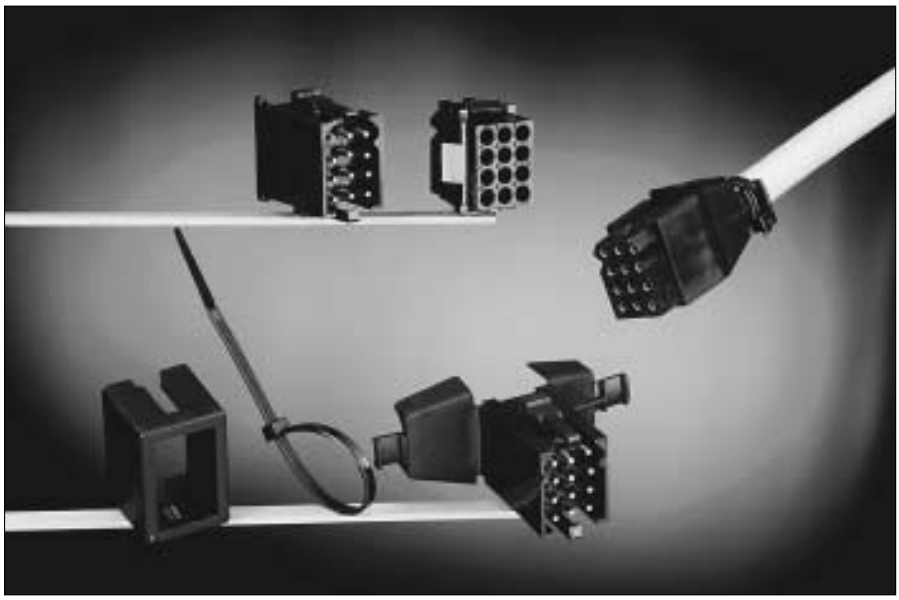
Qikmate panel and cable connectors

Description

The versatile " SMS " Qikmate panel and cable connectors are a highly cost-effective system approach to solving the constant demand for more cost effective interconnection techniques.
It is a range of multiway connectors using N° 16 TRIM TRIO .0625" (1.6mm) diameter contacts and available in 10 contact arrangements from 2 to 36 positions.
Having no additional hardware, Panel receptacle connectors snap and lock into panel cutouts and cable plugs quick connect and disconnect with positive retention locks.
Cable plug connectors also feature pin-protection skirts, positive polarisation and can be supplied with or without integrated strain relief hoods.
Cable receptacle connectors (only with integrated strain relief hoods) are developed to mate with cable plug connectors thus offering solutions for cable to cable applications.

Features and benefits

- Available in 10 contact arrangements.
- Self mountable panel receptacle with positive housing retention.
- Cable plugs with retaining latches for positive locking.
- Cable plug has pin protection skirt to prevent damage of male contacts
- Positive polarization keys prevent mismating.
- Cable plug and receptacle have integrated strain relief hood which can take a wide range of cables.
- Cable plug and receptacle have discrimination cavities in between contact cavities, thus offering discrimination without contact loss.



Performance characteristics

Operating temperature:	-55°C to +105°C
Insulation resistance:	5000 MΩ min.
Test potential:	2000 VAC
Durability:	500 matings and unmatings.

Construction

Material : Polyamide 6.6
Flammability rating : UL94-V2

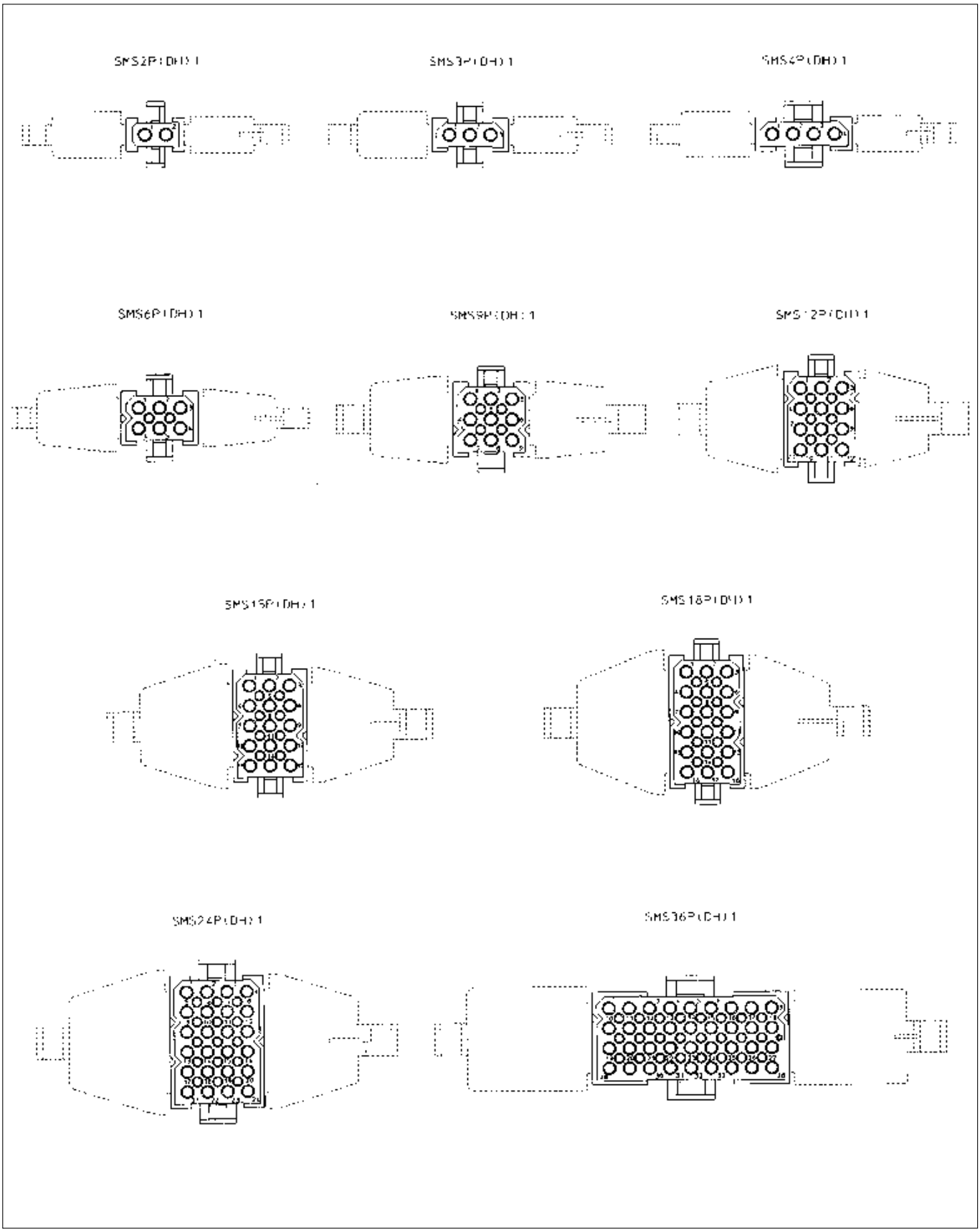
Contact accommodation

- "SMS" Qikmate connectors accept Trim-Trio removable snap-lock contacts (see contact section)
- Contacts to be ordered seperately.

How to order

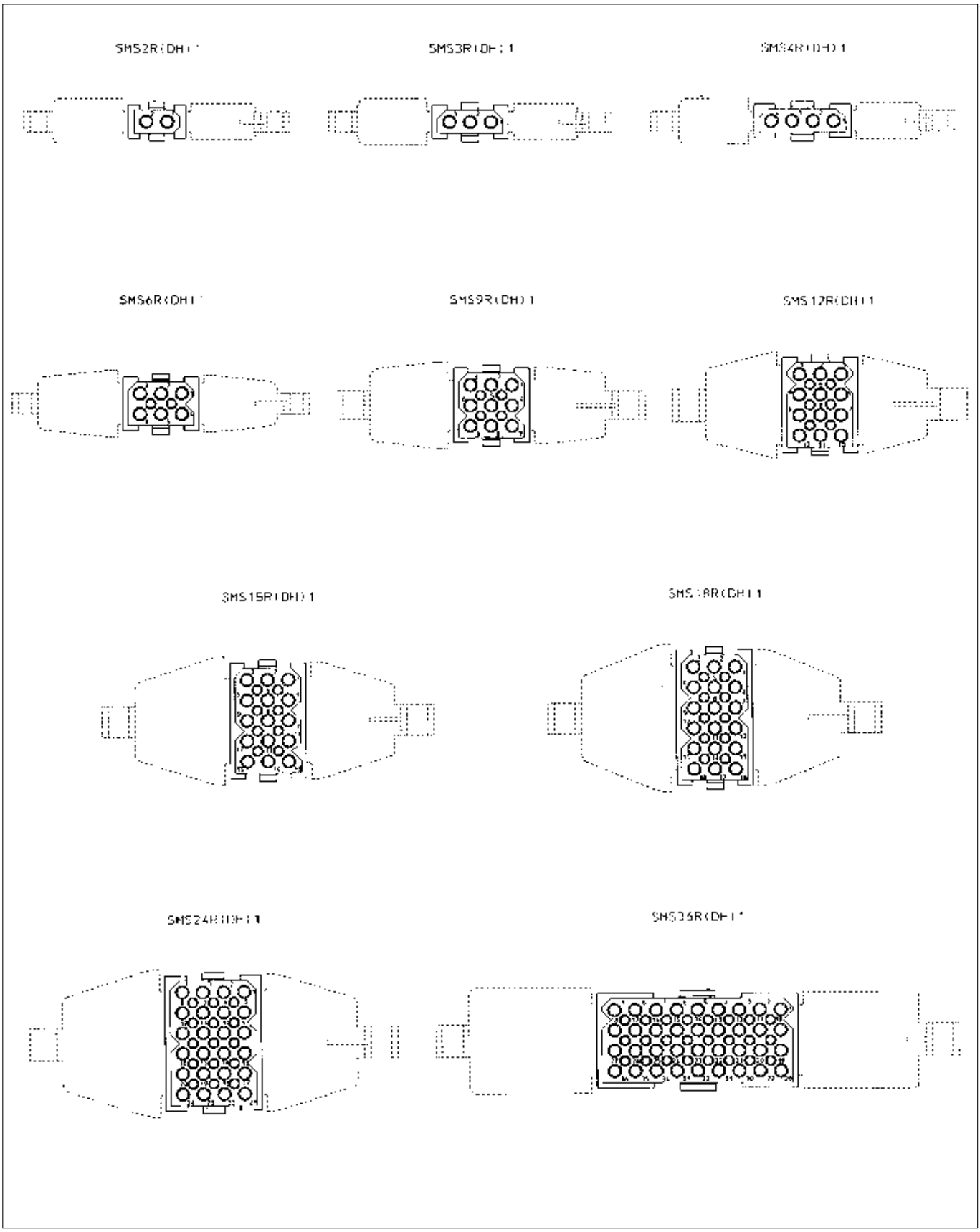
Connector family		**SMS**	**12**	**PDH1**
		SMS	**12**	**P1**
Contact arrangement				
Body variation:	**R1:**	Panel mount receptacle		
	P1:	Cable plug without strain relief hood		
	PDH1:	Cable plug with integrated strain relief hood		
	RDH1:	Cable receptacle with integrated strain relief hood		

