Aluminium Alloy Conductors UV laser printable

#### **Characteristics**

- □ Voltage rating : 600 Volts RMS.
- ☐ Operating temperature : -65°C to +180°C.(Ambient. + Rise.)
- Operating frequency: up to 2000 Hz
- Dimensions and weights : see table on this data sheet
- □ Very Good Resistance to Aircraft Fluids
- Mould and Fungus Resistant
- ☐ Arc Tracking Resistant

#### **Identification**

- ☐ Standard Colour : Grey
- □ Marking: Blue
- Wording : AD \*\* FRF++

#### **CONSTRUCTION**

PRODUCT REFERENCES

ABS 0949 AD \*\*

#### **CONDUCTOR**

Nickel plated aluminium rope-lay conductor

#### <u>INSULATION</u>

- High performance polyimide tape
- ③ Special UV PTFE Tape

FR = Country of origin (FR = France)

F = Manufacturer (F = Nexans)

++ = Year of Production (ie. 00 = 2000)

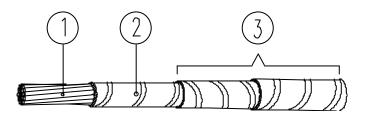
#### **Applications**

Designed for general Purpose Aircraft Wiring Applications

#### **Specifications**

- □ ABS 0957 (conductors)
- □ ABS 0958 (Technical specification)
- □ ABS 0949 AD (Product specification)

#### Filotex<sup>a</sup> ABS 0949 AD



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		Conducteur			Finished wire				
Nexans References	AWG	Stranding	Diameter		Maximum DC Resistance at	Diameter		Maximum Weight	
		(Nbr x mm)	Mini.	Maxi.	20°C (68°F) (Ohms/Km)	Mini.	Max.	Nom.	Max.
			(mm)	(mm)		(mm)	(mm)	(g/m)	(g/m)
ABS 0949 AD 3	3	7 x 19 x 0.51	6.5	7.1	1.18	7.28	7.74	91.26	94.00
ABS 0949 AD 2	2	7 x 24 x 0.51	7.4	8.0	0.94	8.07	8.57	113.1	116.5
ABS 0949 AD 1	1	7 x 30 x 0.51	8.3	8.9	0.75	8.94	9.50	139.17	143.5
ABS 0949 AD 0	0	19 x 14 x 0.51	9.7	10.3	0.60	10.29	10.93	175.81	181.0
ABS 0949 AD 00	00	19 x 18 x 0.51	11.1	11.7	0.43	11.65	12.37	222.96	230.0
ABS 0949 AD 000	000	19 x 22 x 0.51	12.4	13	0.36	12.91	13.71	267.57	276.0

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#### **ABS 1354**

## Filotex®

## Multicores Ni. Copper Clad Alu. (AWG 24 to 4) Multicores Aluminium alloy (AWG 3 to 000)

#### **Characteristics**

- Voltage rating: 600 Volts RMS.
- ☐ Operating temperature : -65°C to +180°C.(Ambient.+ Rise.)
- Operating frequency: up to 2000 Hz
- Dimensions and weights : see table on this data sheet
- □ Very Good Resistance to Aircraft Fluids
- □ Mould and Fungus Resistant
- ☐ Arc Tracking Resistant

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications

#### **CONSTRUCTION**

**PRODUCT REFERENCES** 

ABS 1354 AD+ \*\*

#### **CORES**

2, 3 or 4 Cores ABS 0949 ADA

#### **Specifications**

- □ ABS1354 Product Standard
- □ ABS0958 Technical Specification

**ADB** 



ADC



ADD



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				Fir	nished Wir	е		
PART NUMBERS	US	Nbr of	Colours	Maximum DC Resistance at	Diar	neter	We	ight
	AWG	Cores	0	20°C (68°K)	(m	nm)	(g/	/m)
			Cores	(Ohms/Km)	Nom.	Max.	Nom.	Max.
ABS 1354 ADB	24	2		149.4	1.78	1.9	3.47	3.70
ABS 1354 ADB	22	2		92.9	2.04	2.16	4.83	5.27
ABS 1354 ADB	20	2		51.1	2.58	2.75	7.24	7.53
ABS 1354 ADB	18	2		34.2	3.08	3.25	10.49	10.91
ABS 1354 ADB	16	2		23.7	3.70	3.85	15.03	15.63
ABS 1354 ADB	14	2		16	4.30	4.47	20.22	21.03
ABS 1354 ADB	12	2	1 Red	11.2	5.12	5.31	28.80	30.07
ABS 1354 ADB	10	2	1 Blue	6	6.34	6.98	45.29	51.94
ABS 1354 ADB	8	2		3.91	8.58	8.92	77.4	80.5
ABS 1354 ADB	6	2		2.37	11.0	11.44	127.54	132.64
ABS 1354 ADB	4	2		1.55	13.42	13.96	190.74	198.37
ABS 1354 ADB	3	2		1.22	15.02	15.62	186.17	193.62
ABS 1354 ADB	2	2		0.97	16.64	17.31	230.72	239.95
ABS 1354 ADB	1	2		0.77	18.44	18.99	283.91	295.27
ABS 1354 ADB	0	2		0.62	21.22	21.86	358.65	372.99
ABS 1354 ADB	00	2		0.44	24.02	24.74	454.84	473.03
ABS 1354 ADB	000	2		0.37	26.62	27.42	545.84	567.68
ABS 1354 ADC	24	3		149.4	1.92	2.04	5.20	5.55
ABS 1354 ADC	22	3		92.9	2.20	2.33	7.25	7.91
ABS 1354 ADC	20	3		51.1	2.78	2.96	10.86	11.29
ABS 1354 ADC	18	3		34.2	3.32	3.49	15.73	16.36
ABS 1354 ADC	16	3		23.7	3.99	4.15	22.55	23.45
ABS 1354 ADC	14	3		16	4.63	4.83	30.32	31.54
ABS 1354 ADC	12	3	1 Red	11.2	5.52	5.73	43.21	45.10
ABS 1354 ADC	10	3	1 Blue	6	6.83	7.53	67.93	77.91
ABS 1354 ADC	8	3	1 Yellow	3.91	9.24	9.61	116.10	120.74
ABS 1354 ADC	6	3		2.37	11.85	12.32	191.31	198.96
ABS 1354 ADC	4	3		1.55	14.46	15.04	286.11	297.55
ABS 1354 ADC	3	3		1.22	16.18	16.83	279.26	290.43
ABS 1354 ADC	2	3		0.97	17.93	18.65	346.09	359.93
ABS 1354 ADC	1	3		0.77	19.87	20.66	425.86	442.89
ABS 1354 ADC	0	3	] [	0.62	22.86	23.50	537.98	559.5
ABS 1354 ADC	00	3		0.44	25.88	26.60	682.26	709.55
ABS 1354 ADC	000	3		0.37	28.68	29.48	818.76	851.51

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ABS 1354 ADD	24	4		149.4	2.15	2.28	6.94	7.41
ABS 1354 ADD	22	4		92.9	2.46	2.61	9.67	10.54
ABS 1354 ADD	20	4		51.1	3.11	3.32	14.48	15.06
ABS 1354 ADD	18	4		34.2	3.72	3.92	20.97	21.81
ABS 1354 ADD	16	4		23.7	4.47	4.65	30.07	31.27
ABS 1354 ADD	14	4	1 Red	16	5.19	5.40	40.43	42.05
ABS 1354 ADD	12	4	1 Blue	11.2	6.18	6.42	57.61	60.13
ABS 1354 ADD	10	4	1 Yellow	6	7.65	8.43	90.58	103.89
ABS 1354 ADD	8	4	1 Green	3.91	10.36	10.77	154.8	160.99
ABS 1354 ADD	6	4		2.37	13.28	13.81	255.08	265.28
ABS 1354 ADD	4	4		1.55	16.20	16.85	381.48	396.74
ABS 1354 ADD	3	4		1.22	18.13	18.86	372.34	387.23
ABS 1354 ADD	2	4		0.97	20.08	20.88	461.45	479.91
ABS 1354 ADD	1	4		0.77	22.26	23.15	567.81	590.52

#### **Core identification Colours:**

☐ Two cores (ADB) : Red - Blue

☐ Three cores (ADC): Red - Blue - Yellow

☐ Four cores (ADD) : Red - Blue - Yellow – Green

Marking : ADA \*\* FRF++ \_\_\_\_\_\_ ADA \*\* FRF++\_\_\_\_\_

Colour : Black

\*\* = AWG

FR = Country of Origin (FR = France)

F = Manufacturer (F= Filotex®)

++ = Year of manufacturing (ie. 03 = 2003)





Fax: +33 1 69 42 05 70



#### **ABS 1356**

## Filotex®

## Screened and Jacketed single and multicores UV Laser printable

#### **Characteristics**

- □ Voltage rating: 600 Volts RMS.
- ☐ Operating temperature : -65°C to +180°C.(Ambient.+ Rise.)
- □ Operating frequency: up to 2000 Hz
- Dimensions and weights : see table on this data sheet
- □ Very Good Resistance to Aircraft Fluids
- □ Mould and Fungus Resistant
- ☐ Arc Tracking Resistant

#### Identification

- □ Core Colours
- □ Jacket Colours and

Marking: see next pages on this data sheet

#### **Applications**

☐ Designed for general Purpose Aircraft Wiring Applications

#### **Specifications**

□ ABS 1356

#### **CONSTRUCTION**

**PRODUCT REFERENCES** 

ABS 1356 VN+ \*\*

#### **CORES**

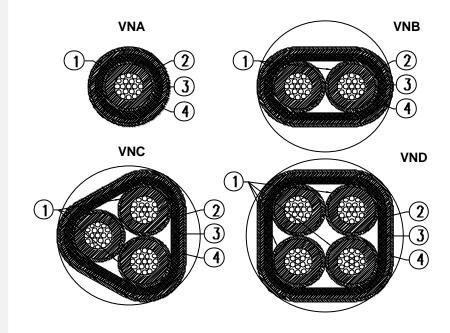
① 1, 2, 3 or 4 Cores ABS 0949 AD

#### **SCREEN**

Nickel-plated copper spiral screen

#### **JACKET**

- 3 Polyimide Tape
- ④ UV PTFE Tape





			Screen			Finished W	'ire			
PART NUMBERS	US		strands nominal	Cole	ours	Maximum DC Resistance at	Dian	neter	We	eight
	AWG	Nbr of	diameter	Cores	Jacket	20°C (68°K)	(m	m)	(g/m)	
		Cores	(mm)			(Ohms/Km)	Nom.	Max.	Nom.	Max.
ABS 1356 VNA	24	1	0.08	1 Grev	Grev	145	1.38	1.45	4.57	4.80
ABS 1356 VNA	22	1	0.08	1 Grey	Grey	90.2	1.51	1.60	5.58	5.86
ABS 1356 VNA	20	1	0.08	1 Grey	Grey	49.6	1.78	1.87	7.48	7.75
ABS 1356 VNA	18	1	0.08	1 Grey	Grey	33.2	2.03	2.11	9.73	10.40
ABS 1356 VNA	16	1	0.10	1 Grey	Grey	23	2.38	2.48	13.64	14.51
ABS 1356 VNA	14	1	0.10	1 Grey	Grey	15.5	2.68	2.79	17.10	17.96
ABS 1356 VNA	12	1	0.10	1 Grey	Grey	10.9	3.09	3.20	22.56	24.30
ABS 1356 VNA	10	1	0.12	1 Grey	Grey	5.8	3.74	3.89	33.91	36.07
ABS 1356 VNB	24	2	0.08		Grev	149.4	2.27	2.40	7.84	8.15
ABS 1356 VNB	22	2	0.08		Grey	92.9	2.53	2.70	9.77	10.16
ABS 1356 VNB	20	2	0.10	1 Red	Grey	51.1	3.11	3.27	14.31	14.88
ABS 1356 VNB	18	2	0.10	1 Blue	Grey	34.2	3.61	3.75	18.81	20.20
ABS 1356 VNB	16	2	0.12		Grey	23.7	4.27	4.44	26.26	28.10
ABS 1356 VNB	14	2	0.15		Grey	16.0	4.93	5.13	35.5	37.27
ABS 1356 VNB	12	2	0.20		Grey	11.2	5.85	6.09	51.50	55.78
ABS 1356 VNB	10	2	0.20		Grey	6.0	7.07	7.39	73.05	78.19
ABS 1356 VNC	24	3	0.10		Grev	149.4	2.45	2.59	11.14	11.59
ABS 1356 VNC	22	3	0.10		Grey	92.9	2.73	2.91	13.96	14.52
ABS 1356 VNC	20	3	0.12	1 Red	Grey	51.1	3.35	3.52	20.34	21.15
ABS 1356 VNC	18	3	0.12	1 Blue	Grey	34.2	3.89	4.05	26.89	28.80
ABS 1356 VNC	16	3	0.15	1 Yellow	Grey	23.7	4.62	4.80	38.23	40.80
ABS 1356 VNC	14	3	0.15		Grey	16.0	5.26	5.47	48.38	50.80
ABS 1356 VNC	12	3	0.20		Grey	11.2	6.25	6.50	70.04	75.81
ABS 1356 VNC	10	3	0.20		Grey	6.0	7.56	7.90	100.81	107.60
ABS 1356 VND	24	4	0.10		Grev	149.4	2.68	2.84	13.74	14.29
ABS 1356 VND	22	4	0.10	1 Red	Grey	92.9	2.99	3.19	17.37	18.06
ABS 1356 VND	20	4	0.12	1 Blue	Grey	51.1	3.68	3.86	25.38	26.39
ABS 1356 VND	18	4	0.12	1 Yellow	Grey	34.2	4.29	4.46	33.83	36.22
ABS 1356 VND	16	4	0.15	1 Green	Grey	23.7	5.10	5.30	48.14	51.30
ABS 1356 VND	14	4	0.20		Grey	16.0	5.92	6.16	66.67	70.00

#### **Core identification Colours:**

☐ Three cores (VNC):

☐ One core (VNA) : Grey☐ Two cores (VNB) : Red - Blue

☐ Four cores (VND) : Red - Blue - Yellow - Green

Marking : ADA \*\* FRF++ \_\_\_\_\_\_ ADA \*\* FRF++\_\_\_\_\_

Colour: Black

Red - Blue - Yellow

Jacket identification: Grey

Marking: XXX \*\* FRF++

Colour : Green for AWG 22 - 18 - 14 -10 and Blue for AWG 24 - 20 - 16 - 12

XXX : Short designation (VNA, VNB, VNC, VND)

\*\* = AWG

FR = Country of Origin (FR = France) F = Manufacturer (F= Filotex®)

++ = Year of manufacturing (ie. 02 = 2002)





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## Filotex<sup>®</sup>

## CABLE - AIRFRAME GENERAL PURPOSE +210 °C

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications.

#### PRODUCT REFERENCES

BAS 8710 AWG \*\*

#### Main data

☐ Operating temperature : -65°C to +210°C.(Ambiant + Rise)

□ Voltage rating : 600 Volts RMS.□ Operating frequency : up to 2000 Hz.

 $\hfill\Box$  Dimensions and weights  $\hfill$  : See table on this data sheet

□ Very Good Resistance to Aircraft Fluids.

□ Mould and Fungus Resistant

#### **CONSTRUCTION**

#### **CONDUCTOR**

Stranded Conductor: Nickel Plated High Strength Copper Alloy (AWG 24) or Nickel Plated Copper (AWG 22 to 10).

#### **INSULATION**

2 FEP/POLYIMIDE/FEP Tapes

#### COLOURED TOPCOAT

Mechanical polyimide coating protection

#### **Identification**

□ Colours : Beige

□ Wording: 710-FF-++-\*\*

With: \*\* = AWG Wire Size

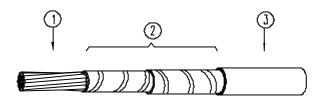
F = Manufacturer (F = Filotex®)
F = Country of Origin (F = France)

++= Year of Manufacturing (ie. 00 = 2000)

#### **Specifications**

□ SB/8D/5063-03 Part B1

#### Filotex<sup>a</sup> BAS 8710



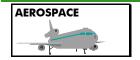


		Condi	uctor			Finished V	√ire		
NEXANS â Filotex	US AWG	Stranding	Dian	neter	Maximum DC Resistance at 20°C (68°F)	Diar	neter	Maximum Weight	
PART NUMBER		(N.H., )	(mm)		(Olama /Km)	(m	ım)	(0/20)	
		(Nbr x mm)	Mini.	Maxi.	(Ohms/Km)	Mini.	Maxi.	(g/m)	
BAS 8710 AWG 24	24	19 x 0.120	0.53	0.63	112.6	0.95	1.10	3.00	
BAS 8710 AWG 22	22	19 x 0.150	0.68	0.80	60.0	1.07	1.25	4.23	
BAS 8710 AWG 20	20	19 x 0.193	0.90	1.02	35.9	1.28	1.47	6.50	
BAS 8710 AWG 18	18	19 x 0.250	1.18	1.30	21.2	1.55	1.75	10.40	
BAS 8710 AWG 16	16	37 x 0.200	1.32	1.45	17.2	1.68	1.90	12.64	
BAS 8710 AWG 14	14	37 x 0.250	1.65	1.80	10.9	2.02	2.25	19.30	
BAS 8710 AWG 12	12	37 x 0.315	2.10	2.25	6.73	2.45	2.70	29.80	
BAS 8710 AWG 10	10	37 x 0.400	2.69	2.85	4.13	3.20 3.50		49.50	

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#### BAS 8711 / 8712 / 8713

## Filotex®

#### Cable – Airframe Single and Multi-cores Screened and Sheathed General Purpose +210 °C

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications.

#### PRODUCT REFERENCES

BAS 8711 AWG \*\*

BAS 8712 AWG \*\*

BAS 8713 AWG \*\*

**BAS 8710 AWG \*\*** 

#### CONSTRUCTION

CORES (BAS 8710)

**SCREEN** 

Nickel Plated Copper

Spinning

**SHEATH** 

FEP/POLYIMIDE/FEP

Tape(s).

Mechanical polyimide coating protection for single core.

PTFE Tape(s) for multicores

#### Main data

☐ Operating temperature : -65°C to +210°C.(Ambiant + Rise)

□ Voltage rating : 600 Volts RMS.□ Operating frequency : up to 2000 Hz.

Dimensions and weights : See table on this data sheet

□ Very Good Resistance to Aircraft Fluids.

Mould and Fungus Resistant

#### **Identification**

Core identification

Colours: Sinale core: Beiae

Two cores: Black / Red with marking

Three cores: Black / Red with marking / Green

☐ Jacket identification colour : White (with marking for single core)

Marking: Wording:  $71\pounds$ -FF-++-\*\*

With :  $\mathfrak{L} = Number of core$ 

\*\* = AWG Wire Size

F = Manufacturer (F = Filotex<sup>®</sup>)

F = Country of Origin (F = France)

++= Year of Manufacturing (ie. 03 = 2003)

Specifications: SB/8D/5063-01 Part B

**BAS 8711** 

**BAS 8712** 





**BAS 8713** 



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Tel: + 33 1 69 83 78 00 Fax: + 33 1 69 42 05 70



				Finished Cable			
NEXANS â Filotex PART NUMBER	US AWG	Nbr of cores	Nom. Diameter of shield strands	Maximum DC Resistance at 20°C (68°F)		neter nm)	Maximum Weight
PART NUMBER			(mm)	(Ohms/Km)	Min.	Max.	(g/m)
BAS 8711 AWG 24	24	1	0.07	112.6	1.26	1.50	5.70
BAS 8711 AWG 22	22	1	0.07	60.0	1.38	1.62	7.25
BAS 8711 AWG 20	20	1	0.07	35.9	1.58	1.82	10.0
BAS 8711 AWG 18	18	1	0.07	21.2	1.87	2.11	14.6
BAS 8712 AWG 24	24	2	0.10	116.0	2.39	2.79	16.2
BAS 8712 AWG 22	22	2	0.10	61.8	2.63	3.03	21.8
BAS 8712 AWG 20	20	2	0.10	37.0	3.09	3.49	25.2
BAS 8712 AWG 18	18	2	0.12	21.8	3.70	4.10	37.5
BAS 8713 AWG 24	24	3	0.10	116.0	2.55	2.95	21.4
BAS 8713 AWG 22	22	3	0.10	61.8	2.80	3.20	28.2
BAS 8713 AWG 20	20	3	0.10	37.0	3.31	3.71	33.3
BAS 8713 AWG 18	18	3	0.12	21.8	3.95	4.35	52.1



### Filotex<sup>a</sup> Type ASN-E0261



## 200°C Operating Temperature Flexible Light Weight Wires Unscreened and Unsheathed Types

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications.

#### PRODUCT REFERENCES

#### ASN-E0261 CF

ASN-E0264 PF ASN-E0266 QF ASN-E0268 RF ASN-E0270 SJ

ASN-E0272 TK ASN-E0274 UD

#### CONSTRUCTION

#### **CONDUCTOR**

A Stranded Conductor Made of Nickel Plated High Strength Copper Alloy (AWG 26 & 24) or Nickel Plated Copper (AWG 22 to 10).

#### <u>INSULATION</u>

② 2 FEP/POLYIMIDE/FEP Tapes

#### COLOURED TOPCOAT

FEP (Laser Markable Optional) or PTFE for cores of Multicores Cables

#### Main data

☐ Operating temperature : -55°C to +200°C.(Ambiant + Rise)

□ Voltage rating : 600 Volts RMS.□ Operating frequency : up to 2000 Hz.

□ Conductor Construction : AECMA EN 2083 Specification
 □ Dimensions and weights : See table on this data sheet

□ Very Good Resistance to Aircraft Fluids.

□ Mould and Fungus Resistant

#### **Identification**

□ Colours: White Except AWG 22 Size Which is Light Green.

□ Wording : ■ CF \*\* @ FR F ++ ■ CF \*\* @ FR F ++

With: \*\* = AWG Wire Size

@ = U letter for UV Laser Markable WiresFR = Country of Origin (FR = France)

F = Manufacturer ( $F = Filotex^{\$}$ ) ++= Year of Production (ie. 00 = 2000)

#### **Specifications**

□ AECMA EN 2083 (Conductors)
 ASN-E0261
 NSA 935000, NSA 307110
 AS N°462012/84, AS 482018/89
 SDF/B67-04/A/108/1128

Filotex<sup>a</sup> ASN-E0261





		Conducto	r		Finishe	d Wire		
NEXANS CABLE â Filotex	US AWG	Stranding	Nomi.Diam	Maximum DC Resistance at 20°C (68°F)		Diamete	r	Maximum Weight
PART NUMBER	ΑΟ	(N.H., )	()	(Olaman /Kan)		(mm)		(a/m)
		(Nbr x mm)	(mm)	(Ohms/Km)	Mini.	Nom.	Max.	(g/m)
ASN-E0261 CF 26 U	26	19 x 0.100	0.49	160	0.75	0.80	0.84	2.00
ASN-E0261 CF 24 U	24	19 x 0.120	0.58	114	0.85	0.89	0.94	2.65
ASN-E0261 CF 22 U	22	19 x 0.160	0.73	60	0.98	1.04	1.09	3.90
ASN-E0261 CF 20 U	20	19 x 0.200	0.97	33.2	1.22	1.28	1.34	6.55
ASN-E0261 CF 18 U	18	19 x 0.250	1.22	21.1	1.45	1.53	1.59	9.90
ASN-E0261 CF 16 U	16	19 x 0.300	1.46	14.5	1.70	1.77	1.84	13.9
ASN-E0261 CF 14 U	14	37 x 0.250	1.71	10.9	1.93	2.02	2.10	18.5
ASN-E0261 CF 12 U	12	37 x 0.320 2.19		6.8	2.41	2.50	2.60	29.7
ASN-E0261 CF 10 U	10	61 x 0.320	2.81	4.1	3.03	3.12	3.25	48.3

U = UV Laser Markable







#### Filotex<sup>a</sup> Type ASN-E0264 ASN-E0266 ASN-E0268

## **200°C Operating Temperature Flexible Light Weight Wires Unscreened and Unsheathed Types**

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications.

#### Main data

☐ Operating temperature : -55°C to +200°C.(Ambiant + Rise)

□ Voltage rating : 600 Volts RMS.□ Operating frequency : up to 2000 Hz.

☐ Conductor Construction : AECMA EN 2083 Specification ☐ Dimensions and weights : See table on this data sheet

□ Very Good Resistance to Aircraft Fluids.

Mould and Fungus Resistant

#### Identification

☐ Cores Colours: 1<sup>st</sup> Core Red

2<sup>nd</sup> Core Light Blue
3<sup>rd</sup> Core Yellow
4<sup>th</sup> Core Green

■ Marking

Colour : White on red and dark green wires

Dark Green on others.

Wording : ■ CF \*\* A FR F ++ ■ CF \*\* A FR

With: \*\* = AWG Wire Size

FR = Country of Origin (FR = France)
F = Manufacturer (F = Filotex®)
++ = Year of Production (ie. 00 = 2000)

#### **Specifications**

☐ AECMA EN 2083 (Conductors)

■ ASN-E0261, ASN-E0264, ASN-E0266, ASN-E0268

□ NSA 935000, NSA 307110 AS N°462012/84, AS 482018/89

#### **Filotex**<sup>â</sup>

ASN-E0264 ASN-E0266 ASN-E0268





#### PRODUCT REFERENCES

ASN-E0261 CF

ASN-E0264 PF ASN-E0266 QF ASN-E0268 RF

ASN-E0270 SJ ASN-E0272 TK ASN-E0274 UD

#### **CONSTRUCTION**

#### CORES (ASN-E0261)

#### **CONDUCTOR**

A Stranded Conductor Made of Nickel Plated High Strength Copper Alloy (AWG 26 & 24) or Nickel Plated Copper (AWG 22 to 10).

#### **INSULATION**

2 FEP/POLYIMIDE/FEP Tapes

#### COLOURED TOPCOAT

**PTFE** 

#### NUMBER OF CORES

ASN-E0264 : 2 ASN-E0266 : 3 ASN-E0268 : 4

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						Finished	Cable		
FILOTEX	Numbe r	US	Stranding	Nomi.	Maximum DC		Diamete	ır	Maximum
PART NUMBER	of	AWG	Sirdinanig	Diam.	Resistance at 20°C (68°F)		Diamete	•1	Weight
TAIRT TROMBER	Cores	71110	(Nbr x Diam.in mm)	(mm)	(Ohms/Km)		(mm)		(g/m)
			(Nor x Diam.iii iiiii)	(111111)	(Onins) kinj	Mini.	Nom.	Max.	(9/111)
ASN-E0264 PF 26	2	26	19 x 0.100	0.49	164	1.55	1.60	1.65	3.90
ASN-E0264 PF 24	2	24	19 x 0.120	0.58	117	1.73	1.78	1.83	5.3
ASN-E0264 PF 22	2	22	19 x 0.160	0.73	64	2.02	2.08	2.14	7.8
ASN-E0264 PF 20	2	20	19 x 0.200	0.97	34.9	2.48	2.56	2.64	13.2
ASN-E0264 PF 18	2	18	19 x 0.250	1.22	22.1	2.97	3.06	3.15	19.9
ASN-E0264 PF 16	2	16	19 x 0.300	1.46	15.2	3.43	3.54	3.65	28.1
ASN-E0264 PF 14	2	14	37 x 0.250	1.71	11.2	3.92	4.04	4.16	37.4
ASN-E0264 PF 12	2	12	37 x 0.320	2.19	7	4.85	5.00	5.15	60.2
ASN-E0264 PF 10	2	10	61 x 0.320	2.81	4.2	6.05	6.24	6.43	97.7
ASN-E0266 QF 26	3	26	19 x 0.100	0.49	164	1.67	1.72	1.78	5.9
ASN-E0266 QF 24	3	24	19 x 0.120	0.58	117	1.86	1.92	1.98	8.0
ASN-E0266 QF 22	3	22	19 x 0.160	0.73	64	2.17	2.24	2.31	11.8
ASN-E0266 QF 20	3	20	19 x 0.200	0.97	34.9	2.68	2.76	2.84	19.8
ASN-E0266 QF 18	3	18	19 x 0.250	1.22	22.1	3.20	3.30	3.40	29.9
ASN-E0266 QF 16	3	16	19 x 0.300	1.46	15.2	3.70	3.81	3.93	42.1
ASN-E0266 QF 14	3	14	37 x 0.250	1.71	11.2	4.22	4.35	4.48	56.2
ASN-E0266 QF 12	3	12	37 x 0.320	2.19	7	5.23	5.39	5.55	90.2
ASN-E0266 QF 10	3	10	61 x 0.320	2.81	4.2	6.52	6.72	6.92	146.5
ASN-E0268 RF 26	4	26	19 x 0.100	0.49	164	1.87	1.93	1.99	7.8
ASN-E0268 RF 24	4	24	19 x 0.120	0.58	117	2.08	2.15	2.21	10.6
ASN-E0268 RF 22	4	22	19 x 0.160	0.73	64	2.44	2.51	2.59	15.7
ASN-E0268 RF 20	4	20	19 x 0.200	0.97	34.9	3.00	3.09	3.18	26.4
ASN-E0268 RF 18	4	18	19 x 0.250	1.22	22.1	3.58	3.69	3.80	39.9
ASN-E0268 RF 16	4	16	19 x 0.300	1.46	15.2	4.14	4.27	4.40	56.2
ASN-E0268 RF 14	4	14	37 x 0.250	1.71	11.2	4.73	4.88	5.02	74.9
ASN-E0268 RF 12	4	12	37 x 0.320	2.19	7	5.85	6.04	6.22	120.3
ASN-E0268 RF 10	4	10	61 x 0.320	2.81	4.2	7.31	7.53	7.76	195.3







#### Filotex<sup>a</sup> Type ASN-E0270 ASN-E0272 ASN-E0274

## 200°C Operating Temperature Flexible Light Weight Cables Screened and Sheathed Types

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications.

#### Main data

☐ Operating temperature : -55°C to +200°C.(Ambiant + Rise)

□ Voltage rating : 600 Volts RMS.□ Operating frequency : up to 2000 Hz.

☐ Conductor Construction : AECMA EN 2083 Specification ☐ Dimensions and weights : See tables on this data sheet

Very Good Resistance to Aircraft Fluids.

☐ Mould and Fungus Resistant

#### Identification

Cores Colours : See Tables on this Data SheetSheaths Colours : See Tables on this Data Sheet

■ Marking:

Colour: White on Red and Dark Green wires

Dark Green on others.

Wording : On Cores

■ CF \*\* A FR F ++ ■ CF \*\* A FR

On Sheaths

■ \$\$ \*\* £ FR F ++ ■ \$\$ \*\* £ FR

With: \$\$ = ASN-E Type (SJ, TK or UD)

\*\* = AWG Wire Size

£ = Topcaot Code (U, C or None)
FR = Country of Origin (FR = France)
F = Manufacturer (F = Filotex®)
++ = Year of Production (ie. 00 = 2000)

#### **Specifications**

☐ AECMA EN 2083 (Conductors)

□ ASN-E0261, ASN-E0270, ASN-E0272, ASN-E0274

■ NSA 935000, NSA 307 110 AS N°462 205/84, AS 482018/89

□ SDF/B67-04/A/108/1128

#### **Filotex**<sup>â</sup>

ASN-E0270 ASN-E0272 ASN-E0274





#### PRODUCT REFERENCES

ASN-E0261 CF ASN-E0264 PF ASN-E0266 QF ASN-E0268 RF

ASN-E0270 SJ ASN-E0272 TK ASN-E0274 UD

#### **CONSTRUCTION**

#### CORES (ASN-E0261)

#### **SCREEN**

Nickel Plated Copper Spinning

#### **SHEATH**

2 FEP/POLYIMIDE/FEP Tapes

#### **COLOURED TOPCOAT**

FEP (Laser Markable Optional)

#### NUMBER OF CORES

ASN-E0270 : 1 ASN-E0272 : 2 ASN-E0274 : 3

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NEXANS CABLE	Nbr	US	Colo	urs	Maximum DC		Diamete	er	Maximum
Filotex <sup>â</sup> PART NUMBER	of Cores	AWG	Cores	Sheath	Resistance at 20°C (68°F)		(mm)		Weight
					(Ohms/Km)	Mini.	Nom.	Max.	(g/m)
ASN-E0270 SJ 26 U	1	26	White	White	160	1.13	1.22	1.25	4.30
ASN-E0270 SJ 24 U	1	24	while	Light Blue	114	1.22	1.31	1.35	5.30
ASN-E0270 SJ 22 U	1	22	Light Green	White	60.0	1.36	1.46	1.52	6.90
ASN-E0270 SJ 20 U	1	20		Light Blue	33.2	1.63	1.70	1.80	10.2
ASN-E0270 SJ 18 U	1	18	White	White	21.1	1.88	1.94	2.05	14.1
ASN-E0270 SJ 16 U	1	16	vvnite	Light Blue	14.5	2.16	2.22	2.35	19.7
ASN-E0270 SJ 14 U	1	14		White	10.9	2.35	2.47	2.55	24.8
ASN-E0272 TK 26 U	2	26		White	164	1.88	2.02	2.10	7.60
ASN-E0272 TK 24 U	2	24		Light Blue	117	2.08	2.20	2.30	9.60
ASN-E0272 TK 22 U	2	22		White	64.0	2.38	2.50	2.60	12.7
ASN-E0272 TK 20 U	2	20	1 Red	Light Blue	34.9	2.90	3.02	3.15	19.9
ASN-E0272 TK 18 U	2	18	1 Light Blue	White	22.1	3.40	3.50	3.70	27.8
ASN-E0272 TK 16 U	2	16		Light Blue	15.2	3.90	4.02	4.20	38.5
ASN-E0272 TK 14 U	2	14		White	11.2	4.35	4.52	4.75	50.0
ASN-E0272 TK 12 U	2	12		White	7.00	5.25	5.52	5.65	75.0
ASN-E0274 UD 26 U	3	26		White	164	2.02	2.14	2.25	10.5
ASN-E0274 UD 24 U	3	24		Light Blue	117	2.25	2.33	2.50	14.0
ASN-E0274 UD 22 U	3	22	1 Red	White	64.0	2.55	2.65	2.85	18.7
ASN-E0274 UD 20 U	3	20	1 Light Blue	Light Blue	34.9	3.10	3.21	3.45	29.2
ASN-E0274 UD 18 U	3	18	1 Yellow	White	22.1	3.60	3.73	4.00	40.9
ASN-E0274 UD 16 U	3	16		Light Blue	15.2	4.15	4.28	4.55	55.6
ASN-E0274 UD 14 U	3	14		White	11.2	4.88	4.88	5.05	72.6

U = UV Laser Markable







#### **PFG QFG RFG**

## Filotex®

## 200°C Operating Temperature Flexible Light Weight Cables

#### **Applications**

☐ Designed for general Purpose Aircraft Wiring Applications.

#### Main data

☐ Operating temperature : -55°C to +200°C.(Ambiant + Rise)

□ Voltage rating : 600 Volts RMS.□ Operating frequency : up to 2000 Hz.

Dimensions and weights : See table on this data sheet

□ Very Good Resistance to Aircraft Fluids.

