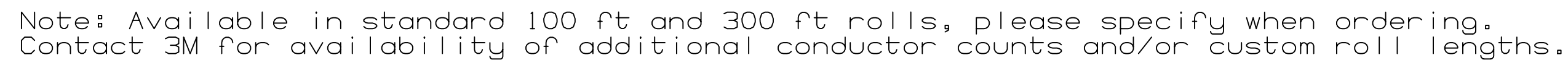


.050", 28 AWG STRANDED, HIGH FLEX LIFE, HALOGEN FREE PO



X HF319/XX XX

NUMBER OF CONDUCTORS
(SEE TABLE 1)

RADIUS	MINIMUM CYCLES
1/2"	18 MILLION
3/4"	113 MILLION

ALL CYCLES WERE PERFORMED AT AMBIENT CONDITIONS.

NUMBER OF CONDUCTORS	3M PART NUMBER	DIMENSION 'A' ± AS NOTED	DIMENSION 'B' (SEE NOTE 2)
6	HF319/06	0.300"±0.010"	0.250"±0.007"
9	HF319/09	0.450"±0.010"	0.400"±0.007"
10	HF319/10	0.500"±0.010"	0.450"±0.007"
14	HF319/14	0.700"±0.010"	0.650"±0.007"
15	HF319/15	0.750"±0.010"	0.700"±0.007"
16	HF319/16	0.800"±0.015"	0.750"±0.011"
20	HF319/20	1.000"±0.015"	0.950"±0.011"
24	HF319/24	1.200"±0.015"	1.150"±0.011"
25	HF319/25	1.250"±0.015"	1.200"±0.011"
26	HF319/26	1.300"±0.015"	1.250"±0.011"
30	HF319/30	1.500"±0.020"	1.450"±0.015"
34	HF319/34	1.700"±0.020"	1.650"±0.015"
36	HF319/36	1.800"±0.020"	1.750"±0.015"
37	HF319/37	1.850"±0.020"	1.800"±0.015"
40	HF319/40	2.000"±0.020"	1.950"±0.015"
50	HF319/50	2.500"±0.020"	2.450"±0.015"
60	HF319/60	3.000"±0.020"	2.950"±0.015"
64	HF319/64	3.200"±0.020"	3.150"±0.015"

VOLTAGE RATING	USA: 300V, CANADA: 150V, EU: 50V	
INSULATION RESISTANCE	PRIMARY CABLE >1 X 10 ¹⁰ Ω /10 FT [3 m]	
	UNBALANCED	BALANCED
CHARACTERISTIC IMPEDANCE	100 Ω	169 Ω
CAPACITANCE	15.0 pF/ft [49.2 pF/m]	8.4 pF/ft [27.7 pF/m]
INDUCTANCE	0.15 μ H/ft [0.49 μ H/m]	0.24 μ H/ft [0.79 μ H/m]
PROPAGATION DELAY	1.48 ns/ft [4.86 ns/m]	1.42 ns/ft [4.66 ns/m]
VELOCITY OF PROPAGATION	68%	72%

UL[®] AWM 21682 105°C 300V HOR **UL**[®] AWM 1A 105°C 150V FT2 EU<50V

CAU[®] US

1. MATERIAL:
A) PRIMARY INSULATION: HALOGEN FREE POLYOLEFIN (PO).
B) CONDUCTORS: 28 AWG, 19 X 40 AWG SILVER PLATED STRANDED COPPER ALLOY

2. REGULATORY INFORMATION:
VISIT 3M.com/regs OR CONTACT YOUR 3M REPRESENTATIVE TO FIND THE RoHS COMPLIANCE STATUS OF THE 3M PART YOU ARE INTERESTED IN.

UL FILE NO: E42769.
UL STYLE NO: 21682.

3. MARKINGS:
STANDARD: NONE
CANADIAN: SEE "PRINTING ILLUSTRATION" VIEW
PRIMARY CABLE: BLUE MARK ON EDGES
DESIGNATES WIRE NUMBER 1.

4. ENVIRONMENTAL:
TEMP RATING: -40°C TO +105°C (EIA-364-32G, METHOD A, TEST CONDITION 2).
-10°C TO +105°C (UL TEMPERATURE RATING)
FLAMABILITY RATING: HORIZONTAL.

5. HALOGEN FREE IS DEFINED AS BOTH:
1) NO HALOGEN COMPOUNDS THAT ARE INTENTIONALLY ADDED TO THE PRODUCT OR USED IN THE MANUFACTURING PROCESS FOR THE PRODUCT.
2) ANY IMPURITIES PRESENT ARE LESS THAN 900 ppm BROMINE, LESS THAN 900 ppm CHLORINE AND/OR LESS THAN 1500 ppm TOTAL BROMINE AND CHLORINE. THE LATTER ARE THE LEVELS SET FORTH IN CERTAIN INDUSTRY STANDARDS FOR PRINTED CIRCUIT BOARDS, SUCH AS THE INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC) 61249-2-21 STANDARD. THIS INFORMATION REPRESENTS 3M'S KNOWLEDGE AND BELIEF WHICH MAY BE BASED IN WHOLE OR IN PART ON INFORMATION PROVIDED BY 3RD PARTY SUPPLIERS TO 3M.

C	80477	SEP 06, 2018 REVISED DATA AND NOTES	JNC	BPM
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B	40826	MAY 22, 2012 REVISED AND REDRAWN	JNC	SN
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REV		ECO		ISSUE DATE AND DESCRIPTION		DRFT	CHKD
DRFT		DATE		MFG		DATE	

CASTIGLIONE	MAY 15, 2012		
CHKD	DATE	APP'VL S. NEU	DATE MAY 15, 2012

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TITLE HIGH FLEX LIFE, FLAT
CABLE, 28 AWG
STRANDED, HF319

CAGE NUMBER	SIZE D	DRAWING NO. 78-5100-2342-3	REV. C
MODEL HF319		DET. LISTS ☐ YES ☒ NO	SHT 1 OF 2

[illegible]

3M™ HIGH FLEX LIFE FLAT CABLE, HF319 SERIES

.050", 28 AWG STRANDED, HIGH FLEX LIFE, HALOGEN FREE PO

Regulatory: For regulatory information about this product, visit 3M.com/regs or contact your 3M representative.

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C		80477		SEP 06,2018		JNC		BPM					
B		40826		MAY 22,2012		JNC		SN					
				REVISED DATA AND NOTES									
				REVISED AND REDRAWN									
DRAWING REFERENCE NEXT ASSEMBLY				REV		ECO		ISSUE DATE AND DESCRIPTION		DRFT		CHKD	
ACCESS CODES				BRT CASTIGLIONE		DATE MAY 15,2012		MFG		DATE			
				CHKD		DATE		APPROV S. NEU		DATE MAY 15,2012			
DIVISION				DIVISION CODE		EMSD		© 3M COPYRIGHT 2018					
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THIRD ANGLE PROJECTION				INCHES		MILLIMETERS		TITLE					
				.00 .0000		.0000 ±		HIGH FLEX LIFE, FLAT CABLE, 28 AWG STRANDED, HF 319					
INTERPRET PER ASME Y14.5 - 2009				.00 ±		.00 ±		CAGE NUMBER		SIZE		DRAWING NO.	
MAX SURFACE ROUGHNESS				.00 ±		.00 ±		D		578-5100-2342-3		REV. C	
MIN SURFACES				.00 ±		.00 ±		MODEL		DET. LISTS		YES X NO	
✓ ☐ MARKED ONLY				ANGLES		HF319		SHT 2 OF 2					