Contact arrangements for cable plug connectors (SMS--P1 and SMS--PDH1)



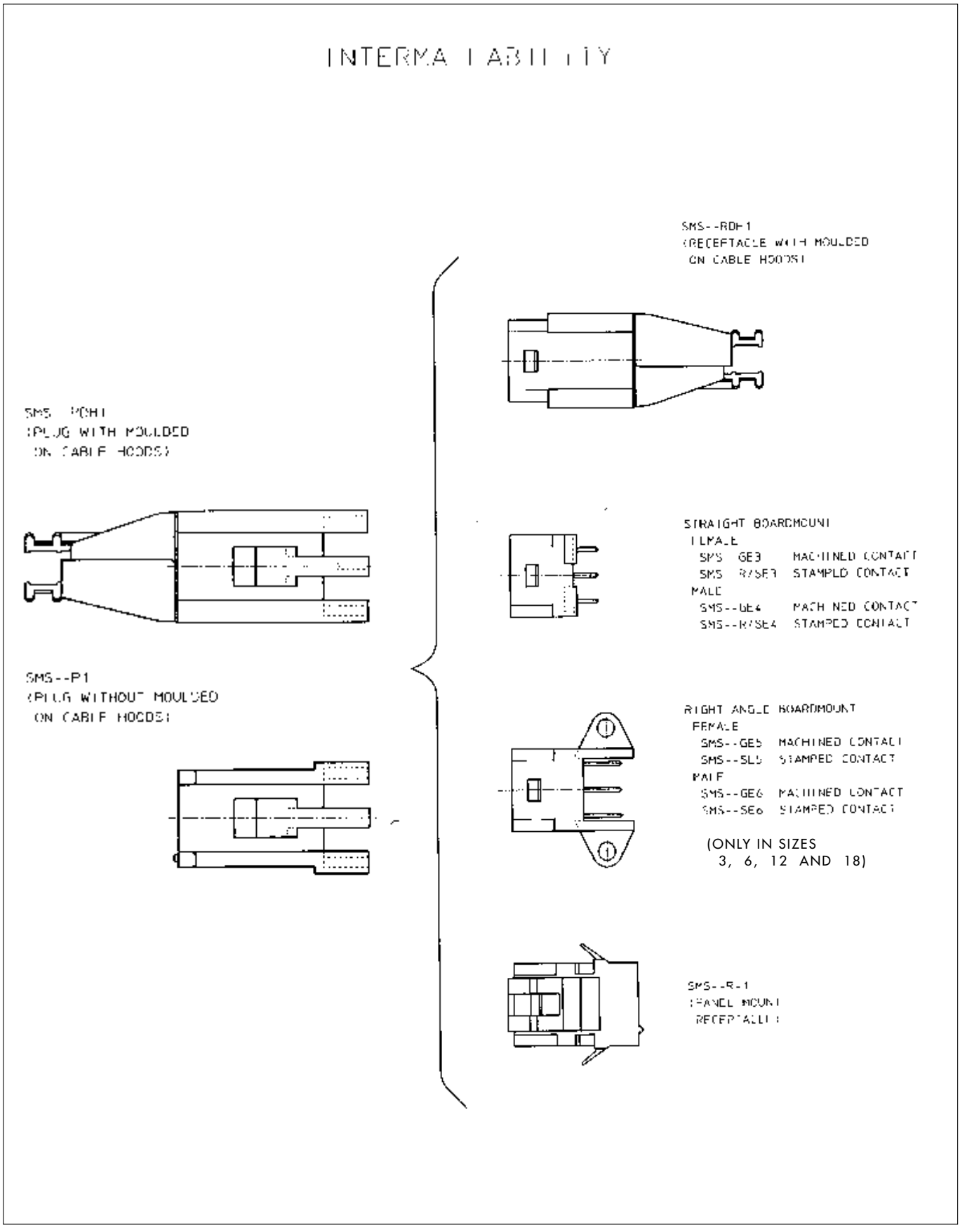
Contact identifications shown are for mating face. Contact identifications of wiring face are identical as shown on the receptacle arrangements

Contact arrangements for cable and panel mount receptacle connectors (SMS--R1 and SMS--RDH1)

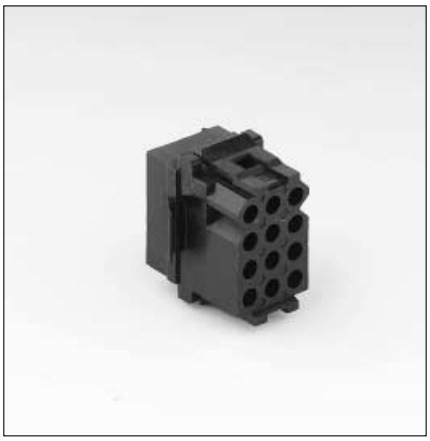


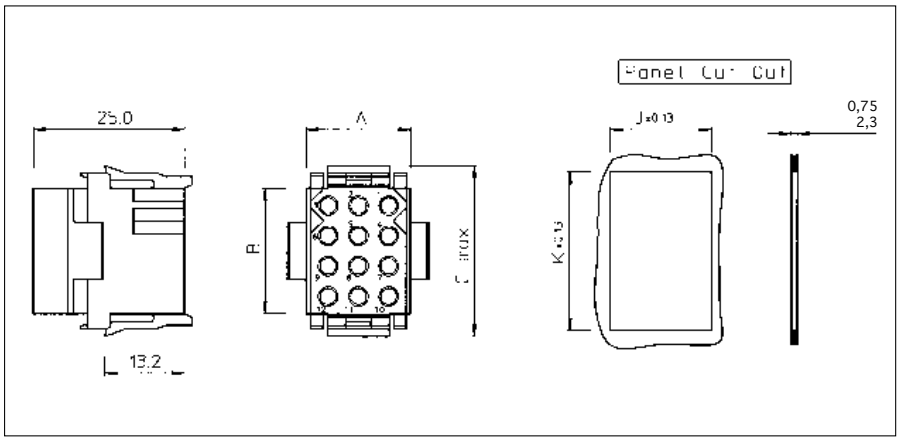
Contact identifications shown are for mating face. Contact identifications of wiring face are identical as shown on the plug arrangements

SMS - Standard Qikmate intermateability chart



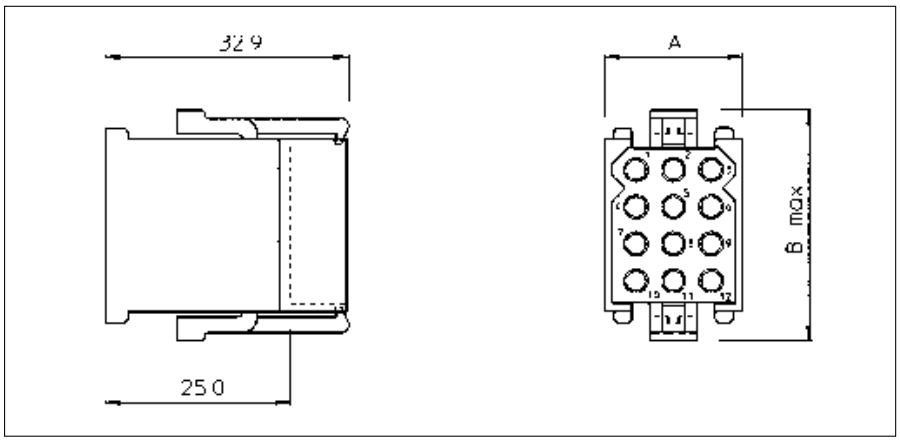
Panel mount receptacle (SMS--R1)





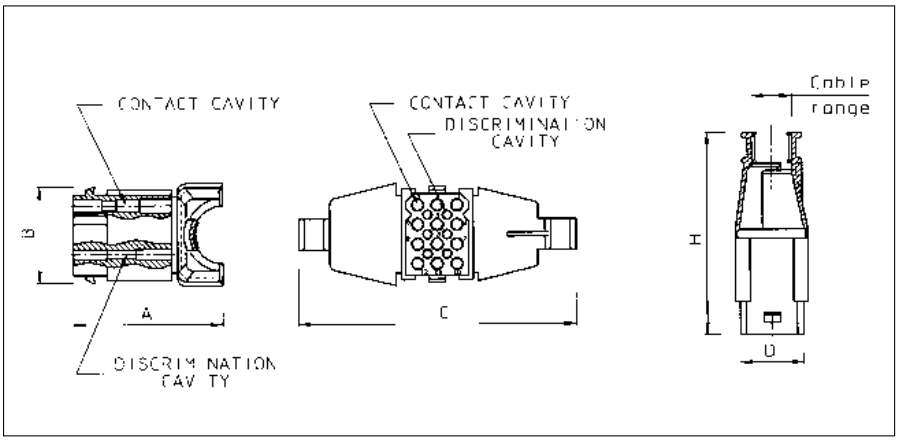
Part number	Number of contact pos.	A	B	C max.	J ±0.13	K ±0.13
SMS2R1	2	11.0	5.8	15.2	11.4	11.6
SMS3R1	3	16.2			16.5	
SMS4R1	4	21.2			21.7	
SMS6R1	6	16.2	10.9	20.3	16.5	16.7
SMS9R1	9		16.0	25.4		21.6
SMS12R1	12		21.1	30.5	16.7	26.7
SMS15R1	15		26.2	35.6		31.8
SMS18R1	18		31.2	40.6		36.9
SMS24R1	24	21.2			21.7	
SMS36R1	36	46.6	21.1	30.5	47.1	26.7

Cable plug without strain relief hood (SMS--P1)