□ Mould and Fungus Resistant

#### **Identification**

□ Colours (cores and jackets): See table on this data sheet

□ Wording : On cores: ■ CF \*\* A FR F ++\*

On Sheaths: ■ PFG \*\* FR F ++ (Green)

With: \*\* = AWG Wire Size

FR = Country of Origin (FR = France)

F = Manufacturer (F = Filotex<sup>®</sup>) ++ = Year of Production (ie. 00 = 2000)

#### **Specifications**

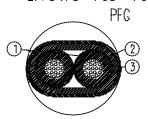
■ AECMA EN 2083 (Conductors) EN2266 - 003 (Cores)

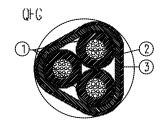
EN2266 - 007 (Cable)

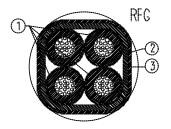
NSA 935000

SDF/B67-04/A/108/1128

EN 3475 - 705 - 706







#### **PRODUCT REFERENCES**

CFA CF-U **PFG QFG RFG** SJB TKB UDB VLB

#### CONSTRUCTION

#### **CORES**

① 2, 3 or 4 CFA elements

#### **SHEATH**

Polyimide tape F2 Type K ≥ 20 %

③ UV Laser Markable FEP Top coat

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Fax: + 33 1 69 42 05 70



#### **DIMENSIONS AND WEIGHTS**

					Finished cable			
Filotex <sup>â</sup>	Nbr of	US	Col	ours	Maximum DC resistance at	Dian	neter	Maximum
Part number	cores	AWG	Cores	Sheaths	20°C (68°F)	(m	ım)	Weight
					(Ohms/Km)	Nom.	Max.	(g/m)
PFG26	2	26		White	164.8	1.77	1.87	4.85
PFG24	2	24		Light Blue	117.5	1.97	2.07	6.40
PFG22	2	22		White	61.8	2.27	2.39	9.10
PFG20	2	20	1 Red	Light Blue	34.2	2.77	2.91	14.90
PFG18	2	18	1 Blue	White	21.8	3.25	3.44	21.80
PFG16	2	16		Light Blue	15	3.75	3.96	30.30
PFG14	2	14		White	11.2	4.23	4.49	40.00
PFG12	2	12		White	6.90	5.19	5.34	62.90
QFG26	3	26		White	164.8	1.89	1.99	7.10
QFG24	3	24		Light Blue	117.5	2.11	2.21	9.30
QFG22	3	22	1 Red	White	61.8	2.43	2.55	13.35
QFG20	3	20	1 Blue	Light Blue	34.2	2.97	3.12	21.90
QFG18	3	18	1 Yellow	White	21.8	3.49	3.68	32.20
QFG16	3	16		Light Blue	15	4.02	4.24	44.90
QFG14	3	14		White	11.2	4.54	4.80	59.40
QFG12	3	12		White	6.90	5.58	5.74	93.60
RFG26	4	26		White	164.8	2.10	2.22	9.20
RFG24	4	24	1 Red	Light Blue	117.5	2.34	2.47	12.15
RFG22	4	22	1 Blue	White	61.8	2.70	2.87	17.55
RFG20	4	20	1 Yellow	Light Blue	34.8	3.30	3.50	28.90
RFG18	4	18	1 Green	White	21.8	3.88	4.15	42.60
RFG16	4	16		Light Blue	15	4.49	4.75	59.50
RFG14	4	14		White	11.2	5.07	5.40	78.80





#### SJB TKB UDB VLB



## 200°C Operating Temperature Flexible Light Weight Cables

#### **Applications**

□ Designed for general Purpose Aircraft Wiring Applications.

#### Main data

☐ Operating temperature : -55°C to +200°C.(Ambiant + Rise)

□ Voltage rating : 600 Volts RMS.□ Operating frequency : up to 2000 Hz.

Dimensions and weights : See table on this data sheet

□ Very Good Resistance to Aircraft Fluids.

☐ Mould and Fungus Resistant

#### **Identification**

□ Colours (cores and jackets): See table on this data sheet

■ Wording : On cores:
■ CF \*\* A FR F + +\*

On Sheaths: ■ SJB \*\* FR F ++ (Green)

With: \*\* = AWG Wire Size

FR = Country of Origin (FR = France)

F = Manufacturer  $(F = Filotex^{(8)})$ 

++= Year of Production (ie. 00 = 2000)

#### **Specifications**

 □ AECMA EN 2083 (Conductors) EN2266 - 003 (Cores) NSA 935000 EN 2713 - 011 SDF/B67-04/A/108/1128

#### CONSTRUCTION

PRODUCT REFERENCES

#### **CORES**

**CFA** 

CF-U

PFG QFG RFG SJB TKB UDB VLB

① 1, 2, 3 or 4 CFA elements PTFE Topcoat

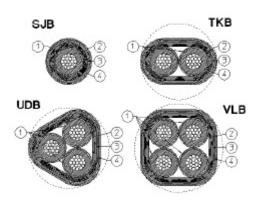
#### **SCREEN**

Silver plated copper helicoidal screen

#### **SHEATH**

3 Polyimide tape F1 Type

④ UV Laser Markable FEP Top coat





#### **DIMENSIONS AND WEIGHTS**

						Finished cab	ole		
Filotex <sup>®</sup>	Nbr of cores	US AWG	Diameter	Col	ours	Maximum DC resistance at 20°C (68°F)		neter ım)	Maximum weight
Part number			Spinning (mm)	Cores	Sheaths	(Ohms/Km)	Nom.	Max.	(g/m)
SJB26	1	26		White	White	160	1.16	1.22	4.15
SJB24	1	24		White	Light blue	114	1.26	1.32	5.15
SJB22	1	22	0.08	Vert Pâle	White	60	1.41	1.48	6.70
SJB20	1	20		White	Light blue	33.2	1.66	1.74	10.00
SJB18	1	18		White	White	21.1	1.90	1.98	13.85
SJB16	1	16		White	Light blue	14.5	2.19	2.28	19.45
SJB14	1	14	0.10	White	White	10.9	2.43	2.53	24.70
SJB12	1	12		White	White	6.8	2.91	3.00	36.80
SJB10	1	10		White	White	4.1	3.53	3.64	57.00
TKB26	2	26			White	164.8	1.95	2.05	7.40
TKB24	2	24	0.08		Light blue	117.5	2.15	2.26	9.20
TKB22	2	22		1 Red	White	61.8	2.45	2.57	12.35
TKB20	2	20	0.10	1 Blue	Light blue	34.2	2.99	3.14	19.80
TKB18	2	18			White	21.8	3.47	3.63	27.60
TKB16	2	16	0.12		Light blue	15	4.01	4.17	38.30
TKB14	2	14			White	11.2	4.49	4.67	49.80
UDB26	3	26			White	164.8	2.07	2.18	10.20
UDB24	3	24	0.08		Light blue	117.5	2.29	2.40	12.60
UDB22	3	22		1 Red	White	61.8	2.61	2.74	17.20
UDB20	3	20	0.10	1 Blue	Light blue	34.2	3.19	3.35	27.70
UDB18	3	18		1 Yellow	White	21.8	3.71	3.87	39.00
UDB16	3	16	0.12		Light blue	15	4.29	4.46	54.70
UDB14	3	14	0.15		White	11.2	4.86	5.06	72.70
UDB12	3	12			White	6.98	5.98	6.16	110.82
VLB26	4	26	0.08		White	164.8	2.28	2.39	13.10
VLB24	4	24		1 Red	Light blue	117.5	2.52	2.64	16.50
VLB22	4	22	0.10	1 Blue	White	61.8	2.92	3.07	23.70
VLB20	4	20		1 Yellow	Light blue	34.2	3.52	3.70	36.40
VLB18	4	18	0.12	1 Green	White	21.8	4.14	4.31	52.90
VLB16	4	16			Light blue	15	4.75	4.94	71.4





#### EN 2267-008A



#### Single UV Laser printable 260°C Operating Temperature Medium Weight Arc Tracking Resistant Cables

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications.

#### **PRODUCT REFERENCES**

EN 2267-007A

EN 2267-008A +++

#### Main data

☐ Operating temperature : -55°C to +260°C.(Ambiant + Rise)

□ Voltage rating : 600 Volts RMS.□ Operating frequency : up to 2000 Hz.

Dimensions and weights : See table on this data sheet

□ Very Good Resistance to Aircraft Fluids.

□ Mould and Fungus Resistant

□ Arc Tracking Resistant

#### CONSTRUCTION

#### **CONDUCTOR**

① Stranded Conductor:
Nickel Plated High
Strength Copper Alloy
(AWG 26 & 24) or
Nickel Plated Copper
(AWG 22 to 6).

#### **INSULATION**

② FEP/POLYIMIDE/FEP Tape

3 UV PTFE Tape(s)

Wire Standard

Colour: White Except AWG 26 Which is Light Yellow and AWG 22 Which is Light Green.

■ Marking:

Colour : Green (Single core)

White on red and dark green wires ( Multicore )

Wording: EN DM \*\* FRF++

With: \*\* = AWG Wire Size

FR = Country of Origin (FR = France)

F = Manufacturer (F = Filotex®)

++= Year of Manufacturing (ie. 01 = 2001)

#### **Specifications**

prEN2267-008 for Wires

□ prEN4434 for Conductors

□ prEN3475 for Tests & Performances



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				Condu	ctor			Finish	ed Wire		
PART NUMBERS	Code of	Colour	US	Stranding (Nbr x Dia.	1 000C ((00F)		Diar	neter	We	ight	
	Nominal	Code	AWG	of Strands	Mini.	Max.		Mini.	Max.	Nom.	Max.
	Section			in mm)	(mm)	(mm)	(Ohms/Km)	(mm)	(mm)	(g/m)	(g/m)
EN 2267-008A	001	S	26	19 x 0.100	0.45	0.49	160.0	0.85	0.97	2.35	2.45
EN 2267-008A	002	Р	24	19 x 0.120	0.55	0.60	114.0	0.90	1.04	2.93	3.10
EN 2267-008A	004	Р	22	19 x 0.150	0.70	0.75	60.0	1.05	1.19	4.20	4.43
EN 2267-008A	006	Р	20	19 x 0.200	0.94	1.00	33.2	1.38	1.53	7.33	7.73
EN 2267-008A	010	Р	18	19 x 0.250	1.18	1.25	21.1	1.65	1.82	11.06	11.74
EN 2267-008A	012	Р	16	19 x 0.300	1.39	1.50	14.5	2.02	2.22	16.19	16.95
EN 2267-008A	020	Р	14	37 x 0.250	1.68	1.75	10.9	2.29	2.49	21.01	22.65
EN 2267-008A	030	Р	12	37 x 0.320	2.12	2.20	6.8	2.73	2.97	32.72	33.70
EN 2267-008A	051	Р	10	61 x 0.320	2.72	2.83	4.1	3.33	3.61	51.54	53.10
EN 2267-008A	090	Р	8	127 x 0.300	•	4.20	2.3	4.47	4.77	92.29	95.60
EN 2267-008A	140	Р	6	27 x 7 x 0.300	-	5.40	1.58	5.70	6.30	138.10	141.40







## Filotex®

## **Unscreened and Unjacketed multicores 260°C Operating Temperature**

#### **Characteristics**

- □ Voltage rating: 600 Volts RMS.
- □ Operating temperature : -55°C to +260°C.(Ambient. + Rise.)
- ☐ Operating frequency: up to 2000 Hz
- Dimensions and weights : see table on this data sheet
- □ Very Good Resistance to Aircraft Fluids
- □ Mould and Fungus Resistant
- ☐ Arc Tracking Resistant

#### Identification

- Core Colours
- ☐ Marking: see next pages on this data sheet

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications

#### CONSTRUCTION

PRODUCT REFERENCES

EN 2267-007\* +++P

EN 2267-007A

#### **CONDUCTOR**

Stranded Conductor Made up of Nickel Coated High Strength Copper Alloy for AWG 26 and 24.

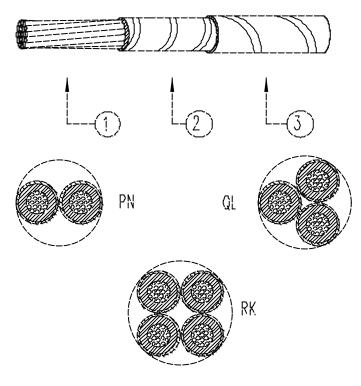
> Stranded Conductor Made up of Nickel Coated Copper for all others AWG

#### <u>INSULATION</u>

- ② FEP / POLYIMIDE / FEP Tape
- 3 PTFE Tape

#### **Specifications**

- □ prEN 4434 for conductors
- □ prEN 2267-007 for cables





DIMENSIONS	AND WE	ІСПІЗ	Metri	c Units	nits )					
						Finished	l Cable			
PART NUMBERS	Code of Nominal	Colour Code	US AWG	Nbr of	Colours	Maximum DC Posistance at 20°C (68°K)		neter nm)		eight /m)
	section			Cores	Cores	(Ohms/Km)	Min.	Max.	Nom.	Max.
EN 2267-007B	001	Р	26	2		165	1.73	1.93	4.79	5.03
EN 2267-007B	002	P	24	2		117	1.84	2.06	5.98	6.31
EN 2267-007B	004	Р	22	2		61.7	2.13	2.37	8.57	9.03
EN 2267-007B	006	Р	20	2		34.1	2.77	3.07	14.95	15.75
EN 2267-007B	010	Р	18	2		21.7	3.36	3.64	22.56	23.93
EN 2267-007B	012	Р	16	2		14.9	4.09	4.44	33.03	34.55
EN 2267-007B	020	Р	14	2	1 Red	11.2	4.57	4.97	42.86	46.16
EN 2267-007B	030	Р	12	2	1 Blue	6.99	5.55	5.92	66.34	68.62
EN 2267-007B	051	Р	10	2	. =	4.22	6.62	7.12	104.65	108.10
EN 2267-007B	090	Р	8	2		2.37	8.90	9.46	188.27	193.92
EN 2267-007B	140	Р	6	2		1.63	11.35	12.05	281.72	290.18
FN 2267-007C	001	Р	26	3		165	1.86	2.08	7.19	7.55
EN 2267-007C	002	Р	24	3		117	1.99	2.22	8.97	9.50
EN 2267-007C	004	Р	22	3		61.7	2.29	2.55	12.85	13.60
EN 2267-007C	006	Р	20	3		34.1	2.99	3.30	22.43	23.70
EN 2267-007C	010	Р	18	3		21.7	3.62	3.92	33.84	35.99
EN 2267-007C	012	Р	16	3	1 Red	14.9	4.41	4.78	49.54	51.96
EN 2267-007C	020	Р	14	3	1 Blue	11.2	4.92	5.35	64.29	68.43
EN 2267-007C	030	Р	12	3	1 Yellow	6.99	5.98	6.37	99.51	103.21
EN 2267-007C	051	Р	10	3		4.22	7.13	7.67	156.98	162.65
EN 2267-007C	090	Р	8	3		2.37	9.59	10.19	282.41	290.88
EN 2267-007C	140	Р	6	3		1.63	12.23	12.98	422.59	435.26
FN 2267-007D	001	Р	26	4		165	2.09	2.33	9.59	10.07
EN 2267-007D	002	Р	24	4		117	2.22	2.49	11.95	12.72
EN 2267-007D	004	Р	22	4		61.7	2.57	2.86	17.14	18.18
EN 2267-007D	006	Р	20	4	4 DI	34.1	3.35	3.70	29.91	31.70
EN 2267-007D	010	Р	18	4	1 Red	21.7	4.06	4.39	45.12	48.18
EN 2267-007D	012	Р	16	4	1 Blue	14.9	4.94	5.36	66.06	69.56
EN 2267-007D	020	Р	14	4	1 Yellow	11.2	5.52	6.00	85.72	92.96
EN 2267-007D	030	Р	12	4	1 Green	6.99	6.70	7.14	132.68	138.18
EN 2267-007D	051	Р	10	4		4.22	7.98	8.60	208.69	217.77
EN 2267-007D	090	Р	8	4		2.37	10.75	11.41	376.54	387.84
EN 2267-007D	140	Р	6	4		1.63	13.70	14.55	563.45	580.35

#### **Core identification Colours:**

Two cores (PN): Red - Blue

☐ Three cores (QL): Red - Blue - Yellow
☐ Four cores (RK): Red - Blue - Yellow - Green
Marking: EN DM A ++ FRF\*\*

(F = Filotex®) ++=AGWF = Manufacturer \*\* = Year of manufacturing (i.e. 99=1999) FR = Country of Origin (FR = France)

#### **Cable identification:**

☐ Two cores : EN 2267-007B (Short designation PN) EN 2267-007C (Short designation QL) EN 2267-007D (Short designation RK) ☐ Three cores : ☐ Four cores :





#### EN 2714-011

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# Screened and Jacketed single and multicores UV Laser printable 260°C Operating Temperature

#### **Characteristics**

- Voltage rating: 600 Volts RMS.
- ☐ Operating temperature : -55°C to +260°C.(Ambient.+ Rise.)
- Operating frequency: up to 2000 Hz
- Dimensions and weights : see table on this data sheet
- □ Very Good Resistance to Aircraft Fluids
- ☐ Mould and Fungus Resistant
- □ Arc Tracking Resistant

#### **Identification**

- □ Core Colours
- □ Jacket Colours and
- Marking: see next pages on this data sheet

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications

#### Specifications

- □ prEN 4434 for conductors
- prEN 2267-007A for cores
- □ prEN 2714-011 for Screened and Jacketed single and multicores

#### CONSTRUCTION

PRODUCT REFERENCES

EN 2267-007A

EN 2267-008A

EN 2714-011\*+++F

#### **CORES**

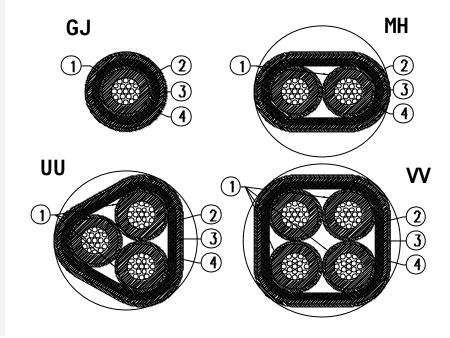
① 1, 2, 3 or 4 Cores EN 2267-007A

#### **SCREEN**

Nickel-plated copper spiral screen

#### **JACKET**

- 3 Polyimide Tape
- UV PTFE Tape





					Saraan	Einighad Wira							
PART NUMBERS	Code of	Colour	US		strands nominal	Col	ours	Maximum DC Resistance at	Dian	neter	We	eight	
	Nominal	Code	AWG	Nbr of	diameter	Cores	Jacket	20°C (68°K)	(mm)		(g/m)		
	section			Cores	(mm)			(Ohms/Km)	Nom.	Max.	Nom.	Max.	
EN 2714-011A	001	F	26	1	0.08	Liaht vellow	White	160	1.40	1.47	5.27	5.63	
EN 2714-011A	002	F	24	1	0.08	White	Light blue	114	1.46	1.53	6.01	6.44	
EN 2714-011A	004	F	22	1	0.08	Light green	White	60	1.61	1.69	7.68	8.19	
EN 2714-011A	006	F	20	1	0.08	White	Light blue	33.2	1.95	2.05	11.71	12.42	
EN 2714-011A	010	F	18	1	0.08	White	White	21.1	2.24	2.33	16.21	17.28	
EN 2714-011A	012	F	16	1	0.10	White	Light blue	14.5	2.66	2.77	23.32	24.57	
EN 2714-011A	020	F	14	1	0.10	White	White	10.9	2.91	3.03	28.90	31.16	
EN 2714-011A	030	F	12	1	0.10	White	White	6.8	3.41	3.49	42.14	43.63	
EN 2714-011A	051	F	10	1	0.12	White	White	4.1	4.07	4.13	64.40	66.65	
FN 2714-011B	001	F	26	2	0.08		White	165	2.31	2.43	9.25	9.78	
EN 2714-011B	002	F	24	2	0.08		Light blue	117	2.43	2.55	10.69	11.35	
EN 2714-011B	004	F	22	2	0.08		White	61.7	2.73	2.87	13.93	14.75	
EN 2714-011B	006	F	20	2	0.10	1 Red	Light blue	34.1	3.45	3.62	22.87	24.10	
EN 2714-011B	010	F	18	2	0.10	1 Blue	White	21.7	4.03	4.19	31.93	33.67	
EN 2714-011B	012	F	16	2	0.12		Light blue	14.9	4.83	5.02	45.84	47.76	
EN 2714-011B	020	F	14	2	0.15		White	11.2	5.39	5.61	59.67	63.64	
EN 2714-011B	030	F	12	2	0.20		White	6.99	6.49	6.65	92.10	94.47	
EN 2714-011B	051	F	10	2	0.20		White	4.22	7.73	7.87	135.04	139.07	
FN 2714-011C	001	F	26	3	0.08		White	165	2.45	2.57	12.41	13.07	
EN 2714-011C	002	F	24	3	0.10		Light blue	117	2.62	2.75	15.38	16.36	
EN 2714-011C	004	F	22	3	0.10	1 Red	White	61.7	2.94	3.09	20.16	21.33	
EN 2714-011C	006	F	20	3	0.12	1 Blue	Light blue	34.1	3.72	3.90	33.05	34.73	
EN 2714-011C	010	F	18	3	0.12	1 Yellow	White	21.7	4.34	4.51	46.43	49.00	
EN 2714-011C	012	F	16	3	0.15		Light blue	14.9	5.22	5.43	67.44	70.38	
EN 2714-011C	020	F	14	3	0.15		White	11.2	5.76	5.99	84.18	89.85	
EN 2714-011C	030	F	12	3	0.20		White	6.99	6.89	7.10	129.32	133.30	
EN 2714-011C	051	F	10	3	0.20		White	4.22	8.23	8.40	192.93	198.55	
FN 2714-011D	001	F	26	4	0.10		White	165	2.73	2.86	16.53	17.45	
EN 2714-011D	002	F	24	4	0.10		Light blue	117	2.87	3.02	19.31	20.46	
EN 2714-011D	004	F	22	4	0.10	1 Red	White	61.7	3.23	3.39	25.53	26.98	
EN 2714-011D	006	F	20	4	0.12	1 Blue	Light blue	34.1	4.09	4.30	42.14	44.37	
EN 2714-011D	010	F	18	4	0.12	1 Yellow	White	21.7	4.79	4.99	59.63	62.90	
EN 2714-011D	012	F	16	4	0.15	1 Green	Light blue	14.9	5.77	6.00	86.71	90.48	
EN 2714-011D	020	F	14	4	0.20		White	11.2	6.47	6.73	114.61	122.32	

#### **Core identification Colours:**

☐ One core (GJ): White except code 001: Light Yellow and code 004: Light Green

Red - Blue ☐ Two cores (MH): Red - Blue - Yellow

Three cores (UU):

Red - Blue - Yellow - Green ☐ Four cores (VV):

Marking: EN DMA ++ FRF\*\*

**Jacket identification:** White except code 002/006/012 : Light Blue

Marking: EN xx ++ FRF\*\*

xx = Short designation (GJ, MH, UU, VV) Manufacturer (F = Filotex<sup>®</sup>) ++ = AwgYear of manufacturing (ie. 99=1999)

FR = Country of Origin (FR = France)





#### EN 2267-010A



## UV Laser printable Wire 260°C Operating Temperature Light Weight Arc Tracking Resistant

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications.

#### PRODUCT REFERENCES

EN 2267-009A

EN 2267-010A +++

#### Main data

☐ Operating temperature : -55°C to +260°C.(Ambiant + Rise)

□ Voltage rating : 600 Volts RMS.□ Operating frequency : up to 2000 Hz.

Dimensions and weights : See table on this data sheet

□ Very Good Resistance to Aircraft Fluids.

Mould and Fungus Resistant

□ Arc Tracking Resistant

#### CONSTRUCTION

#### **CONDUCTOR**

Stranded Conductor : Nickel Plated High Strength Copper Alloy (AWG 26 & 24) or Nickel Plated Copper (AWG 22 to 2).

#### INSULATION

- ② Special Polyimide Tape
- ③ Special UV PTFE Tape(s)

#### **Identification**

■ Wire Standard

Colour: White Except AWG 26 Which is Light Yellow and AWG 22 Which is Light Green.

☐ Marking : EN DR \*\* FRF++

With: \*\* = AWG Wire Size

DR = Short designation

FR = Country of Origin (FR = France)

F = Manufacturer (F = Filotex<sup>®</sup>)

++= Year of Manufacturing (ie. 02=2002)

Colour: Green

#### **Specifications**

- prEN2267-010 product standard
- prEN4434 for Conductors AWG 26 to 6
- □ prEN2083 for Conductors AWG 4 to 2
- prEN3475 for Tests & Performances



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				Conc	Finished Wire							
PART NUMBERS	PART NUMBERS  Code of		US	Stranding (Nbr x Dia.	Diameter		Maximum DC Resistance at 20°C (68°F)	Diameter		Weight		
	Nominal	Code	AWG	of Strands	Mini.	Max.		Mini.	Max.	Nom.	Max.	
	Section			in mm)	(mm)	(mm)	(Ohms/Km)	(mm)	(mm)	(g/m)	(g/m)	
EN 2267-010A	001	S	26	19 x 0.100	0.47	0.49	160.0	0.75	0.84	1.95	2.08	
EN 2267-010A	002	S	24	19 x 0.120	0.555	0.585	114.0	0.85	0.96	2.64	2.72	
EN 2267-010A	004	S	22	19 x 0.150	0.71	0.73	60.0	1.00	1.10	3.89	4.14	
EN 2267-010A	006	S	20	19 x 0.200	0.94	0.97	33.2	1.22	1.34	6.57	6.85	
EN 2267-010A	010	S	18	19 x 0.250	1.19	1.22	21.1	1.46	1.61	10.15	10.43	
EN 2267-010A	012	S	16	19 x 0.300	1.41	1.45	14.5	1.76	1.92	14.05	14.61	
EN 2267-010A	020	S	14	37 x 0.250	1.69	1.73	10.9	2.04	2.24	19.31	19.78	
EN 2267-010A	030	S	12	37 x 0.320	2.13	2.18	6.8	2.50	2.70	29.25	31.33	
EN 2267-010A	051	S	10	61 x 0.320	2.73	2.77	4.1	3.13	3.33	47.37	49.85	
EN 2267-010A	090	S	8	127 x 0.300	3.55	3.85	2.3	4.10	4.40	87.81	90.00	
EN 2267-010A	140	S	6	27 x 7 x 0.300	4.80	5.20	1.58	5.30	5.70	132.41	135.00	
EN 2267-010A	220	S	4	37 x 12 x 0.250	-	6.80	0.97	6.71	7.41	215.15	222.00	
EN 2267-010A	340	S	2	37 x 19 x 0.250	-	8.60	0.61	8.28	9.16	336.10	347.00	







#### EN 2267-009



#### **Multicores DRA**

#### **Characteristics**

- □ Voltage rating : 600 Volts RMS.
- ☐ Operating temperature : -55°C to +260°C.(Ambient.+ Rise.)
- ☐ Operating frequency : up to 2000 Hz
- Dimensions and weights: see table on this data sheet
- □ Very Good Resistance to Aircraft Fluids
- Mould and Fungus Resistant
- ☐ Arc Tracking Resistant

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications

#### **CONSTRUCTION**

**PRODUCT REFERENCES** 

EN 2267-009\* +++P

#### **CORES**

2, 3 or 4 Cores EN 2267-009A

#### **Specifications**

- □ prEN2267-009 Product Standard
- □ prEN2267-002 General Specification

DRB



DRC





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**DRD** 

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**√**exans

					Finished Wire							
PART NUMBERS	Code of	Colour	US AWG	Nbr of Cores	Colours	Maximum DC	Dia	meter	Weight			
	Nominal	Code			Cores	20°C (68°K)	(n	nm)	(g/m)			
	section				0 0.00	(Ohms/Km)	Nom.	Max.	Nom.	Max.		
EN 2267-009B	001	Р	26	2		165	1.56	1.68	3.98	4.28		
EN 2267-009B	002	Р	24	2		117	1.82	1.92	5.39	5.60		
EN 2267-009B	004	Р	22	2		61.7	2.10	2.20	7.94	8.53		
EN 2267-009B	006	Р	20	2		34.1	2.60	2.68	13.40	14.11		
EN 2267-009B	010	Р	18	2		21.7	3.08	3.22	20.71	21.49		
EN 2267-009B	012	Р	16	2	1 Red	14.9	3.66	3.84	28.66	30.10		
EN 2267-009B	020	Р	14	2	1 Blue	11.2	4.32	4.48	39.39	40.75		
EN 2267-009B	030	Р	12	2		6.99	5.14	5.40	59.67	64.54		
EN 2267-009B	051	Р	10	2		4.22	6.42	6.66	96.63	102.69		
EN 2267-009B	090	Р	8	2		2.37	8.60	8.80	179.13	185.40		
EN 2267-009B	140	Р	6	2		1.63	11.10	11.40	270.12	278.10		
EN 2267-009B	220	Р	4	2		1	14.12	14.82	438.91	457.32		
FN 2267-009C	001	Р	26	3		165	1.68	1.81	5.97	6.43		
EN 2267-009C	002	Р	24	3		117	1.96	2.06	8.08	8.40		
EN 2267-009C	004	Р	22	3		61.7	2.26	2.37	11.90	12.79		
EN 2267-009C	006	Р	20	3		34.1	2.80	2.88	20.10	21.17		
EN 2267-009C	010	Р	18	3	1 Red	21.7	3.32	3.46	31.06	32.23		
EN 2267-009C	012	Р	16	3	1 Blue	14.9	3.94	4.13	42.99	45.14		
EN 2267-009C	020	Р	14	3	1 Yellow	11.2	4.65	4.82	59.09	61.12		
EN 2267-009C	030	Р	12	3		6.99	5.54	5.81	89.50	96.81		
EN 2267-009C	051	Р	10	3		4.22	6.92	7.16	144.95	154.04		
EN 2267-009C	090	Р	8	3		2.37	9.27	9.46	268.7	278.10		
EN 2267-009C	140	Р	6	3		1.63	11.96	12.26	405.17	417.15		
EN 2267-009C	220	Р	4	3		1	15.21	15.93	658.36	685.98		
FN 2267-009D	001	Р	26	4		165	1.88	2.02	7.96	8.57		
EN 2267-009D	002	Р	24	4		117	2.20	2.30	10.77	11.21		
EN 2267-009D	004	Р	22	4		61.7	2.53	2.64	15.87	17.06		
EN 2267-009D	006	Р	20	4		34.1	3.14	3.22	26.81	28.22		
EN 2267-009D	010	Р	18	4	1 Red	21.7	3.72	3.86	41.41	42.97		
EN 2267-009D	012	Р	16	4	1 Blue	14.9	4.42	4.61	57.32	60.19		
EN 2267-009D	020	Р	14	4	1 Yellow	11.2	5.21	5.38	78.78	81.49		
EN 2267-009D	030	Р	12	4	1 Green	6.99	6.20	6.48	119.34	129.08		
EN 2267-009D	051	Р	10	4		4.22	7.75	7.99	193.27	205.38		
EN 2267-009D	090	Р	8	4		2.37	10.38	10.56	358.26	370.80		
EN 2267-009D	140	Р	6	4		1.63	13.40	13.68	540.23	556.20		
EN 2267-009D	220	Р	4	4		1	17.04	17.78	877.81	914.64		

#### **Core identification Colours:**

 $\begin{array}{ll} \square & \text{Two cores (DRB)}: & \text{Red - Blue} \\ \square & \text{Three cores (DRC)}: & \text{Red - Blue - Yellow} \end{array}$ 

 $\square$  Four cores (DRD) : Red - Blue - Yellow - Green

Marking: EN DRA \*\* FRF++

Colour : White for Red and Green core.

Green for Blue and Yellow core.

With: \*\* = AWG Wire Size DRA = Short designation

FR = Country of Origin (FR = France)  $F = Manufacturer (F = Filotex^{®})$ 

++= Year of Manufacturing (ie. 03 = 2003)





#### EN 2714-013

## Filotex®

## 260 °C, S/J, Light Weight , UV Arc Tracking Resistant

#### **Characteristics**

- □ Voltage rating: 600 Volts RMS.
- ☐ Operating temperature : -55°C to +260°C.(Ambient. + Rise.)
- ☐ Operating frequency: up to 2000 Hz
- Dimensions and weights : see table on this data sheet
- □ Very Good Resistance to Aircraft Fluids
- Arc Tracking Resistant

#### **PRODUCT REFERENCES**

EN 2267-009A EN 2267-010A

EN 2714-013\* +++F

#### Identification

- □ Core Colours
- □ Jacket Colours and
- Marking: see next pages on this data sheet

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications

#### CONSTRUCTION

#### **CORES**

① 1, 2, 3 or 4 Cores EN 2267-009A

#### **SCREEN**

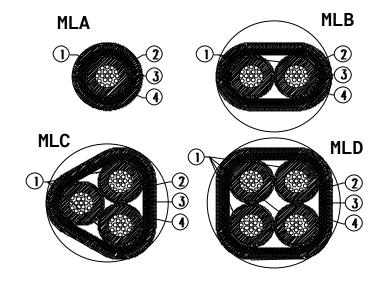
Nickel-plated copper spiral screen

#### **JACKET**

- 3 Polyimide Tape
- UV PTFE Tape

#### **Specifications**

- □ prEN 4434 for conductors
- □ prEN 2267-009 for cores
- □ prEN 2714-013 for Screened and Jacketed single and multicores





					Screen			Finished W	/ire			
PART NUMBERS	Code of	Colour	US		strands nominal	Col	ours	Maximum DC Resistance at	Dian	neter	We	eight
	Nominal	Code	AWG	Nbr of	diameter	Cores	Jacket	20°C (68°K)	(m	ım)	(g	/m)
	section			Cores	(mm)			(Ohms/Km)	Nom.	Max.	Nom.	Max.
EN 2714-013A	001	F	26	1	0.08	Liaht vellow	White	160	1.23	1.31	4.35	4.68
EN 2714-013A	002	F	24	1	0.08	White	Light blue	114	1.36	1.45	5.37	5.76
EN 2714-013A	004	F	22	1	0.08	Light green	White	60	1.50	1.60	6.97	7.51
EN 2714-013A	006	F	20	1	0.08	White	Light blue	33.2	1.75	1.84	10.28	10.77
EN 2714-013A	010	F	18	1	0.08	White	White	21.1	1.99	2.08	14.47	14.97
EN 2714-013A	012	F	16	1	0.10	White	Light blue	14.5	2.32	2.43	19.95	20.97
EN 2714-013A	020	F	14	1	0.10	White	White	10.9	2.65	2.74	26.17	27.03
EN 2714-013A	030	F	12	1	0.10	White	White	6.8	3.06	3.20	37.31	39.70
EN 2714-013A	051	F	10	1	0.12	White	White	4.1	3.74	3.89	58.72	61.94
FN 2714-013B	001	F	26	2	0.08		White	165	2.01	2.13	7.63	8.17
EN 2714-013B	002	F	24	2	0.08		Light blue	117	2.27	2.40	9.58	10.23
EN 2714-013B	004	F	22	2	0.08		White	61.7	2.55	2.70	12.70	13.64
EN 2714-013B	006	F	20	2	0.10	1 Red	Light blue	34.1	3.09	3.22	20.17	21.05
EN 2714-013B	010	F	18	2	0.10	1 Blue	White	21.7	3.57	3.71	28.62	29.52
EN 2714-013B	012	F	16	2	0.12		Light blue	14.9	4.19	4.38	39.30	41.20
EN 2714-013B	020	F	14	2	0.15		White	11.2	4.91	5.04	54.19	55.83
EN 2714-013B	030	F	12	2	0.20		White	6.99	5.83	6.09	81.80	86.79
EN 2714-013B	051	F	10	2	0.20		White	4.22	7.11	7.39	123.94	130.51
FN 2714-013C	001	F	26	3	0.08		White	165	2.13	2.26	10.25	10.94
EN 2714-013C	002	F	24	3	0.10		Light blue	117	2.45	2.59	13.83	14.72
EN 2714-013C	004	F	22	3	0.10	1 Red	White	61.7	2.75	2.91	18.45	19.76
EN 2714-013C	006	F	20	3	0.12	1 Blue	Light blue	34.1	3.33	3.48	29.23	30.44
EN 2714-013C	010	F	18	3	0.12	1 Yellow	White	21.7	3.85	4.00	41.75	42.96
EN 2714-013C	012	F	16	3	0.15		Light blue	14.9	4.53	4.73	57.96	60.67
EN 2714-013C	020	F	14	3	0.15		White	11.2	5.25	5.39	76.59	78.83
EN 2714-013C	030	F	12	3	0.20		White	6.99	6.23	6.50	115.68	122.72
EN 2714-013C	051	F	10	3	0.20		White	4.22	7.61	7.90	177.31	186.69
FN 2714-013D	001	F	26	4	0.10		White	165	2.37	2.51	13.69	14.57
EN 2714-013D	002	F	24	4	0.10	1 Red	Light blue	117	2.69	2.84	17.37	18.47
EN 2714-013D	004	F	22	4	0.10	1 Blue	White	61.7	3.03	3.19	23.4	25.04
EN 2714-013D	006	F	20	4	0.12	1 Yellow	Light blue	34.1	3.67	3.82	37.31	38.81
EN 2714-013D	010	F	18	4	0.12	1 Green	White	21.7	4.25	4.41	53.73	55.22
EN 2714-013D	012	F	16	4	0.15		Light blue	14.9	5.01	5.23	74.58	78.02
EN 2714-013D	020	F	14	4	0.20		White	11.2	5.91	6.06	104.39	107.36

#### **Core identification Colours:**

One core (MLA): White except code 001: Light Yellow code 004: Light Green

□ Two cores (MLB) : Red - Blue
 □ Three cores (MLC) : Red - Blue - Yellow
 □ Four cores (MLD) : Red - Blue - Yellow - Green

Marking: EN DRA ++ FRF\*\*

Colour: White for Red and Green core. Green for Blue and Yellow core.