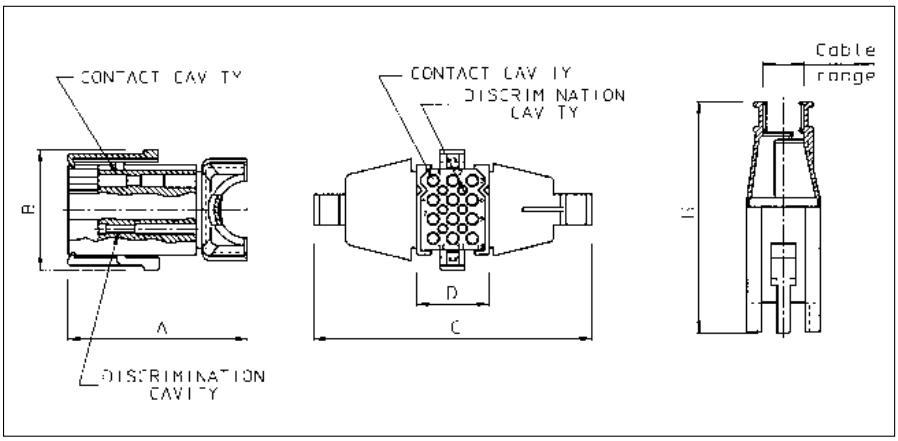
Part number	Number of contact pos.	A	C max.
SMS2P1	2	15.0	17.8
SMS3P1	3	18.6	
SMS4P1	4	23.7	
SMS6P1	6	18.6	22.9
SMS9P1	9		27.9
SMS12P1	12		33.0
SMS15P1	15		38.1
SMS18P1	18		43.2
SMS24P1	24	23.7	
SMS36P1	36	49.1	33.0

Cable receptacle with integrated strain relief hood (SMS--RDH1)



Part number	Number of contact pos.	Number of disrimination pos.	A	B	C	D	H	Cable range	Recommended unirap cable te
SMS2RDH1	**2**	**0**	31.6	9.9	64.8	11.1	49..2	0.5 - 8.4	TF4D
SMS3RDH1	**3**	**0**	35.1		69.0	16.2		0.8 - 7.3	
SMS4RDH1	**4**	**0**	38.2		74.4	21.2		1.5 - 10.0	
SMS6RDH1	**6**	**2**	34.6	15.0	72.6	16.2	50.9	1.7 - 9.2	TF5D
SMS9RDH1	**9**	**4**	35.8	20.0	75.3		52.2	3.9 - 14.3	
SMS12RDH1	**12**	**6**	38.1	25.1	72.0		52.7	4.0 - 15.0	
SMS15RDH1	**15**	**8**	35.9	30.2	81.3		55.2	5.0 - 16.2	
SMS18RDH1	**18**	**10**	36.1	35.3				5.8 - 20.3	
SMS24RDH1	**24**	**15**	39.7		90.4	21.2	57.2	7.1 - 20.4	
SMS36RDH1	**36**	**24**	54.6	25.1	128.0	46.6	63.3	8.8 - 24.5	

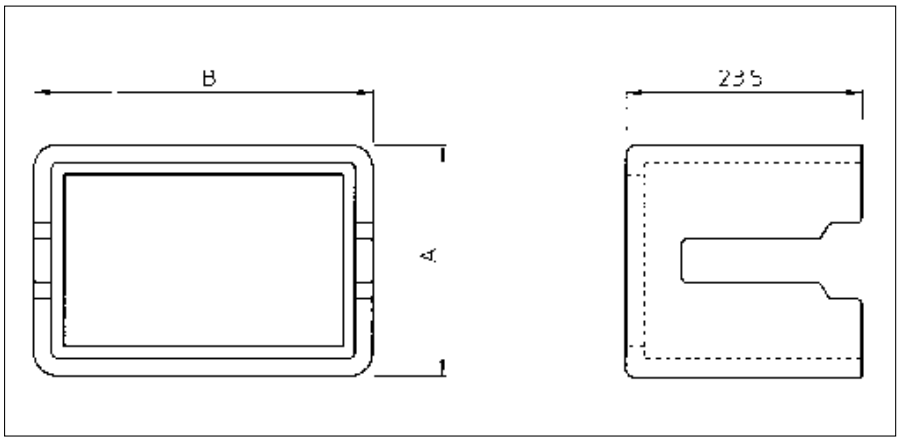
Cable plug with integrated strain relief hood (SMS--PDH1)



Part number	Number of contact pos.	Number of disrimination pos.	A	B	C	D	H	Cable range	Recommended unirap cable te
SMS2PDH1	**2**	**0**	39.5	16.4	64.8	14.1	57.1	0.5 - 8.4	TF4D
SMS3PDH1	**3**	**0**	43.0		69.0	18.6		0.8 - 7.3	
SMS4PDH1	**4**	**0**	46.1		74.4	23.7		1.5 - 10.0	
SMS6PDH1	**6**	**2**	42.5	21.5	72.6	18.6	58.8	1.7 - 9.2	TF5D
SMS9PDH1	**9**	**4**	43.7	26.7	75.3		60.1	3.9 - 14.3	
SMS12PDH1	**12**	**6**	46.0	31.7	72.0		60.6	4.0 - 15.0	
SMS15PDH1	**15**	**8**	43.8	36.7	81.3		63.1	5.0 - 16.2	
SMS18PDH1	**18**	**10**	44.0	41.8				5.8 - 20.3	
SMS24PDH1	**24**	**15**	47.6		90.4	23.7	65.1	7.1 - 20.4	
SMS36PDH1	**36**	**24**	62.5	31.7	128.0	49.1	71.2	8.8 - 24.5	

Accessories for standard Qikmate connectors

Pin protection shroud for panel mount receptacle (SMS--CSB1)



When pins are inserted into the panelmount receptacle half (SMS--R1) of the QIKMATE connector, an optional pin protection shroud can be installed.
The shroud is mounted at the same time as the receptacle by holding the shroud against the mating side of the panel with both cutouts lined up. The receptacle is then inserted in place, trapping the shroud between the receptacle and panel. The use of the pin protection shroud reduces the allowable thickness of the panel from 2.3 to 1.6 mm max.

Part number	Number of contact positions	A	B
SMS2CSB1	**2**	19.8	18.8
SMS3CSB1	**3**	23.4	
SMS4CSB1	**4**	28.4	
SMS6CSB1	**6**	23.4	23.9
SMS9CSB1	**9**		29.0
SMS12CSB1	**12**		34.0
SMS15CSB1	**15**		39.1
SMS18CSB1	**18**		44.2
SMS24CSB1	**24**	28.4	
SMS36CSB1	**36**	54.1	34.0

Strain relief hoods (SMS—H1)

Separate strain relief hoods are available for all standard plugs SMS—P1.
The hoods consist of identical halves that snap into position on the plug and are secured in place with the cable tie drawn tightly around the cabe entry collar.
Catalog numbers designate a complete hood (2 halves) SMS—H1
The cable tie is not included (TF4D – TF5D)
Two three and four position hoods are single piece units

Discrimination pins

For discrimination pins on both standard Qikmate and Qikmate Pin Headers cable and boardmount:
See accessories section.

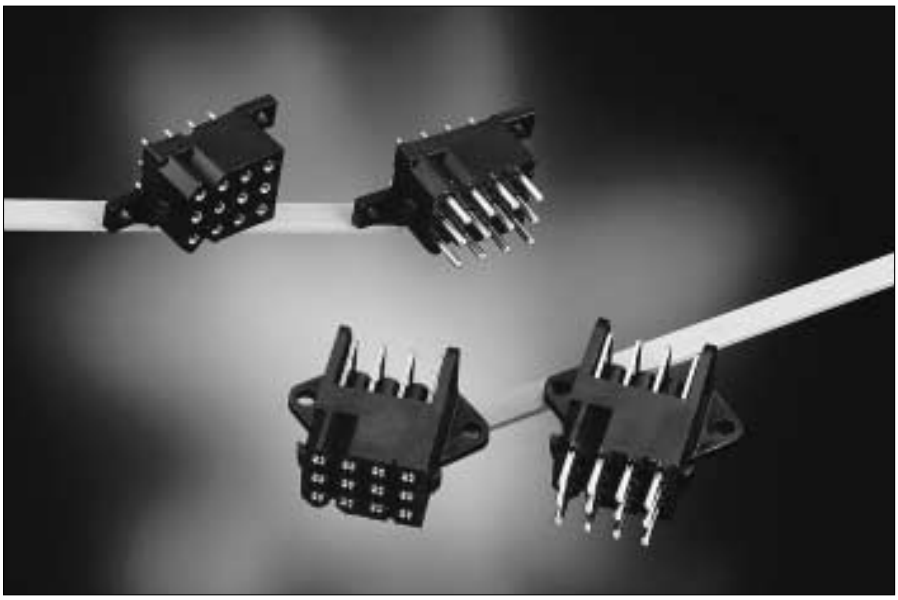
Qikmate PC-boardmount connectors

Description

These PC boardmount connectors enable QIKMATE and preassembled TRIM TRIO contacts to be PC board mounted, using conventional solder production techniques. They will then mate and latch with the standard QIKMATE plugs.
Straight boardmount QIKMATE is available in 10 insert arrangements from 2 to 36 positions.
Right-angled boardmount QIKMATE is available in 3, 6, 12 and 18 positions.
All boardmount connectors are supplied fully loaded with pin or socket contacts, either in solid machined or stamped and formed contacts.
Stamped and formed contact have selective tin plating on the solder tails, thus eliminating flux operations.

Features and benefits

- Straight versions available in 10 contact arrangements from 2 to 36 positions
- Right-angled versions available in 3, 6, 12 and 18 positions.
- All versions are available with:
  - Pin or socket contacts
  - Stamped and formed or solid machined contacts.
- Some boardmount connectors have discrimination cavities in between contact cavities, thus offering discrimination without contact loss.



Performance characteristics

Operating temperature:	-55°C to +125°C
Insulation resistance:	5000 MΩ min.
Test potential:	2000 VAC
Current rating:	5 Amp
Durability:	500 matings and unmatings.

Construction

Connector body: Glass filled thermoplast UL94-V0

Contacts: High conductive copper alloy

Plating table

Plating for solid machined contacts:

No digit (std) = Min. 0.4µ Gold all over, over Nickel.
T = 3 - 5µ Tin all over

Plating for Stamped and formed contacts :

K9 (std) = Min. 0.4µ Gold in contact area, 3 - 5µ Tin on solder tail.
T = 3 - 5µ Tin all over

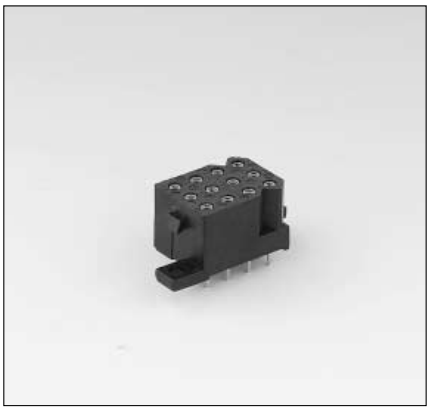
Intermateability

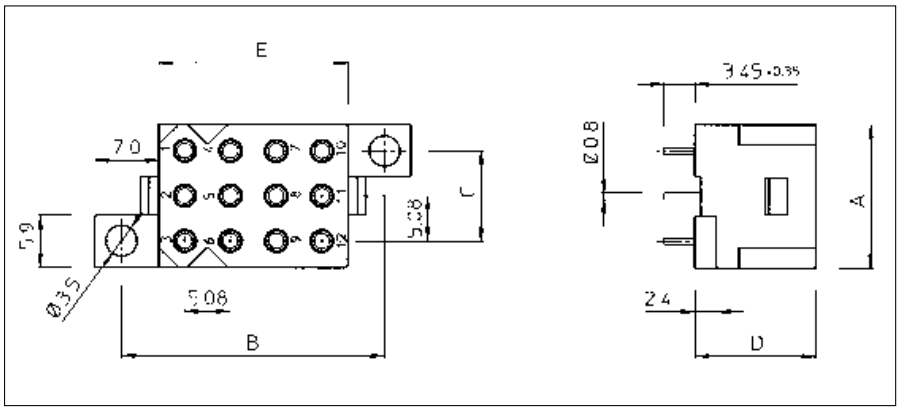
- "SMS" Qikmate boardmount connectors with preassembled TRIM TRIO boarmount contacts are intermateable only with the "SMS" Qikmate cable plug connectors equipped with TRIM TRIO crimp type removable snap-lock contacts (see contact section)

How to order

Connector family		**SMS** **SMS**	**12** **12**	**GE** **SE**	**3** **3**	**–** **K9**
Contact arrangement						
Contact type:	**GE:** Solid machined contacts **SE:** Stamped and formed contacts					
Design variation:	**3:** Straight boardmount with female contacts **4:** Straight boardmount with male contacts **5:** Right angle boardmount with female contacts **6:** Right angle boardmount with male contacts					
Plating indication						

Straight boardmount with female contacts (SMS--GE3 / SMS--SE3K9)

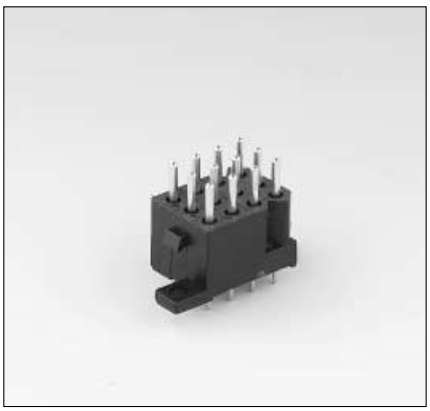


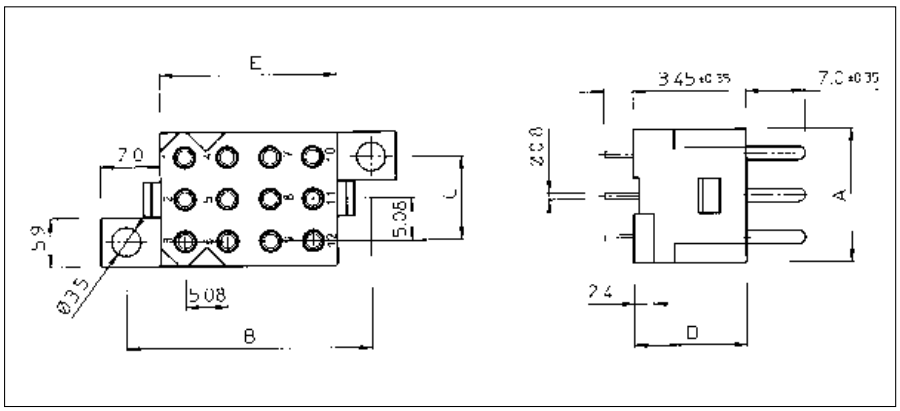


Part number Solid machined contacts	Part number Stamped and formed contacts	Number of contact pos.	Number of discrimination pos.	A	B	C	D	E
SMS2GE3	SMS2SE3K9	2	0	11.0	-	19.1	13.4	5.9
SMS3GE3	SMS3SE3K9	3	0	16.2	14.0	10.2		
SMS4GE3	SMS4SE3K9	4	0	21.3		15.2		
SMS6GE3	SMS6SE3K9	6	0	16.2	19.2	10.2		10.9
SMS9GE3	SMS9SE3K9	9	4		24.2			16.0
SMS12GE3	SMS12SE3K9	12	0		29.2			21.1
SMS15GE3	SMS15SE3K9	15	8		34.3			26.1
SMS18GE3	SMS18SE3K9	18	10		39.4			31.2
SMS24GE3	SMS24SE3K9	24	0	21.2		15.2		
SMS36GE3	SMS36SE3K9	36	0	46.5	15.2	54.6		20.9

For other platings: see plating table

Straight boardmount with male contacts (SMS--GE4 / SMS--SE4K9)

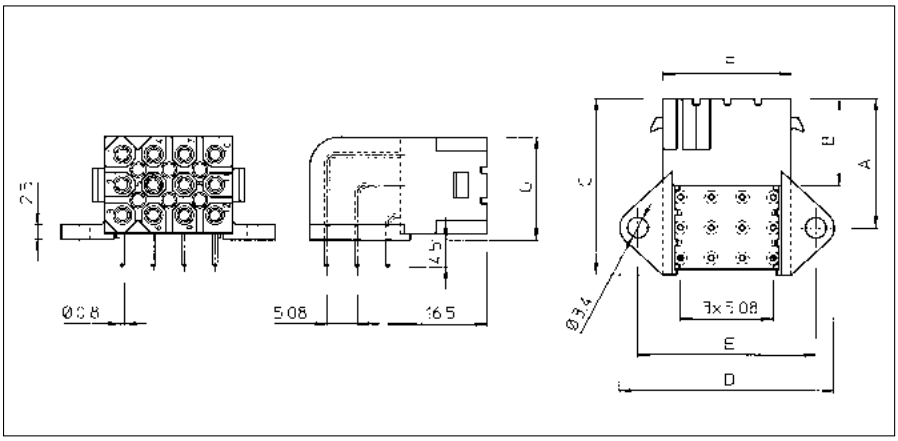




Part number Solid machined contacts	Part number Stamped and formed contacts	Number of contact pos.	Number of discrimination pos.	A	B	C	D	E
SMS2GE4	SMS2SE4K9	2	0	11.1	-	19.1	13.4	5.9
SMS3GE4	SMS3SE4K9	3	0	16.2	14.0	10.2		
SMS4GE4	SMS4SE4K9	4	0	21.3		15.2		
SMS6GE4	SMS6SE4K9	6	0	16.2	19.2	10.2		10.9
SMS9GE4	SMS9SE4K9	9	4		24.2			16.0
SMS12GE4	SMS12SE4K9	12	0		29.2			21.1
SMS15GE4	SMS15SE4K9	15	8		34.3			26.1
SMS18GE4	SMS18SE4K9	18	10		39.4			31.2
SMS24GE4	SMS24SE4K9	24	0	21.2		15.2		
SMS36GE4	SMS36SE4K9	36	0	46.5	15.2	54.6		20.9

For other platings: see plating table

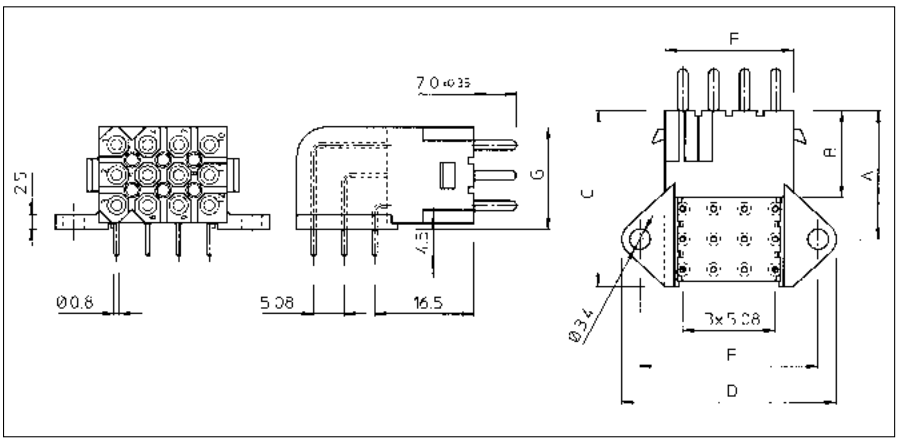
Right angle boardmount with female contacts (SMS--GE5 / SMS--SE5K9)



Part number Solid machined contacts	Part number Stamped and formed contacts	Number of contact pos.	Number of discrimination pos.	A	B	C	D	E	F	G
SMS3GE5	SMS3SE5K9	3	0	16.5	14.4	20.5	30.2	24.2	16.2	6.8
SMS6GE5	SMS6SE5K9	6	0	19.0		24.5				11.9
SMS12GE5	SMS12SE5K9	12	6	21.6		29.5	35.2	29.2	21.2	17.2
SMS18GE5	SMS18SE5K9	18	10				45.4	39.4	31.2	