Jacket identification: White except code 002/006/012: Light Blue

Marking: EN xxx ++ FRF\*\* Colour: Green

xxx = Short designation (MLA, MLB, MLC, MLD) ++ = Awg

FR = Country of Origin (FR = France)

F = Manufacturer (F = Filotex®)

\*\* = Year of manufacturing (ie. 02 = 2002)





#### EN 2714-014

## Filotex®

## 260 °C, S/J, Light Weight, UV Arc Tracking Resistant

#### **Characteristics**

- Voltage rating: 600 Volts RMS.
- ☐ Operating temperature : -55°C to +260°C.(Ambient.+ Rise.)
- □ Operating frequency : up to 2000 Hz
- Dimensions and weights : see table on this data sheet
- $\ \square$  Very Good Resistance to Aircraft Fluids
- □ Arc Tracking Resistant

#### **PRODUCT REFERENCES**

EN 2267-009A EN 2267-010A

EN 2714-014\* +++£

## Identification ☐ Core Colours

**Applications** 

- ☐ Core Colours
- Jacket Colours and

Marking : see next pages on this data sheet

#### - -

Designed for general Purpose Aircraft Wiring Applications

#### CONSTRUCTION

#### **CORES**

- ① Cores EN 2267-009A
- ② Polyimide Tape

#### **SCREEN**

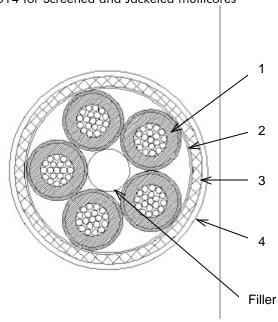
3 Nickel plated copper braid

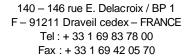
#### **JACKET**

④ Polyimide Tape
UV PTFE Tape

#### **Specifications**

- □ prEN 4434 for conductors
- □ prEN 2267-009 for cores
- prEN 2714-014 for Screened and Jacketed multicores







					Screen	Finished Wire							
PART NUMBERS	Code of	Colour	US		strands nominal	Col	Colours		Dian	neter	Weight		
	Nominal	Code	AWG	Nbr of	diameter	Cores	Cores Jacket		(m	(mm)		(g/m)	
	section			Cores	(mm)			(Ohms/Km)	Nom.	Max.	Nom.	Max.	
EN 2714-014E	010	J	18	5	0.12	1 White	White	21.7	5.03	5.26	73.22	76.0	
EN 2714-014E	012	J	16	5	0.12	1 Blue	Light blue	14.9	5.82	6.10	97.31	102.2	
EN 2714-014E	020	J	14	5	0.12	1 Yellow 1 Red 1 Green	White	11.2	6.71	7.05	128.62	135.0	
EN 2714-014E	030	н	12	5	0.15	1 Black 1 Blue 1 Yellow 1 Red 1 Green	Light blue	6.99	7.94	8.41	191.30	205.6	
EN 2714-014G	002	G	24	7	0.12	1 Red 1 Blue 1 Yellow 1 Green 1 White 1 Black 1 Brown	White	117	3.61	3.80	32.96	34.60	

#### **Core Colours:**

☐ Five cores (MME): (Code H) Black – Blue – Yellow - Red – Green

(Code J) White - Blue - Yellow - Red - Green

☐ Seven cores (MMG), : (Code G) Red - Blue – Yellow – Green – White – Black - Brown

Marking: EN DRA ++ FRF\*\*

Colour: White for Black / Red / Brown and Green core.

Green for Blue / Yellow and White core.

**Jacket Colours:** See table.

Marking: EN xxx ++ FRF\*\*

Colour: Green

xxx = Short designation (MME, MMG)

++ = Awg

 $\begin{array}{lll} FR = & Country \ of \ Origin \ (FR = France) \\ F = & Manufacturer \ & (F = Filotex^{®}) \end{array}$ 

\*\* = Year of manufacturing (ie. 02 = 2002)



## Part 2

# Cables for power transmission



Fax: + 33 1 69 42 05 70









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# Filotex<sup>®</sup>

#### **Polyimide Insulated Aluminium Wire**

#### PRODUCT REFERENCES

BMS 13-35

**BMS** 

#### **Applications**

□ Aircraft.

#### **Specifications**

- BMS 13-35 dated 23 December 1992,
- □ MIL-W-7072.

#### CONSTRUCTION

#### **CONDUCTOR**

① Stranded Aluminium conductor.

#### **INSULATION**

- ② Polyimide Tapes 100 per cent fused together.
- 3 Glass fiber braid (Aromatic Polyimide 200 denier).

#### **Characteristics**

- Voltage rating: 600 Volts RMS,
- Low operating temperature : -65 °C,
- ☐ Temperature rating :+177 °C,
- Dimensions and weight: see table on reverse of this datasheet,
- Dimensions and weight: see table on reverse of this data sheet,
- ☐ Flexible cables, large gauge,
- Low density,
- ☐ Good resistance to aircraft fluids.

Filotex<sup>a</sup> BMS 13-35





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#### PHYSICAL DETAILS OF CONDUCTOR (Metric Units)

US	Nominal			Number		Diameter		Max Resistance		
AWG	Conductor	Core			Layer			(mm)		at 20°C (68°F)
	Area (mm2)		1	2	3	4	5	Min.	Max.	(Ohms/Km).
8	8.4	41 x 0.51						4.37	5.00	3.59
6	14.3	14 x 0.51	8x7x 0.51					5.66	6.30	2.10
4	21.9	37 x 0.51	10x7x0.51					6.86	7.59	1.40
2	34.3	14 x 0.51	8x7x 0.51	14x7x0.51				8.43	9.32	0.88
1	44.7	37 x 0.51	10x7x0.51	16x7x0.51				9.40	10.29	0.70
1/0	52.9	7 x 0.51	6x7x0.51	12x7x0.51	18x7x0.51			10.67	11.56	0.55
2/0	68.2	7 x 0.51	6x7x0.51	12x7x0.51	18x5x0.51	21x7x0.51		12.09	13.08	0.44
3/0	87.2	7 x 0.51	6x7x0.51	12x7x0.51	18x7x0.51	24x7x0.51		13.54	14.53	0.36
4/0	106.8	7 x 0.51	6x7x0.51	12x7x0.51	18x5x0.51	21x7x0.51	27x7x0.51	14.86	15.85	0.28

#### Type I DIMENSIONS AND WEIGHTS (Metric Units)

	US	Outside	Diameter	Maximum Weight
PART NUMBER	AWG	Min. (mm)	Max. (mm)	(Kg/Km)
BMS 13-35 T I C1 G.8	8	4.37	5.00	39.4
BMS 13-35 T I C1 G.6	6	5.66	6.30	58.0
BMS 13-35 T I C1 G.4	4	6.86	7.59	87.8
BMS 13-35 T I C1 G.2	2	8.43	9.32	133.2
BMS 13-35 T I C1 G.1	1	9.40	10.29	168.1
BMS 13-35 T I C1 G.1/0	1/0	10.67	11.56	197.9
BMS 13-35 T I C1 G.2/0	2/0	12.09	13.08	254.5
BMS 13-35 T I C1 G.3/0	3/0	13.54	14.53	337.8
BMS 13-35 T I C1 G.4/0	4/0	14.86	15.85	424.1

#### Type II DIMENSIONS AND WEIGHTS (Metric Units)

	US	Outside	Diameter	Maximum Weight
PART NUMBER	AWG	Min. (mm)	Max. (mm)	(Kg/Km)
BMS 13-35 T II C1 G.8	8	4.57	5.56	44.6
BMS 13-35 T II C1 G.6	6	5.84	6.86	64.0
BMS 13-35 T II C1 G.4	4	7.04	8.15	95.2
BMS 13-35 T II C1 G.2	2	8.64	9.88	142.9
BMS 13-35 T II C1 G.1	1	9.60	10.85	178.6
BMS 13-35 T II C1 G.1/0	1/0	10.85	12.12	211.3
BMS 13-35 T II C1 G.2/0	2/0	12.27	13.64	269.3
BMS 13-35 T II C1 G.3/0	3/0	13.72	15.09	354.1
BMS 13-35 T II C1 G.4/0	4/0	15.04	16.41	441.9







#### Filotex<sup>a</sup> Type ASNE0438 180°C Operating Temperature (up to 200°C Peak)

#### **PRODUCT REFERENCES**

#### ASNE0438 YV

#### **CONSTRUCTION**

#### **CONDUCTOR**

A Stranded Conductor Made of Nickel Plated Aluminium

#### **INSULATION**

3 POLYIMIDE Tapes

#### **EXTERNAL PROTECTION**

An Aromatic Polyamide Braid Impregnated with a Non Flammable Varnish

# Flexible Nickel Plated Aluminium Light Weight Wires Single Core Large Sizes

#### **Applications**

Designed for general Purpose Aircraft Wiring Applications.

#### Main data

☐ Operating temperature : -55°C to +180°C.(Ambiant + Rise)

(up to + 200°C Peak)

□ Voltage rating : 600 Volts RMS.□ Operating frequency : up to 2000 Hz.

☐ Conductor Construction : AECMA EN 3719 Specification ☐ Dimensions and weights : See table on this data sheet

□ Very Good Resistance to Aircraft Fluids.

☐ Mould and Fungus Resistant

#### **Identification**

By Colored Threads Between Polyimide Tapes and External Braid

1, 2 or 3 Threads for Manufacturer : i.e. Black + Grey = Filotex®

2 Treads for Year of

Manufacturing : i.e. Blue + Orange = 2000

☐ Wires Size AWG 06, 03, 01, 00 and 0000 are identified with 1 black carrier in the external Aromatic Polyamide braid

#### **Specifications**

- ☐ AECMA EN 3719 (Conductors)
- ☐ ASN-E0438
- □ NSA 935000
- NSA 307110
- □ AS N°462396/85
- □ FAR 25-869

Filotex<sup>a</sup> ASN-E0438





#### **DIMENSIONS AND WEIGHTS (Metric Units)**

			Conducto	r		Finish	ed Wire or	Cable	
FILOTEX PART NUMBER	US AWG	Stranding	Diam.	Nbr of Strands	Maximum DC Resistance at 20°C (68°F)	Diam	eter	Maximum Weight	
		(m x n x Diam. in mm)	(mm)	Missing Allowed	(Ohms/Km)	(mn	n)	(g/m)	
	(m x r	(III X II X DIGIII: III IIIIII)	(111111)		(Omins/Rin)	Mini.	Max.	(g/111)	
YV-1-06	6	7 x 10 x 0.51	$5.0 \pm 0.25$	0	2.20	5.7	6.3	55	
YV-1-04	4	7 x 15 x 0.51	6.1 ± 0.30	0	1.50	6.8	7.4	77	
YV-1-03	3	7 x 19 x 0.51	$6.8 \pm 0.30$	0	1.18	7.7	8.1	96	
YV-1-02	2	7 x 24 x 0.51	$7.7 \pm 0.30$	2	0.94	8.4	9.0	119	
YV-1-01	1	7 x 30 x 0.51	$8.6 \pm 0.30$	2	0.75	9.3	9.9	149	
YV-1-0A	0	19 x 14 x 0.51	$10.0 \pm 0.30$	3	0.60	10.7	11.5	186	
YV-1-00	00	19 x 18 x 0.51	$11.4 \pm 0.30$	3	0.43	12.1	13.1	240	
YV-1-000 <sup>①</sup>	000	19 x 22 x 0.51	12.7 ± 0.30	4	0.36	13.3	14.5	290	
YV-1-0000 <sup>①</sup>	0000	37 x 15 x 0.51	$14.45 \pm 0.35$	5	0.29	15.1	16.3	370	

 $<sup>\</sup>bigcirc$  = AWG not defined in ASN Specification, values obtained by extension with defined construction







# Filotex<sup>a</sup> Type NSA 935 308 150°C Operating Temperature

PRODUCT REFERENCES

#### NSA935308 YU

#### **CONSTRUCTION**

#### **CONDUCTOR**

A Stranded Conductor Made of Aluminium alloy

#### INSULATION

3 POLYIMIDE Tapes

#### **EXTERNAL PROTECTION**

An Aromatic Polyamide Braid Impregnated with a Non Flammable Varnish

# Flexible Aluminium Alloy conductor Single Core Large Sizes

#### **Applications**

□ Designed for general Purpose Aircraft Wiring Applications.

#### Main data

 $\square$  Operating temperature : -55°C to +150°C.(Ambiant + Rise))

□ Voltage rating : 600 Volts RMS.□ Operating frequency : up to 2000 Hz.

☐ Conductor Construction : AECMA EN 3719 Specification ☐ Dimensions and weights : See table on this data sheet

□ Very Good Resistance to Aircraft Fluids.

Mould and Fungus Resistant

#### **Identification**

By Colored Threads Between Polyimide Tapes and External Braid

Manufacturer colour: Black + Grey = Filotex<sup>®</sup>
Manufacturing year : Blue + Brown = 2003

#### **Specifications**

□ AECMA EN 3719 (Conductors)

□ NSA935308

■ NSA 935000

□ NSA 307110

□ FAR 25-1359

#### Filotex<sup>a</sup> NSA 935308





#### **DIMENSIONS AND WEIGHTS (Metric Units)**

			Conducto	r		Finished Wire or Cable			
FILOTEX PART NUMBER	US AWG	Stranding	Diam.	Nbr of Strands	Maximum DC Resistance at 20°C (68°F)	Diam	eter	Maximum Weight	
	, , , ,	(m x n x Diam. in mm)	(mm)	Missing Allowed	(Ohms/Km)	(mn	n)	(g/m)	
		(III X II X DIGIII: III IIIIII)	(111111)		(Onins) kinj	Mini.	Max.	(9/111)	
YU 12 <sup>®</sup>	12	45 x 0.30	2.4 ±0.20	0	10	3.2	3.45	16.5	
YU 10 <sup>®</sup>	10	27 x 0.51	$2.9 \pm 0.20$	0	5.8	3.6	4.0	26	
YU 8 <sup>①</sup>	8	41 x 0.51	$3.7 \pm 0.20$	0	3.8	4.4	4.8	35	
YU 6 <sup>®</sup>	6	7 x 10 x 0.51	5.0 ± 0.25	0	2.20	5.7	6.3	55	
YU 4	4	7 x 15 x 0.51	6.1 ± 0.30	0	1.50	6.8	7.4	84	
YU 3 <sup>①</sup>	3	7 x 19 x 0.51	$6.8 \pm 0.30$	0	1.18	7.7	8.1	96	
YU 2 <sup>①</sup>	2	7 x 24 x 0.51	$7.7 \pm 0.30$	2	0.94	8.4	9.0	120	
YU 1 <sup>①</sup>	1	7 x 30 x 0.51	$8.6 \pm 0.30$	2	0.75	9.3	9.9	149	
YU 0	0	19 x 14 x 0.51	$10.0 \pm 0.30$	3	0.66	10.7	11.5	199	
YU 00	00	19 x 18 x 0.51	$11.4 \pm 0.30$	3	0.43	12.1	13.1	256	
YU 000	000	19 x 22 x 0.51	$12.7 \pm 0.30$	4	0.36	13.3	14.5	309	
YU 000	0000	37 x 15 x 0.51	$14.45 \pm 0.35$	5	0.29	15.1	16.3	390	

 $<sup>\</sup>textcircled{\tiny } = \mathsf{AWG} \mathsf{\ not\ designed\ in\ NSA\ Specification,\ values\ obtained\ by\ extension\ with\ defined\ construction}$ 



### Part 3

Nacelles and engines: High temperature, fire resistant/proof cables



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#### FX 5400 VG 95218-20 type J Single wire

## **Applications**Designed

Designed for general Purpose Aircraft Wiring Applications.

#### Main data

□ Temperature rating : -55°C /+260°C (Ambiant. + Rise.)

□ Voltage rating : 600 Volts RMS.□ Operating frequency : up to 2000 Hz.

Dimensions and weights : see table on this data sheet.

□ Very good resistance to Aircraft Fluids.

☐ Arc Tracking Resistant

#### **Identification**

□ Colour : White

☐ Markina : VG95218T020J\*\*£ F 0241 ++ DG

\*\* = Dash  $N^{\circ}$ 

 $\mathfrak{L} = \text{Colour} (9 = \text{White})$ 

++ = Year of production (ie. : 00 = 2000)

DG = Cable code according to TR 6058

F 0241 = Manufacturer's Cage code

#### **Specifications**

□ VG 95218-2 (May 1998)

□ VG 95218-20 (Feb 2000)

#### **PRODUCT REFERENCES**

#### FX 5400

FX 5301

FX 5303

FX 5401

FX 5403

#### CONSTRUCTION

#### CONDUCTOR:

① Stranded conductor Made of Nickel Plated Copper.

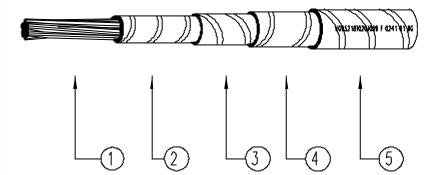
#### **INSULATION:**

② Polyimide tape

3 PTFE tape

④ Glass fiber tape

⑤ PTFE tape



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#### **DIMENSIONS AND WEIGHTS (METRIC UNITS)**

TYPE J : Single core nickel plated copper.

					Conduct	or
VG	NEXANS	Dash	Size	AWG	Stranding	Diameter
Reference	Part Number	Number	Code	(1)	Nbr x Diam of strands	Max.
		(VG)	(NEXAN S)		(mm)	(mm)
VG 95218T020J019	FX 5400-050	01	050	10	73 x 0.30	3.3
VG 95218T020J029	FX 5400-090	02	090	8	127 x 0.30	4.5
VG 95218T020J039	FX 5400-140	03	140	6	27 x 7 x 0.30	5.6
VG 95218T020J049	FX 5400-220	04	220	4	37 x 12 x 0.25	7.3
VG 95218T020J059	FX 5400-340	05	340	2	37 x 19 x 0.25	8.8
VG 95218T020J069	FX 5400-420	06	420	1	37 x 23 x 0.25	10.0
VG 95218T020J079	FX 5400-530	07	530	0	37 x 29 x 0.25	11.3
VG 95218T020J089	FX 5400-680	08	680	00	37 x 37 x 0.25	12.5
VG 95218T020J099	FX 5400-850	09	850	000	48 x 36 x 0.25	14.4
VG 95218T020J109	FX 5400-107	10	107	0000	61 x 36 x 0.25	15.9

(1) = For Information only.

	Finis	shed Wire	
Dian	neter	Weight	Maximum DC
Min.	Max.	Max.	Resistance at 20°C (68°F)
(mm)	(mm)	(g/m)	(Ohms/Km)
4.1	4.5	64.5	3.9
5.2	5.6	108	2.3
6.3	7.3	160	1.6
8.1	9.3	245	0.97
9.7	10.9	396	0.61
10.6	12.1	470	0.50
11.8	13.4	600	0.40
13.6	14.5	750	0.31
15.6	16.8	950	0.25
17.0	18.4	1200	0.20

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#### **NSA 935131**

# Filotex<sup>®</sup>

# **260°C Operating High Temperature Aircraft wire**

#### **Applications**

☐ Designed for general Purpose Aircraft Wiring Applications.

#### Main data

□ Temperature rating : -55°C /+260°C (Ambiant. + Rise.)

□ Voltage rating : 600 Volts RMS.□ Operating frequency : up to 2000 Hz.

☐ Dimensions and weights : see table on this data sheet.

□ Very good resistance to Aircraft Fluids.

☐ Mould and Fungus Resistant

■ Non flammable

#### **PRODUCT REFERENCES**

NSA 935 131 DG ++

#### **CONSTRUCTION**

#### **CONDUCTOR**

① Stranded conductor Nickel Plated Copper.

#### **INSULATION**

- 2 Polyimide tape
- 3 PTFE tape(s)
- 4 Glass fiber tape
- ⑤ PTFE tape(s)

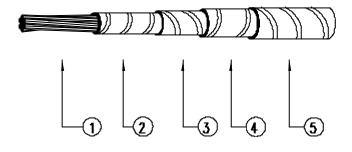
#### **Identification**

Colour: White

#### **Specifications**

□ NSA935131

NSA 935 131 DG



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#### **DIMENSIONS AND WEIGHTS (METRIC UNITS)**

			Conductor	
NEXANS	Nominal	AWG	Stranding	Diameter
Part Number	section		Nbr x Dia. of strands	Max.
	(mm²)		(mm)	(mm)
NSA 935 131 DG 10	5.15	10	73 x 0.30	3.3
NSA 935 131 DG 8	8.98	8	127 x 0.30	4.5
NSA 935 131 DG 6	13.4	6	27 x 7 x 0.30	5.6
NSA 935 131 DG 4	21.8	4	37 x 12 x 0.25	7.3
NSA 935 131 DG 2	34.5	2	37 x 19 x 0.25	8.8
NSA 935 131 DG 1	41.8	1	37 x 23 x 0.25	10.0
NSA 935 131 DG 0	52.7	0	37 x 29 x 0.25	11.3
NSA 935 131 DG 00	67.2	00	37 x 37 x 0.25	12.5
NSA 935 131 DG 000	84.8	000	48 x 36 x 0.25	14.4
NSA 935 131 DG 0000	107.8	0000	61 x 36 x 0.25	15.9

	Finished Wire			
NEXANS	Diameter	Weight	Maximum DC	
Part Number	Min.	Max.	Max.	Resistance at 20°C (68°F)
	(mm)	(mm)	(g/m)	(Ohms/Km)
NSA 935 131 DG 10	4.1	4.5	64.5	3.9
NSA 935 131 DG 8	5.2	5.6	108	2.3
NSA 935 131 DG 6	6.3	7.3	160	1.6
NSA 935 131 DG 4	8.1	9.3	245	0.97
NSA 935 131 DG 2	9.7	10.9	396	0.61
NSA 935 131 DG 1	10.6	12.1	470	0.50
NSA 935 131 DG 0	11.8	13.4	600	0.40
NSA 935 131 DG 00	13.6	14.5	750	0.31
NSA 935 131 DG 000	15.6	16.8	950	0.25
NSA 935 131 DG 0000	17.0	18.4	1200	0.20

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# Filotex<sup>®</sup>

#### **High Temperature Aircraft Wire**

#### **Applications**

☐ Designed for general purpose aircraft wiring where exposure to thermal changes and corrosive fluids is normal.

#### **PRODUCT REFERENCES**

BMS 13-58 T1 BMS 13-58 T5

BMS 13-58 T2 to T9

#### Main data

□ Voltage/Frequency Rating : 600 Volts RMS/2000 Hz Max.

☐ Operating Temperature : -65°C (-85°F) to +260°C (+500°F)

Dimensions and weights : See Tables on This Data Sheet.

□ Abrasion resistant

☐ Resistant to aircraft fluids

☐ Good mechanical and electrical performances

#### **CONSTRUCTION**

#### **CONDUCTOR**

①-Nickel coated Copper Conductor (Type 1) -Nickel coated copper alloy (Type 5)

#### <u>INSULATION</u>

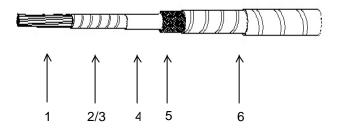
- ② PTFE tape
- 3 Polyimide tape
- PTFE coated glass tape (AWG 8 to 0000 only)
- ⑤ PTFE coated glass braid
- 6 PTFE tapes Jacket

#### **Specification**

☐ BMS 13-58 QPL

#### **Product range**

- ☐ Shielded and jacketed T3, T7, T9 cables are available upon request
- ☐ Shielded T2, T6 cables are available upon request
- ☐ Jacketed T4, T8 cables are available upon request





#### **DIMENSIONS AND WEIGHTS (METRIC UNITS)**

TYPE 1

		Condu	ıctor			Fi	nished Wire		
FILOTEX <sup>®</sup>	US	Stranding	Diam	eter	Resistance at 20°C (68°F)	Diameter		Weight	
PART NUMBER	AWG	(Nbr of Strands x	(mr	n)	(Ohms/Km)	(m	m)	(Kg/	Km)
		Dia.of Strands in mm)	Nom.	Max.	Max.	Min.	Max.	Min.	Max.
BMS 13-58 T1	24	19 x 0.127	0.58	0.66	86	1.75	1.91	6.4	7.23
BMS 13-58 T1	22	19 x 0.16	0.74	0.84	52.5	1.85	2.01	7.89	8.72
BMS 13-58 T1	22	19 x 0.20	0.94	1.04	32.1	2.03	2.18	9.73	11.55
BMS 13-58 T1	18	19 x 0.25	1.17	1.30	22	2.31	2.46	13.91	16.07
BMS 13-58 T1	16	19 x 0.30	1.32	1.47	15.6	2.41	2.62	17.26	19.05
BMS 13-58 T1	14	19 x 0.36	1.65	1.85	9.84	2.77	2.97	24.10	26.93
BMS 13-58 T1	12	37 x 0.32	2.13	2.29	6.5	3.25	3.45	34.60	38.69
BMS 13-58 T1	10	37 x 0.40	2.69	2.90	4.07	3.71	4.01	51.48	57.88
BMS 13-58 T1	8	19 x 7 x 0.287	4.01	4.39	2.28	5.46	5.77	94.04	106.84
BMS 13-58 T1	6	19 x 7 x 0.360	5.03	5.51	1.43	6.38	7.14	138.23	161.75
BMS 13-58 T1	4	19 x 7 x 0.455	6.35	6.96	0.902	7.77	8.64	217.54	254.15
BMS 13-58 T1	2	19 x 35 x 0.254	8.13	8.64	0.581	9.83	10.49	348.04	401.46
BMS 13-58 T1	0	19 x 55 x 0.254	10.03	10.8	0.371	11.79	12.6	510.23	610.53
BMS 13-58 T1	00	19 x 70 x 0.254	11.18	12.07	0.292	12.88	14.15	566.18	765.58
BMS 13-58 T1	000	37 x 45 x 0.254	12.7	13.72	0.233	14.17	15.44	793.10	941.9
BMS 13-58 T1	0000	37 x 57 x 0.254	14.35	15.37	0.184	15.95	17.25	1031.63	1125

#### TYPE 5

		Condu	ıctor		Finished Wire					
FILOTEX®	US	Stranding	Diameter		Resistance at 20°C (68°F)	Diameter		Weight		
PART NUMBER	AWG	(Nbr of Strands x	(mn	n)	(Ohms/Km)	(mm)		(Kg/Km)		
		Dia. of Strands in mm)	Min.	Max.	Max.	Min.	Max.	Min.	Max.	
BMS 13-58 T5	24	19 x 0.127	0.58	0.66	86	1.75	1.91	6.4	7.23	
BMS 13-58 T5	22	19 x 0.16	0.74	0.84	52.5	1.85	2.01	7.89	8.72	
BMS 13-58 T5	22	19 x 0.20	0.94	1.04	32.1	2.03	2.18	10.42	11.55	
BMS 13-58 T5	18	19 x 0.25	1.17	1.30	22	2.31	2.46	15.19	16.07	
BMS 13-58 T5	16	19 x 0.30	1.32	1.47	15.6	2.41	2.62	17.26	19.05	





#### **Type 2100**

# Filotex®

#### Flexible cables for high ambient temperatures

To AIR 4524, B.N.Aé, MIL-W-22759 D & B.M.S. 13-58 These cables are approved by the Air Ministry under letters : N°42707 STA/EQ/E2 (03-12-68)

Registered at the B.N.Aé : N° 6418 401 Operating voltage: 600 volts RMS

Operating temperature: - 50°C to + 250°C

(ambient + rise)

#### **PRODUCT REFERENCES**

#### 2100

1050

#### **Characteristics:**

- ☐ These cables are designed for use at high ambient temperatures up to 289°C at peak,
- Excellent flame resistance,
- Non-flammable,
- ☐ They withstand most solvents.

#### **Technical requirements and control conditions:**

- □ Air4524 Specification of September 1965 Category 250/280°C,
- NF.L 52-125A French Draft Specification Category C, of July 1978 – Standard cables.

#### CONSTRUCTION

# ① CONDUCTOR: Stranded nickel plated copper

- ② Thin wrapped PTFE layer
- ③ INSULATION: Polyimide

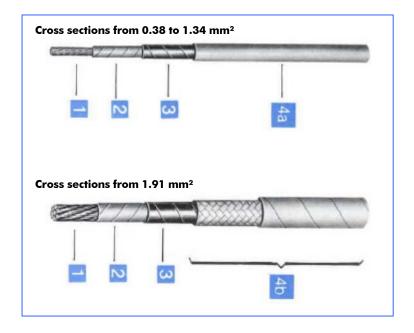
#### **4** OUTER JACKET:

- a) from 0.38 to 1.34 mm<sup>2</sup>: extruded PTFE sheath (high abrasion resistance)
- b) from 1.91 mm<sup>2</sup>: composite glass fiber + PTFE + wrapped and sintered PTFE sheath.

Colour coding: according to AIR0107 (10/1961).

#### Interchangeability:

☐ MIL-W-22759 D Specification – Index 8 A of June 1973 and MS 18001 (up to 12 AWG).





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#### **MECHANICAL & ELECTRICAL VALUES**

			CONDUCT	OR		ORE		ELECTRICAL \	/ALUES
Ref	erences	Gauge	Construction	Nominal diameter	Overall diameter	Wei	ght	D.C. Resistance at 20°C (maxi.)	Current rating
Type	Cross Sectional aera	AWG	n x Ø mm	mm	mm	nomi. g/m	maxi. g/m	W / km	A
2100	0.38	22	12 x 0.20	0.85	$1.90 \pm 0.10$	8.6	9.3	54.50	7
2100	0.60	20	19 x 0.20	1.00	$2.20 \pm 0.10$	12.1	12.4	34.40	11
2100	0.98	18	19 x 0.25	1.25	$2.40 \pm 0.10$	15.8	17	22.00	16
2100	1.34	16	19 x 0.30	1.50	$2.70 \pm 0.10$	19.6	20	15.30	22
2100	1.91	14	27 x 0.30	1.85	$2.95 \pm 0.10$	26.1	27	10.80	32
2100	3.18	12	45 x 0.30	2.40	$3.60 \pm 0.15$	40.8	16.5	6.50	41
2100	5.15	10	73 x 0.30	3.10	$4.20 \pm 0.20$	60.4	65	3.40	55
2100	8.98	8	127 x 0.30	4.00	$5.30 \pm 0.20$	102	108	2.30	75
2100	13.40	6	27 x 7 x 0.30	5.10	$7.00 \pm 0.30$	158	160	1.60	100
2100	21.80	4	37 x 12 x 0.25	6.60	$9.00 \pm 0.30$	237	245	0.97	135
2100	34.50	2	37 x 19 x 0.25	8.10	$10.60 \pm 0.30$	391	396	0.61	181
2100	41.80	1	37 x 23 x 0.25	9.80	$11.80 \pm 0.30$	460	470	0.50	211
2100	52.70	0	37 x 29 x 0.25	10.80	$13.10 \pm 0.30$	580	600	0.40	245
2100	67.20	00	37 x 37 x 0.25	12.40	$14.20 \pm 0.30$	736	750	0.31	283

The currents shown are valid for single wires in air. For current ratings of bundles see Air 7822 Specification.





#### **Type 2102**

# Filotex<sup>®</sup>

#### PRODUCT REFERENCES

2102

#### **CONSTRUCTION**

#### ① CONDUCTOR:

Stranded nickel plated copper or nickel plated copper alloy for 0.21 sq mm size (alloy providing a good mechanical resistance)

- ② Thin wrapped PTFE layer allowing easy stripping
- ③ INSULATION:

Polyimide insulation closely bonded to the PTFE layer

#### **4** OUTER JACKET:

Wrapped and fused PTFE sheath Colour coding: according to AIR0107 (10/1961).

# Flexible cables for high ambient temperatures Lighweight cables

#### To AIR 4524, B.N.Aé

These cables are approved by the Air Ministry under letters:

N°34456 STA/EQ/E2 (03-05-74)

Registered at the B.N.Aé : N° 6418 403

Operating voltage: 600 volts RMS

Operating temperature: - 50°C to + 250°C

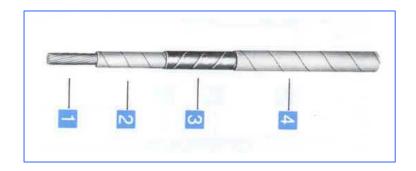
(ambient + rise)

#### Characteristics:

- ☐ These cables may be used at high ambient temperatures, up to 280°C at peak,
- □ Excellent flame resistance,
- Non-flammable,
- They withstand most solvents.

#### **Technical requirements and control conditions:**

- □ Air4524 Specification Category 250/280°C,
- NF.L 52-125A French Draft Specification Category C Lightweight cables.



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#### **MECHANICAL & ELECTRICAL VALUES**

			CON	CONDUCTOR				ELECTRICAL VALUES		
		Gauge	Construction	Nominal diameter	Tensile Strength	Overall diameter	Average Weight	D.C. Resistan ce at 20°C (maxi.)	Current rating	
Туре	Cross Sectional aera	AWG	n x Ø mm	mm	daN	mm	g/m	W / km	Α	
2102	0.21	24	19 x 0.12 N.P.All.	0.58	7	$1.40 \pm 0.10$	5.0	112.3	4	
2102	0.38	22	12 x 0.20 N.P.C.	0.77	8	$1.60 \pm 0.10$	7.1	54.5	7	
2102	0.60	20	19 x 0.20 N.P.C.	0.97	16	$1.80 \pm 0.10$	9.2	34.4	11	
2102	0.93	18	19 x 0.25 N.P.C.	1.21	> 20	$2.05 \pm 0.10$	13.0	22.0	16	
2102	1.34	16	19 x 0.30 N.P.C.	1.45	> 20	$2.30 \pm 0.10$	17.5	15.3	22	
2102	1.91	14	27 x 0.30 N.P.C.	1.74	> 20	$2.70 \pm 0.15$	24.8	10.8	32	
2102	3.18	12	45 x 0.30 N.P.C.	2.25	> 20	$3.25 \pm 0.15$	38.2	6.4	41	

The currents shown are valid for single wires in air. For current ratings of bundles see Air 7822 Specification. N.P.All. = nickel plated annealed copper alloy – N.P.C. = nickel plated annealed electrolytic copper

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#### **Type 2103**

# Filotex<sup>®</sup>

#### Flexible cables for high ambient temperatures

To AIR 4524, B.N.Aé, MIL-W-22759B

These cables are approved by the Air Ministry under letters :  $N^{\circ}34672$  STA/EQ/E3 (25-05-77) for cross-section from 0.38 mm<sup>2</sup> to 107.80 mm<sup>2</sup>

 $N^{\circ}34672~STA/EQ/E3~(22-12-77)~for~cross-section~0.21~mm^{2}$ 

Registered at the B.N.Aé : N° 6418 404 A

Operating voltage: 600 volts RMS

Operating temperature: - 90°C to + 260°C

(ambient + rise)

#### PRODUCT REFERENCES

2103

#### **Characteristics:**

- ☐ These cables may be used at high ambient temperatures, up to 300°C at peak,
- □ Vital circuits: they withstand overloads for 15 seconds to 2 minutes (870°C to 1040°C) according to MIL-W-7139 B Standard,
- Non-flammable,
- □ Excellent soldering resistance,
- Good abrasion resistance,
- They withstand most solvents.

#### CONSTRUCTION

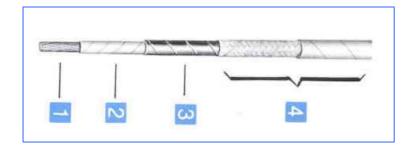
#### ① CONDUCTOR:

Stranded nickel plated copper or nickel plated copper alloy for 0.21 sq mm size (alloy providing a high mechanical resistance)

- ② Thin PTFE layer
- ③ INSULATION: Polyimide insulation
- **4** PROTECTIVE INSULATION:
- PTFE + glass fiber tape coated with PTFE,
- wrapped PTFE finish sheath These tapes are intimately bonded to each other.

#### Technical requirements and control conditions:

- □ Air4524 Specification Category 250/280°C,
- □ NF.L 52-125A French Draft Specification (high temperature cable),
- MIL-W-22759 B Specification Class 2 (Nickel-plated copper conductor).