For other platings: see plating table

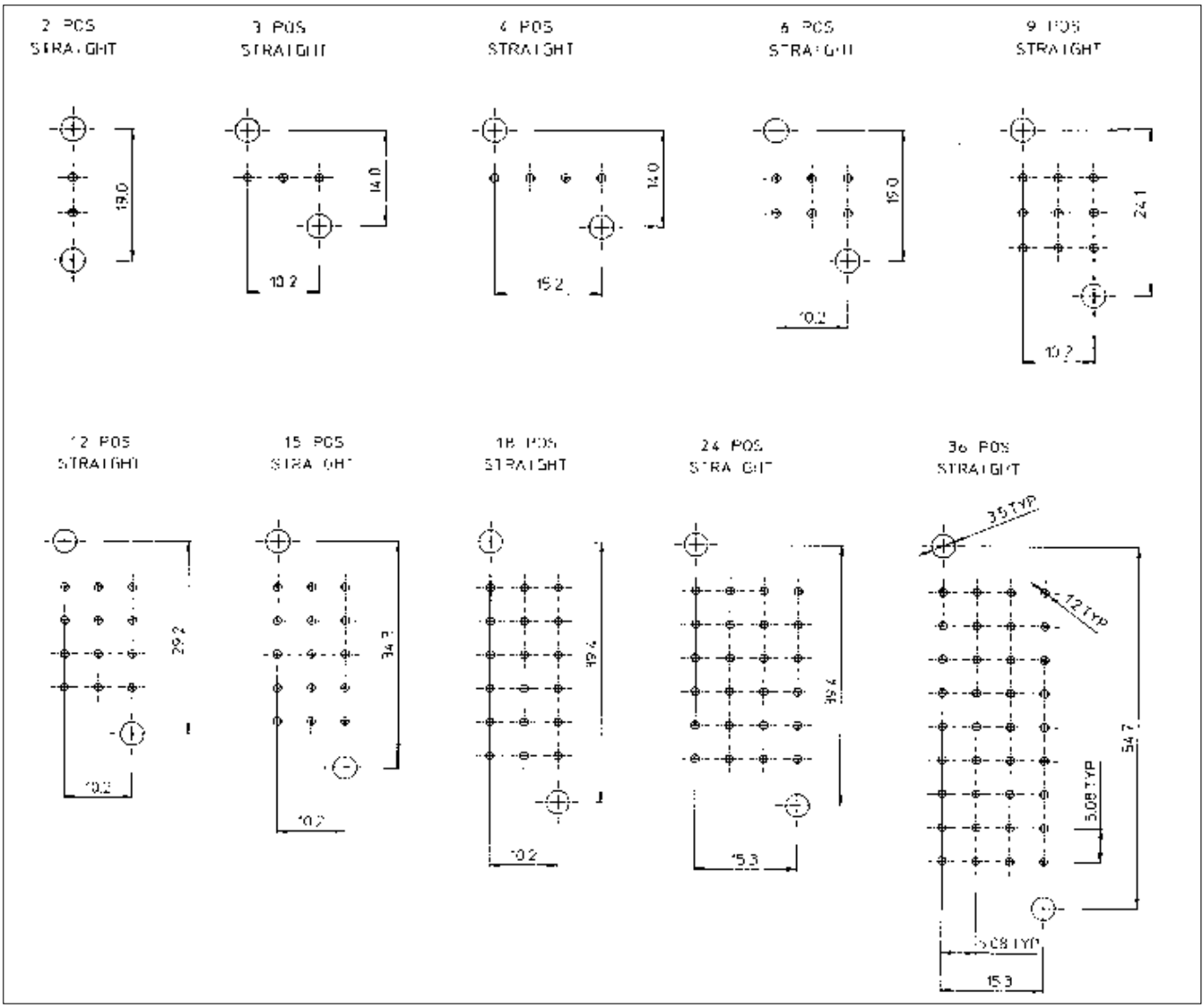
Right angle boardmount with male contacts (SMS--GE6 / SMS--SE6K9)



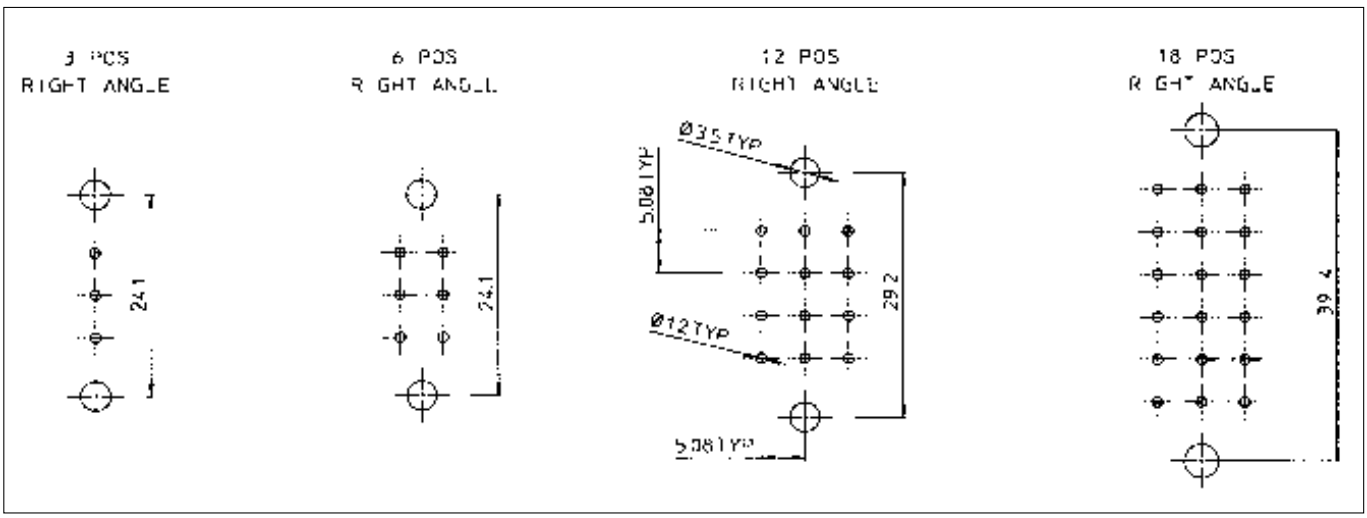
Part number Solid machined contacts	Part number Stamped and formed contacts	Number of contact pos.	Number of discrimination pos.	A	B	C	D	E	F	G
SMS3GE6	SMS3SE6K9	3	0	16.5	14.4	20.5	30.2	24.2	16.2	6.8
SMS6GE6	SMS6SE6K9	6	0	19.0		24.5				11.9
SMS12GE6	SMS12SE6K9	12	6	21.6		29.5	35.2	29.2	21.2	17.2
SMS18GE6	SMS18SE6K9	18	10				45.4	39.4	31.2	

For other platings: see plating table

Recommended PC-Board hole lay out for straight male and female boardmount connectors



Recommended PC-Board hole lay out for right-angled male and female boardmount connectors



Qikmate PC boardmount Pin Headers and plugs

Description

Qikmate Pin Header, available in 3, 4, 6, 9 and 10 positions, provides the additional versatility of straight and right angle board mounting.
Offered as an alternative to stacked connectors, the in-line contact design of the pin header provides the user with significant PC board space savings.
The boardmount receptacle features positieve polarization and a moulded on pin protection skirt and is supplied preassembled with straight or right angled:
- Solid machined or stamped and formed PC board pin contacts.
- Coax PC board pin contacts.

The socket cable plug features positive quick connect / disconnect latches and is designed to accept N° 16 TRIM TRIO .0625" (1.6mm) diameter socket contacts for maximum contact protection.

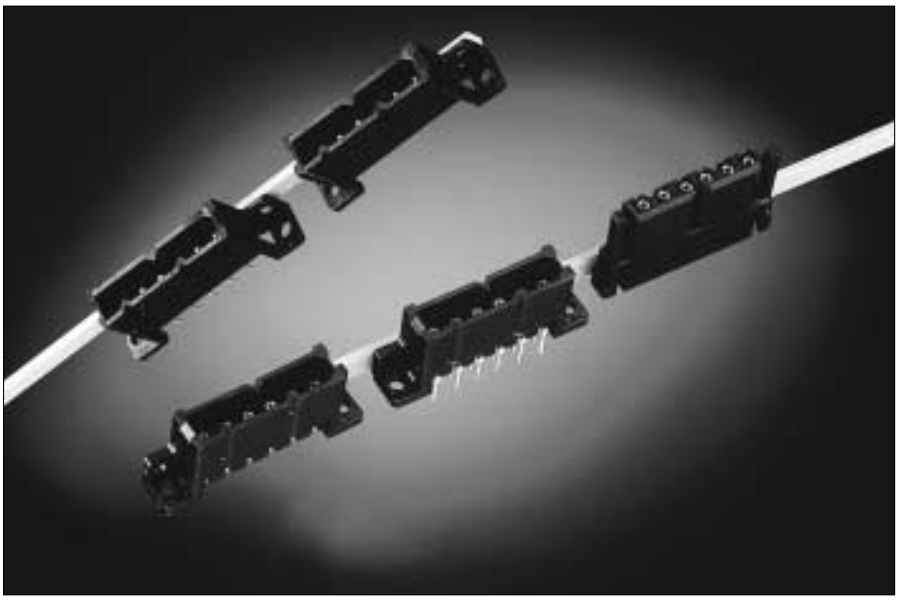
Features and benefits

- Available in 3, 4, 6, 9 and 10 positions.
- In-line contact design, offering significant PC board space savings.
- Boardmount connectors available in straight and right-angled version preassembled with:
  - Solid machined or stamped and formed pin contacts.
  - Coax pin contacts.

Construction

Connector body:
Glass filled thermoplast UL94-V0
Colour: Black

Contacts: High conductive copper alloy



Performance characteristics

Operating temperature:	-55°C to +125°C
Insulation resistance:	5000 MΩ min.
Test potential:	2000 VAC
Current rating:	5 AMP
Durability:	500 matings and unmatings.

Intermateability

- "SMS" Socket plugs accept Trim-Trio removable snap-lock contacts (see contact section)
- Contacts to be ordered seperately.

Plating table

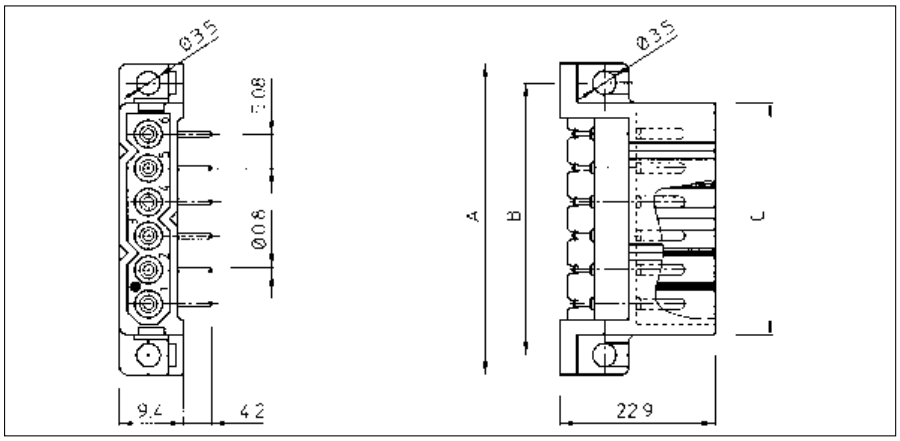
Plating for solid machined contacts:
No digit (std) = Min. 0.4µ Gold all over, over Nickel.
T = 3 - 5µ Tin all over
Plating for Stamped and formed contacts :
D28 = Min. 0.75µ Au over nickel.
D70 = Gold flash all over
TR29 = 1.2µ Pre-plated Tin all over.
Plating for coax contacts:
Z17 = Min. 0.75µ Au in contact area, Flash on solder tail (inner)
Min 0.75µ Au in contact area, Tin on solder tail (outer)

How to order

Connector family		**SMS**	**9**	**PH**	**3**	**TR29**
		SMS	**9**	**CH**	**1**	**Z17**
		SMS	**9**	**P3**	**–**	**–**
Contact arrangement						
Contact type:	**PH:**	Pin header boardmount.				
	CH:	Coax header boardmount.				
	P3:	Socket cable plug for pin and coax boardmount header.				
Design variation:	**1:**	Right angle coax header boardmount with male contacts.				
	2:	Straight coax header boardmount with male contacts				
	3:	Right angle pin header boardmount with stamped male contacts				
	4:	Straight pin header boardmount with stamped male contacts				
	GE6:	Right angle pin header boardmount with machined male contacts				
	GE4:	Straight pin header boardmount with machined male contacts				
Plating indication						

SMS - Qikmate Pin Header

Right angle pin header boardmount with male contacts (SMS--PH3 / SMS--PHGE6)

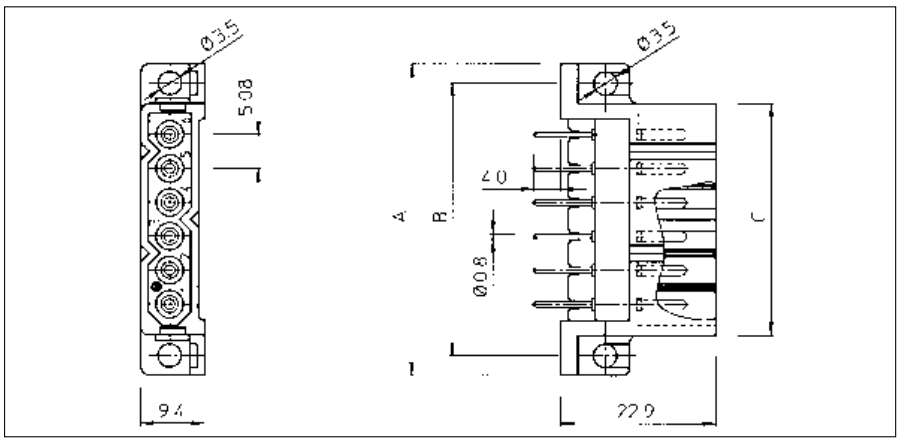


Part number Stamped and formed contacts	Part number Solid machined contacts	Number of contact positions	A	B	C
SMS3PH3TR29	**SMS3PHGE6**	**3**	31.2	25.4	19.3
SMS4PH3TR29	**SMS4PHGE6**	**4**	36.3	30.4	24.4
SMS6PH3TR29	**SMS6PHGE6**	**6**	46.5	40.6	34.5
SMS9PH3TR29	**SMS9PHGE6**	**9**	61.7	55.9	49.8
SMS10PH3TR29	**SMS10PHGE6**	**10**	66.8	61.0	54.9

For other platings: see plating table.

Other solder tail lenghts on request

Straight pin header boardmount with male contacts (SMS--PH4 / SMS--PHGE4)

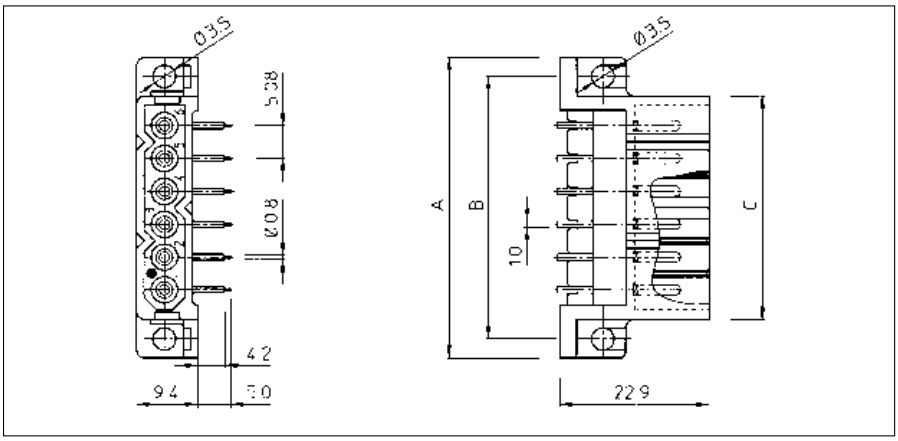


Part number Stamped and formed contacts	Part number Solid machined contacts	Number of contact positions	A	B	C
SMS3PH4TR29	**SMS3PHGE4**	**3**	31.2	25.4	19.3
SMS4PH4TR29	**SMS4PHGE4**	**4**	36.3	30.4	24.4
SMS6PH4TR29	**SMS6PHGE4**	**6**	46.5	40.6	34.5
SMS9PH4TR29	**SMS9PHGE4**	**9**	61.7	55.9	49.8
SMS10PH4TR29	**SMS10PHGE4**	**10**	66.8	61.0	54.9

For other platings: see plating table.

Other solder tail lenghts on request

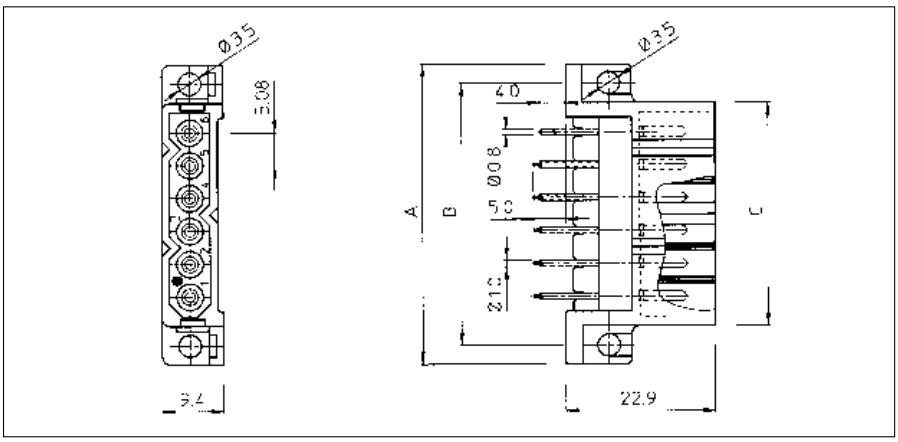
Right angle coax header boardmount with male contacts (SMS--CH1Z17)



Part number positions	Number of contact	A	B	C
SMS3CH1Z17	3	31.2	25.4	19.3
SMS4CH1Z17	4	36.3	30.4	24.4
SMS6CH1Z17	6	46.5	40.6	34.5
SMS9CH1Z17	9	61.7	55.9	49.8
SMS10CH1Z17	10	66.8	61.0	54.9

For plating spec.: see plating table.

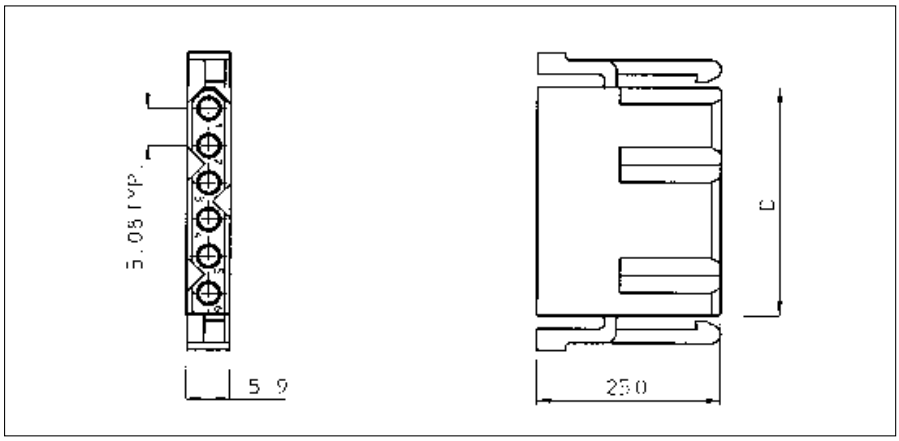
Straight coax header boardmount with male contacts (SMS--CH2Z17)



Part number positions	Number of contact	A	B	C
SMS3CH2Z17	3	31.2	25.4	19.3
SMS4CH2Z17	4	36.3	30.4	24.4
SMS6CH2Z17	6	46.5	40.6	34.5
SMS9CH2Z17	9	61.7	55.9	49.8
SMS10CH2Z17	10	66.8	61.0	54.9

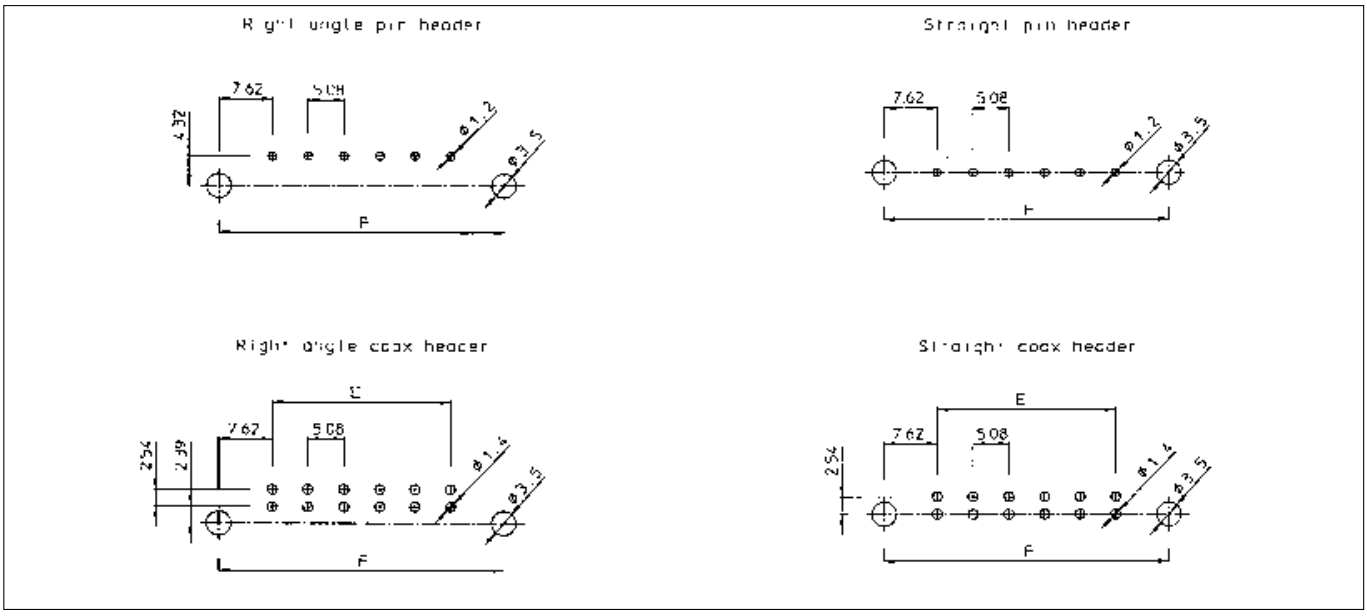
For plating spec.: see plating table.