#### **MECHANICAL & ELECTRICAL VALUES**

			CONDU	JCTOR		COR	E	ELECTI VAL	
Refe	erences	Gauge	Construction	Nominal diameter	Tensile Strength	Overall diameter (max.)	Avera geWei ght	D.C. Resistan ce at 20°C (maxi.)	Current rating
Туре	Cross Sectional aera	AWG	n x Ø mm	mm	daN	mm	g/m	W / km	Α
2103	0.21	24	19 x 0.12 N.P.All.	0.65	7	1.80	5.60	112.30	4
2103	0.38	22	12 x 0.20 N.P.C.	0.85	8	1.95	7	54.50	7
2103	0.60	20	19 x 0.20 N.P.C.	1.03	16	2.10	9.40	34.40	11
2103	0.93	18	19 x 0.25 N.P.C.	1.28	> 20	2.20	13	22.00	16
2103	1.34	16	19 x 0.30 N.P.C.	1.53	> 20	2.80	18	15.30	22
2103	1.91	14	27 x 0.30 N.P.C.	1.87	> 20	3.20	25	10.80	32
2103	3.18	12	45 x 0.30 N.P.C.	2.40	> 20	3.70	38.5	6.40	41
2103	5.15	10	73 x 0.30 N.P.C.	3.10	> 20	4.35	60	3.98	55
2103	8.98	8	127 x 0.30 N.P.C.	4.20	> 20	5.55	101	2.29	75
2103	13.40	6	27 x 7 x 0.30 N.P.C.	5.60	> 20	7.30	148	1.58	100
2103	21.80	4	37 x 12 x 0.25 N.P.C.	7.30	> 20	9.30	227	0.97	135
2103	34.50	2	37 x 19 x 0.25 N.P.C.	8.80	> 20	10.90	367	0.61	181
2103	41.80	1	37 x 23 x 0.25 N.P.C.	9.80	> 20	12.10	430	0.50	211
2103	52.70	0	37 x 29 x 0.25 N.P.C.	10.80	> 20	13.40	540	0.40	245
2103	67.20	00	37 x 37 x 0.25 N.P.C.	12.40	> 20	14.50	675	0.31	283
2103	84.80	000	48 x 36 x 0.25 N.P.C.	13.80	> 20	16.90	965	0.25	328
2103	107.80	0000	61 x 36 x 0.25 N.P.C.	15.80	> 20	18.70	1150	0.19	380

The currents shown are valid for single wires in air. For current ratings of bundles see Air 7822 Specification. N.P.All. = nickel plated annealed copper alloy – N.P.C. = nickel plated annealed electrolytic copper

Colour coding: according to AIR0107 A Specification (10/1961). Other colour codings on request (stripes or printed identification).



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#### **Type 1050**

# Filotex<sup>®</sup>

#### Screened cables for high ambient temperatures

To AIR 4524, B.N.Aé, MIL-W-22759 D & B.M.S. 13-58 Operating voltage: 600 volts RMS Operating temperature: - 50°C to + 250°C (ambient + rise)

#### PRODUCT REFERENCES

1050

2100

#### CONSTRUCTION

1,2 or 3 cores, Type 2100 covered with:

- ① A braided screen made up of nickel plated copper
- ② A Polyimide sheath
- ③ A wrapped and sintered PTFE sheath

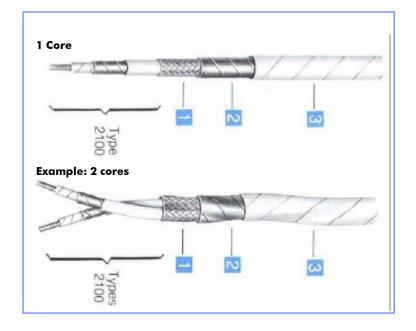
#### **Characteristics:**

Same as 2100 cores. Moreover, the overall polyimide and PTFE sheaths provide the following advantages:

- Very good electrical insulation of the screen,
- Very efficient protection of the screen against oxidation and corrosion,
- □ Easy fitting of the cable,
- Good mechanical protection of the screen,
- Safer handling.

#### Technical requirements and control conditions:

- □ Cores: see data sheet on type '2100',
- Screen: MIL-7078 of August 1971,
- □ Coding: AIR 0107 A Specification of October 1961 and Note N°348/SIB distributed under N°5927/STT/SIB of May 1961.





#### **MECHANICAL & ELECTRICAL VALUES**

				2100	CORES		SCREEN AND PROTECTION					
	Referen	ces	Gauge	Construction	Overall diameter of the core	Colour of cores	Screen strands	PTFE outer sheath	Overall diameter (max.)	Average weight		
Туре	Nb. cores	Cross Sectional aera	AWG	n x Ø mm	mm		Ømm	Colour	mm	g/m		
1050	1	0.38	22	12 x 0.20 NPC	1.90	White	12/100	White	3.2	20.8		
1050	1	0.60	20	19 x 0.20 NPC	2.20	Light blue	12/100	Blue	3.5	25.9		
1050	1	0.93	18	19 x 0.25 NPC	2.40	White	12/100	White	3.8	30.8		
1050	1	1.34	16	19 x 0.30 NPC	2.70	Light blue	12/100	Blue	4.1	36.3		
1050	1	1.91	14	27 x 0.30 NPC	2.95	White	12/100	White	4.4	44.3		
1050	2	0.38	22	12 x 0.20 NPC	1.90	White + blue	12/100	White	5.3	42.2		
1050	2	0.60	20	19 x 0.20 NPC	2.20	Light blue + blue	12/100	Blue	5.9	51.0		
1050	2	0.93	18	19 x 0.25 NPC	2.40	White + blue	12/100	White	6.3	63.2		
1050	2	1.34	16	19 x 0.30 NPC	2.70	Light blue + blue	12/100	Blue	6.9	75.2		
1050	2	1.91	14	27 x 0.30 NPC	2.95	White + blue	12/100	White	7.6	92.6		
1050	3	0.38	22	12 x 0.20 NPC	1.90	White + blue + Yellow	12/100	White	5.6	53.0		
1050	3	0.60	20	19 x 0.20 NPC	2.20	Light blue + blue + Yellow	12/100	Blue	6.2	66.1		
1050	3	0.93	18	19 x 0.25 NPC	2.40	White + blue + Yellow	12/100	White	6.6	82.7		
1050	3	1.34	16	19 x 0.30 NPC	2.70	Light blue + blue + Yellow	12/100	Blue	7.3	98.6		
1050	3	1.91	14	27 x 0.30 NPC	2.95	White + blue + Yellow	12/100	White	8.1	122.3		

The currents shown are valid for single wires in air. For current ratings of bundles see Air 7822 Specification. N.P.C. = Nickel plated copper





#### **Type 1052**

# Filotex<sup>®</sup>

#### Screened cables for high ambient temperatures

Same as 2102 basic cores. Moreover, the overall polyimide and PTFE

Very efficient protection of the screen against oxidation and

To AIR 4524, B.N.Aé Operating voltage: 600 volts RMS Operating temperature: - 50°C to + 250°C (ambient + rise)

sheaths provide the following advantages:

Easy fitting of the cable,

Very good electrical insulation of the screen,

Characteristics:

corrosion,

Safer handling.

#### PRODUCT REFERENCES

CONSTRUCTION

1,2 or 3 cores, Type 2102

① A braided screen made up of

3 A wrapped and sintered PTFE

covered with:

overall sheath

nickel plated copper

② A Polyimide sheath

1052

2102

### **Technical requirements and control conditions:**

- Cores: see data sheet on type '2102',
- Screen: MIL-C 7078 of August 1971,
- □ Coding: AIR 0107 A Specification of October 1961 and Note N°348/SIB distributed under N°5927/STT/SIB of May 1961.

# 1 Core Example: 2 cores

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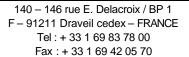
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#### **MECHANICAL & ELECTRICAL VALUES**

				2100 CO	RES		S	CREEN AN	D PROTECTION	ON
ı	Referen	ces	Gauge	Construction	Overall diameter of the core	Colour of cores	Screen strands	PTFE outer sheath	Overall diameter (max.)	Average weight
Туре	Nb. cores	Cross Sectional aera	AWG	n x Ø mm	mm		Ømm	Colour	mm	g/m
1052	1	0.21	24	19 x 0.12 N.P. All.	1.40	Light blue	10/100	Blue	2.6	13.3
1052	1	0.38	22	12 x 0.20 NPC	1.60	White	10/100	White	2.8	16.5
1052	1	0.60	20	19 x 0.20 NPC	1.80	Light blue	10/100	Blue	2.9	19.1
1052	1	0.93	18	19 x 0.25 NPC	2.05	White	10/100	White	3.2	24.0
1052	1	1.34	16	19 x 0.30 NPC	2.30	Light blue	12/100	Blue	3.7	32.2
1052	1	1.91	14	27 x 0.30 NPC	2.70	White	12/100	White	4.0	41.1
1052	2	0.21	24	19 x 0.12 N.P. All.	1.40	Light blue + blue	12/100	Blue	4.2	29.3
1052	2	0.38	22	12 x 0.20 NPC	1.60	White + blue	12/100	White	4.7	36.6
1052	2	0.60	20	19 x 0.20 NPC	1.80	Light blue + blue	12/100	Blue	5.0	42.2
1052	2	0.93	18	19 x 0.25 NPC	2.05	White + blue	12/100	White	5.5	53.0
1052	2	1.34	16	19 x 0.30 NPC	2.30	Light blue + blue	12/100	Blue	6.3	66.7
1052	2	1.91	14	27 x 0.30 NPC	2.70	White + blue	12/100	White	7.0	85.9
1052	3	0.21	24	19 x 0.12 N.P. All.	1.40	Light blue + blue + Yellow	12/100	Blue	4.4	46.2
1052	3	0.38	22	12 x 0.20 NPC	1.60	White + blue + Yellow	12/100	White	5.1	45.6
1052	3	0.60	20	19 x 0.20 NPC	1.80	Light blue + blue + Yellow	12/100	Blue	5.3	53.8
1052	3	0.93	18	19 x 0.25 NPC	2.05	White + blue + Yellow	12/100	White	5.8	68.8
1052	3	1.34	16	19 x 0.30 NPC	2.30	Light blue + blue + Yellow	12/100	Blue	6.7	90.0
1052	3	1.91	14	27 x 0.30 NPC	2.70	White + blue + Yellow	12/100	White	7.6	115.5

N.P. All. = Nickel plated copper alloy N.P.C. = Nickel plated annealed electrolytic copper







#### **Type 1053**

# Filotex®

#### Screened cables for high ambient temperatures

To AIR 4524, B.N.Aé, MIL-W-22759B & MIL-C-7078C Operating voltage: 600 volts RMS Operating temperature: - 90°C to + 260°C (ambient + rise)

#### **PRODUCT REFERENCES**

1053

2103

#### CONSTRUCTION

1,2 or 3 cores, Type 2103 covered with:

- ① A braided screen made up of nickel plated copper (62% minimum coverage)
- ② A Polyimide sheath
- ③ A wrapped and sintered PTFE sheath

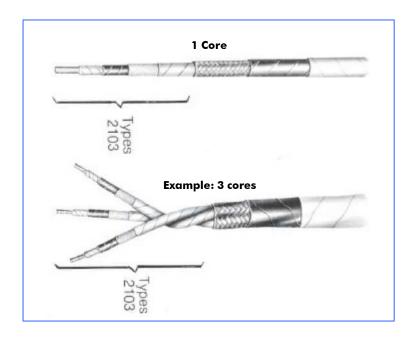
#### **Characteristics:**

Same as 2103 basic cores. Moreover, the polyimide and PTFE protective sheaths provide the following advantages:

- □ Very good electrical insulation of the screen,
- Very efficient protection of the screen against oxidation and corrosion,
- □ Easy fitting of the cable,
- Safer handling.

#### **Technical requirements and control conditions:**

- □ Cores: see data sheet on type '2103',
- Screen: MIL-C-7078 C Specification of August 1971,
- Coding: AIR 0107 A Specification of October 1961 and Note N°348/SIB distributed under N°5927/STT/SIB of May 1961.



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#### **MECHANICAL & ELECTRICAL VALUES**

				2100	CORES			SCREEN	AND PROT	ECTION
ı	Referen	ces	Gauge	Construction	Overall diameter of the core	Colour of cores	Screen strands	PTFE outer sheath	Overall diamete r (max.)	Average weight
Туре	Nb. cores	Cross Sectional aera	AWG	n x Ø mm	mm		Ømm	Colou r	mm	g/m
1053	1	0.38	22	12 x 0.20 NPC	1.80	White	10/100	White	2.9	16.5
1053	1	0.60	20	19 x 0.20 NPC	1.95	Light blue	10/100	Blue	3.0	19.3
1053	1	0.93	18	19 x 0.25 NPC	2.10	White	10/100	White	3.2	24.0
1053	1	1.34	16	19 x 0.30 NPC	2.20	Light blue	12/100	Blue	4.1	32.7
1053	1	1.91	14	27 x 0.30 NPC	2.80	White	12/100	White	4.4	41.3
1053	2	0.38	22	12 x 0.20 NPC	1.80	White + blue	12/100	White	4.9	38.0
1053	2	0.60	20	19 x 0.20 NPC	1.95	Light blue + blue	12/100	Blue	5.2	44.0
1053	2	0.93	18	19 x 0.25 NPC	2.10	White + blue	12/100	White	5.5	56.0
1053	2	1.34	16	19 x 0.30 NPC	2.20	Light blue + blue	12/100	Blue	7.1	70.0
1053	2	1.91	14	27 x 0.30 NPC	2.80	White + blue	12/100	White	7.8	91.0
1053	3	0.38	22	12 x 0.20 NPC	1.80	White + blue + Yellow	12/100	White	5.4	48.0
1053	3	0.60	20	19 x 0.20 NPC	1.95	Light blue + blue + Yellow	12/100	Blue	5.6	57.0
1053	3	0.93	18	19 x 0.25 NPC	2.10	White + blue + Yellow	12/100	White	5.8	73.0
1053	3	1.34	16	19 x 0.30 NPC	2.20	Light blue + blue + Yellow	12/100	Blue	7.5	95.0
1053	3	1.91	14	27 x 0.30 NPC	2.80	White + blue + Yellow	12/100	White	8.4	121.0

The currents shown are valid for single wires in air. For current ratings of bundles see Air 7822 Specification.

This cable type accomodates connectors according to MIL-C-83723 Specification

N.P.C. = Nickel plated annealed electrolytic copper



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# Filotex®

# Filotex<sup>®</sup> Type TMF High Temperature Fire Resistant Wires

#### **High Temperature and Fire Resistant Aero-Engines Wires**

#### PRODUCT REFERENCES



#### CONSTRUCTION

#### **CONDUCTOR**

① 19 Strands of Nickel Clad Copper Conductor.

#### **INSULATION**

- ② Special Fire Resistant Composite Insulation.
- ③ PTFE Tape(s).

#### **Characteristics**

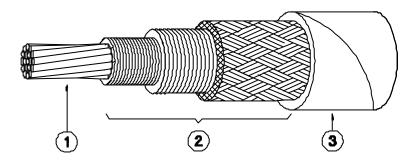
- □ Voltage Rating: 600 Volts RMS.
- □ Low Operating Temperature : -65°C (-85°F)
- ☐ High Operating Temperature: +260°C (+500°F)
- ☐ Operating Frequency : up to 2000 Hz
- Dimensions and weight: see table on this data sheet
- Very Good Fire Résistance : Pass BMS 13-55 and M25038
   Fire Test (Aged and Unaged)
- ☐ Good resistance to aircraft fluids
- Good mechanical and electrical performances

#### **Applications**

☐ Heavy Duty Applications in Aero-engines and High Temperature Areas.

#### **Specification**

- □ MIL W 25038/1 and BMS 13-55 For Fire Tests.
- MILITARY QPL APPROVAL.





#### **DIMENSIONS AND WEIGHTS (Metric Units)**

		Conduct	or		Finished Wire				
FILOTEX	US	Stranding	ls x Diam. (mm)		Resistance at 20°C (68°F)	Diameter (mm)		Weight	
PART NUMBER	AWG	(Nbr of Strands x Diam.			(Ohms/Km)			(Kg/Km)	
		of Strands in mm)			Max.	Nom.	Max.	Max.	
TMF-1-22	22	19 x 0.160	0.78	0.84	77.8	2.54	2.94	14.9	
TMF-1-20	20	19 x 0.203	0.98	1.04	47.9	2.77	3.17	17.9	
TMF-1-18	18	19 x 0.254	1.22	1.32	30.0	3.03	3.43	22.3	
TMF-1-16	16	19 x 0.287	1.40	1.55	22.5	3.23	3.73	28.3	
TMF-1-14	14	19 x 0.361	1.76	1.88	14.8	3.81	4.31	37.2	
TMF-1-12	12	19 x 0.455	2.20	2.36	9.12	4.20	4.70	52.1	
TMF-1-10	10	7 x 7 x 0.360	3.09	3.25	5.51	5.30	5.84	81.8	
TMF-1-8	8	19 x 7 x 0.287	4.05	4.47	3.07	6.50	7.12	127	
TMF-1-6	6	19 x 7 x 0.361	5.09	5.54	1.94	8.10	8.69	189	
TMF-1-4	4	19 x 7 x 0.455	6.42	6.91	1.23	9.70	10.4	286	
TMF-1-2	2	19 x 35 x 0.254	8.01	8.76	0.790	11.7	12.3	433	
TMF-1-1	1	19 x 43 x 0.254	8.88	9.75	0.643	12.6	13.6	516	
TMF-1-01	0	19 x 55 x 0.254	10.04 10.97		0.502	13.6	14.6	618	
TMF-1-02	00	19 x 70 x 0.254	11.33 12.45		0.394	15.1	16.1	774	
TMF-1-03	000	37 x 46 x 0.254	12.82	13.92	0.315	16.8	17.8	964	
TMF-1-04	0000	37 x 57 x 0.254	14.27	15.62	0.253	18.5	19.6	1180	

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# Filotex<sup>®</sup> type TMF-VRA-US TMF-VR-US High Temperature Fire Resistant Cables

**High Temperature and Fire Resistant Aero-Engines Cables** 

#### **PRODUCT REFERENCES**

TMF TMF SJ

#### **CONSTRUCTION**

#### CONDUCTOR

Tilotex® TMF-VRA-US Nickel Clad High Strength Copper Alloy Conductor for AWG 22, 22H and 20

**Filotex® TMF-VR-US**Nickel Clad Copper
Conductor for other AWG

#### **INSULATION**

- Special Fire Resistant Composite Insulation
- ③ PTFE Tape(s)

#### **Characteristics**

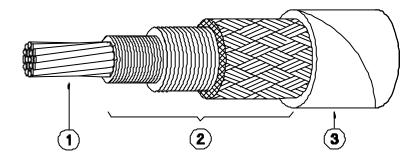
- □ Voltage Rating: 600 Volts RMS.
- □ Low Operating Temperature : -65°C (-85°F)
- ☐ High Operating Temperature: +260°C (+500°F)
- Operating Frequency: Up to 2000 Hz.
- Dimensions and weight: See table on this data sheet
- □ Very Good Fire Résistance : According to MIL W 25038
- □ Good resistance to aircraft fluids
- Good mechanical and electrical performances

#### **Applications**

 Heavy Duty Applications in Aero-engines and High Temperature Areas

#### **Specification**

- □ MIL W 25038/3
- ☐ MILITARY QPL APPROVAL



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#### **DIMENSIONS AND WEIGHTS (Metric Units)**

		Conduct	or		Finished Wire					
FILOTEX	US	Stranding	0.	.D.	Resistance at 20°C (68°F)	Diameter (mm)		Weight		
PART NUMBER	AWG	(Nbr of Strands x Diam.	(m	ım)	(Ohms/Km)			(Kg/Km)		
		of Strands in mm)	Nom.	Max.	Max.	Mini.	Max.	Max.		
TMF-VRA-US-22	22	19 x 0.160	0.78	0.84	77.8	1.02	1.37	6.18		
TMF-VRA-US-22H	22	19 x 0.160	0.78	0.84	77.8	1.40	1.91	8.90		
TMF-VRA-US-20	20	19 x 0.203	0.99	1.04	50.1	1.22	2.11	13.40		
TMF-VR-US-18	18	19 x 0.254	1.22	1.32	30.0	1.65	2.46	15.60		
TMF-VR-US-16	16	19 x 0.287	1.40	1.55	22.5	1.73	2.62	20.10		
TMF-VR-US-14	14	19 x 0.361	1.76	1.88	14.2	2.46	3.12	29.00		
TMF-VR-US-12	12	19 x 0.455	2.23 2.36		9.12	2.54	3.61	41.70		
								_		



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# Filotex® Type FRM-A-US FRM-US



# **High Temperature Fire Resistant Cables Aero Engines, Fire Zone Applications**

#### **PRODUCT REFERENCES**

#### FRM-A-US FRM-US

#### **Applications**

☐ Fire Resistant Cable

#### **Characteristics**

Voltage/Frequency Rating: 600 Volts RMS/2000 Hz Max.

Operating Temperature: -65°C/+260°C (-85°F/+500°F)

□ Dimensions and Weights : See Table on Reverse Side

of this Data Sheet

#### **CONSTRUCTION**

① CONDUCTOR

#### Filotex<sup>a</sup> FRM-A-US

Nickel Clad High Strength Copper Alloy Conductor for AWG 22, 22H and 20

#### Filotex<sup>a</sup> FRM-US

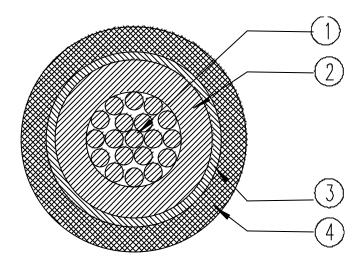
Nickel Clad Copper Conductor for other AWG

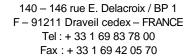
#### **INSULATION**

- ② Inorganic barrier
- 3 Polyimide Tape
- PTFE Tape

#### **Specification**

□ MIL W 25038/3

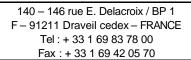






#### **DIMENSIONS AND WEIGHTS (METRIC)**

	Cor	nductors			Finish	ed Wire		
US	Strands	Ο.	D.	Maximum DC			Weight	
				Resistance				
AWG	(No / AWG)	(mm)		(Ohms/Km)		(mm)		(Kg/Km)
		Nom. Max.		at 23°C (73°F)	Min.	Nom.	Max.	Nom.
22	19/34	0.78	0.84	77.8	1.02	1.34	1.37	5.01
22H	19/34	0.78	0.84	77.8	1.40	1.50	1.91	5.82
20	19/32	0.99	1.04	50.1	1.22	1.78	2.11	8.10
18	19/30	1.24	1.32	27.9	1.65	2.02	2.46	11.60
16	19/29	1.40	1.55	21.8	1.73	2.21	2.62	14.62
14	19/27	1.76 1.88		14.2	2.46	2.64	3.12	22.38
12	19/25	2.20	2.36	9.12	2.54	3.08	3.61	33.18







#### M27500A\*\* JF + N 06

# Filotex®

# High Temperature Fire Resistant Shielded and Jacketed Cables

#### PRODUCT REFERENCES

FRM-(A)-US **M27500A\*\* JF + N 06** 

#### CONSTRUCTION

#### **CORES**

Tilotex® FRM-A-US for AWG 22 and 20 Filotex® FRM-US for other AWG

#### **SCREEN**

② Nickel Clad Copper Braided Screen

#### **JACKET**

34 PTFE Tapes

#### **Characteristics**

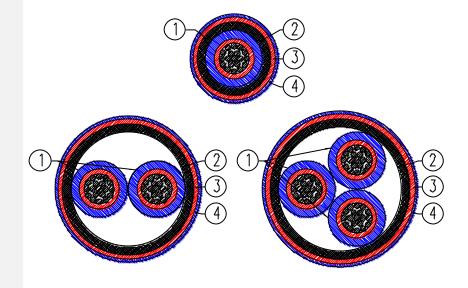
- □ Voltage Rating: 600 Volts RMS.
- □ Low Operating Temperature : -65°C (-85°F)
- ☐ High Operating Temperature : +260°C (+500°F)
- □ Operating Frequency : up to 2000 Hz.
- Dimensions and weight: see table on this data sheet.
- ☐ Good Fire Résistance.
- ☐ Good resistance to aircraft fluids.
- ☐ Good mechanical and electrical performances

#### **Applications**

☐ Fire Resistant Cable

#### **Specification**

- □ MIL W 25038/3
- ☐ MIL DTL 27500



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#### **DIMENSIONS AND WEIGHTS (Metric Units)**

		Number	Sc	reen	F	inished C	able			
	US	of	Strands	O.D.	Resistance at 20°C (68°F)	Diameter		Weight		
PART NUMBERS	AWG	Cores	(mm)	(mm)	of Cores (Ohms/Km)	(m	(mm)		/Km)	
				Nom.	Max.	Nom.	Max.	Nom.	Max.	
M27500A22 JF 1 N 06	22	1	0.10	1.74	77.8	2.38	2.83	13.89	19.13	
M27500A20 JF 1 N 06	20	1	0.13	2.30	50.1	2.94	3.70	21.22	34.05	
M27500A18 JF 1 N 06	18	1	0.13	2.54	28.0	3.18	4.05	26.09	38.86	
M27500A16 JF 1 N 06	16	1	0.13	2.73	21.9	3.37	4.21	30.20	44.62	
M27500A14 JF 1 N 06	14	1	0.13	3.16	14.2	3.80	4.71	40.41	57.36	
M27500A12 JF 1 N 06	12	1	0.13	3.60	9.12	4.24	5.20	53.72	73.91	
M27500A22 JF 2 N 06	22	2	0.13	3.20	79.4	3.84	4.33	25.70	35.60	
M27500A20 JF 2 N 06	20	2	0.13	4.08	51.1	4.72	5.81	36.11	60.09	
M27500A18 JF 2 N 06	18	2	0.13	4.56	28.6	5.20	6.51	45.49	69.19	
M27500A16 JF 2 N 06	16	2	0.13	4.94	22.3	5.58	6.83	53.43	80.48	
M27500A14 JF 2 N 06	14	2	0.13	5.80	14.4	6.44	7.83	73.28	105.23	
M27500A12 JF 2 N 06	12	2	0.13	6.68	9.3	7.32	8.81	99.42	137.61	
M27500A22 JF 3 N 06	22	3	0.13	3.41	79.4	4.05	4.55	33.25	44.91	
M27500A20 JF 3 N 06	20	3	0.13	4.36	51.1	4.99	6.15	47.61	78.39	
M27500A18 JF 3 N 06	18	3	0.13	4.87	28.6	5.51	6.91	61.00	90.51	
M27500A16 JF 3 N 06	16	3	0.13	5.28	22.3	5.92	7.25	72.36	106.74	
M27500A14 JF 3 N 06	14	3	0.13	6.21	14.4	6.85	8.33	100.90	141.67	
M27500A12 JF 3 N 06	12	3	0.13	7.16	9.3	7.80	9.39	138.85	188.08	







#### M27500A\*\* JF + N 24

# Filotex®

# High Temperature Fire Resistant Shielded and Jacketed Cables

#### **PRODUCT REFERENCES**

FRM-(A)-US **M27500A\*\* JF + N 24** 

#### CONSTRUCTION

#### **CORES**

Tilotex<sup>a</sup> FRM-A-US for AWG 22 and 20 Filotex<sup>a</sup> FRM-US for other AWG

#### **SCREEN**

Nickel Clad Copper Braided Screen

#### **JACKET**

- 3 Polyimide Tape
- ④ UV PTFE Tapes

#### **Characteristics**

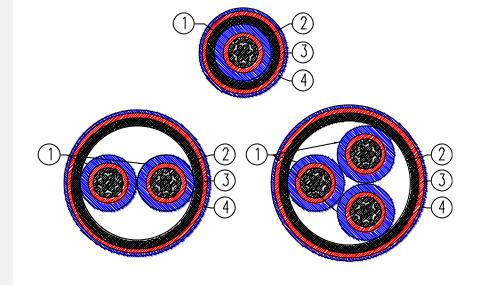
- □ Voltage Rating: 600 Volts RMS.
- □ Low Operating Temperature : -65°C (-85°F)
- ☐ High Operating Temperature: +200°C (+392°F)
- □ Operating Frequency : up to 2000 Hz.
- Dimensions and weight: see table on this data sheet.
- ☐ Good Fire Resistance.
- ☐ Good resistance to aircraft fluids.
- ☐ Good mechanical and electrical performances

#### **Applications**

☐ Fire Resistant Cable

#### **Specification**

- □ MIL W 25038/3
- ☐ MIL DTL 27500





#### **DIMENSIONS AND WEIGHTS (Metric Units)**

		Number	Sc	reen	F	inished C	able		
	US	of	Strands	O.D.	Resistance at 20°C (68°F)	Dian	neter	Weight	
PART NUMBERS	AWG	Cores	(mm)	(mm)	of Cores (Ohms/Km)	(mm)		(Kg/Km)	
				Nom.	Max.	Nom.	Max.	Nom.	Max.
M27500A22 JF 1 N 24	22	1	0.10	1.74	77.8	2.11	2.42	11.44	14.84
M27500A20 JF 1 N 24	20	1	0.13	2.30	50.1	2.67	3.30	18.20	28.28
M27500A18 JF 1 N 24	18	1	0.13	2.54	28.0	2.91	3.65	22.82	32.50
M27500A16 JF 1 N 24	16	1	0.13	2.73	21.9	3.10	3.81	26.73	37.99
M27500A14 JF 1 N 24	14	1	0.13	3.16	14.2	3.53	4.31	36.50	49.89
M27500A12 JF 1 N 24	12	1	0.13	3.60	9.12	3.97	4.80	49.36	65.67
M27500A22 JF 2 N 24	22	2	0.13	3.20	79.4	3.57	3.93	22.25	29.23
M27500A20 JF 2 N 24	20	2	0.13	4.08	51.1	4.45	5.41	31.92	51.47
M27500A18 JF 2 N 24	18	2	0.13	4.56	28.6	4.93	6.11	40.90	59.51
M27500A16 JF 2 N 24	16	2	0.13	4.94	22.3	5.31	6.43	48.51	70.31
M27500A14 JF 2 N 24	14	2	0.13	5.80	14.4	6.17	7.43	67.64	93.54
M27500A12 JF 2 N 24	12	2	0.13	6.68	9.3	7.05	8.41	93.04	124.43
M27500A22 JF 3 N 24	22	3	0.13	3.41	79.4	3.78	4.15	29.36	37.85
M27500A20 JF 3 N 24	20	3	0.13	4.36	51.1	4.73	5.75	42.83	68.70
M27500A18 JF 3 N 24	18	3	0.13	4.87	28.6	5.25	6.50	55.74	79.58
M27500A16 JF 3 N 24	16	3	0.13	5.28	22.3	5.65	6.85	66.72	95.25
M27500A14 JF 3 N 24	14	3	0.13	6.21	14.4	6.58	7.93	94.39	128.40
M27500A12 JF 3 N 24	12	3	0.13	7.16	9.3	7.53	8.99	131.47	173.07





# **BMS 13-55 Type 2 Class 1**



# **High Temperature and Fire Resistant Aero-Engines Wires**

# **PRODUCT REFERENCES**

# BMS 13-55 T2

BMS 13-55 T1

# CONSTRUCTION

## **CONDUCTOR**

① Made up with Nickel. Clad high strength. Copper alloy strands.

### INSULATION

- ② Impregnated inorganic fiber.
- 3 TFE coated glass braid.
- 4 PTFE tapes (fused)

#### **Characteristics**

- □ Voltage rating: 600 Volts RMS,
- ☐ Low operating temperature : -65 °C (-85 °F),
- ☐ High operating temperature : +260 °C (+500 °F),
- ☐ Operating frequency: up to 2000 Hz,
- Dimensions and weight: see table on reverse of this datasheet,
- Usery good fire resistance: BMS 13-55 fire test (aged and unaged),
- Very good mechanical and electrical performances,
- ☐ Good resistance to aircraft fluids.

# **Identification**

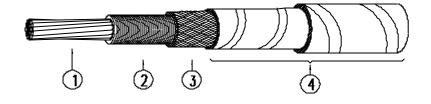
- □ Colors : White with Red Stripe.
- Marking: \* W55/2/1-\*\* F0241\* = specification revision letter
  - \*\* = AWG

### **Application**

☐ Heavy-duty applications in Aero-engines and High Temperature Areas.

# **Specification**

□ BMS 13-55.



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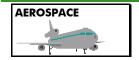


# **DIMENSIONS AND WEIGHTS** (Metric Units)

		Condu	uctor				Finishe	ed Wire		
FILOTEX®	US	Stranding	Diar	meter	Nominal	Resistance	Diameter		We	eight
		(Nbr of Strands			Aera	at 20°C (68°F)				
PART NUMBER	AWG	X Diam.	(m	nm)		(Ohms/Km.)	(m	nm)	(Kg,	/Km)
		of Strands in mm.)	Nom.	Max.	(mm²)	Max.	Min	Max.	Min	Max.
BMS 13-55 T2 C1 G22	22	19 x 0.16	0.79	0.84	0.38	80.81	2.08	2.29	8.97	9.91
BMS 13-55 T2 C1 G20	20	19 x 0.20	0.99	1.04	0.62	50.10	2.24	2.46	11.32	12.51
BMS 13-55 T2 C1 G18	18	19 x 0.25	1.24	1.32	0.96	32.05	2.44	2.67	14.88	16.44
BMS 13-55 T2 C1 G16	16	19 x 0.287	1.40	1.55	1.23	25.13	2.62	2.84	17.96	19.85
BMS 13-55 T2 C1 G14	14	19 x 0.36	1.78	1.88	1.94	16.31	2.97	3.25	25.79	28.51
BMS 13-55 T2 C1 G12	12	19 x 0.45	2.24	2.36	3.09	10.50	3.78	4.17	41.14	45.47
BMS 13-55 T2 C1 G10	10	7 x 7 x 0.36	3.10	3.25	5.02	6.33	4.65	5.08	63.60	70.29

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# Filotexâ Type ASNE0437



# **High Temperature Fire Resistant Cables**

# **Applications**

 Heavy Duty Applications in Aero-engines and High Temperature Areas

### PRODUCT REFERENCES

ASNE0437 DL ++

#### Main data

□ Voltage rating : 600 Volts RMS.

□ Operating temperature : -55°C to +260°C (Ambiant + Rise)

Operating frequency : Up to 2000 Hz.

□ Dimensions and weights : See table on this data sheet.□ Very Good Fire Resistance : According to MIL W 25038

□ Good resistance to aircraft fluids.

Good mechanical and electrical performances.

#### CONSTRUCTION

# CONDUCTOR

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 Stranded conductor: Nickel Clad High Strength Copper Alloy for size 22. Nickel Clad Copper for other sizes.

# **INSULATION**

② Special Fire Resistant Composite Insulation.

3 PTFE Tape(s).

# **Identification**

□ Wire Standard Colour : White with red stripe

□ Marking:

Colour : Green

Wording : ■ DL++ FRF\*\* ■ DL++

FRF\*\*

++ = AWG Wire Size

FR = Country of origin (FR=France)

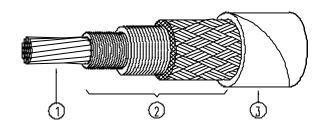
 $F = Manufacturer (F = Filotex^{\hat{a}})$ 

\*\* = Year of manufacturing (ie. 03=2003)

### **Specifications**

□ ASNE0437

ASNE0437 DL





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# **DIMENSIONS AND WEIGHTS (Metric Units)**

		Condu	ıctor		Finished Wire					
PART NUMBERS	US	Stranding	Diameter		Diameter Maximum DC		neter	Weight		
	AWG	(Nbr x Diam.	Nom. Maxi.		Resistance at	Min.	Max.	Nom.	Max.	
		of Strands in mm)	(mm)	(mm)	20°C (Ohms/Km)	(mm)	(mm)	(g/m)	(g/m)	
ASNE0437 DL 22	22	19 x 0.160	0.78	0.84	84.0	1.93	2.11	8.33	9.7	
ASNE0437 DL 20	20	19 x 0.204	0.98	1.04	47.8	2.13	2.36	11.38	13.4	
ASNE0437 DL 18	18	19 x 0.254	1.22	1.32	30.0	2.38	2.61	15.08	17.1	
ASNE0437 DL 16	16	19 x 0.287	1.40	1.55	22.5	2.51	2.97	18.22	21.6	







# **EN 2346-005 DW-DWB-DWC**



# Fireproof Cable Single and Multicore assembly light weight

# **Applications**

☐ Use in the on-board electrical systems of aircraft.

# **PRODUCT REFERENCES**

EN 2346-005A xxx

EN 2346-005B xxx

EN 2346-005C xxx

EN 4608-004A xxx

EN 4608-004B xxx

EN 4608-004C xxx

#### **CONSTRUCTION**

# Conductor

① Stranded conductor:
Nickel clad copper alloy
for AWG 24 and 22.
Nickel clad copper for other
AWG.

#### Insulation

- ② Fire resistant insulation
- 3 Polyimide Tape
- PTFE Tape, UV laser markable (for single core)

### **Electrical Characteristics**

☐ Temperature rating : -65°C /+260°C (Ambiant. + Rise.)

□ Voltage rating : 600 Volts rms□ Operating frequency : up to 2000 Hz.

Dimensions and weights : see table on this data sheet.

 $\label{eq:continuous} \square \quad \text{Fire resistance} \qquad \qquad : > 50 \ \text{k}\Omega.$ 

Very good resistance to Aircraft Fluids.

#### **Identification**

Core identification

Colour: One core: White with a helical red stripe

Two cores: White with a helical red / blue stripe

Three cores : White with a helical red /

blue / yellow stripe

■ Marking

Wording : EN DW ++ FRF\*\* for single core

EN DW A ++ FRF\*\* for multicore core

With : DW = Short designation

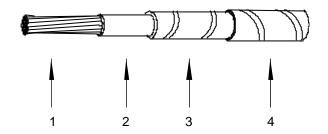
++ = AWG Wire Size

FR = Country of Origin (FR = France)

F = Manufacturer (F = Filotex®)

\*\* = Year of Manufacturing (ie. 03 = 2003)

## Specification: EN2346-005



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					Finished C	Cable	
REFERENCE	No of	Size Code	Gauge (AWG)	DC Resistance at 20°C ( Ohms/Km )		meter im)	Weight ( g/m )
	core	(AECMA)	(۸۷۷)	Max.	Min.	Max.	Max.
EN 2346-005A 002	1	002	24	131.0	1.20	1.65	5.0
EN 2346-005A 004	1	004	22	80.9	1.55	1.80	6.3
EN 2346-005A 006	1	006	20	44.3	1.80	1.97	9.0
EN 2346-005A 010	1	010	18	27.9	2.04	2.23	12.7
EN 2346-005A 012	1	012	16	18.8	2.28	2.50	17.0
EN 2346-005A 020	1	020	14	13.9	2.53	2.75	22.0
EN 2346-005B 004	2	004	22	82.5	-	3.60	12.98
EN 2346-005B 006	2	006	20	45.2	-	3.94	18.54
EN 2346-005B 010	2	010	18	28.5	-	4.46	26.16
EN 2346-005B 012	2	012	16	19.2	-	5.00	35.02
EN 2346-005B 020	2	020	14	14.2	-	5.80	45.32
EN 2346-005C 004	3	004	22	82.5	-	3.87	19.47
EN 2346-005C 006	3	006	20	45.2	-	4.23	27.81
EN 2346-005C 010	3	010	18	28.5	-	4.79	39.24
EN 2346-005C 012	3	012	16	19.2	-	5.37	52.53
EN 2346-005C 020	3	020	14	14.2	-	5.91	67.98

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# Filotex<sup>®</sup>

# **Fireproof Cable** Single and Multi-cores Screened and Jacketed

# **Applications**

☐ Use in the onboard electrical systems of aircraft.

### PRODUCT REFERENCES

# EN 4608-004A xxx

EN 4608-004B xxx EN 4608-004C xxx EN 2346-005

#### CONSTRUCTION

### **CORE**

Conductor

① Stranded conductor: Nickel clad copper alloy for AWG 22. Nickel clad copper for other AWG.

#### Insulation

- ② Fireproof insulation
- 3 Polyimide Tape
- 4 PTFE Tape

# **SCREEN**

S Nickel plated copper braid

## **JACKET**

**6** UV PTFE Tape(s)

#### **Electrical Characteristics**

Temperature rating : -65°C /+260°C (Ambiant. + Rise.)

: 600 Volts rms Voltage Rating : up to 2000 Hz. Operating frequency

□ Dimensions and weights : see table on this data sheet.

 $: > 50 \text{ k}\Omega.$ ☐ Fire resistance Very good resistance to Aircraft Fluids.

### **Identification**

Core identification

Colours: Single core: White with a helical red stripe

Two cores: White with a helical red / blue stripe

Three cores: White with a helical red / blue / yellow stripe

Wording: EN DW A ++ FRF\*\* Marking

☐ Jacket identification colour: White with narrow red stripe

Wording: EN £££ ++ FRF\*\* Marking

With: £££ = (single core : GPA, two cores : GPB, three cores : GPC)

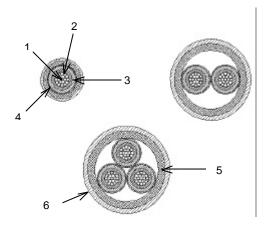
++ = AWG Wire Size

FR = Country of Origin (FR = France)

 $F = Manufacturer (F = Filotex^{(B)})$ 

\*\* = Year of Manufacturing (ie. 03 = 2003)

Specification: EN 4608-004



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					Finished Cab	le	
REFERENCE	Size Code	AWG	Nbr of cores	Nom. Diameter of shield strands	DC Resistance at 20°C	Diameter	Weight
				(mm)	(Ohms/Km) Max.	(mm) Max.	(g/m) Max.
EN 4608-004A 004	004	22	1	0.10	80.9	2.75	15.96
EN 4608-004A 006	006	20	1	0.10	44.3	2.93	19.50
EN 4608-004A 010	010	18	1	0.12	27.9	3.26	25.95
EN 4608-004A 012	012	16	1	0.12	18.8	3.50	31.67
EN 4608-004A 020	020	14	1	0.12	13.9	3.75	37.59
EN 4608-004B 004	004	22	2	0.12	82.5	4.40	29.47
EN 4608-004B 006	006	20	2	0.12	45.2	4.80	36.50
EN 4608-004B 010	010	18	2	0.12	28.5	5.30	46.20
EN 4608-004B 012	012	16	2	0.12	19.2	5.80	56.80
EN 4608-004B 020	020	14	2	0.12	14.2	6.30	69.00
EN 4608-004C 004	004	22	3	0.12	82.5	4.70	38.65
EN 4608-004C 006	006	20	3	0.12	45.2	5.10	48.80
EN 4608-004C 010	010	18	3	0.12	28.5	5.60	62.70
EN 4608-004C 012	012	16	3	0.12	19.2	6.20	78.00
EN 4608-004C 020	020	14	3	0.15	14.2	6.80	100.70







# **ESW 1100-010-XXX**

# Filotex®

# Filter Effect Cable High Temperature Wire

# **Applications**

☐ Aero engine services.

# **Electrical Characteristics**

☐ Temperature rating: -65°C /+260°C (Ambiant. + Rise.)

□ Voltage Rating: 200 Volts rms

Dimensions and weights: see table on this data sheet.

→ Attenuation at 20°C and 260°C:

Passband: 10 MHz 0.3 dB/m (Max.) Stopband: 18 GHz 100 dB/m (Min.)

□ Very good resistance to Aircraft Fluids.

### PRODUCT REFERENCES

# ESW 1100-010-xxx

ESW 1101 ESW 1102

#### CONSTRUCTION

# **CONDUCTOR**

① Stranded conductor:

Nickel plated high strength copper alloy

004 : 19 x 0.15 mm 006 : 19 x 0.20 mm

### **INSULATION**

2 Polyimide Tape

3 Filter Layer

PTFE Tape

#### **Identification**

□ Colour of wire : Dark Blue

■ Marking

Colour: White

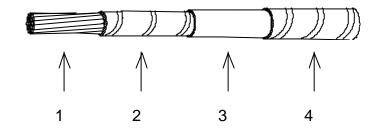
Wording: ESW1100-010-xxx-FX-FF-\*\*

xxx = Size Code

\*\* = Year of manufacturing.

# Specification: ESW 1100-010-XXX

FILOTEX® ESW 1100-010-xxx



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				Conduc	for	Fir	Finished Cable			
REFERENCE	Size	Construction	Diameter		DC Resistance at 20°C	Dian	neter	Weight		
	Code	( n x mm )	( mm )		( Ohms/Km )	(mm)		( g/m )		
			Min.	Max.	Max.	Min.	Max.	Max.		
ESW1100-010-004	004	19 x 0.15	0.72	0.80	59.7	1.0	1.5	6.00		
ESW1100-010-006	006	19 x 0.20	0.94	1.04	35.2	1.3	1.8	9.00		

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# ESW 1101-++-XXX

# Filotex®

# Filter Effect Cable Unscreened and Unjacketed multicores

# **Applications**

□ Aero engine services.

**Electrical Characteristics** 

# **PRODUCT REFERENCES**

# ESW 1101-021-xxx

ESW 1101-031-xxx ESW 1101-041-xxx ESW 1100 ESW 1102

#### □ Temperatore raini

☐ Temperature rating: -65°C /+260°C (Ambiant. + Rise.)

□ Voltage Rating: 200 Volts rms

Dimensions and weights: see table on this data sheet.

☐ Attenuation at 20°C and 260°C:

Passband: 10 MHz 0.3 dB/m (Max.) Stopband: 18 GHz 100 dB/m (Min.)

□ Very good resistance to Aircraft Fluids.

#### CONSTRUCTION

# **CONDUCTOR**

① Stranded conductor:

Nickel plated high strength copper alloy

004 : 19 x 0.15 mm 006 : 19 x 0.20 mm

#### CONSTRUCTION

### **INSULATION**

2 Polyimide Tape

3 Filter Layer

4 PTFE Tape

## **ASSEMBLY**

2, 3 or 4 cores

#### Identification

□ Core identification Colours : Dark Blue

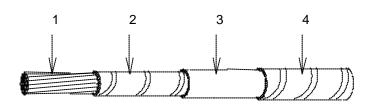
■ Marking

Wording: ESW1100-010-xxx-FX-FF-\*\*

xxx = Size Code \*\* = Year of manufacturing

**Specification :** ESW 1101-+++-XXX

FILOTEX® ESW 1100-010-xxx









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				Finished Cable			
REFERENCE	Size	Nbr of	Colours	DC Resistance at 20°C	Dian	neter	Weight
	Code	cores	of cores	( Ohms/Km )	(m	m)	(g/m)
				Max.	Min.	Max.	Max.
ESW1101-021-004	004	2	Dark	61.5	2.0	3.0	12.5
ESW1101-021-006	006	2	Blue	36.3	2.6	3.6	19.0
ESW1101-031-004	004	3	Dark	61.5	2.2	3.3	19.6
ESW1101-031-006	006	3	Blue	36.3	2.8	3.9	28.8
ESW1101-041-004	004	4	Dark	61.5	2.72	4.10	27.9
ESW1101-041-006	006	4	Blue	36.3	3.27	4.72	39.0

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# ESW 1102-+++-XXX



# Filter Effect Cable Single and Multi-cores Screened and Jacketed

# **Applications**

**Identification** 

□ Aero engine services.

#### **Electrical Characteristics**

□ Temperature rating: -65°C/+260°C (Ambiant. + Rise.)

□ Voltage Rating: 200 Volts rms

□ Dimensions and weights : see table on this data sheet.

☐ Attenuation at 20°C and 260°C:

Passband: 10 MHz 0.3 dB/m (Max.) Stopband: 18 GHz 100 dB/m (Min.)

Very good resistance to Aircraft Fluids.

#### 12-xxx

☐ Core identification Colours: Single core : White

Two cores: Red - Blue

Three cores: Red - Blue - Yellow

Four cores: Red - Blue - Yellow - Green

Jacket identification colour: Dark Blue

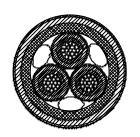
 $\square$  Marking Wording: ESW1102-+++-xxx-FX-FF-\*\*

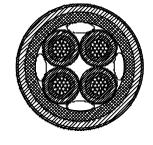
+++ = Form Code xxx = Size Code \*\* = Year of manufacturing

# Specification: ESW1102-+++-XXX









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# **PRODUCT REFERENCES**

# ESW 1102-012-xxx

ESW 1102-022-xxx ESW 1102-032-xxx ESW 1102-042-xxx ESW 1100 ESW 1101

#### CONSTRUCTION

## **CORE**

Conductor

① Stranded conductor:

Nickel plated high strength copper alloy

004 : 19 x 0.15 mm

006 : 19 x 0.20 mm Insulation

2 Polyimide Tape

3 Filter Layer

4 PTFE Tape

**SCREEN** 

S Nickel plated copper braid

<u>JACKET</u>

**©** Polyimide Tape

7 PTFE Tape

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				Finished Cable			
REFERENCE	Size	Nbr of	Colours	DC Resistance at 20°C	Dian	neter	Weight
	Code	cores	of cores	( Ohms/Km )	(m	m)	( g/m )
				Max.	Min.	Max.	Max.
		_					
ESW1102-012-004	004	1	White	59.7	2.0	2.80	19.8
ESW1102-012-006	006	1		35.2	2.4	3.35	28.3
ESW1102-022-004	004	2	1 Red	61.5	2.85	3.8	28
ESW1102-022-006	006	2	1 Blue	36.3	3.35	4.3	38
ESW1102-032-004	004	3	1 Red	61.5	3.16	4.1	35.5
ESW1102-032-006	006	3	1 Blue	36.3	3.70	4.5	48.0
			1 Yellow				
			1 Red				
ESW1102-042-004	004	4	1 Blue	61.5	4.06	5.74	59.1
ESW1102-042-006	006	4	1 Yellow	36.3	4.89	6.37	74.1
			1 Green				







# **ESW 1700-010-XXX**

# Filotex®

# Thermocouple, Nickel Chromium Filter Effect Cable High Temperature Wire

# **Applications**

☐ Aero engine services.

#### **Electrical Characteristics**

- ☐ Temperature rating: -65°C /+260°C (Ambiant. + Rise.)
- □ Voltage Rating: 200 Volts rms
- □ Ni-Cr single core for ESW 1702 thermocouple cable.
- Dimensions and weights : see table on this data sheet.
- ☐ Attenuation at 20°C and 260°C:

Passband: 10 MHz 0.3 dB/m (Max.) Stopband: 18 GHz 100 dB/m (Min.)

□ Very good resistance to Aircraft Fluids.

### PRODUCT REFERENCES

# ESW 1700-010-xxx

ESW 1701-010 ESW 1702-022

#### CONSTRUCTION

# **CONDUCTOR**

① Stranded conductor:

Nickel – chromium alloy 004 : 19 x 0.15 mm 006 : 19 x 0.20 mm

## INSULATION

- 2 Polyimide Tape
- 3 Filter Layer
- PTFE Tape

#### Identification

□ Colour of wire: White

■ Marking

Colour: Green

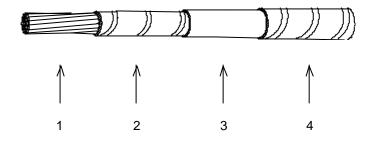
Wording: ESW1700-010-xxx-FX-FF-\*\*

xxx = Size Code

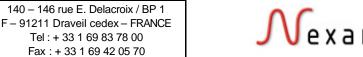
\*\* = Year of manufacturing.

Specification: ESW 1700-010-XXX

FILOTEX® ESW 1700-010-xxx



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					Finished Cable				
REFERENCE	Size	ze Construction		neter	DC Resistance at 20°C		Dian	neter	Weight
	Code	( n x mm )	( mm )		( Ohms/Km )		(mm)		(g/m)
			Min.	Max.	Min.	Max.	Min.	Max.	Max.
ESW1700-010-004	004	19 x 0.15	0.72	0.80	1956	2364	1.0	1.5	6.00
ESW1700-010-006	006	19 x 0.20	0.94	1.04	1100	1330	1.3	1.8	8.50

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# **ESW 1701-010-XXX**



# Thermocouple, Nickel Aluminium Filter Effect Cable High Temperature Wire

### **Applications**

□ Aero engine services.

# **PRODUCT REFERENCES**

# ESW 1701-010-xxx

ESW 1700-010 ESW 1702-022

#### CONSTRUCTION

# **CONDUCTOR**

① Stranded conductor:

Nickel – aluminium alloy 004 : 19 x 0.15 mm 006 : 19 x 0.20 mm

#### INSULATION

- ② Polyimide Tape
- 3 Filter Layer
- 4 PTFE Tape

### **Electrical Characteristics**

□ Temperature rating : -65°C /+260°C (Ambiant. + Rise.)

□ Voltage Rating : 200 Volts rms

 $\ \square$  Ni-Al single core for ESW 1702 thermocouple cable.

Dimensions and weights: see table on this data sheet.

☐ Attenuation at 20°C and 260°C:

Passband: 10 MHz 0.3 dB/m (Max.) Stopband: 18 GHz 100 dB/m (Min.)

□ Very good resistance to Aircraft Fluids.

# Identification

□ Colour of wire: Green

■ Marking

Colour: White

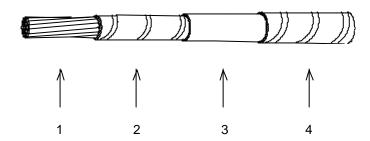
Wording: ESW1701-010-xxx-FX-FF-\*\*

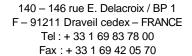
xxx = Size Code

\*\* = Year of manufacturing.

Specification: ESW 1701-010-XXX

FILOTEX® ESW 1701-010-xxx







				Fir	Finished Cable				
REFERENCE	Size	Construction	Diameter		DC Resistance at 20°C		Dian	neter	Weight
	Code	( n x mm )	( mm )		( Ohms/Km )		(mm)		(g/m)
			Min.	Max.	Min.	Max.	Min.	Max.	Max.
ESW1701-010-004	004	19 x 0.15	0.72	0.80	771	932	1.0	1.5	6.00
ESW1701-010-006	006	19 x 0.20	0.94	1.04	434	524	1.3	1.8	8.50

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# **ESW 1702-022-XXX**

# Filotex®

# Ni-Cr/Ni-Al Thermocouple extension Filter Effect Cable Twin core Screened and Jacketed

### **Applications**

□ Aero engine services.

# **PRODUCT REFERENCES**

# ESW 1702-022-xxx

ESW 1700-010-xxx ESW 1701-010-xxx

### **CONSTRUCTION**

## **CORE**

Conductor

① Stranded conductor:

Nickel-Chromium or Nickel-

Aluminium alloy

004 : 19 x 0.15 mm

006: 19 x 0.20 mm

Insulation

② Polyimide Tape

3 Filter Layer

4 PTFE Tape

### **SCREEN**

S Nickel plated copper braid

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> Tel: + 33 1 69 83 78 00 Fax: + 33 1 69 42 05 70

#### <u>JACKET</u>

- 6 Polyimide Tape
- 7 PTFE Tape

# **Electrical Characteristics**

☐ Temperature rating: -65°C /+260°C (Ambiant. + Rise.)

□ Voltage Rating: 200 Volts rms

□ Ni-Cr/Ni-Al Thermocouple extension cable

Dimensions and weights: see table on this data sheet.

☐ Attenuation at 20°C and 260°C:

Passband: 10 MHz 0.3 dB/m (Max.) Stopband: 18 GHz 100 dB/m (Min.)

□ Very good resistance to Aircraft Fluids.

#### **Identification**

☐ Core identification Colours: White – Green

Jacket identification Colour: Green

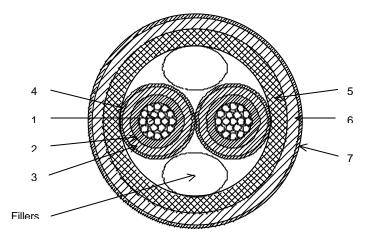
Marking Colour: White

Wording: ESW1702-022-xxx-FX-FF-\*\*

xxx = Size Code

\*\* = Year of manufacturing

## Specification: ESW1702-022-XXX





		Finished Cable							
reference	Size Code	Nbr of	Colours of cores	Dian (m	Weight ( g/m )				
		cores	of cores	Min.	Max.	Max.			
ESW1702-022-004	004	2	1 White	2.85	3.8	28			
ESW1702-022-006	006	2	1 Green	3.35	4.3	38			

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# ESW 1200-010-XXX ESW 1201-010-XXX



# Fire Resistant Cable Single core

# **Applications**

☐ Aero engine services.

# PRODUCT REFERENCES ESW 1200-010-xxx ESW 1201-010-xxx

ESW 1202 / ESW 1203

-012-xxx

-022-xxx

-032-xxx

-042-xxx

### **CONSTRUCTION**

# **CONDUCTOR**

① Stranded conductor : Nickel clad copper alloy (ESW1200) Nickel clad copper (ESW1201)

# <u>INSULATION</u>

- ② Fire resistant insulation
- 3 Polyimide Tape
- 4 PTFE Tape

#### **Electrical Characteristics**

- ☐ Temperature rating: -65°C /+260°C (Ambiant. + Rise.)
- □ Voltage Rating: 600 Volts rms
- Dimensions and weights: see table on this data sheet.
- □ Very good fire resistance.
- □ Very good resistance to Aircraft Fluids.

### **Identification**

Core identification :

Colour : White with a helical red stripe

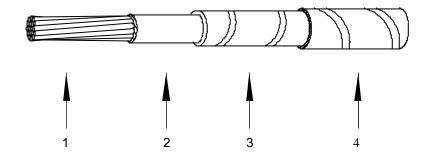
☐ Marking Wording : ESW1200-010-xxx-FX-FF-\*\* or

ESW1201-010-xxx-FX-FF-\*\*

With : xxx = Size Code

\*\* = Year of manufacturing

# Specification: ESW1200 / 1201-010-XXX



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**N**exans

# ESW 1200

			1200			
				Finished C	Cable	
REFERENCE	Size	Gauge	DC Resistance at	Dian	neter	Weight
		(1)1(0)	20°C	(mm)		, , ,
	Code	(AWG)	( Ohms/Km )	(m	m)	( g/m )
	(AECMA)		Max.	Min.	Max.	Max.
ESW1200-010-004	004	22	95	1.45	1.85	8.4
ESW1200-010-006	006	20	51.1	1.60	2.00	10.5
ESW1200-010-010	010	18	32.7	1.90	2.32	14.4
ESW1200-010-012	012	16	25.6	2.10	2.57	18.7

# ESW 1201

				Finished C	Cable	
REFERENCE	Size	Gauge	DC Resistance at	Dian	neter	Weight
	6 1	(4)4(0)	20°C	(mm)		
	Code	(AWG)	( Ohms/Km )	,		( g/m )
	(AECMA)		Max.	Min.	Max.	Max.
ESW1201-010-004	004	22	87.9	1.45	1.85	8.4
ESW1201-010-006	006	20	43.6	1.60	2.00	10.5
ESW1201-010-010	010	18	27.9	1.90	2.32	14.4
ESW1201-010-012	012	16	21.9	2.10	2.57	18.7

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Fax: + 33 1 69 83 78 00





ESW 1202-+++-XXX ESW 1203-+++-XXX



# Fire Resistant Cable Single and Multi-cores Screened and Jacketed

# **Applications**

□ Aero engine services.

### PRODUCT REFERENCES

# ESW 1202 / ESW 1203

-012-xxx

-022-xxx

-032-xxx

-042-xxx

ESW 1200 ESW 1201

### **CONSTRUCTION**

## **CORE**

Conductor

① Stranded conductor : Nickel clad copper alloy (ESW1202)

Nickel clad copper (ESW1203)

004 : 19 x 0.15 mm 006 : 19 x 0.20 mm 010 : 19 x 0.25 mm 012 : 19 x 0.30 mm

Insulation

② Fire resistant insulation

③ Polyimide Tape

4 PTFE Tape

SCREEN

S Nickel plated copper braid

**JACKET** 

PTFE Tape(s)

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## **Electrical Characteristics**

☐ Temperature rating: -65°C /+260°C (Ambiant. + Rise.)

□ Voltage Rating: 600 Volts rms

Dimensions and weights: see table on this data sheet.

□ Very good fire resistance.

□ Very good resistance to Aircraft Fluids.

#### Identification

□ Core identification Colours: Single core : White

Two cores :Red - Blue

Three cores: Red - Blue - Yellow

Four cores : Red - Blue - Yellow - Green

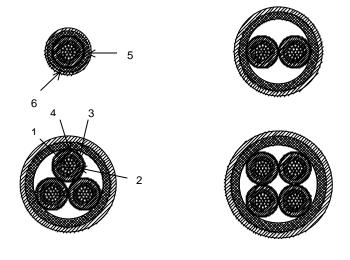
Jacket identification colour: White with narrow red stripe

 $\Box$  Marking Wording: ESW1202-+++-xxx-FX-FF-\*\* or

ESW1203-+++-xxx-FX-FF-\*\*

+++ = Form Code xxx = Size Code \*\* = Year of manufacturing

## Specification: ESW1202 / ESW1203-+++-XXX





# ESW 1202

			Finished Cable								
REFERENCE	Size	Nbr of	Colours	DC Resistance at 20°C	Diameter		Weight				
	Code	cores	of cores	( Ohms/Km )	(mm)		( g/m )				
				Max.	Min.	Max.	Max.				
ESW1202-012-004	004	1		95.0	2.40	3.25	22.5				
ESW1202-012-006	006	1	White	51.1	2.65	3.35	28.3				
ESW1202-012-010	010	1		32.7	2.90	3.60	34.0				
ESW1202-012-012	012	1		25.6	3.15	3.90	40.5				
ESW1202-022-004	004	2		96.9	3.89	5.35	43.5				
ESW1202-022-006	006	2	1 Red	52.1	4.21	5.64	50.6				
ESW1202-022-010	010	2	1 Blue	33.4	4.70	6.00	60.3				
ESW1202-022-012	012	2		26.1	5.20	6.50	72.8				
ESW1202-032-004	004	3		96.9	4.10	5.65	55.7				
ESW1202-032-006	006	3	1 Red 1 Blue	52.1	4.40	5.97	67.0				
ESW1202-032-010	010	3	1 Yellow	33.4	5.16	6.40	81.0				
ESW1202-032-012	012	3		26.1	5.54	6.80	94.0				
ESW1202-042-004	004	4		96.9	4.55	5.95	66.5				
ESW1202-042-006	006	4	1 Red 1 Blue	52.1	4.92	6.30	76.3				
ESW1202-042-010	010	4	1 Yellow 1 Green	33.4	5.69	7.00	98.9				
ESW1202-042-012	012	4		26.1	6.29	7.50	115.0				

# ESW 1203

			LJVV 12	203							
			Finished Cable								
REFERENCE	Size	Nbr of	Colours	DC Resistance at 20°C	Diameter		Weight				
	Code	cores	of cores	( Ohms/Km )	\	ım)	( g/m )				
				Max.	Min.	Max.	Max.				
ESW1203-012-004	004	1		87.9	2.40	3.25	22.5				
ESW1203-012-006	006	1	White	43.6	2.65	3.35	28.3				
ESW1203-012-010	010	1		27.9	2.90	3.60	34.0				
ESW1203-012-012	012	1		21.9	3.15	3.90	40.5				
ESW1203-022-004	004	2		89.66	3.89	5.35	43.5				
ESW1203-022-006	006	2	1 Red	44.47	4.21	5.64	50.6				
ESW1203-022-010	010	2	1 Blue	28.46	4.70	6.00	60.3				
ESW1203-022-012	012	2		22.34	5.20	6.50	72.8				
ESW1203-032-004	004	3		89.66	4.10	5.65	55.7				
ESW1203-032-006	006	3	1 Red 1 Blue	44.47	4.40	5.97	67.0				
ESW1203-032-010	010	3	1 Yellow	28.46	5.16	6.40	81.0				
ESW1203-032-012	012	3		22.34	5.54	6.80	94.0				
ESW1203-042-004	004	4		89.66	4.55	5.95	66.5				
ESW1203-042-006	006	4	1 Red 1 Blue	44.47	4.92	6.30	76.3				
ESW1203-042-010	010	4	1 Yellow 1 Green	28.46	5.69	7.00	98.9				
ESW1203-042-012	012	4		22.34	6.29	7.50	115.0				

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# ESW 1250-010-XXX ESW 1251-010-XXX



# Fireproof Cable Single core

# **Applications**

☐ Use in essential services.

# PRODUCT REFERENCES ESW 1250-010-xxx ESW 1251-010-xxx

ESW 1252 / ESW 1253

-012-xxx

-022-xxx

-032-xxx

-042-xxx

### **CONSTRUCTION**

# CONDUCTOR

① Stranded conductor:
Nickel clad copper alloy
(ESW1250)
Nickel clad copper
(ESW1251)

### INSULATION

- ② Fire resistant insulation
- 3 Polyimide Tape
- 4 PTFE Tape

#### **Electrical Characteristics**

- ☐ Temperature rating: -65°C /+260°C (Ambiant. + Rise.)
- □ Voltage Rating: 600 Volts rms
- Dimensions and weights: see table on this data sheet.
- □ Very good fire resistance.
- □ Very good resistance to Aircraft Fluids.

# **Identification**

Core identification :

Colour : White with a helical red stripe

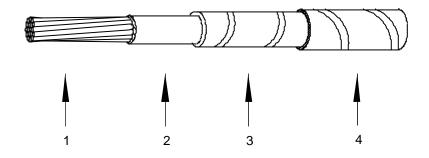
☐ Marking Wording : ESW1250-010-xxx-FX-FF-\*\* or

ESW1251-010-xxx-FX-FF-\*\*

With : xxx = Size Code

\*\* = Year of manufacturing

# Specification: ESW1250 / ESW1251-010-XXX



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# ESW 1250

				Finished C	Cable	
REFERENCE	Size	Gauge	DC Resistance at	Diameter		Weight
	Code	(AWG)	20°C (Ohms/Km)	lm	m)	( a /m )
	(AECMA)	(AVVG)	Max.	(m Min.	Max.	( g/m ) Max.
	(* := 3 *** **)				7.13/1	
ESW1250-010-004	004	22	95	1.45	1.85	10.4
ESW1250-010-006	006	20	51.1	1.60	2.00	13.0
20111230 010 000	000	20	31.1	1.00	2.00	10.0
ESW1250-010-010	010	18	32.7	1.90	2.32	17.0
ESW1250-010-012	012	16	25.6	2.10	2.57	22.0

# ESW 1251

				Finished C	Cable	
REFERENCE	Size	Gauge	DC Resistance at	Dian	neter	Weight
	6 1	(4)4(0)	20°C	,	,	, , ,
	Code	(AWG)	( Ohms/Km )	(m	m)	( g/m )
	(AECMA)		Max.	Min.	Max.	Max.
ESW1251-010-004	004	22	87.9	1.45	1.85	10.4
ESW1251-010-006	006	20	43.6	1.60	2.00	13.0
ESW1251-010-010	010	18	27.9	1.90	2.32	17.0
ESW1251-010-012	012	16	21.9	2.10	2.57	22.0

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ESW 1252-+++-XXX ESW 1253-+++-XXX



# Fireproof Cable Single and Multi-cores Screened and Jacketed

# **Applications**

☐ Use in essential services.

### PRODUCT REFERENCES

# ESW 1252 / ESW 1253

- -012-xxx
- -022-xxx
- -032-xxx
- -042-xxx

ESW 1250 ESW 1251

### **CONSTRUCTION**

#### **CORE**

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#### Conductor

① Stranded conductor:

Nickel clad copper alloy (ESW1252)

Nickel clad copper (ESW1253)

004 : 19 x 0.15 mm 006 : 19 x 0.20 mm 010 : 19 x 0.25 mm 012 : 19 x 0.30 mm

Insulation

② Fireproof insulation

3 Polyimide Tape

4 PTFE Tape

#### SCREEN

5 Nickel plated copper braid

# <u>JACKET</u>

PTFE Tape(s)

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## **Electrical Characteristics**

- ☐ Temperature rating: -65°C /+260°C (Ambiant. + Rise.)
- □ Voltage Rating: 600 Volts rms
- Dimensions and weights: see table on this data sheet.
- □ Very good fire resistance.
- □ Very good resistance to Aircraft Fluids.

#### **Identification**

☐ Core identification Colours: Single core : White

Two cores: Red – Blue

Three cores: Red - Blue - Yellow

Four cores: Red - Blue - Yellow - Green

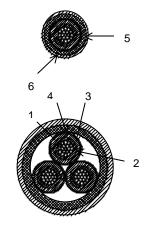
Jacket identification colour: White with narrow red stripe

 $\square$  Marking Wording: ESW1252-+++-xxx-FX-FF-\*\* or

ESW1253-+++-xxx-FX-FF-\*\*

+++ = Form Code xxx = Size Code \*\* = Year of manufacturing

Specification: ESW1252 / ESW1253-+++-XXX









# ESW 1252

				Finished Cable			
REFERENCE	Size	Nbr of	Colours	DC Resistance at 20°C	Diameter		Weight
	Code	cores	of cores	( Ohms/Km )	(mm)		( g/m )
				Max.	Min.	Max.	Max.
ESW1252-012-004	004	1		95.0	2.40	3.25	22.5
ESW1252-012-006	006	1	White	51.1	2.65	3.50	33.4
ESW1252-012-010	010	1		32.7	2.90	3.80	40.12
ESW1252-012-012	012	1		25.6	3.15	4.10	47.8
ESW1252-022-004	004	2		96.9	3.89	5.35	43.5
ESW1252-022-006	006	2	1 Red	52.1	4.21	5.64	50.6
ESW1252-022-010	010	2	1 Blue	33.4	4.70	6.00	60.3
ESW1252-022-012	012	2		26.1	5.20	6.50	72.8
ESW1252-032-004	004	3		96.9	4.10	5.65	55.7
ESW1252-032-006	006	3	1 Red 1 Blue	52.1	4.40	5.97	67.0
ESW1252-032-010	010	3	1 Yellow	33.4	5.16	6.40	81.0
ESW1252-032-012	012	3		26.1	5.54	6.80	94.0
ESW1252-042-004	004	4		96.9	4.55	5.95	66.5
ESW1252-042-006	006	4	1 Red 1 Blue	52.1	4.92	6.30	76.3
ESW1252-042-010	010	4	1 Yellow 1 Green	33.4	5.69	7.00	98.9
ESW1252-042-012	012	4		26.1	6.29	7.50	115.0

# ESW 1253

				Finished Cable						
reference	Size Code	Nbr of cores	Colours of cores	DC Resistance at 20°C ( Ohms/Km )	Diameter (mm)		Weight ( g/m )			
				Max.	Min.	Max.	Max.			
ESW1253-012-004	004	1		87.9	2.40	3.25	22.5			
ESW1253-012-006	006	1	White	43.6	2.65	3.50	33.4			
ESW1253-012-010	010	1		27.9	2.90	3.80	40.12			
ESW1253-012-012	012	1		21.9	3.15	4.10	47.8			
ESW1253-022-004	004	2		89.66	3.89	5.35	43.5			
ESW1253-022-006	006	2	1 Red	44.47	4.21	5.64	50.6			
ESW1253-022-010	010	2	1 Blue	28.46	4.70	6.00	60.3			
ESW1253-022-012	012	2		22.34	5.20	6.50	72.8			
ESW1253-032-004	004	3		89.66	4.10	5.65	55.7			
ESW1253-032-006	006	3	1 Red 1 Blue	44.47	4.40	5.97	67.0			
ESW1253-032-010	010	3	1 Yellow	28.46	5.16	6.40	81.0			
ESW1253-032-012	012	3		22.34	5.54	6.80	94.0			
ESW1253-042-004	004	4		89.66	4.55	5.95	66.5			
ESW1253-042-006	006	4	1 Red 1 Blue	44.47	4.92	6.30	76.3			
ESW1253-042-010	010	4	1 Yellow 1 Green	28.46	5.69	7.00	98.9			
ESW1253-042-012	012	4		22.34	6.29	7.50	115.0			

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# ESW 1254-010-002



# Fireproof Cable Single core

## **Applications**

☐ Aero engine services.

### PRODUCT REFERENCES

ESW 1254-010-002 ESW 1254-022-002

### **CONSTRUCTION**

# CONDUCTOR

① Stranded conductor : Nickel clad copper alloy

002:19 x 0.12 mm

# INSULATION

- ② Fire resistant insulation
- 3 Polyimide Tape
- 4 PTFE Tape

#### **Electrical Characteristics**

- □ Temperature rating : -65°C /+260°C (Ambiant. + Rise.)
- □ Voltage Rating: 600 Volts rms
- Dimensions and weights: see table on this data sheet.
- □ Very good fire resistance.
- □ Very good resistance to Aircraft Fluids.