Socket cable plug for pin and coax boardmount header (SMS--P3)



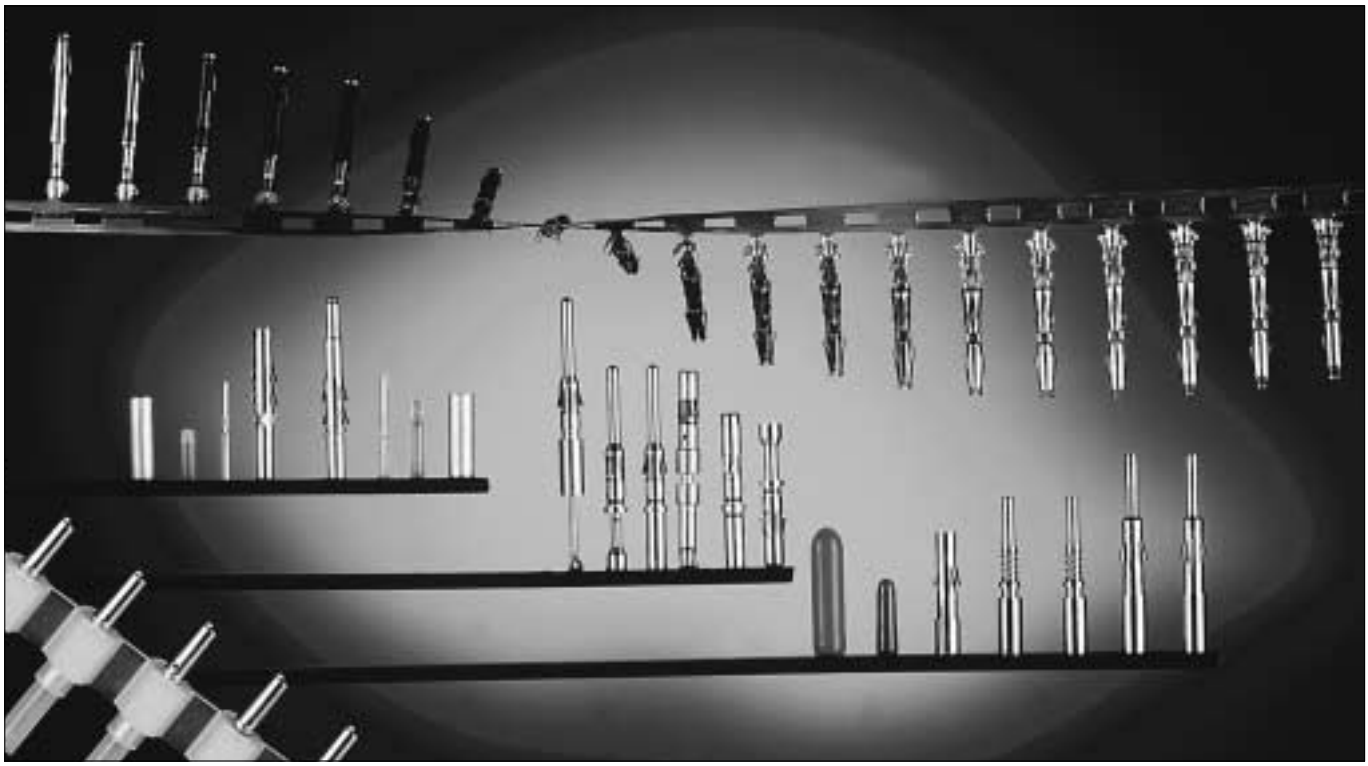
Part number	Number of contact positions	D
SMS3P3	**3**	16.0
SMS4P3	**4**	21.1
SMS6P3	**6**	31.2
SMS9P3	**9**	46.5
SMS10P3	**10**	51.6

Recommended PC-board hole layouts

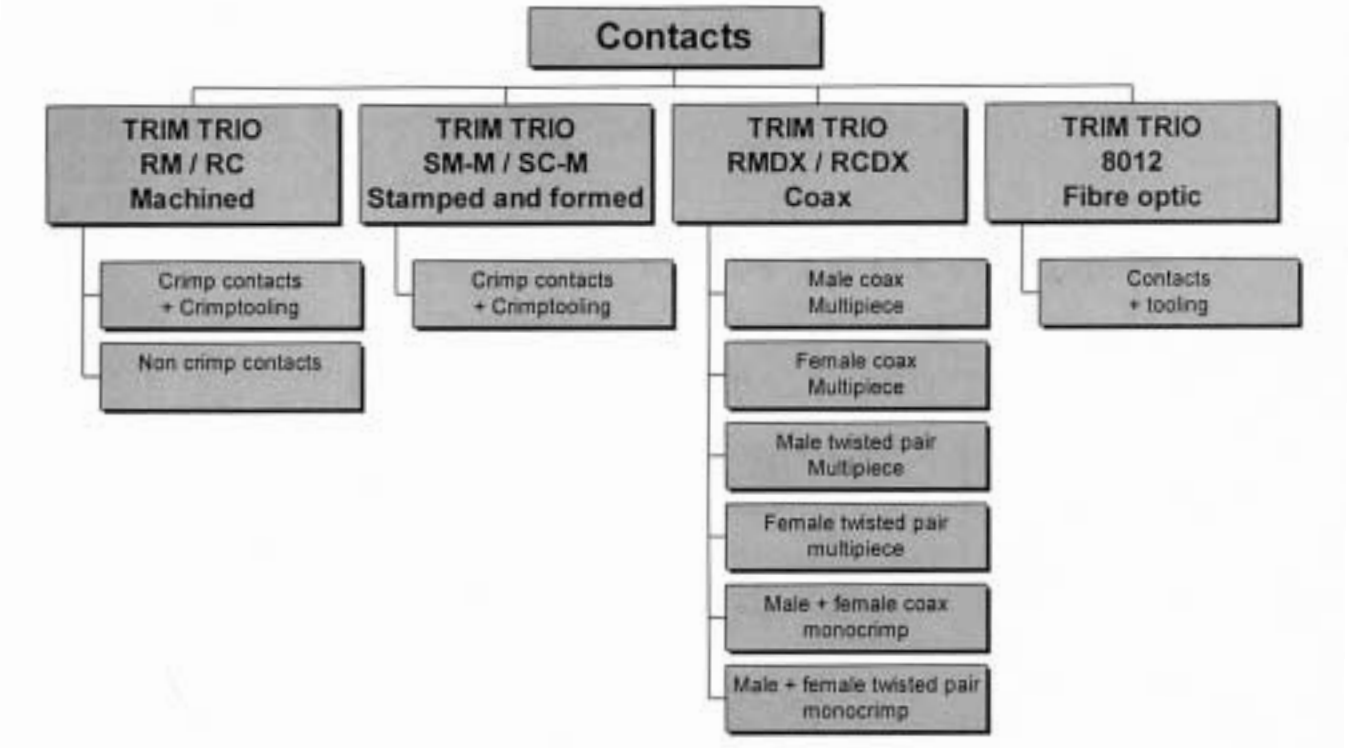


Part number of contact positions	E	F
3	10.18	25.40
4	15.24	30.48
6	25.40	40.64
9	40.64	55.88
10	45.72	60.96

Overview TRIM TRIO contacts



Selection matrix TRIM TRIO contacts



Current ratings for multi-contact connectors

Choice of right connector - contact combination.

The choice of a Trim Trio connector in combination with a Trim Trio contact is essential and different for any application
There is considerable misunderstanding in the field on current carrying capabilities for the various contacts in the TrimTrio programme.
The intention of this part is to give guidance how to interprete the given current ratings in general and how to calculate them for particular applications.
The information given is based upon existing MIL specifications such as:
MIL-C-26482, MIL-C-8384,
MIL-T-7928, MIL-W-5086,
MIL-W-5088, MIL-W-16878, etc. and in conjunction with long field practice.

Current carrying capabilities

Trim Trio contacts are designed to carry a specific current, in accordance with the applicable specification.
This specification will be defined by following variables:

• **Connector size**
The more contacts in a connector, the less current per contact can be loaded.

• **Wire size** (see table 1)
The cross section will determine the internal resistance and temperature rise for a given current.
-Table 1 gives the current ratings for the various wire sizes commonly used with Trim Trio contacts.

• **Current rating** (see table 2)
The current load for a given application will generate heat.
- Table 2 gives the *maximum current carrying capacity* of most of the Trim Trio contacts, the *maximum operating current* and the *recommended continuous current*.

• **Ambient temperature**
The combination of the connector size, the wire size and the current rating will generate a temperature rise.
This temperature rise + a given ambient temperature may not exeed the maximum operating temperature of the connector material (see performance characteristics for each connector family).

Table 1 - Current carrying capabilities per wire size

AWG	wire size mm^2	wire dia. mm	max.curr. carrying Amp.	max.operating curr. Amp.	recomm. cont. curr.
26	**0.13**	0.40	3	2	1
24	**0.20**	0.51	4.5	3	2
22	**0.32**	0.64	9	5	3
20	**0.52**	0.81	11	7.5	5
18	**0.82**	1.02	16	10	7.5
16	**1.30**	1.29	22	13	10
14	**2.10**	1.63	32	17	13

Table 2 - Current carrying capabilities per contact type

size	pin dia.	type	max. curr. carying Amp.	max. operating curr. Amp.	recomm. cont. curr. Amp.
		RM / RC machined	22	13	10
16	**.062* 1.6 mm**	**SM / SC 2 piece stamped**	22	13	10
20	**.040* 1.0 mm**	**SM-W / SC-W 2 piece stamped**	11	7.5	5

• *Max. current carrying capacity*
• *Max. operating current*
• *Recommended continuous current*
What do these values mean in practice ?