# **Identification**

□ Core identification :

Colour : White with a helical red stripe

☐ Marking Wording : ESW1254-010-002-FX-FF-\*\*

With

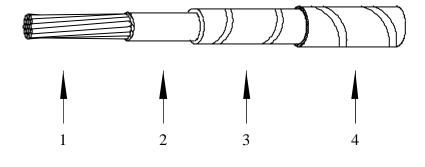
FF = Manufacturer's code

: FX = Country of origin

\*\* = Year of manufacturing

- 137 -

Specification: ESW1254-010-002





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				Finished C	Cable	
REFERENCE	Size	Gauge	DC Resistance at 20°C	Diameter (mm)		Weight
	Code	(AWG)	( Ohms/Km )			( g/m )
			Max.	Min.	Max.	Max.
ESW1254-010-002	002	24	131	1.20	1.65	9.50







# ESW 1254-022-002



# Fireproof Cable Two-cores Twisted Screened and Jacketed

# **Applications**

☐ Aero engine services.

### PRODUCT REFERENCES

**ESW 1254-022-002** ESW 1254-010-002

### **CONSTRUCTION**

# CORE

Conductor

① Stranded conductor : Nickel clad copper alloy 002 : 19 x 0.12 mm

#### Insulation

- ② Fire resistant insulation
- 3 Polyimide Tape
- 4 PTFE Tape

### **SCREEN**

5 Nickel plated copper braid

# <u>JACKET</u>

#### **Electrical Characteristics**

- ☐ Temperature rating: -65°C /+260°C (Ambiant. + Rise.)
- □ Voltage Rating: 600 Volts rms
- Dimensions and weights: see table on this data sheet.
- □ Very good fire resistance.
- □ Very good resistance to Aircraft Fluids.

# Identification

□ Core identification Colours:

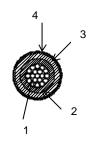
Two cores: Red – Blue

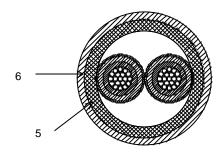
Jacket identification colour: White with narrow red stripe

☐ Marking Wording: ESW1254-022-002-FX-FF-\*\*

FX = Country of origin FF = Manufacturer's code \*\* = Year of manufacturing

# Specification: ESW1254-022-002





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**√**exans

		Finished Cable								
reference	Size	Nbr of	Colours	DC Resistance at 20°C	Diameter		Weight			
	Code	cores	cores of cores (Ohms/Km)		(mm)		( g/m )			
				Max.	Min.	Max.	Max.			
ESW1254-022-002	002	2	1 Red 1 Blue	135	2.95	4.45	38			

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# ESW 1600-010-XXX Thermocouple Nickel Chromium ESW 1601-010-XXX

Thermocouple Nickel Aluminium, Fire Resistant Cable

# **Applications**

Aero engine services.

# **PRODUCT REFERENCES**

ESW 1600-010-xxx ESW 1601-010-xxx

ESW 1602-022-xxx ESW 1603-025-xxx

### **CONSTRUCTION**

# CONDUCTOR

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① Stranded conductor : Nickel chromium (ESW 1600) Nickel Aluminium (ESW 1601)

# <u>INSULATION</u>

- ② Fire resistant insulation
- 3 Polyimide Tape
- 4 PTFE Tape

#### **Electrical Characteristics**

- ☐ Temperature rating: -65°C /+260°C (Ambiant. + Rise.)
- Dimensions and weights: see table on this data sheet.
- □ Very good fire resistance.
- □ Very good resistance to Aircraft Fluids.

#### **Identification**

Core identification :

Colour : White (ESW 1600)

Green (ESW 1601)

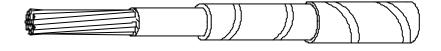
☐ Marking Wording : ESW1600-010-xxx-FX-FF-\*\*

ESW1601-010-xxx-FX-FF-\*\*

With : xxx = Size Code

\*\* = Year of manufacturing

Specification: ESW1600-010-XXX Specification: ESW1601-010-XXX



2 3 4

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Fax: +33 1 69 42 05 70



1

# **NICKEL CHROMIUM**

					Finished C	Cable	
REFERENCE	Size	Gauge		DC Resistance at		neter	Weight
	Cl -	(ATTIC)		)°C	1	1	1 = 1== 1
	Code	(AWG)	Min.	s/Km ) Max.	(m Min.	Max.	( g/m ) Max.
	(AECMA)		iviii.	max.	/VIII.	mux.	wax.
ESW1600-010-006	006	20	1100	1300	1.60	2.00	10.5
ESW1600-010-010	010	18	705	851	1.92	2.32	14.4
ESW1600-010-012	012	16	489	591	2.17	2.57	18.7
ESW1600-010-050	050	10	133	162	3.65	4.05	56.5

# **NICKEL ALUMINIUM**

	Finished Cable						
REFERENCE	Size	Gauge		stance at	Dian	neter	Weight
				)°C	,	,	, , ,
	Code	(AWG)	,	ıs/Km )	,	<u>m)</u>	( g/m )
	(AECMA)		Min.	Max.	Min.	Max.	Max.
ESW1601-010-006	006	20	434	524	1.60	2.00	10.5
ESW1601-010-010	010	18	278	336	1.92	2.32	14.4
ESW1601-010-012	012	16	193	234	2.17	2.57	18.7
ESW1601-010-050	050	10	52	64	3.65	4.05	56.5

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# **ESW 1602-022-XXX**



# Fire Resistant Cable Thermocouple Nickel Chromium/Nickel Aluminium

# **Applications**

Aero engine services.

# **PRODUCT REFERENCES**

# ESW 1602-022-xxx

ESW 1600 ESW 1601

### **CONSTRUCTION**

## **CORE**

Conductor

① Stranded conductor:

Nickel Chromium/ Nickel Aluminium

006: 19 x 0.20 mm 010: 19 x 0.25 mm 012: 19 x 0.30 mm 050: 61 x 0.32 mm

# Insulation

② Fire resistant insulation

3 Polyimide Tape

4 PTFE Tape

#### <u>SCREEN</u>

S Nickel plated copper braid

### **JACKET**

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# **Electrical Characteristics**

☐ Temperature rating: -65°C /+260°C (Ambiant. + Rise.)

□ Voltage Rating: 600 Volts rms

Dimensions and weights: see table on this data sheet.

□ Very good fire resistance.

□ Very good resistance to Aircraft Fluids.

#### **Identification**

Core identification Colours:

Nickel Chromium : white Nickel Aluminium : green

Jacket identification colour: Green with red stripe

☐ Marking: ESW1254-022-002-FX-FF-\*\*

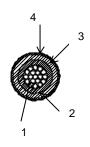
xxx = size code

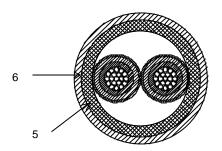
FX = Country of origin

FF = Manufacturer's code

\*\* = Year of manufacturing

Specification: ESW1602-022-xxx







				Finisł	ned Cable			
REFERENCE	Size			nce at 20°C		Dian	Weight	
	Code		( Ohm		(m	m)	( g/m )	
		Nickel Chromium		Nickel Aluminium		Min.	Max.	Max.
		Min.	Max.	Min.	Max.			
ESW1602-022-006	006	1122	1357	443	534	4.40	5.64	50.6
ESW1602-022-010	010	719	868	283	343	4.70	6.0	60.3
ESW1602-022-012	012	499	603	197	239	5.20	6.50	72.8
ESW1602-022-050	050	136	165	53	65	7.50	9.50	148.8







### Filotex®

## Type "RMS" (ROHR)

### **Characteristics**

- ☐ Construction : See. RMS (next pages)
- □ Voltage Rating : See. RMS (next pages)
- Operating Temperature : See. RMS (next pages)
- Diameters and weight according to Specification and Standards.

### **Identification**

Core Colors : See next pages.Marking : See next pages.

### **Applications**

□ Aircraft / Engines

### CONSTRUCTION

PRODUCT REFERENCES

Several types of construction are possible:

D)
Single wire shielded and
Jacketed

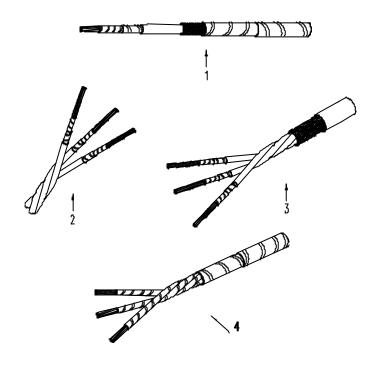
② Twisted cables

Two or more cores
twisted shielded and Jacketed

①
Two or more cores
twisted Unshielded Jacketed

### **Specifications**

□ **RMS** Revision and Date, see each type



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RMS

QPL	R/	RMS 302				
Rohr P/N	Construction	Comments				
RMS 302-** (AWG 18 to 14)	Conductor : Nickel - coated copper Insulated : PTFE jacket, reinforced with abrasion resistant mineral fillers	Color : Grey Marking : 2105-1-** F0241	Voltage Rating			
RMS 302-#-	Basic wires (RMS 302-**) twisted, to form a multi-conductor	Basic wire with a spiral colored stripe as follows: 2 cond.: Red, Blue 3 cond.: Red, Blue, Yello	600 V (RMS)			
(AWG 18 to 14)		4 conductor : Red, Blue, Yellow, Green (Only basic wire shall be marked : '2105-#-** F0241'	)			
RMS 302- #SJ**	Basic wires (RMS 302-**) or twisted cable	Single conductor: Grey + marking on core '1105-1-** F024 <u>Multi-conductors</u> : 1 <sup>st</sup> .cond.: Grey + Red stripe + marking:	Temperature Rating			
(AWG 18 to 14)	Braid : Nickel coated copper Jacket : PTFE tapes (fused)	'2105-1-** F0241' 2nd.cond.:Grey + Blue stripe 3rd cond.: Grey + Yellow stripe 4th cond. : Grey + Grestripe All Jackets : Grey *** See note ***				
# = Number ** = A	· · · · · · · · · · · · · · · · · · ·	cation shall be printed on a marker tape placed beneath the shiel ('1105-#-** F0241')	d :			

RMS 320	Low Noise Cable
	RMS 320

QPL		RMS	322 Miniature Firezono	e, high temperature
Rohr P/N	Construction		Color	Voltage Rating
RMS 322-**	Conductor : Nickel clad copper		Color : White	600 V (RMS)
** = AWG	Insulated : Impregnated Inorganic fiber TFE coated glass braid		Marking: 3101-1-**-LS F0241	Temperature Rating
(AWG 18 to 8)	PTFE tapes (fused)			260°C

QPL	RMS	323	Miniature Firezone,high temperature, high strength copper alloy		
Rohr P/N	Construction		Color	Voltage Rating	
RMS 323-**	Conductor : Nickel clad, high strength copper alloy	Color : Whi	te	600 V (RMS)	
** = AWG	Insulated : Impregnated Inorganic fiber TFE coated glass braid	Marking: 3	101-1-**-MS F0241	Temperature Rating	
(AWG 20 to 16)	PTFE tapes (fused)			260°C	

QPL	R	RMS 324 High temperature, NPC, and moisture problem (sv			
Rohr P/N	Construction	Comments			
RMS 324-**	Conductor: Nickel - coated copper Insulated: PTFE tape + Polyimide tape PTFE coated glass tape (1/0 AWG	Color : Light grey  Marking : 324-1-** F0241 (18 AWG through 2)  324-** F0241 (1/0 AWG through 4/0)	Voltage Rating		
(AWG 18 to 0000)	through 4/0) PTFE coated glass braid Two or + PTFE tapes (fused)				
RMS 324-#J-**	Twisted and jacketed cable : Cores : 2 cond. : Red, Blue 3 cond. : Red, Blue, Yellow				
AWG 18,16 and 12	1 , ,	Jacket : Grey.   *** See note ***			
RMS 324-#SJ-**	Shielded and jacketed wire and cable : or twisted cable Braid : Nickel plated copper	Single conductor: Grey + marking on core '1124-1-** F0241  Multi-conductors: 1st.cond.: Red + marking '324-1-**-LS F0241'  2nd.cond.:Blue 3rd cond.: Yellow 4th cond.:  Green	Temperatur Rating		
AWG 18,16 and 14	Jacket : PTFE tapes (fused)	Jacket : Grey.  *** See note ***	260°C		
# = Number of conductor * = AWG	Note: The cable product identification s	shall be printed on a marker tape placed beneath the jacket ('1124-#- #-**-LS F0241'), according to jacketed or shieldded and			

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QPL		temperature MI ENGINES)					
Rohr P/N	Construction	Construction Comments					
	Shielded and jacketed single or multi-conductor	Single conductor : F0241	White + marking on core '112a	6-1-**-LS	Rating		
	cables twisted together :	<u>Multi-conductors</u> : F0241'	1st.cond.: Red + marking '310	1-1-**-LS	600 V (RMS)		
RMS 326-#SJ- **	(Basic wire : See RMS 322-**)	2nd.cond.:Blue Green	3rd cond.: Yellow	4th cond. :			
	Braid: Nickel plated copper	Jacket : White.					
	PTFE tape				Temperature		
	PTFE coated glass braid	The cable product tape	identification shall be printed o	n a marker	Rating		
(AWG 18 to 14)	Jacket : PTFE tapes (fused)		e shield : '1126-#-**-LS F024	1'	260°C		
	# = Number of conductor		** = AWG				

QPL	RM	S 327 Miniature Firezone, high t high strength coppe	•
Rohr P/N	Construction	Comments	Voltage
	Shielded and jacketed single or multi-conductor	Single conductor: White + marking on core '1127-1-**-MS F0241	Rating
	cables twisted together :	<u>Multi-conductors</u> : 1st.cond.: Red + marking '3101-1-**-MS F0241'	600 V (RMS)
	(Basic wire : See RMS 323-**)	2nd.cond.:Blue 3rd cond.: Yellow 4th cond. : Green	
RMS 327-#SJ- **	Braid: Nickel plated copper	Jacket : White.	
	PTFE tape		Temperature
	PTFE coated glass braid	The cable product identification shall be printed on a marker tape	Rating
(AWG 20 to 16)	Jacket : PTFE tapes (fused)	placed beneath the shield: '1127-#-**-MS F0241'	260°C
	# = Number of conductor	** = AWG	

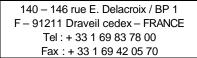
QPL	RM	S 328 Miniature Firezone, high	temperatur
Rohr P/N	Construction	Comments	Voltage
	Twisted and jacketed cable :	Cores : 2 cond. : Red, Blue 3 cond. : Red, Blue, Yellow	Rating
RMS 328-#J- **	Basic wires (RMS 322-**)	4 conductor : Red, Blue, Yellow, Green	
	Separator polyimide tape	(Only red wire shall be marked: '3101-1-**-LS F0241')	600 V (RMS)
(AWG 18 to 16)	Jacket : PTFE tapes (fused)	Jacket : White. *** See note ***	,
	Shielded and jacketed single or multi-conductor	Single conductor: White + marking on core '1128-1-**-LS F0241	
	cables, twisted together :	<u>Multi-conductors</u> : 1st.cond.: Red + marking '3101-1-**-LS F0241'	
RMS 328-#SJ-	(Basic wire: RMS 322-**)	2nd.cond.:Blue 3rd cond.: Yellow 4th cond. : Green	Temperature
	Braid: Nickel plated copper	Jacket : White.	Rating
	Jacket : PTFE tapes (fused)	The cable product identification shall be printed on a marker	
(AWG 18 to 16)		tape placed beneath the shield: '1128-#-**-LS F0241'	260°C
# = Number o	f Note: The cable product identification	n shall be printed on a marker tape placed beneath the jo	acket :
conductor		, , , , , , , , , , , , , , , , , , , ,	
* = AWG	'3101-#-**-GLS F02	241'	





QPL		MS 329	Rev.N	Date : 14/05/99
	Miniature Firezone, high ter	mperature, high stren	gth copper alloy	
Rohr P/N	Construction	Coi	mments	Voltage
	Twisted and jacketed cable :	Cores : 2 cond. : Red, Blue Yellow	3 cond. : Red	, Blue, Rating
RMS 329-#J-	Basic wires (RMS 323-**)	4 conductor : Red,	Blue, Yellow, Green	600 V (RMS)
	Separator polyimide tape	( Only red wire shall be mo	arked : '3101-1-**-MS F02	241')
(AWG 20 to 16)	Jacket : PTFE tapes (fused)	Jacket : White.	*** See note **	*
	Shielded and jacketed single or multi-conduct	for Single conductor : White + m F0241	narking on core '1129-1-**-L	S
	cables, twisted together :	<u>Multi-conductors</u> : 1st.cond.: F0241'	Red + marking '3101-1-**-ለ	AS
RMS 329-#SJ- **	(Basic wire : RMS 323-*	*) 2nd.cond.:Blue 3rd Green	cond.: Yellow 4th	cond. :
	Braid: Nickel plated copper	Jacket : White.		
	Jacket : PTFE tapes (fused)	The cable product identification tape	on shall be printed on a mar	Temperature
(AWG 20 to 18)		placed beneath the shield : '	1129-#-**-MS F0241'	<b>Rating</b> 260°C
# = Number o	f Note: The cable product identification	ntion shall be printed on a ma	rker tape placed benea	th the jacket :
conductor	,	·		•
* = AW	G '3101-#-**-GMS	5 F0241'		

QPL	RM	S 332	Rev.E Dat	te : 08/02/96
			S.C.O. 3 Da	ite : 19/07/96
High tem	perature, high strength copper alloy,	severe wind and moisture	problem (swa	mp) areas
Rohr P/N	Construction	Comments		
	Conductor : Nickel coated high strength copper alloy	Color : Light grey		Voltage
	Insulated : PTFE tape	Marking : 332-1-**-MS F0241		Rating
RMS 332-**	Polyimide tape			
	PTFE coated glass braid			600 V (RMS)
(AWG 20 to 16)	Two PTFE tapes (fused)			
	Twisted and jacketed cable :	Cores : 2 cond. : Red, Blue Yellow	3 cond. : Red, Blue,	
RMS 332-#J-	Basic wires (RMS 332-**)	4 conductor : Red, Blue, Yellow	v, Green	
	Separator polyimide tape	( Only red wire shall be marked : '33	2-1-**-MS F0241')	
(AWG 20 to 16)	Jacket : PTFE tapes (fused)	Jacket : White.	** See note ***	Temperature
	Shielded and jacketed single or multi-conductor	Single conductor : White + marking on co	ore '1132-1-**-MS	Rating
	cables, twisted together :	<u>Multi-conductors</u> : 1st.cond.: Red + marki F0241'	ng '332-1-**-MS	
RMS 332-#SJ-	(Basic wire: RMS 332-**)	2nd.cond.:Blue 3rd cond.: Yellov Green	v 4th cond. :	260°C
	Braid: Nickel plated copper	Jacket : White.		
	Jacket : PTFE tapes (fused)	The cable product identification shall be p	rinted on a marker	
		tape placed beneath the shield: '1132-#-**-N	AS E0241'	
(AWG 20 to 16)		placed believin life shield . 1132-#/V	10 1 0241	
# = Number o	f Note: The cable product identification	shall be printed on a marker tape p	laced beneath the id	acket :
conductor	, , , , , , , , , , , , , , , , , , , ,	,	[.	
* = AWG	'332-#-**-GMS F02	41'		







### **Type 3000 A**

### Filotex<sup>®</sup>

### Fire resistant cables

To AIR 4527, B.N.Aé

These cables are approved by the  $\operatorname{Air}$  Ministry under letters :

N°31573 STA/EQ/E2 (10-02-65)

Registered at the B.N.Aé: N° 6418 400 C

Operating voltage: 600 volts RMS

Operating temperature: - 50°C to + 280°C

(ambient + rise)

### PRODUCT REFERENCES

### 3000 A

### **Characteristics:**

- ☐ These cables are used at high ambient temperatures, up to 300°C at peak,
- ☐ They withstand a 1090°C flame applied for 5 minutes under a 250 V d.c. voltage,
- □ Non-flammable,
- They withstand most solvents.

### CONSTRUCTION

### ① <u>CONDUCTOR</u> Stranded nickel clad copper

- ② Feltlike winding of siliceous fibres
- ③ INSULATION PTFE (wrapped)

### **4** BRAID

Glass fiber braid coated with a PTFE varnish

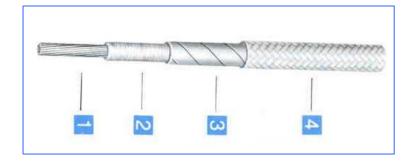
Colour coding: in natural colour + red stripe (printed indentification is possible on the braid)

### Technical requirements and control conditions:

- □ Air4527 Specification (high temperature cables and fire resistant cables),
- B.N.Aé NF.L 52-127 Specification of July 1978, R.C.Aéro 140-55
   A of March 1962.

### Interchangeability:

☐ MIL-W-25038 D Specification of January 1972.



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**M**exans

### **MECHANICAL & ELECTRICAL VALUES**

			CONDUCTOR			CORE		ELECTRICAL VALUES	
References		Gaug e	Construction	Nominal diameter	Tensile Strength	Overall diameter + 0.1	Average Weight	D.C. Resistan ce at 20°C (maxi.)	Current rating
Туре	Cross Sectional aera	AWG	n x Ø mm	mm	daN	mm	g/m	W / km	A
3000A	0.38	22	12 x 0.20	0.85	10.5	2.5	9.5	71.20	7
3000A	0.60	20	19 x 0.20	1.03	16.5	2.8	12.5	45.00	11
3000A	0.93	18	19 x 0.25	1.28	24.0	3.1	17.5	28.80	16
3000A	1.34	16	19 x0.30	1.53	> 30.0	3.5	21.5	20.00	22
3000A	1.91	14	27 x0.30	1.87	> 30.0	4.0	31.5	14.40	32
3000A	3.18	12	45 x0.30	2.40	> 30.0	4.5	47.5	8.45	41
3000A	5.15	10	73 x0.30	3.10	> 30.0	5.3	71.0	5.20	55
3000A	8.98	8	127 x 0.30	4.20	> 30.0	6.7	114.0	3.00	75
3000A	13.40	6	27 x 7 x 0.30	5.60	> 30.0	8.1	172.0	2.07	100
3000A	21.80	4	37 x 12 x 0.25	7.30	> 30.0	9.6	262.0	1.27	135
3000A	34.50	2	37 x 19 x 0.25	8.80	> 30.0	11.5	414.0	0.80	181
3000A	41.80	1	37 x 23 x 0.25	9.80	> 30.0	12.8	480.0	0.66	211
3000A	52.70	0	37 x 29 x 0.25	10.80	> 30.0	14.2	618.0	0.52	245
3000A	67.20	00	37 x 37 x 0.25	12.40	> 30.0	15.7	781.0	0.41	283

The currents shown are valid for single wires in air. If the ambient temperature is lower than 250°C the current ratings can be above those quoted in Air 7822 Specification, provided that the conductor temperature does not exceed 300°C. For cables in bundle please refer to Air 7822 Specification.

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### BMS 13-67 310 °C Rating TMF 350-A FLEX SBJ

### Very High Temperature Fire Resistant Shielded and Jacketed Cables

### **Applications**

Aero Enaines and Verv High Temperature Applications
 Main data

Main data

□ Voltage/Frequency Rating

Operating Temperature

: 600 Volts RMS/2000 Hz Max. : 20,000 hours at +313°C (595°F)

:

: or 10,000 hours at  $+321^{\circ}$ C (610°F).

Dimensions and weights

: See Tables on This Data Sheet.

☐ Fire Resistance

: Insulation resistance 10,000 Ohms

Minimum.

■ Bend Radius

: Minimum 5 times cable O.D.

### **CONSTRUCTION**

PRODUCT REFERENCES

TMF 350-A FLEX SBJ

BMS13-67T02C0\*G0\*\*

### CORE(S)

① Conductor:

Nickel Clad High Strength Copper Alloy Conductor US Sizes

Insulation:

.Very High Temperature and Fire Resistant insulation

.High Temperature PTFE Tapes

. PTFE Coated Fiber Glass Braid

#### **SHIELD**

② Nickel Clad Copper Braid

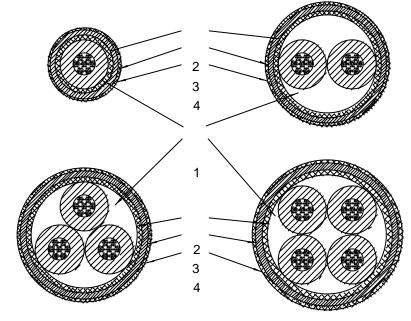
### **JACKET**

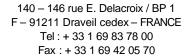
3 High Temperature PTFE Tapes

4 PTFE Coated Fiber Glass Braid

### **Specification**

■ BMS 13-67 QPL







### **DIMENSIONS AND WEIGHTS (METRIC UNITS)**

### **BASIC CORE**

		Co	Conductors		Finished Wire				
FILOTEX <sup>â</sup>	US	Strands	O.D.		Maximum DC Resistance		Diameter		Weight
PART NUMBER	AWG	(Nbr x mm)	(mm)		(Ohms/Km)		(mm)		(g/m)
			Nom.	Max .	at 23°C (73°F)	at 370°C (698°F)	Nom.	Max.	Nom.
BMS13-67T0*C01G022	22	37 x 0.115	0.78	0.84	80.8	192.59	2.49	2.61	11.33
BMS13-67T0*C01G020	20	7 x 7 x 0.115	0.99	1.04	50.1	118.37	2.65	2.78	12.72
BMS13-67T0*C01G018	18	7 x 7 x 0.150	1.30	1.32	32.0	74.28	2.91	3.03	16.70
BMS13-67T0*C01G016	16	7 x 7 x 0.175	1.51	1.55	25.1	55.77	3.10	3.22	20.11
BMS13-67T0*C01G014	14	7 x 7 x 0.210	1.81	1.88	16.3	36.09	3.38	3.52	25.52
BMS13-67T0*C01G012	12	7 x 7 x 0.270	2.33	2.36	10.5	23.23	3.92	4.04	37.21
BMS13-67T0*C01G010	10	7 x 7 x 0.360	3.11	3.25	6.34	14.01	4.78	4.92	59.90

### FINISHED CABLE

			Shie	ld			Finished	Cable			
FILOTEX <sup>â</sup>	US	Nbr of	Strands O.D.	O.D.	Resistance at 20°C (68°F)	Diameter			Weight		
PART NUMBER	AWG	Cores	(mm)	(mm)	of Cores (Ohms/Km)		(mm)		(g/m)		
				Nom.	Max.	Min.	Nom.	Max.	Min.	Nom.	Max.
BMS13-67T02C01G022	22	1	0.13	3.01	80.8	3.53	3.71	3.89	27.83	29.60	31.37
BMS13-67T02C01G020	20	1	0.13	3.17	50.1	3.66	3.87	4.06	30.03	31.95	33.87
BMS13-67T02C01G018	18	1	0.13	3.43	32.0	4.04	4.18	4.34	35.77	38.06	40.34
BMS13-67T02C01G016	16	1	0.13	3.62	25.1	4.19	4.36	4.55	39.51	42.02	44.55
BMS13-67T02C01G014	14	1	0.13	3.90	16.3	4.47	4.68	4.88	47.62	50.12	52.63
BMS13-67T02C01G012	12	1	0.13	4.44	10.5	5.03	5.19	5.33	61.60	64.85	68.09
BMS13-67T02C01G010	10	1	0.13	5.30	6.34	5.87 6.04 6.22		6.22	87.99	92.61	97.26
BMS13-67T02C02G022	22	2	0.13	5.50	82.4	6.02 6.32		6.63	49.64	52.81	55.98
BMS13-67T02C02G020	20	2	0.13	5.82	51.1	6.30 6.62 6.96		6.96	53.61	57.04	60.46
BMS13-67T02C02G018	18	2	0.13	6.34	32.7	6.86	7.13	7.42	63.64	67.70	71.77
BMS13-67T02C02G016	16	2	0.13	6.72	25.6	7.21	7.52	7.82	72.12	76.74	81.33
BMS13-67T02C02G014	14	2	0.13	7.28	16.6	7.77	8.10	8.43	86.44	90.99	95.53
BMS13-67T02C03G022	22	3	0.13	5.89	82.4	6.35	6.68	7.01	64.74	68.86	73.00
BMS13-67T02C03G020	20	3	0.13	6.23	51.1	6.65	7.02	7.37	70.58	75.08	79.59
BMS13-67T02C03G018	18	3	0.13	6.79	32.7	7.29	7.60	7.90	85.37	90.81	96.26
BMS13-67T02C03G016	16	3	0.13	7.20	25.6	7.67	8.00	8.33	97.12	103.31	109.52
BMS13-67T02C03G014	14	3	0.13	7.80	16.6	8.28	8.60	8.94	117.08	123.24	129.41
BMS13-67T02C04G022	22	4	0.13	6.53	82.4	82.4 6.99		7.70	80.50	85.63	90.77
BMS13-67T02C04G020	20	4	0.13	6.92	51.1	7.34	7.71	8.10	87.78	93.39	98.98
BMS13-67T02C04G018	18	4	0.13	7.54	32.7	8.00	8.34	8.66	106.51	113.31	120.11
BMS13-67T02C04G016	16	4	0.13	8.00	25.6	8.43 8.80 9.14 122.21 1		130.01	137.80		
BMS13-67T02C04G014	14	4	0.13	8.68	16.6	9.09	9.47	9.86	148.19	156.00	163.80

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### Filotex<sup>®</sup> Study 124585 Very High Temperature Fire Resistant Wires

### **Aero Engines and Very High Temperature Applications**

### **Characteristics**

□ Tension/Frequency Rating: 600 Volts RMS/2000 Hz Max.

☐ Operating Temperatures : -65°C/+300°C

□ Operating Life (Approx) : 30 Hours at +370°C

Or 300 Hours at +350°C Or 330 Hours at +310°C Or 2500 Hours at +300°C Or 32840 Hours at +260°C

Total of 36000 hours

Dimensions and Weights: See Table on Reverse Side of This Data

☐ Fluids Resistance : According to BMS 13-55.

### CONSTRUCTION

PRODUCT REFERENCES

FILOTEX Ref : **ET 124 585** 

**CORE** (study 124521)

 19 strands of Nickel Clad Copper conductor (Diameter of strands: 0.287 mm)

Special Fire Resistant Composite Insulation, very high temperature.

### **SCREEN**

③ Nickel Clad Copper Helicoidal Screen (Diameter of strands: 0.13mm)

### **JACKET**

Very high temperature resistant composite

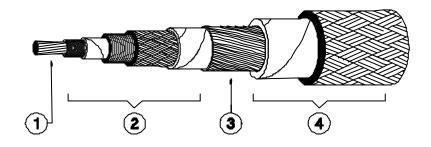
### **Applications**

 Heavy Duty Applications in Aero-engines and Very High Temperature Areas.

### **Specification**

BMS 13-55 For Fire and Fluids Resistance

□ ST 448 006 3 01 A



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### **DIMENSIONS AND WEIGHTS**

			Conductor				Insulc	ıtion	Screen		Finished cable		
FILOTEX®	US	Construction	Diam	Diameter		DC resistance		eter	er		Ext. Diameter		Weight
Reference	AWG	(N x mm)	(mm)		(Ohms/Km)		(mm)		Ø Strands	Ø Nom.	(mm)		(Kg/Km)
			Nom.	Max.	Max.at 20°C	Nomi. at 370°C	Nom.	Max.	(mm)	(mm)	Mini.	Max.	Max.
Et.124585	16	19 x 0.287	1.40	1.55	22.5	55.8	2.90	3.40	0.13	3.45	4.15	4.45	42

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### Part 4

# Coaxial cables for high frequency transmission









### SP 124962 STUDY 124962



### Laser UV miniature coaxial cable

Basic study: 122715 (UV Laser markable Jacket)

### **Electrical characteristics**

 $\Box$  Characteristic impedance :  $50 \pm 5 \Omega$ 

□ Linear capacitance at 1 kHz

Nominal value : 90 pF/m

Maximal value : 100 pF/m

☐ Attenuation at 10 MHz : 0.09 dB/m

100 MHz : 0.26 dB/m 200 MHz : 0.37 dB/m 500 MHz : 0.65 dB/m 1000 MHz : 1.06 dB/m 1500 MHz : 1.33 dB/m

□ Voltage rating: 250 Volts Eff 50 Hz.

□ Voltage withstanding: between dielectric and shield:

3000 Volts Eff 50 Hz.

☐ Jacket spark test: 5000 Volts impulse.

DC resistance at 20°C: ≤ 144 ohms/Km.

☐ Insulation resistance :

between dielectric and shield : ≥1500 Mohms . Km.

Jacket: ≥1500 Mohms . Km.

□ Nominal relative velocity of propagation: 76%

### **CONSTRUCTION**

PRODUCT REFERENCES

① CONDUCTOR

ET 124962

ET 124964

19 x 0.098 mm Silvered alloy Nom. diameter = 0.48 mm.

② INSULATION

Expansed PTFE Nom. diameter = 1.35 mm

3 SHIELD

Silver plated copper 7/100 Coverage ≥ 62 %

SHIELD

Silver plated copper 7/100 Coverage ≥ 62 % US Nom. diameter = 2.00 mm

⑤ JACKET

Laser UV ETFE markable OD  $2.35 \pm 0.05$  mm

### **Physical characteristics**

■ Nominal weight : 13.0 g/m

☐ Maximum weight: 14.0 g/m.

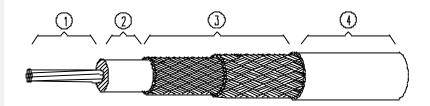
☐ Minimum bending radius:

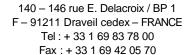
Static : 12 mm. Dynamic : 25 mm.

Strippability: mechanical device or automatic stripper.

□ Temperature rating: -65°C to +150°C

Outer jacket color : green







### **Physical characteristics**

- ☐ Fire resistance : No flame propagation (NFC 32070/C1)

  Low smoke emission
- Resistance to fluids: good resistance to aircraft fluids.

### **Applications**

- ☐ With similar transmission characteristics to KX 22A / RG 316U,
- ☐ This cable has the following advantages:
  - Lower diameter and weight .
  - Better bendability.
  - Better screening effectiveness ( Double braid )
  - UV Laser marquability
- □ Recommended for Aeronautics uses and miniature systems.

### **Specifications:**

□ NFC 93 550 and MIL C 17

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### SP 124963 STUDY 124963



### Laser UV miniature coaxial cable

Basic study: 123775 (FEP Jacket)

### **Electrical characteristics**

 $\Box$  Characteristic impedance : 75 ± 5  $\Omega$ 

Nominal value: 60 pF/m

☐ Linear capacitance at 1 kHz

Maximal value : 65 pF/m

□ Attenuation at 10 MHz : 0.09 dB/m
100 MHz : 0.26 dB/m
200 MHz : 0.37 dB/m

500 MHz : 0.65 dB/m 1000 MHz : 0.84 dB/m 1500 MHz : 1.05 dB/m

□ Voltage rating: 250 Volts Eff 50 Hz.

□ Voltage withstanding: between dielectric and shield: 3000 Volts Eff 50 Hz.

☐ Jacket spark test: 5000 Volts impulse.

☐ Insulation resistance : between dielectric and shield :

≥1500 Mohms . Km.

□ Nominal relative velocity of propagation : 76%

### CONSTRUCTION

PRODUCT REFERENCES

① CONDUCTOR

ET 124963

7 x 0.10 mm Silver plated copper covered steel Diameter = 0.30 mm.

**2** INSULATION

Expansed PTFE Nom. diameter = 1.35 mm

③ SHIELD

Silver plated copper 7/100 Coverage ≥ 85 % US

SHIELD

Silver plated copper 7/100 Coverage ≥ 85 % US Nom. diameter = 2.00 mm

⑤ JACKET

Laser UV ETFE OD  $2.35 \pm 0.05$  mm

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### Physical characteristics Nominal weight: 12.5 g/m Maximum weight: 14.0 g/r

Maximum weight: 14.0 g/m.Minimum bending radius:

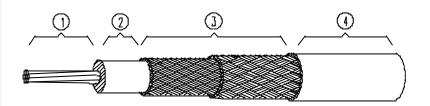
Static : 12 mm.

Dynamic: 25 mm.

□ Strippability: mechanical device or automatic stripper.

☐ Temperature rating: -65°C to +150°C

Outer jacket color : blue





### **Physical characteristics**

- ☐ Fire resistance : No flame propagation (NFC 32070/C1)
- Resistance to fluids: good resistance to aircraft fluids.

### **Applications**

- □ With similar transmission characteristics to KX 22A / RG 316U,
- ☐ This cable has the following advantages:
  - Lower diameter and weight .
  - Better bendability.
  - Better screening effectiveness ( Double braid )
  - UV Laser marquability
- □ Recommended for Aeronautics uses and miniature systems.

### **Specifications:**

□ NFC 93 550 and MIL C 17

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### SP 124964 STUDY 124964



### Laser UV miniature triaxial cable

Basic study: 123774 (UV Laser markable Jacket)

### **Electrical characteristics**

 $\Box$  Characteristic impedance : 50 ± 5  $\Omega$ 

□ Linear capacitance at 1 kHz
Nominal value : 90 pF/m
Maximal value : 100 pF/m

☐ Attenuation at 10 MHz : 0.09 dB/m

100 MHz : 0.26 dB/m 200 MHz : 0.37 dB/m 500 MHz : 0.65 dB/m 1000 MHz : 1.06 dB/m 1500 MHz : 1.33 dB/m

□ Voltage rating: 250 Volts Eff 50 Hz.

□ Voltage withstanding: between dielectric and shield:

3000 Volts Eff 50 Hz.

□ Jacket spark test : 5000 Volts impulse.

□ DC resistance at 20°C: ≤ 144 ohms/Km.

□ Insulation resistance : between dielectric and shield : ≥1500 Mohms . Km.

Jacket: ≥1500 Mohms . Km.

□ Nominal relative velocity of propagation: 76%

### **Physical characteristics**

□ Nominal weight : 27.0 g/m

☐ Maximum weight : 30.0 g/m.

■ Minimum bending radius :

Static : 17 mm. Dynamic : 35 mm.

Strippability: mechanical device or automatic stripper.

□ Temperature rating: -65°C to +150°C

Outer jacket color : green

### **PRODUCT REFERENCES**

**ET 124964** ET 124962

### CONSTRUCTION Basic core: study 124962

① CONDUCTOR

19 x 0.098 mm Silvered alloy Nom. diameter = 0.48 mm.

② <u>INSULATION</u> Expansed PTFE Nom. diameter = 1.35 mm

③ <u>SHIELD</u>

Silver plated copper 7/100 Coverage ≥ 62 %

§ SHIELD

Silver plated copper 7/100 Coverage ≥ 62 % US Nom. diameter = 2.00 mm

⑤ <u>JACKET</u> UV ETFE OD 2.35 ± 0.05 mm

OD  $2.35 \pm 0.05 \text{ mm}$ © SHIELD

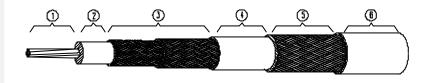
Silver plated copper 10/100 Coverage ≥ 62 %

Nom. diameter = 2.80 mm

JACKET
 Laser UV ETFE markable

Laser UV ETFE markable
OD 3.45 ± 0.10 mm

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### **Physical characteristics**

- $f \Box$  Fire resistance : No flame propagation ( NFC 32070/C1)
  - Low smoke emission
- Resistance to fluids: good resistance to aircraft fluids.

### **Applications**

- ☐ With similar transmission characteristics to KX 22A / RG 316U,
- ☐ This cable has the following advantages:
  - Lower diameter and weight .
  - Better bendability.
  - Better screening effectiveness ( Double braid )
  - UV Laser marquability
- □ Recommended for Aeronautics uses and miniature systems.

### **Specifications:**

□ NFC 93 550 and MIL C 17

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## AEROSPACE

### SP 124965 STUDY 124965



### Laser UV miniature triaxial cable

Basic study: 123776 (UV Laser markable Jacket)

### **Electrical characteristics**

 $f \Box$  Characteristic impedance : 75 ± 5  $\Omega$ 

□ Linear capacitance at 1 kHz

Nominal value : 60 pF/m

Maximal value : 65 pF/m

☐ Attenuation at 10 MHz : 0.09 dB/m

100 MHz : 0.26 dB/m 200 MHz : 0.37 dB/m 500 MHz : 0.65 dB/m 1000 MHz : 0.84 dB/m 1500 MHz : 1.05 dB/m

□ Voltage rating : 250 Volts Eff 50 Hz.

□ Voltage withstanding: between dielectric and shield: 3000 Volts Eff 50 Hz.

☐ Jacket spark test: 5000 Volts impulse.

☐ Insulation resistance :

between dielectric and shield :  $\geq\!1500$  Mohms . Km.

Jacket: ≥1500 Mohms . Km.

□ Nominal relative velocity of propagation: 76%

### **CONSTRUCTION**

PRODUCT REFERENCES

① CONDUCTOR

ET 124965

7 x 0.10 mm

Silver plated copper covered

Nom. diameter = 0.30 mm.

**2** INSULATION

**Expansed PTFE** 

Nom. diameter = 1.35 mm

③ <u>SHIELD</u>

Silver plated copper 7/100 Coverage ≥ 62 %

SHIELD

Silver plated copper 7/100 Coverage ≥ 62 % US Nom. diameter = 2.00 mm

⑤ JACKET

**FEP** 

OD  $2.35 \pm 0.05 \text{ mm}$ 

SHIELD

Silver plated copper 10/100 Coverage  $\geq 62 \%$ 

Nom. diameter = 2.80 mm

② JACKET

Laser UV ETFE markable
OD 3.40 ± 0.10 mm

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Fax : + 33 1 69 42 05 70

### **Physical characteristics**

□ Nominal weight : 26.0 g/m

☐ Maximum weight : 29.0 g/m.

☐ Minimum bending radius:

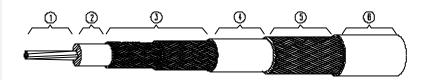
Static : 17 mm.

Dynamic : 35 mm.

Strippability: mechanical device or automatic stripper.

☐ Temperature rating: -65°C to +150°C

Outer jacket color : blue





### **Physical characteristics**

- ☐ Fire resistance : No flame propagation (NFC 32070/C1)

  Low smoke emission
- □ Resistance to fluids : good resistance to aircraft fluids.

### **Applications**

- □ With similar transmission characteristics to KX 22A / RG 316U,
- ☐ This cable has the following advantages :
  - Lower diameter and weight .
  - Better bendability.
  - Better screening effectiveness ( Double braid )
  - UV Laser marquability
- □ Recommended for Aeronautics uses and miniature systems.

### **Specifications:**

□ NFC 93 550 and MIL C 17

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### **EN 4604-003 WZ**

### Filotex®

### 50 Ohms Coaxial Cable, 200°C Operating Temperature

### **Applications**

 Designed for Signal Transmission Applications in Aeronautic environment.

#### **Main characteristics**

- ☐ Operating temperature: -65°C to +200°C.(Ambient. + Rise)
- Operating frequency: up to 3 GHz.
- Dimensions: see construction details hereunder
- ☐ Static bend radius: 37 mm
- Dynamic bend radius: 100 mm
- ☐ Max weight: 30 g/m
- Very Good Resistance to Aircraft Fluids
- ☐ Mould and Fungus Resistant
- UV Laser markable Jacket.

### **Electrical characteristics**

□ See on next page

### **Specifications**

- ☐ Product designed according to: prEN 4604-001, -002 and -003
- ☐ Tested according to prEN 3475 and pr EN 3838.

### PRODUCT REFERENCES

EN 4604-003

### CONSTRUCTION

① CONDUCTOR

Solid Silver plated copper OD: 0.88 to 0.93

② INSULATION

Low density PTFE

 $OD: 2.35 \pm 0.15 \text{ mm}$ 

③ SHIELD

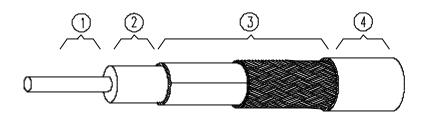
Metallized foil Silver plated copper braid

 $OD: 3.05 \pm 0.15$ 

**4** JACKET

White FEP

 $OD: 3.55 \pm 0.15 \text{ mm}$ 



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☐ Jacket Color identification: Green or Black

□ Cable identification : Marking text : EN WN FRF\*\*

FR = Country of Origin (FR = France)
F = Manufacturer (F = Filotex®)
\*\* = Year of manufacturing (ie. 02=2002)

□ Dielectric strength : 4000 Vac

□ Corona extinction voltage : 1700 Vac

☐ Insulation resistance : ≥ 1000 Mohm.km

 $f \Box$  Characteristic impedance : 50  $\pm$  2  $\Omega$ 

□ Linear capacitance : 88 pF/m max.

□ Velocity of propagation : 225 000 km/s min. (75% relative)

☐ Transfer impedance : 30 mohms/m, up to 3GHz

☐ Maximal attenuation and rated power :

Frequency (MHz)	Max Rated Power (W)	Attenuation at 20°C (dB/100m)
50	1100	11
200	660	19
400	450	28
1000	250	47
3000	150	90





### **EN 4604-004 WS**

### Filotex®

### 50 Ohms Coaxial Cable, 200°C Operating Temperature

### **Applications**

☐ Designed for high frequency signal transmission in aircraft radio communication systems.

#### **Main characteristics**

- ☐ Operating temperature: -55°C to +200°C.(Ambient. + Rise)
- Operating frequency: up to 3 GHz.
- Dimensions: see construction details hereunder
- □ Static bend radius: 15 mm
- Dynamic bend radius: 28 mm
- ☐ Max weight: 20 g/m
- □ Very Good Resistance to Aircraft Fluids
- Mould and Fungus Resistant
- ☐ Especially designed for high EMC performances.

### Electrical characteristics

□ See on next page

### **Specifications**

- □ Product designed according to : prEN 4604-001, -002 and -004
- □ Tested according to prEN 3475.

### **PRODUCT REFERENCES**

EN 4604-004

### CONSTRUCTION

① CONDUCTOR

7 x 0.16 mm strands

OD: 0.51

② INSULATION

Extruded PTFE

OD: 1.50

③ SHIELD

1st layer

Silver plated copper braid

Strand diam : 0.085 mm

2nd layer

High permeability

metal tape

3rd layer

Silver plated copper braid Strand diam: 0.085 mm

OD :  $2.31 \pm 0.14 \text{ mm}$ 

JACKET

2 Polyimide tapes + FEP

coating

OD:  $2.49 \pm 0.16 \text{ mm}$ 

Color: White

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☐ Jacket Color identification : Green

 $f \Box$  Cable identification : Marking text : EN WN FRF\*\*

FR = Country of Origin (FR = France)
F = Manufacturer (F = Filotex®)
\*\* = Year of manufacturing (ie. 02=2002)

□ Dielectric strength : 1500 Vac□ Operating voltage : 1300 Vac

☐ Insulation resistance : ≥ 1000 Mohm.km

 $f \Box$  Characteristic impedance : 50  $\pm$  5  $\Omega$ 

□ Linear capacitance :  $(95 \pm 10) \text{ pF/m}$ 

□ Velocity of propagation : 207 000 km/s nominal (69% relative)

☐ Maximal attenuation and rated power :

Frequency (MHz)	Max Rated Power (W)	Attenuation at 20°C (dB/100m)		
50	600	26		
100	400	36		
200	270	55		
400	180	78		
1000	120	140		
3000	75	195		







### EN 4604-006 WM



### 50 Ohms Coaxial Cable, 200°C Operating Temperature

### **Applications**

Designed for high frequency signal transmission in aircraft electrical

### Main characteristics

- Operating temperature: -55°C to +200°C.(Ambient. + Rise)
- Operating frequency: up to 5 GHz.
- Dimensions: see construction details hereunder
- ☐ Static bend radius: 25 mm
- Dynamic bend radius: 70 mm
- Max weight: 35 g/m
- Very Good Resistance to Aircraft Fluids
- Mould and Fungus Resistant.

### CONSTRUCTION

PRODUCT REFERENCES

① CONDUCTOR

EN 4604-006

Solid silver plated copper  $OD: 1.02 \pm 0.03 \text{ mm}$ 

**2** INSULATION

Expanded PTFE  $OD: 2.84 \pm 0.10 \text{ mm}$ 

③ SHIELD

1st layer Silver plated copper tape 2nd layer Silver plated copper braid Strand diam.: 0.10 mm  $OD: 3.50 \pm 0.20 \text{ mm}$ 

JACKET

Violet FEP

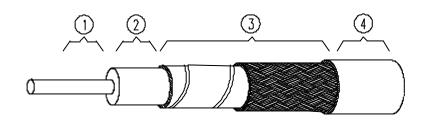
 $OD: 3.85 \pm 0.15 \text{ mm}$ 

### **Electrical characteristics**

☐ See on next page

### **Specifications**

- Product designed according to: prEN 4604-001, -002 and -006
- Tested according to prEN 3475.



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☐ Jacket Color identification : Black

□ Cable identification : Marking text : EN WN FRF\*\*

FR = Country of Origin (FR = France)
F = Manufacturer (F = Filotex®)
\*\* = Year of manufacturing (ie. 02=2002)

□ Dielectric strength : 2500 Vac

☐ Operating voltage : 750 Vac

☐ Insulation resistance : ≥ 1000 Mohm.km

figspace Characteristic impedance : 50 ± 3  $\Omega$ 

□ Linear capacitance : 82 pF/m maximum

□ Velocity of propagation : 243 000 km/s nominal (81% relative)

☐ Maximal attenuation and rated power :

Frequency (MHz)	Max Rated Power (W)	Attenuation at 20°C (dB/100m)
50	2800	8
100	2000	11.5
400	1100	20.5
1000	600	40
5000	300	85





### **EN 4604-007 WN**



### 50 Ohms Coaxial Cable, 200°C Operating Temperature

### **Applications**

 Designed for high frequency signal transmission in aircraft electrical systems

### **Main characteristics**

- ☐ Operating temperature: -55°C to +200°C.(Ambient. + Rise)
- Operating frequency: up to 5 GHz.
- Dimensions: see construction details hereunder
- ☐ Static bend radius: 80 mm
- Dynamic bend radius: 120 mm
- ☐ Max weight: 145 g/m
- □ Very Good Resistance to Aircraft Fluids
- Mould and Fungus Resistant.

### CONSTRUCTION

PRODUCT REFERENCES

### ① CONDUCTOR

EN 4604-007

Solid silver plated copper OD :  $2.30 \pm 0.03$  mm

### **2** INSULATION

Expanded PTFE OD: 6.20 ± 0.10 mm

### ③ SHIELD

1st layer Silver plated copper tape 2nd layer Silver plated copper braid Strand diam : 0.20 mm OD : 7.5 ± 0.20 mm

### JACKET

Violet FEP

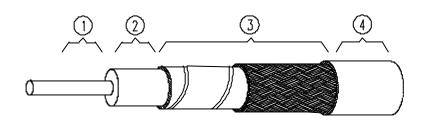
OD:  $8.00 \pm 0.20$ mm

### **Electrical characteristics**

☐ See on next page

### **Specifications**

- ☐ Product designed according to: prEN 4604-001, -002 and -007
- □ Tested according to prEN 3475.



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☐ Jacket Color identification : Black

 $f \Box$  Cable identification : Marking text : EN WN FRF\*\*

FR = Country of Origin (FR = France)
F = Manufacturer (F = Filotex®)
\*\* = Year of manufacturing (ie. 02=2002)

□ Dielectric strength : 3000 Vac□ Operating voltage : 1000 Vac

☐ Insulation resistance : ≥ 1000 Mohm.km

 $\Box$  Characteristic impedance : 50 ± 3  $\Omega$ 

□ Linear capacitance : 82 pF/m maximum

□ Velocity of propagation : 243 000 km/s nominal (81% relative)

☐ Maximal attenuation and rated power :

Frequency (MHz)	Max Rated Power (W)	Attenuation at 20°C (dB/100m)
50	8000	3.5
100	5000	5.5
400	3000	10
1000	2000	15
5000	800	35









### Filotex<sup>®</sup>

### **PTFE Coaxial Laser Markable Cables**

### PRODUCT REFERENCES

PAN 6422 ++

Main data

Voltage Rating : see table on this data sheet.

Peak Temperature : 200°C. Operating Frequency : up to 1 Ghz.

Bend Radius : Minimum 6 times cable O.D.

Dimensions and high frequency characteristics: see table on this П

data sheet.

Very good resistance to solvents. 

Very good resistance to soldering operations.

### **CONSTRUCTION**

### ① CONDUCTOR

Stranded conductors: See table on this data sheet.

### **2** INSULATION

Extruded PTFE

### ③ SHIELD

Silver plated copper single or double braid

### **4** JACKET

Polyimide Tape UV Laser PTFE Tape(s) (Munsell colour limits 5YR 6/4 to 5YR 7/4)

### **Applications**

For general purpose coaxial cables

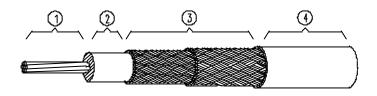
### **Specifications**

PAN6422

MIL-C-17

BS2316

### PAN 6422 SINGLE OR DOUBLE BRAID



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### **DIMENSIONS AND WEIGHTS (METRIC UNITS)**

		CONDUCTOR			INSULATION	SHIELD		FINISHED CABLE	
FILOTEX PART NUMBER	MIL-C-17 PART NUMBER	Composition (Nbr x Dia. of strand in mm)	Nature	Nom. Dia. (mm)	Nom. Diameter (mm)	Number	Nature	Nom. Diameter (mm)	Nom. Weight (Kg/Km)
PAN 6422 XQ	M17/172-00001 (RG316/U)	7 x 0.1702	SPCCS	0.51	1.52	1	SPC	2.22	14
PAN 6422 XR	M17/175-00001 (RG400/U)	19 x 0.195	SPC	0.96	2.95	2	SPC	4.28	58
PAN 6422 XS	M17/86-00001 (RG225/U)	7 x 0.792	SPC	2.38	7.25	2	SPC	9.15	223
PAN 6422 XT	M17/169-00001 (RG178/U)	7 x 0.1016	SPCCS	0.30	0.82	1	SPC	1.54	7.2
PAN 6422 XU	URM107	7 x 0.82	SPC	2.46	7.25	1	SPC	8.66	180
PAN 6422 XW	URM108	1 x 1.0	SPC	1.0	2.95	1	SPC	3.87	46
PAN 6422 XX	M17/110-RG302 (RG302/U)	1 x 0.635	SPCCS	0.635	3.71	1	SPC	4.59	49
PAN 6422 XY	M17/94-RG179 (RG179/U)	7 x 0.1016	SPCCS	0.30	1.60	1	SPC	2.30	14
PAN 6422 XZ	M17/95-RG180 (RG180/U)	7 x 0.1016	SPCCS	0.30	2.59	1	SPC	3.29	26

SPCCS: Silver plated Copper covered Steel

### **ELECTRICAL CHARACTERISTICS**

FILOTEX PART NUMBER	MIL-C-17 PART NUMBER	, , ,				VOLTS RMS (Max)	
		$(\Omega)$	10	100	400	1000	
PAN 6422 XQ	M17/172-00001 (RG316/U)	50	19.7	37.4	65.6	101.5	900
PAN 6422 XR	M17/175-00001 (RG400/U)	50	3.96	14.4	31.6	53.2	1400
PAN 6422 XS	M17/86-00001 (RG225/U)	50	1.97	6.9	14.8	25.0	3700
PAN 6422 XT	M17/169-00001 (RG178/U)	50	18.45	46.0	92.0	151.0	750
PAN 6422 XU	URM107	50	1.7	6.3	13.6	23.4	3500
PAN 6422 XW	URM108	50	3.6	13.4	29.1	46.3	1400
PAN 6422 XX	M17/110-RG302 (RG302/U)	75	2.96	10.8	26.3	42.6	1700
PAN 6422 XY	M17/94-RG179 (RG179/U)	75	17.45	32.9	52.5	79.0	900
PAN 6422 XZ	M17/95-RG180 (RG180/U)	95	3.96	14.4	31.6	53.2	1100

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### ASNE0293 XF



### 50 Ohms Coaxial Cable

### **Applications**

☐ Avionic interconnexion.

### **PRODUCT REFERENCES**

### ASNE0293 XF

### **CONSTRUCTION**

① CORE

Stranded conductor, 19 x 0.20 Silver Plated Copper

② INSULATION Extruded PTFE Nom. Diam. 2.95 mm

③ <u>SCREEN</u>

Dual Silver plated copper braid. Strands diam. 0.13 mm Overall nom. Diam. 4.06 mm

FEP JACKET

Maximum Diameter = 5.08 mm Nominal Weight = 67 g/m Main data

□ Voltage Rating: 600 Volts RMS

□ Operating Temperature: -65°C / +200°C

→ Mean Attenuation:

 10 MHz
 4.3 dB/100m

 200 MHz
 19 dB/100m

 400 MHz
 28 dB/100m

 3000 MHz
 95 dB/100m

 10000 MHz
 210 dB/100m

 $\Box$  Impedance: 50  $\pm$  2  $\Omega$ 

□ Nominal capacitance : 95 pF/m

☐ Minimum Bend radius : 50 mm

☐ Good resistance to aircraft fluids

Identification

□ Color of Jacket: Brown

Green marking of the external sheath: "XF FR F \*\*"

FR = Country of Origin (FR = France)

F = Manufacturer (F = Filotex<sup>®</sup>)

\*\* = Year of Manufacturing (ie. 02 = 2002)

Specification: ASNE0293



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### FILOTEX® TYPE: NSA 935344 XE



### **Application**

High frequency interconnections.

### **PRODUCT REFERENCES**

NSA 935344 XE

### **Electrical Characteristics**

☐ Impedance at 200 Mhz :  $50 \pm 2 \Omega$ ■ Nominal capacitance : 95 pF/m □ Nominal attenuation at 900 Mhz : 0.8 dB/m ☐ Maximum Operating frequency : 1.8 Ghz

: 900 Volts RMS. □ Voltage rating

☐ Maximum rating temperature : 250°C (ambient + rise)

### CONSTRUCTION

① CONDUCTOR 7 x 0.17mm silver plated

copper covered steel.

Diameter 0.51 mm

INSULATION Extruded PTFE

Diameter  $1.52 \pm 0.07$  mm

3 SHIELD

single braid of silver plated copper

Stand diameter 0.10 mm

**JACKET** 

White PTFE tapes Diameter  $2.70 \pm 0.10 \text{ mm}$ 

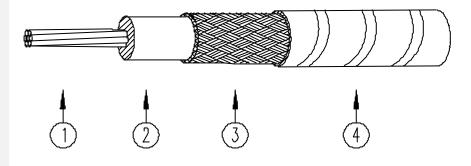
### **Physical Characteristics**

□ Nominal weight: 18 g/m

☐ Marking: XE \*\* FR F

\*\* Year of manufacturing

Type: NSA 935344 - XE



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### Part 5

# Data bus and high speed transmission cables









### **ABS 0972 KB 24**

## Filotex<sup>®</sup>

#### **PRODUCT REFERENCES**

#### ET 2PC236

#### CONSTRUCTION

① 19 x 0.13 mm Silver Copper stranded 24 AWG FEP Insulated  $\emptyset = 1.40 \text{ mm}$ 

Color: Blue-Red-Yellow-Green

- ② Natural FEP Filler
- ③ Wrapping Tape
- @ 0.10 mm Silver Copper Braid
- (5) Clear Blue FEP Jacket for UV laser marking

 $\emptyset = 4.40 + / - 0.20 \text{ mm}$ 

Weight: 40,28 g/m nominal

#### Shielded Quad **24 AWG 100 OHMS**

#### **Applications**

☐ High speed data transmission – Ethernet networks – 100 Mbit/s and in-flight entertainment application.

#### **Temperature rating**

□ Operating temperature : - 55°C up to +125°C.

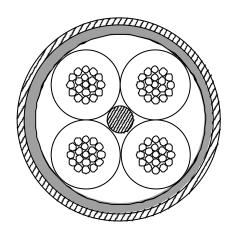
#### **Identification**

□ Inkjet marking pitch length ≈ 300 mm. Pitch length between the two text marking ≈ 150 mm KB 24 FR F \*\*

#### **Electrical characteristics:**

Loop resistance: 19.2 Ohms/100 m at 20°C (Max). Insulation resistance: 150 M.ohms / Km at 20°C. Impedance :  $100 \pm 15$  Ohms from 1 to 100 MHz Velocity of propagation: 69 % Next  $> 65 - 15 \times \log (F) dB from 1 to 100 MHz$ Attenuation Nominal Values: 2.1 dB/100 m at 1 4.1 dB/100 m at 4 MHz 6.5 dB/100 m at 10 MHz 8.2 dB/100 m at 16 MH<sub>7</sub> 9.3 dB/100 m at 20 MHz 11.7 dB/100 m at 31.25 MHz 17 dB/100 m at 62.5 MHz dB/100 m at 100 MHz 22

#### **SPECIFICATION ABS 0972**



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## SP 124960 STUDY 124960



#### Bus lines for multiplexed transmission

#### **Electrical characteristics**

- $\hfill \Box$  Characteristic impedance at 1 MHz : 77  $\pm$  7  $\Omega$
- Nominal mutual capacitance : 65 pF/m
- □ Nominal capacitance between 1 core and shield : 110 pF/m
   □ Nominal capacitance between cores and shield : 180 pF/m
- □ Nominal attenuation at 1 MHz : 3.5 dB/100 m
- ☐ Linear resistance: ≤ 146 ohms/Km.
- ☐ Insulation resistance: ≥1500 Mohms . Km.
- □ Voltage withstanding:

between conductors: 1000 volts

between conductors and shield: 1000 volts

- □ Jacket spark test: 1000 Volts□ Voltage rating: 250 Volts
- $\square$  Maximum transfer impedance (m $\Omega$ /m):

DC current : 50 1MHz 50 10MHz 50 30 MHz 100

## CONSTRUCTION

PRODUCT REFERENCES

① 2 <u>FILLERS</u> PTFE

ET 124960

2 CORES

1 core : AWG 26 Cross section: 0.15 mm<sup>2</sup> 19 x 0.10 Silver plated copper

alloy (EN2083)

 $\begin{array}{l} \text{Insulation: extruded PTFE} \\ \text{Diameter} = 0.80 \pm 0.05 \text{ mm} \end{array}$ 

3 LAY UP

Nominal diameter: 1.60 mm

SHIELD

Silver plated copper 10/100 Diameter < 2.00 mm

**5** JACKET

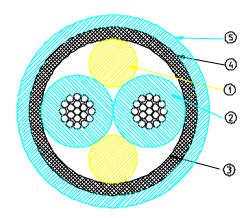
UV laser markable ETFE OD 2.50 ± 0.10 mm

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Fax: +33 1 69 42 05 70

#### **Physical characteristics**

- □ Nominal weight : 14.5 g/m□ Maximum weight : 19 g/m.
- ☐ Minimum static bending radius : 15 mm
- ☐ Good resistance to aircraft fluids
- ☐ Temperature rating: -65°C to +150°C
- Outer jacket color : white
- □ Color of cores: white, blue





## **Marking**

- □ "FILOTEX FRANCE ET 124960-\*\*""
  - (\*\*) = Year of manufacturing
- Red marking for the main line
  - (Nexans reference: ETUDE 124960-01)
- □ Blue marking for the branch line

(Nexans reference: ETUDE 124960-02)

Technical requirements and control conditions: according to pr EN 3375

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## SP 124961 STUDY 124961



#### Bus lines for multiplexed transmission

#### **Electrical characteristics**

- $\hfill \Box$  Characteristic impedance at 1 MHz : 77  $\pm$  7  $\Omega$
- □ Nominal mutual capacitance : 65 pF/m
- □ Nominal capacitance between 1 core and shield : 110 pF/m
   □ Nominal capacitance between cores and shield : 180 pF/m
- □ Nominal attenuation at 1 MHz : 2.7 dB/100 m
- ☐ Linear resistance: ≤ 109 ohms/Km.
- ☐ Insulation resistance: ≥1500 Mohms . Km.
- □ Voltage withstanding:

between conductors: 1000 volts

between conductors and shield: 1000 volts

- □ Jacket spark test: 1000 Volts□ Voltage rating: 250 Volts
- $\square$  Maximum transfer impedance ( $\Omega/m$ ):

DC current : 15 . 10<sup>-3</sup> 1MHz 5 . 10<sup>-3</sup> 10MHz 5 . 10<sup>-3</sup> 30 MHz 10 . 10<sup>-3</sup>

#### CONSTRUCTION

PRODUCT REFERENCES

① 2 <u>FILLERS</u> PTFE

ET 124961

2 CORES

1 core : AWG 24 Cross section: 0.21 mm<sup>2</sup> 19 x 0.12 Silver plated copper alloy (EN2083)

Insulation : extruded PTFE

Diameter =  $1.05 \pm 0.10$  mm

3 LAY UP

Nominal diameter: 2.10 mm

SHIELD

Silver plated copper 10/100

SHIELD

Silver plated copper 10/100 Diameter < 3.50 mm

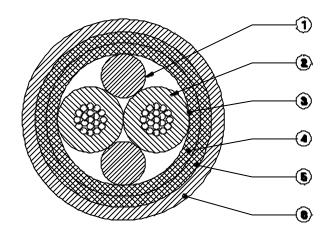
**6** JACKET

UV laser markable ETFE OD 3.65 ± 0.25 mm

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#### **Physical characteristics**

- □ Nominal weight : 28 g/m
- ☐ Maximum weight : 37 g/m.
- ☐ Minimum static bending radius : 20 mm
- ☐ Good resistance to aircraft fluids
- ☐ Temperature rating: -65°C to +150°C
- Outer jacket color : white
- □ Color of cores: white, blue





#### **Marking**

- □ "FILOTEX FRANCE ET 124961-\*\*""
  - (\*\*) = Year of manufacturing
- Red marking for the main line (EN 3375 004 C01, Nexans reference: ETUDE 124961-01)
- □ Blue marking for the branch line (EN 3375 004 CO2, Nexans reference: ETUDE 124961-02)

Technical requirements and control conditions: according to pr EN 3375

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## SP 96770 ASNE 0479 - WJ



#### **Bus lines for multiplexed transmission**

Use for Bus System MIL STD 1553

#### **Electrical characteristics**

- $\hfill\Box$  Characteristic impedance at 1 MHz : 77  $\pm$  7  $\Omega$
- □ Nominal mutual capacitance : 65 pF/m
- □ Nominal capacitance between 1 core and shield : 110 pF/m
   □ Nominal capacitance between cores and shield : 180 pF/m
- □ Nominal attenuation at 1 MHz : 2.7 dB/100 m
- ☐ Linear resistance: ≤ 109 ohms/Km.
- ☐ Insulation resistance: ≥1500 Mohms . Km.
- □ Voltage withstanding:

between conductors: 1000 volts

between conductors and shield: 1000 volts

- ☐ Jacket spark test: 1000 Volts
- □ Voltage rating : 250 Volts
- $\Box$  Maximum transfer impedance ( $\Omega/m$ ):

DC current 15 . 10<sup>-3</sup> 1MHz 5 . 10<sup>-3</sup> 10MHz 5 . 10<sup>-3</sup> 30 MHz 10 . 10<sup>-3</sup>

#### CONSTRUCTION

PRODUCT REFERENCES

① 2 <u>FILLERS</u> PTFE

ET 96770

ET 96770-01

ET 96770-02

② 2 CORES

1 core : AWG 24 Cross section: 0.21 mm<sup>2</sup> 19 x 0.12 Silver plated copper

alloy (EN2083)

Insulation : extruded PTFE Diameter =  $1.05 \pm 0.10$  mm

3 LAY UP

Nominal diameter: 2.10 mm

§ SHIELD

Tin plated copper 10/100

SHIELD

Tin plated copper 10/100 Diameter < 3.50 mm

6 JACKET

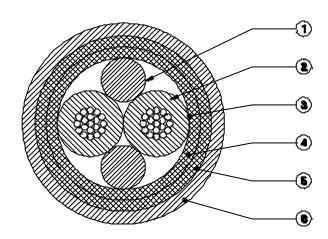
FEP Jacket

OD  $3.65\pm0.25~\text{mm}$ 

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#### **Physical characteristics**

- □ Nominal weight : 28 g/m
- ☐ Maximum weight: 37 g/m.
- ☐ Minimum static bending radius : 20 mm
- ☐ Good resistance to aircraft fluids
- ☐ Temperature rating: -65°C to +150°C
- Outer jacket color : white
- □ Color of cores: white, blue





### Marking

- □ "FILOTEX FRANCE ET 96770-\*\*""
  - (\*\*) = Year of manufacturing
- Red marking for the main line (EN 3375 004 B01, Nexans reference: ETUDE 96770-01)
- Blue marking for the branch line (EN 3375 004 B02, Nexans reference: ETUDE 96770-02)

Technical requirements and control conditions: according to pr EN 3375

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## STUDY 65529 PAN 6421 ZA 002



## CABLE, SPECIAL ELECTRIC (MIL-STD-1553B DATA BUS)

#### **Physical Characteristics**

- □ Operating Temperature: -65°C to +150°C
- → Maximal weight : 29 Kg./Km.
- Good resistance to aircraft fluids

#### PRODUCT REFERENCES

PAN 6421 ZA 002 ET 65529

#### CONSTRUCTION

① CORES:

Stranded conductor:
19 x 0.118 Silver plated copper
Alloy
Insulation Polyimide/FEP Tape
plus dispersion

Diameter = 1.22 mm Maxi = 1.26 mm

- 2 P.T.F.E. fillers
- ③ Inner screen 0.08 mm Silver plated copper (Braid)
- ④ Outer screen 0.08 mm Silver plated copper (Braid)
- © Extruded FEP Jacket 0.20 mm Minimum Wall Thickness

Diameter min.= 3.15 mm Diameter max.= 3.80 mm Max. Weight = 29.0 g/m

## Electrical Characteristics

□ Voltage Rating: 600 Volts RMS.

#### **Characteristics Impedance**

 $\Box$  77 $\Omega \pm 3\Omega$ 

#### **Mutual Capacitance**

□ 98.4 pF/m

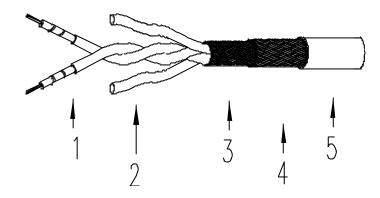
#### **Attenuation**

□ 4.92 dB/100m. Max.

#### Identification

- □ Color of cores : Red, Blue
- □ Color of Jacket : Blue
- Black Marking of the external sheath:
- □ "PAN 6421 ZA 002 FR F \*\*"
- → \*\* = Year of manufacturing

**Specification :** PANAVIA 75.6421 SP-P-99301-00-P



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**M**exans



### **ASNE0259 HE 24**



## BUS CABLE AWG 24 - Single braid - Polyimide Jacket

#### PRODUCT REFERENCES

#### **ASNE0259 HE 24**

#### **Characteristics**

□ Voltage Rating : 600 Volts RMS□ Operating Temperature : -55°C to +150°C

Good Resistance to aircraft fluids.

Non flammable.

☐ Nominal weight : 27 g/m

#### **Characteristics impedance**

**□** 125 Ω ±10%

#### **CONSTRUCTION**

### ① CORES

2 twisted cores AWG 24: Stranded conductor: 19 x 0.12 mm Silver plated high strength copper alloy Extruded PTFE Ø 1.97 ± 0.03 mm

#### ② SHIELD

0.10 mm Nickel plated copper braid Covering ≥ 62%

#### **3** JACKET

Polyimide tape(s)

Maxi. Diameter = 4.50 mm

Attenuation at 500 KHz: 2.5 dB/100m

□ Attenuation at 1 MHz : 3.1 dB/100m□ Mutual capacitance : 40 pF/m

#### **Electrical characteristics**

Voltage withstanding

between conductors: 1500 volts

between conductors and shield: 1500 volts

 $\Box$  Maximum linear resistance of conductor at 20°C : 97.2  $\Omega$ /Km

**Identification:** 1 core white and 1 core brown

Natural jacket

**Specification: ASNE0259** 



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## **ASNE0849 HJ 26**

## Filotex®

### **Twinaxial Cable High immunity**

#### **Applications**

☐ General Electronic Wiring.

#### PRODUCT REFERENCES

#### ASNE0849 HJ 26

#### Main data

- □ Voltage Rating: 600 Volts RMS
- □ Low Operating Temperature: -65°C
- ☐ High Operating Temperature: +200°C
- ☐ Transfer Impedance:

DC  $28.10^{-3} \Omega/m$  10 kHz  $8,7.10^{-3} \Omega/m$  100 kHz  $0,85.10^{-3} \Omega/m$ 2 MHz  $0,8.10^{-5} \Omega/m$ 

#### **CONSTRUCTION**

#### ① 2 CORES

Stranded conductors:
19 x 0.100 Nickel Plated
High Strength Copper Alloy
Insualtion:
Polyimide tape(s)
PTFE Topcoat
Dia. max. = 0.84 mm

#### **SCREEN**

- ② 0.08 mm Nickel plated copper braid.
- ③ High immunity TapesNominal dia. = 2.06 mm
- ① 0.10 mm Nickel plated copper braid.Nominal dia. = 2.50 mm

#### **JACKET**

⑤ FEP

 $\begin{array}{ll} \mbox{Maximum Diameter} = 3 \mbox{ mm} \\ \mbox{Maximum Weight} = 22 \mbox{ g/m} \end{array}$ 

 $\hfill\Box$  Impedance max. : 75  $\Omega$ 

☐ Minimum Bend radius: 30 mm

☐ Good resistance to aircraft fluids

#### Identification

□ Color of cores : Light Blue, Red

□ Color of Jacket : White

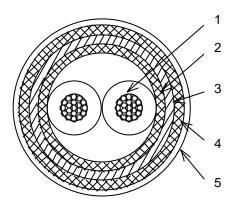
Black marking of the external sheath: "HJ 26 FR F \*\*"

FR = Country of Origin (FR = France)

F = Manufacturer (F = Filotex<sup>®</sup>)

\*\* = Year of Manufacturing (ie. 02 = 2002)

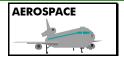
**Specification:** ASNE0849



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## SP 554 STUDY 61333



#### Bus lines for multiplexed transmission

#### **Electrical characteristics**

□ Characteristic impedance :  $75 \pm 5 \Omega$  □ Nominal mutual capacitance :  $65 \pm 5 \text{ pF/m}$ 

□ Capacitance unbalance: ≤ 5%

□ Nominal attenuation at 1 MHz : 2.6 dB/100 m at 10 MHz : 10 dB/100 m

☐ Linear resistance: ≤ 50.2 ohms/Km

☐ Insulation resistance under 500 volts: > 5000 Mohms . Km.

■ Voltage withstanding:

between conductors: 2000 volts RMS

between conductors and shield: 2000 volts RMS

□ Jacket spark test: 500 Volts□ Voltage rating: 600 Volts

Transfer impedance ( $\Omega/m$ ): at 1 MHz: 2.5 . <sup>10-5</sup>

#### **Physical characteristics**

□ Nominal weight: 55 g/m

☐ Maximum weight : 55.4 g/m.

□ Good resistance to aircraft fluids

□ Temperature rating: -65°C to +200°C

Outer jacket color : whiteColor of cores: white, blue

These cables are approved by the Defense Ministry under

letters:

N°8981/STTE/CTG (10-09-86)

Registered at the B.N.Aé: N° 6415 401

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#### PRODUCT REFERENCES

ET 61333

#### CONSTRUCTION

① 2 <u>FILLERS</u> PTFE

② 2 CORES

1 core : AWG 22 Cross section: 0.38 mm<sup>2</sup> 19 x 0.16 Silver plated copper Insulation : extruded PTFE Diameter =  $1.50 \pm 0.03$  mm Lay up:

Nominal diameter: 3.00 mm

SHIELD Silver plated copper 12/100

4 TAPE

High permeability alloy

⑤ SHIELD

Silver plated copper 12/100 Nominal diameter: 4.06 mm

**6** JACKET

Polyimide PTFE

 $OD = 4.55 \pm 0.25 \text{ mm}$ 

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## SP 69899 **ASNE 0811 - WY**

#### **Bus lines for multiplexed transmission**

Use for Bus system MIL STD 1553

#### **Electrical characteristics**

- $\Box$  Characteristic impedance at 1 MHz : 77 ± 7  $\Omega$
- □ Nominal mutual capacitance : 65 pF/m
- □ Nominal capacitance between 1 core and shield : 110 pF/m Nominal capacitance between cores and shield: 180 pF/m
- □ Nominal attenuation at 1 MHz : 3.5 dB/100 m
- ☐ Linear resistance: ≤ 146 ohms/Km.
- ☐ Insulation resistance: ≥1500 Mohms. Km.
- Voltage withstanding:

between conductors: 1000 volts

between conductors and shield: 1000 volts

- ☐ Jacket spark test: 1000 Volts □ Voltage rating : 250 Volts
- $\square$  Maximum transfer impedance (m $\Omega$ /m):

DC current: 50 10<sup>-3</sup> 1MHz 50 10-3 50 10-3 10MHz 100 10-3 30 MHz

#### CONSTRUCTION

PRODUCT REFERENCES

**ASNE 0811 WY** 

ET 69899-01

ET 69899-02

① 2 FILLERS PTFE

2 CORES

1 core : AWG 26 Cross section: 0.15 mm<sup>2</sup> 19 x 0.10 Silver plated copper

alloy (EN2083)

Insulation: extruded PTFE Diameter =  $0.80 \pm 0.05$  mm

3 LAY UP

Nominal diameter: 1.60 mm

SHIELD

Silver plated copper 10/100 Diameter < 2.00 mm

⑤ JACKET

OD  $2.50 \pm 0.10 \text{ mm}$ 

**FEP** 

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#### **Physical characteristics**

Nominal weight: 14.5 g/m Maximum weight: 19 g/m. 

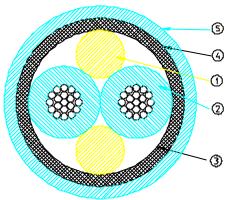
Minimum static bending radius: 15 mm 

Good resistance to aircraft fluids 

Temperature rating: -65°C to +200°C 

Outer jacket color: white Color of cores: white, blue

**Specification: ASNE 0811** 





## Marking

- □ "FILOTEX FRANCE ET 69899-\*\*""
  - (\*\*) = Year of manufacturing
- Red marking for the main line (Nexans reference: ETUDE 69899-01)
- □ Blue marking for the branch line
- (Nexans reference: ETUDE 69899-02)





## ABS 0386 WF STUDY 96897



## PRODUCT REFERENCES

ABS 0386 WF ET 96897

#### CONSTRUCTION

① <u>CORES</u> 2 Cores

19 x 0.12 mm Nickel coated copper. PTFE insulation.

- SCREEN
   Nickel coated copper braid
   (Ø 0.08 mm)
  - <u>JACKET</u>
- 3 Polyimide tapes
- Fiber glass fillers.

#### **Applications**

Data bus cable.

#### Main data

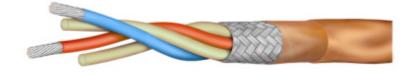
- □ Voltage rating: 1600 vrms.
- □ Operating temperature: -55°C/+200°C
- ☐ Minimum bend radius.: 25 mm.
- ☐ Characteristic impedance: 100 ± 10 Ohms at 5 MHz.
- □ Attenuation at 1 MHz: 0.03 dB/m.

at 5 MHz: 0.06 dB/m. at 10 Mhz: 0.12 dB/m

- ☐ Maximum capacitance: 60 pF/m
- Dimensions and weight: see table on reverse of this data sheet.

#### **Identification**

- □ 1 core: Light blue with green marking 'WF 24 FR F \*\*'
- □ 1 core : Red with white marking 'WF 24 FR F \*\*'
- ☐ Amber color jacket : (Marking tape under jacket)
- $\square$  Marking: 'WF 24 FR F \*\*' + dash. (\*\*) = Year code.



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#### **DIMENSIONS AND WEIGHT**

		Conductor			Insulation Braid		Finish cable					
Reference	US	Composition	Diameter		Ohmic resistance at 20°C	Diameter				Overall diameter		Weight
FILOTEX	AWG	(N x mm)	(mı	m)	(Ohms/Km)	(m	m)	Østr and	Ø Nom.	(m	ım)	(Kg/Km)
			Nom.	Max.	Max.	Nom.	Max.	(mm)	(mm)	Nom.	Max.	Max.
Study. 96897	24	19 x 0.12	0.59		117.5	1.40	1.50	0.08	3.12	3.30	3.50	23.4

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### **ASNE0290 XM 24**



### **BUS PAIR**, High temperature

#### **Applications**

- ☐ General Electronic Wiring.
- □ Communication Data Bus, compatible RS 422

#### Main data

- □ Voltage Rating: 600 Volts RMS
- □ Low Operating Temperature: -55°C
- ☐ High Operating Temperature: +200°C
- ☐ Minimum Bend radius : 30 mm
- Good resistance to aircraft fluids
- ☐ Maximum Weight = 15 g/m

#### **Electrical data**

- $\hfill\Box$  Impedance : (78  $\pm$  7)  $\Omega$  @ 200 MHz
- ☐ Lineic capacitance (nom): 64 pF/m
- □ Linear attenation (max):
  - 0.035 dB/m @ 1 MHz
  - 0.15 dB/m @ 10 MHz

#### CONSTRUCTION

PRODUCT REFERENCES

ASNE0290 XM 24

#### ① 2 CORES

Stranded conductors: 19 x 0.12 Nickel Plated

High Strength Copper

Alloy

Insulation:

**Etruded coloured PTFE** 

Max Dia. = 1.33 mm

#### **SCREEN**

② 0.08 mm Nickel plated copper braid.Kr = 0.65 min.

#### **JACKET**

Polyimide TapeOverlap = 15% min.

Polyimide Tape

Overlap = 53% min.

Maximum Diameter = 3.10 mm

#### **Identification**

□ Color of cores: Light Blue, Red

□ Color of Jacket : Natural

Marking : "XM 24 \*-F"

FR = Country of Origin (FR = France)

F = Manufacturer (F = Filotex<sup>®</sup>)

\* = Year of Manufacturing Code (ie. 02 = 2002)

**Specification:** ASNE0290









## SP 69794 EN 3375-004 C - WJ



#### Bus lines for multiplexed transmission

Use for Bus System MIL STD 1553

#### **Electrical characteristics**

- $\Box$  Characteristic impedance at 1 MHz : 77 ± 7  $\Omega$
- □ Nominal mutual capacitance : 65 pF/m
- □ Nominal capacitance between 1 core and shield : 110 pF/m
   □ Nominal capacitance between cores and shield : 180 pF/m
- □ Nominal attenuation at 1 MHz : 2.7 dB/100 m
- ☐ Linear resistance: ≤ 109 ohms/Km.
- □ Insulation resistance: ≥1500 Mohms . Km.
- Voltage withstanding:

between conductors: 1000 volts

between conductors and shield: 1000 volts

- ☐ Jacket spark test: 1000 Volts
- □ Voltage rating: 250 Volts
- $\square$  Maximum transfer impedance ( $\Omega/m$ ):

DC current 15 . 10<sup>-3</sup> 1MHz 5 . 10<sup>-3</sup> 10MHz 5 . 10<sup>-3</sup> 30 MHz 10 . 10<sup>-3</sup>

#### **CONSTRUCTION**

PRODUCT REFERENCES

① 2 FILLERS PTFE

ET 69794

ET 69794-01

ET 69794-02

2 CORES

1 core : AWG 24 Cross section: 0.21 mm<sup>2</sup> 19 x 0.12 Silver plated copper alloy (EN2083)

Insulation : extruded PTFE Diameter =  $1.05 \pm 0.10$  mm

3 LAY UP

Nominal diameter: 2.10 mm

SHIELD

Silver plated copper 10/100

SHIELD

Silver plated copper 10/100 Diameter < 3.50 mm

6 JACKET

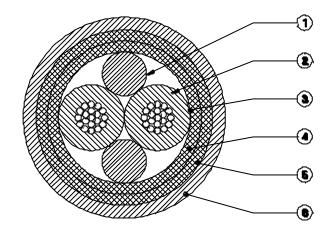
**FEP Jacket** 

OD  $3.65 \pm 0.25 \text{ mm}$ 

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#### **Physical characteristics**

- □ Nominal weight : 28 g/m
- ☐ Maximum weight : 37 g/m.
- ☐ Minimum static bending radius : 20 mm
- ☐ Good resistance to aircraft fluids
- □ Temperature rating: -65°C to +200°C
- Outer jacket color : white
- □ Color of cores: white, blue





### Marking

- □ "FILOTEX FRANCE ET 69794-\*\*""
  - (\*\*) = Year of manufacturing
- Red marking for the main line (EN 3375 004 C01, Nexans reference: ETUDE 69794-01)
- Blue marking for the branch line
   (EN 3375 004 CO2, Nexans reference: ETUDE 69794-02)

Technical requirements and control conditions: according to pr EN 3375

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### EN 4608-005B 002

## Filotex<sup>®</sup>

### Fireproof Cable Two-cores Twisted Screened and Jacketed Gauge 24 for data transmission

#### **Applications**

☐ Use in the onboard electrical systems of aircraft.

#### **PRODUCT REFERENCES**

EN 4608-005B 002 EN 2346-005

#### **CONSTRUCTION**

#### **CORE**

Conductor

① Stranded conductor:
19 x 0.120 Nickel clad
copper alloy

Insulation

② Fire resistant insulation

3 Polyimide Tape

4 PTFE Tape

**SCREEN** 

© 0.12 Nickel plated copper braid

**JACKET** 

**©** UV PTFE Tape(s)

#### **Electrical Characteristics**

☐ Temperature rating : -65°C /+260°C (Ambiant. + Rise.)

□ Voltage Rating : 600 Volts rms□ Operating frequency : up to 125 KHz.

Dimensions and weights : see table on this data sheet.

□ Fire resistance – 15 mn : > 50 kΩ. □ Very good resistance to Aircraft Fluids.

#### Identification

□ Core identification Colours:

Two cores: White with a helical red / blue stripe

Marking Wording: EN DW A ++ FRF\*\*

☐ Jacket identification colour: White with narrow red stripe

Marking Wording: EN xxx ++ FRF\*\*

With: xxx type code TBD

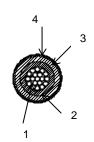
++ = AWG Wire Size

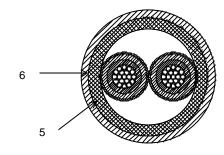
FR = Country of Origin (FR = France)

F = Manufacturer (F = Filotex®)

\*\* = Year of Manufacturing (ie. 03 = 2003)

### **Specification: EN 4608-005**





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#### **DIMENSIONS AND WEIGHTS**

				Finished Co	able	
reference	Size Code	AWG	No of cores	DC Resistance at 20°C ( Ohms/Km )	Diameter (mm)	Weight ( g/m )
				Max.	Max.	Max.
EN 4608-005B 002	002	24	2	135	4.00	27.5

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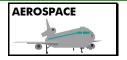
## Part 6

# Special cables









### **STUDY 124401**



#### Low Noise Screened Pair Cable Transmission Cable 260 °C

#### **Applications**

☐ General Electronic Wiring.

#### Main data

- □ Voltage Rating: 600 Volts RMS
- □ Operating Temperature: -54 to +260°C
- □ Voltage withstanding: Insulation : 2000 V RMS
  - Jacket : 5000 V Impulse
- $\square$  Insulation resistance:  $> 10^{12} \ \Omega$ .m (Core/Core and Core/Screen)
- □ Capacitance 100 Pf/m (between cores)

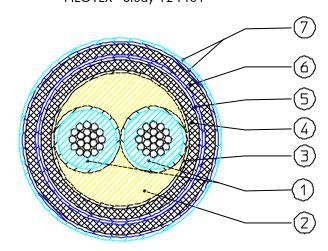
200 Pf/m (between core and screen)

- Triboelectrical noise
  from 30 to 90 Hz, displacement 2 mm pk-pk: < 0.15 pC
  from 20 to 50 Hz. displacement 5 mm pk-pk: < 1 pC
  at 2 Hz, displacement 40 mm pk-pk: < 10 pC
- Excellent chemical resistance
- □ Nominal weight: 68.9 g/m

#### **Identification**

- □ Color of cores : Red, Blue
- □ Color of Jacket : Black

#### FILOTEX® Study 124401



#### **PRODUCT REFERENCES**

FILOTEX Ref: ET 124401

#### **CONSTRUCTION**

① 2 CORES:

Stranded conductor:
19 x 0.203 Nickel plated copper alloy
(PD 135)
Insulation:
Extruded PTFE
Semi-conductive tape

- ② GLASS FIBER FILLERS
- 3 SEMI-CONDUCTIVE TAPE Diameter = 3.74 mm

Diameter = 1.78 mm

4 SHIELD

0.12 mm Nickel plated copper braid 91% (US) minimum coverage Diameter = 4.22 mm INNER JACKET

- Polyimide tape(s)51% minimum overlap
- 6 SHIELD 0.12 mm Nickel plated copper braid 91% (US) minimum coverage Diameter = 4.83 mm
- OUTER JACKET
  Polyimide tape(s)
  PTFE tape(s)
  51% minimum overlap
  OD = 5.20 ± 0.20 mm

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## NSA 935 306 YK STUDY 86891



#### Low noise transmission cable 260°C

#### **Characteristics:**

- □ Operating temperature : -55 to +260°C
- □ Operating voltage: 600 V AC
- □ Voltage withstanding:
  - between cores 1500 V AC

between cores and shield 1500 V AC

- □ Insulation resistance :  $\geq$  1000 MΩ.Km
- □ Capacitance 100 Pf/m (between cores)

200 Pf/m (between cores and shield)

- □ Triboelectrical noise
  - 2 Hz, 40 mm pk-pk : ≤ 10 pC
  - 5 to 50 Hz , 5 mm pk-pk :  $\leq$  1 pC
  - 10 Hz to 70 Hz , 2 mm pk-pk :  $\leq$  0.15 pC
- □ Nominal weight: 38.2 g/m
- □ Identification : 1 core Red 1 core blue
- → White jacket

#### PRODUCT REFERENCES

NSA 935 306 YK ET 86891

#### CONSTRUCTION

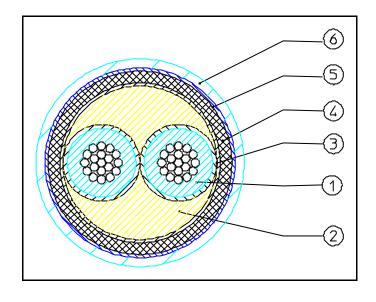
① 2 CORES
CONDUCTOR
19 x 0.17 mm
Silver plated copper clad steel
INSULATION
Extruded PTFE 1.40 ± 0.05 mm
Semi-conductor tape
Diameter 1.58 mm nom.

- ② GLASS FIBER FILLERS
- **③ SEMI-CONDUCTOR TAPE**
- SHIELD

Nickel plated copper  $\emptyset$  0.12 mm Kr > 70%

#### **JACKET**

- ⑤ Polyimide tape(s)
- © PTFE tape(s)
- OD max 4.35 mm



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## MBBN 3320 YH +++ STUDY 96532 / STUDY 96533



## Cable electric, Nickel chromium/Nickel aluminium Jacketed, Shielded Twisted pair

#### **Electrical Characteristics**

□ Voltage rating: 600 Volts RMS

#### **Thermal Characteristics**

□ Temperature rating : -55°C /+ 260°C

#### **Properties**

Resistant to fungus and to fluids used on board

Flame resistant

**EMF**:  $10.56 \pm 0.12 \text{ mV}$  at  $+260^{\circ}\text{C}$ 

#### **Identification**

Conductor Nickel Chromium: WhiteConductor Nickel Aluminium: Green

Jacket: Green (Size 006)

Green With narrow White Stripe (Size 004)

■ Marking : Colour : Black

■ Wording : MBBN 3320 YH +++ FR F \*\*

+++ = Code for Nominal Section FR = Country of Origin (FR=France)

F = Manufacturer (F=Filotex®)

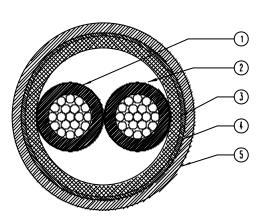
\*\* = Year of Manufacturing (ie.00 = 2000)

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#### **Specifications**

☐ MBBN 3320

prEN 4049



# √exa

### PRODUCT REFERENCES

MBBN 3320 YH +++ ET 96532, ET 96533

#### **CONSTRUCTION**

① CONDUCTOR
Stranded conductor:
19 x 0.20 mm
Nickel Chromium for Size
006

or 19 x 0.15 mm

Nickel Chromium for Size

004

INSULATION

PTFE / Polyimide /PTFE Tapes

© CONDUCTOR
Stranded conductor:
19 x 0.20 mm
Nickel Alumimium for
Size 006

or 19 x 0.15 mm
Nickel Alumimium for
Size 004
INSULATION
PTFE / Polyimide /PTFE Tapes

③ SCREEN Nickel plated Copper Braid JACKET

Polyimide Tape

⑤ PTFE Tape

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#### **DIMENSIONS AND WEIGHT**

Code for	US AWG	CONDUCTORS CORES SCREEN OHMIC RESISTANC At 20°C				NCE	FINISHED	CABLES			
Nominal section		Construction	Nominal Diameter	Maximal Diameter	Strands Diameter	Nic Chro			kel inium	Maximal Diameter	Maximal Weight
		n x mm	(mm)	(mm)	(mm)	$(\Omega)$	/m)	$(\Omega,$	/m)	(mm)	(g/m)
						Min.	Max.	Min.	Max.		
004	22	19 x 0.15	0.75	1.45	0.12	1.99	2.41	0.78	0.95	4.00	24.3
						5	1	6	1		
006	20	19 x 0.20	1.00	1.67	0.12	1.12	1.35	0.44	0.53	4.55	31.4
						2	7	3	4		









## Filotex<sup>a</sup> Type ASNE0409 **ASNE0410 ASNE0411 ASNE0412**

#### Shielded and Sheathed single and multicores UV Laser printable

#### **Applications**

Designed for Flight Testing Wiring.

#### Main data

: -55°C to +200°C.(Ambiant + Rise) Operating temperature

: 600 Volts RMS. ■ Voltage rating Operating frequency : up to 2500 Hz.

Dimensions and weights : See tables on this data sheet

Very Good Resistance to Aircraft Fluids.

Mould and Fungus Resistant

Solderability test on conductors: according to ASNE0243

#### **Identification**

☐ Cores and Sheath Colours : See Table on this Data Sheet

■ Marking:

Colour: White on Red and Black wires

Dark Green on other colours.

Wording: On Cores ■ BG\*\* FRF++ ■ BG\*\* FRF++ ■ \$\$\*\* £ FRF++ On Sheaths ■ \$\$\*\* £ FRF++

\$ = ASNE Type (SU, TV or VF)

= AWG Wire Size

= Topcaot Code (U or None) = Country of Origin (FR = France) = Manufacturer (F = Filotex<sup>®</sup>) ++ = Year of Manufacturing (ie. 01 = 2001)

#### **Specifications**

☐ ASNE0409, ASNE0410, ASNE0411, ASNE0412, ASNE0243

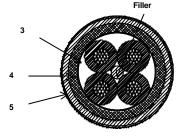
□ NSA 935000, SDF/B67-04/A/108/1128

Filotex<sup>a</sup> ASNE0409 - ASNE0410 - ASNE0411 - ASNE0412









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#### PRODUCT REFERENCES

ASNE0409 BG ASNE0410 SU ASNE0411 T\ ASNE0412 VF

#### CONSTRUCTION

#### CORES (ASNE0409)

① Conductor:

19 x 0.120 Nickel plated copper

(Suitable for solderability)

② Insulation: PTFE tape

#### ASSEMBLY (2 and 4 cores)

3 PTFE tape

#### SHIELD

 Nickel Plated Copper Spinning

#### **SHEATH**

⑤ 1 Polyimide Tape

1 Orange PTFE UV Tape

#### **NUMBER OF CORES**

ASNE0410 : 1 ASNE0411 : 2 ASNE0412 : 4

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#### **DIMENSIONS AND WEIGHTS (METRIC UNITS)**

		Dia.	Finished Cable						
Nexans	Nbr of Cores	of	Colours		Maximum DC		Diameter		Maximum
Filotex <sup>â</sup> PART NUMBER		strand	Cores	Sheath	Resistance at 20°C (68°F)		(mm)	Weight	
		(mm)			(Ohms/Km)	Mini.	Nom.	Max.	(g/m)
ASNE0409 BG 24 UV	1	-	Orange		91.2	0.86	0.97	1.02	3.10
ASNE0410 SU 24 UV	1	0.08	White	Orange	91.2	-	1.42	1.50	6.40
ASNE0411 TV 24 UV	2	0.08	White + Light Blue	Orange	94	-	2.54	2.70	12.4
ASNE0412 VF 24 UV	4	0.10	White + Light Blue + Red + Black	Orange	94	-	2.99	3.10	21.8

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## Part 7

## **Optical cable**









### ABS0963-003 LF

## Filotex®

#### **Multimode Fibre Optic Cable 62.5/125**

#### Main data

□ Operating temperature :

Long term : -55 to +125°C Peak : -65 to +150°C

☐ Maximum pulling force :

Long term : 10 daN Short term : 25 daN

☐ Tensile strength : > 100 daN

□ Nominal weight : < 4 kg/km

☐ Minimum bend radius :

Storage > 40 mm Long term > 20 mm

Short term (installation) > 12 mm

☐ Minimum bend radius :

Storage > 40 mm Long term > 20 mm

Short term (installation) > 12 mm

☐ Maximum attenuation at 20°C:

at 850 nm : 4 dB/km at 1310 nm : 2 dB/km

☐ Effective index of refraction:

at 850 nm : 1.4970 at 1300 nm : 1.4919

□ Numerical aperture : 0.275 ± 0.015

□ Cable Bandwidth (MHz. km):

at 850 nm : >400 at 1310 nm : > 1000

#### **Spécifications**

□ ABS0963-003

√exar

#### PRODUCT REFERENCES

ABS0963-003 LF ET 132126

#### **CONSTRUCTION**

① OPTICAL FIBRE:

Core +cladding + coating Silica/Silica/Silicone Type 62.5/125/400 µm

② PRIMARY JACKET:

Copolymer 0 Halogen High Temperature

 $\emptyset : 0.90 \pm 0.05 \text{ mm}$ 

3 MECHANICAL STRENGTH:

Polymer aromatic fibre braid

**4** OUTER JACKET:

Copolymer O Halogen High Temperature

 $\varnothing$ : 1.50 mm (for info.)

+

E.T.F.E

 $\emptyset$ : 1.80 ± 0.1 mm

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#### **Connection:**

Stripping of primary jacket, buffer and coating.

If mechanical stripping is used, we highly recommend:

To strip directly from primary jacket to silica to carefully clean silica with a solvent such as MEK (Methylethylketone).

Residues of silicone can be removed with a wet tissue by wiping off of different angles in order to clean all the circumference of the silica.

If you dip bare fibre into solvent, take care to avoid contact between solvent and other part of the cable such as strength members, silicone and jacket.

#### **Advantages**

- ☐ Small diameter
- Low weight
- ☐ Good chemical resistance
- ☐ Good mechanical resistance
- **¬** Flame retardant
- ☐ Flammability: non flammable
- ☐ Smoke density and toxicity (According to ABD0031 chart1)

DADAA	METERS	With	Flame	Without Flame		
FANAN	Requested	Measured	Requested	Measured		
Dm -	≤ 200	65	≤ 200	0		
Dm 16 mn (fo	or information)	-	207	-	50	
	HF	≤ 100	30	≤ 100	0	
	HCL	≤ 150	0	≤ 150	0	
TOXICITE at 4 mn	HCN	≤ 150	2	≤ 150	0	
	SO <sub>2</sub> /H <sub>2</sub> S	≤ 100	0	≤ 100	0	
	NO/NO <sub>2</sub>	≤ 100	5	≤ 100	0	
	CO	≤ 1000	50	≤ 1000	≈ 0	
	HF	≤ 100	25	≤ 100	6	
	HCL	≤ 150	0	≤ 150	0	
TOXICITY at 16 mn	HCN	≤ 150	5	≤ 150	1	
	SO <sub>2</sub> /H <sub>2</sub> S	≤ 100	0	≤ 100	0	
	NO/NO <sub>2</sub>	≤ 100	10	≤ 100	0	
	СО	≤ 1000	400	≤ 1000	50	

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PARAMETER and Measuement norm	TEST Description and Remarks	RESULTS **
<b>Core Diameter</b> ANSI/EIA/TI – A455-58 A		62.5 ± 3 μm
Cladding Diameter ANSI/EIA/TI – A 455-45 B		125 ± 2 μm
Core « non » circularity ANSI/EIA/TI – A 455-45 B		≤ 5% (3µm)
Concentricity error ANSI/EIA/TI – A 455-45 B		3 μm
<b>Numerical aperture</b> ANSI/EIA/TI – EIA 455-177A		0.275 ± 0.015
Cladding non circularity ANSI / EIA / TI – A 455 – 45 B		$\leq$ 2 % ( 2.5 $\mu$ m )
Index of refraction ANSI/EIA/TIA 455/44B		1.4970 at 850 nm 1.4919 at 1310 nm
<b>Fibre bandwith</b> ANSI/EIA/TI – EIA 455-30B	Tests performed on a 1300 m length	>400 MHz. km ( 850 nm ) > 1000 MHz. km (1310 nm )
<b>Primary Jacket</b> ANSI/EIA/TI – A 455-55B		900 ± 50 μm
<b>O</b> uter <b>Diameter</b> ANSI/EIA/TI – 455-55C		1.80 ± 0.1 mm
<b>Cable Stability</b> EN 3745 – 205	Silica versus primary jacket Primary jacket versus outer jacket (2 m and 20 m)	Shrinkage < 100 μm Shrinkage < 200 μm
<b>Attenuation</b> EIA 455-53B		At 850 nm < 4 dB/km At 1310 nm < 2 dB/km
<b>Discontinuity</b> EIA 455-59		Discontinuity < 0.2 dB/dB/point
Ambient light coupling EN 3745 – 305	( 20 m ) solar spectrum (6000 K) 86400 Lux	≤ - 80dBm
Cable attenuation variation during temperature cycling EN 3745 306	5 cycles according to EN 3745 – 402 ( 20 m )	During test < 0.4 dB** After test ≈ 0 ( 850 nm, 1310 nm )
<b>Accelerated ageing</b> EN 3745 – 401	( 100 m ) Ø mandrel : 250 mm 168h at 125°C	( 850 and 1310 nm ) During test ≤ 0.05 dB** Residual < 0.1 dB**
Cable temperature cycling EN 3745 – 402 definition	High temp. 125°C Low temp. –55°C Duration of high & low temp. 30mn Rate of change : 5°C ( 20 m )	
<b>Thermal shock</b> EN 3745 – 404	4 cycles 125°C/30mn -55°C/30mn 20°C (20 m)	Maximum permissive variation in attenuation during test sequence and after 24h : < 0.5dB**

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PARAMETER and Measuement norm	TEST Description and Remarks	RESULTS **			
<b>Cable cold bend test</b> EN 3745 – 406	Ø mandrel : 40 mm 10 turns (2 m) 2 cycles 20°C /-55°C 2 windings and unwindings at –55°C	During test :Δα max < 0.6 dB** After 24h : < 0.1 dB**			
<b>Flammability</b> EN 3745 – 407	Os	Passed			
<b>Life time</b> EN 3745 – 410	( 100 m )	> 1000 h at 125 °C			
Resistance to fluids EN 3745 – 411	Fluids according to EN 3909	Weight variation < 5% No cracks, no colour change Good printing legibility			
<b>Humidity resistance</b> EN 3745 - 412	15 cycles >95% R.H. ( 20 m )	passed			
<b>Fibre proof test</b> EN 3745 – 501	1%/1seconde exceed 100 KPSI	passed			
<b>Scrape abrasion</b> EN 3745 – 503	∅ needle : 0.5 mm Load : 10N 100 cycles	Δα<0.1 dB **at 1310 nm during test			
<b>Micro-bending</b> EN 3745 – 504	Ø mandrel : 20 mm Load : 150 N	∆α<0.2 dB** at 1310 nm during test 15 mn after test, Residual attenuation ≈ 0 dB			
Cable tensile strength EN 3745 - 505		Cable breakage > 1100N Δα< 0.2 dB** for 150 N load			
<b>Cable impact test</b> EN 3745 – 506	Energy : 5 J Anvil radius : 15 mm	After 5 impacts Δα< 0.1 dB**			
<b>Cable Cut-through</b> EN 3745 – 507	Load 20N / 1 mn	During test Δα< 0.3 dB** After test Δα ≈ 0 dB** No insulation degradation No fibre breakage			
<b>Torsion test</b> EN 3745 – 508	Cable tension load : 10 N Length under torsion = 250 mm 1000 cycles	Δα at 1310 nm during test : 0 dB for one cycle < 0.1 dB** for 1000 cycles			
<b>Kink test</b> EN 3745 – 509	Ø of the kink : 20 mm	Δα at 1310 nm during test : < 0.2 dB**			
<b>Bending test</b> EN 3745 – 510	Ø mandrel : 25 mm 10 turns Tension load on cable : 20 N	After bending : $\Delta\alpha$ 0.15 dB** After unwinding : $\Delta\alpha$ residual $\approx$ 0 dB			
<b>Cable to cable Abrasion</b> EN 3745 - 511	Optical / Electrical Optical / Electrical	> 10 <sup>7</sup> for * CF* 18 with 1 daN load >10 <sup>7</sup> for * DM* 18 with 1 daN load			
Flexure Endurance EN 3745 – 512	Optical / Optical  Tension load on cable : 10 N  Ø mandrel : 25 mm  3000 cycles	6x10 <sup>6</sup> for 500g load  Δα before and after test < 0.1 dB**  No insulation degradation			
Smoke Density EN 3745 - 601	ABD 0031 Method: AITM 2.0008	See Chart 1			

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PARAMETER and Measuement norm	TEST Description and Remarks	RESULTS **
Toxicity	ABD 0031	See Chart 1
EN 3745 – 602	Method: AITM 3.0005	
<b>Strippability</b> EN 3745 – 701	Load : 20 N Stripped length : 50 mm Stripping speed : 25 to 50 mm/mn	< 7 N on secondary coating, 900 μm
Durability of manufacturer identification EN 3745 - 703	Ø needle : 0.5 mm Load : 1.5 N 125 cycles	After test, good printing legibility
UV laser marking EXCIMER  Laser (XeCPI)  between 0.9 and 1.05 J/ cm²	Marking contrast versus jacket > 65 %	

- \* **CF** = Polyamide tapes + FEP coating
- \* **DM** = PTFE wrapped jacket.
- \*\* Optical tests performed with a 85 % / 85 % source ( near field and far field ) launch conditions. Launch conditions are calibrated at 15 %

#### 1- STRONG POINTS

#### Mechanical properties:

- High temperature
- High tensile resistance
- High flexibility
- Low weight / Small diameter
- Low bending radius
- Easy strippability

#### Optical properties:

- High bandwidth
- Low cost ferrules (Telecom components)

#### Chemical properties:

- High chemical resistance
- Very low smoke and toxicity
- No flame propagation

#### 2 - MAIN TARGET APPLICATIONS

#### Harsh environments such as:

- Aeronautical
- Geophysics
- Space
- Missile
- Chemical industry

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#### **About Nexans**

**Nexans, with its Filotex® products,** has a high technology knowledge and an international experience, which has been developed in different industrial areas:

☐ Aerospace,
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☐ Railways and Shipboard,

☐ Automotive,

☐ Military and Navy,

☐ Industrial Instrumentation,

☐ Geophysics,

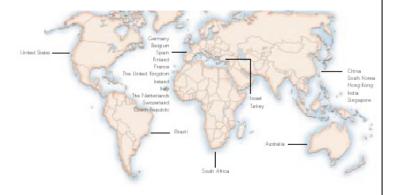
☐ Micro-Computing,

☐ Medical.

### ■ A global presence

In order to offer the **best service**, to be close to its customers and respond quickly to their requirements, Nexans is **present worldwide**.

The production centres are located over 3 continents with sales representatives in 20 countries.



#### ■ A wide range of products

☐ Single / Multicore cables (hook-up wires),

☐ Coaxial cables (RG, ..),

☐ Bus cables (multipairs),
☐ Special cables (cables for sensors...),

☐ Twinaxial cables,

☐ Microcables and microcoaxial cables.

#### Also available:

- Optical cables and 'hybrid' cables which perform under very harsh ambient conditions for aeronautics, railways & shipboard, geophysics and industry.
- Special cable assemblies for applications in aerospace, railways, defence, micro-computing, medical devices...

#### ■ Our strengths

- ☐ High technology capabilities:
- Insulation knowledge: different materials & processes,
- Screen knowledge: braid and / or tape, spiral.
- Miniaturization: exclusive technology process.
- □ Worldwide experience (different markets)
- ☐ Development & production capacity:
- Standard or customized products,
- Small or long series,
- Several R&D and production centres.



## Global expert in cables and cabling systems

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