• *Max current carrying capacity*
of a contact is defined by the conducting section of the contact in its smallest area. The listed values are obtained from several tests in laboratories under room conditions (21°C). The contact is considered to be in free air.

• *Max operating current*
is the current with which the contacts can be energized during a longer or shorter period, without deteriorating and depending on working conditions.
These are dissipated heat, cooling provisions, ambient temperature, insulation material, etc.

• *Recommended continuous current*
can be applied for all normal cases and working conditions. The values include a safety margin. However, there are restrictions in the application of the given values. The most important restriction is the used wire, its sectional area, insulation temperature range, as well as wires in bundles.
Military specifications require that for a cable bundle of 15 conductors or more, the bundle shall not carry more than 20% of the total carrying capacity of the bundle.
In smaller bundles, the allowable percentage of total current may be increased as the bundle approaches the single wire condition.
This percentage of increase in total current carrying capacity of the bundle is 6% for each conductor less than 15 in a bundle.

From simple calculations, one can see that the closer the bundle approaches the single wire condition, the higher the allowable current per conductor becomes, to even such an extent, that it exceeds the recommended continuous current value. In that case, the recommended continuous value should have preference. In order to make this clear, we will give some typical examples.

• Example 1
Cable bundle, 48 conductors AWG20 (0.5mm2) used with circular TrimTrio connector with insert arrangement 24-48 and machined size 16 contacts RM/RC20.

- Total operating current capacity of bundle 48 x 7.5 A (table I) = 360 A
- Total allowable capacity for bundles of more than 15 wires is 20% = 72 A
- When all conductors are energized equally, this gives:
  72 : 48 = 1.5 A per conductor

When for instance 5 conductors are energized to the recommended continuous current of 5 A (see table 1) resulting in 25 A consumption, the other conductors may not take more than
72 - 25 = 47 A all together, or 1 A per conductor.
Any other combination can of course also be taken as long as the total capacity of 72 A is not exceeded and the recommended continuous current is respected.

Remark
Please note that contacts used are of the size 16 type with maximum operating current of 13 A (table 2).
The maximum operating current of the bundle is however restricted to 7.5 A per conductor due to the wire size of AWG20 (see table 1).

• Example 2
Cable bundle, 14 conductors AWG22 (0.32 mm2) used with rectangular
Trim Trio connector with insert arrangement for 14 contacts, and machined size 16 contacts RM / RC20.

- Total operating current capacity of bundle 14 x 5 (table I) = 70 A
- Total allowable for wire bundle of 15 wires less 1 is 20% + 6% = 26% gives 18.2 A.
- All conductors energized equally, gives:
  18.2 : 14 = 1.3 A per conductor

This value is within the recommended rating of 3 A so that it can be applied.
See also remark under example 1.

• Example 3
Cable bundle, 4 conductors AWG16 (1.3mm2) used with circular Trim Trio connector with insert arrangement 10-4 and stamped 2 piece contacts
SM /SC.

- Total operating current capacity of bundle 4 x 13 A (table I) = 52 A
- Total allowable for wire bundle of 15 wires less 11 is 20% + 66% = 86% gives 44.7 A.
- All conductors energized equally, gives:
  44.7 : 4 = 11.2 A per conductor

Since the recommended continuous current is 10 A, the conductor should not carry more than 10 A individiually.

As said before, the recommended ratings are valid for most common wiring systems and under normal working conditions. For extreme conditions, the given values should be lowered. The percentage of current reduction should be investigated from case to case.
A rule-of thumb which can be used for such cases is:

$$\frac{4 \text{ Amp. per mm}^2}{\text{wire section}}$$

It gives us for common used wire sizes the values listed in table 3.

Table 3 - Recommended continuous current for extreme working conditions

AWG	wire size mm2	recommended continuous current Amp.
26	**0.13**	0.5
24	**0.20**	0.8
22	**0.32**	1.3
20	**0.52**	2.0
18	**0.82**	3.3
16	**1.30**	5.2
14	**2.10**	8.4

Crimping instructions

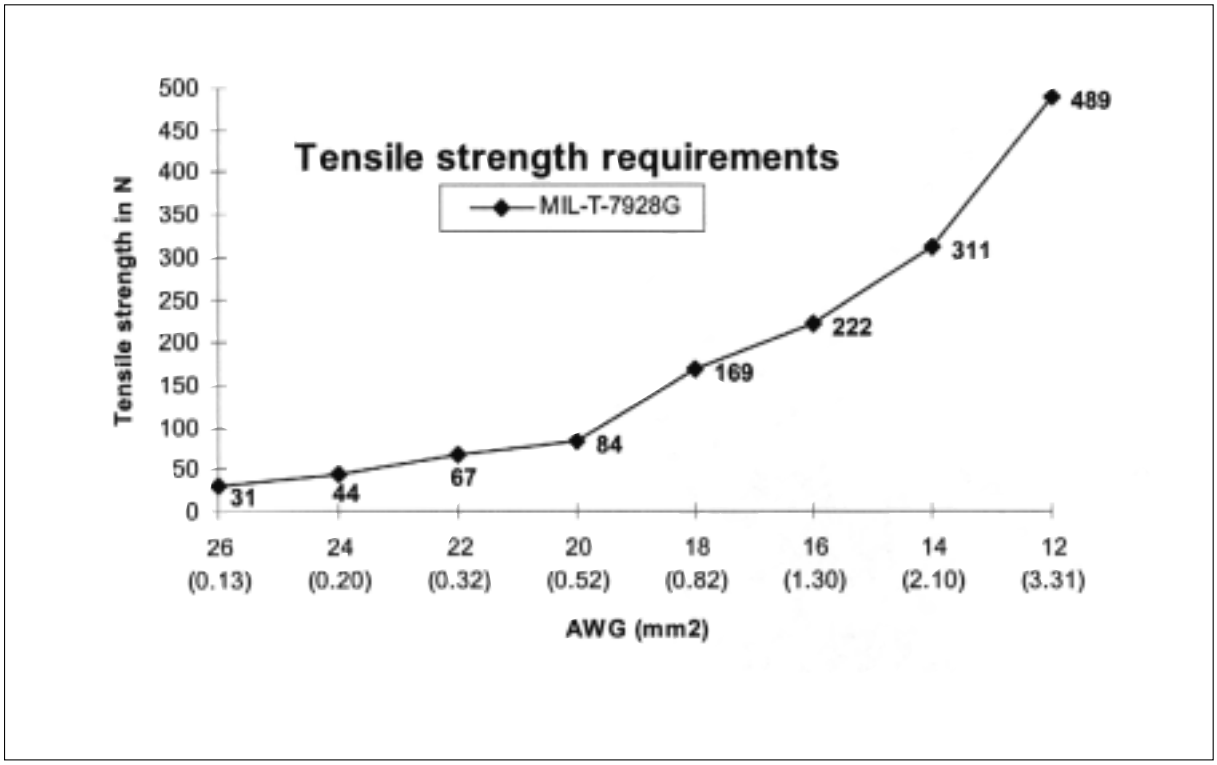
The conductor and insulation crimp section
Are designed to accommodate wire-conductor and insulation diameters, expressed in AWG (American Wire Gauge) or mm^2.
For each wire gauge, a correct crimp requires a crimp height that offers the highest performance.
This performance is defined as the highest tensile strength force.
A good conductor crimp can be guaranteed if the tensile stength force is equal or higher as indicated on the graph below. E.g. a conductor of AWG20 (0.52 mm^2) has a good crimp if the tensile strength is min 84N.

The tensile strength force is measured in Newtons and is the wire-to-contact connection that will withstand when a straight axial load is applied to the terminated wire. This is however a destructive test and is therefore inappropriate as a 100% inspection method.

An alternative method is to measure crimp height. The crimp height is measured at the conductor-crimp section.

- **If the dimension is too small**, then the conductor is over-crimped and the wire strands could be damaged, which results in a lower tensile strength force.
- **If the dimension is too large**, then the conductor is under-crimped and the wire strands will not be deformed enough to assure that the crimp will pass the tensile strength test.

In both cases, the application tooling's crimp height should be adjusted.
In order to have the right tooling's crimp height go and no-go gauges can be obtained and are defined in function of the type of crimp tooling and the wire gauge.
For further information consult factory.



Size 16 solid machined contacts for TRIM TRIO connectors

Description

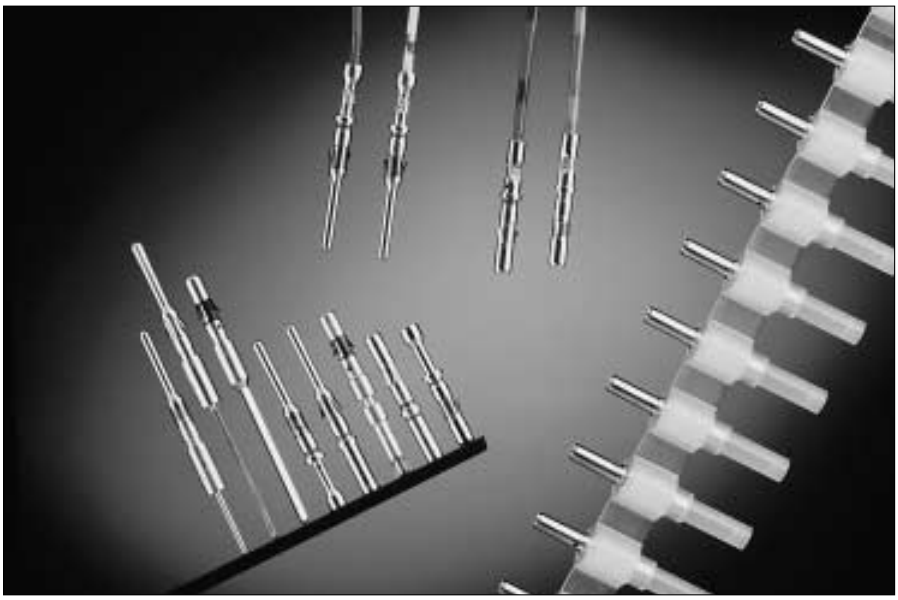
Size 16 RM/RC .063" (1.6mm) diameter contacts are precision solid machined crimp snap-in pin and sockets for heavy duty top performance requirements. Springs on both contacts are made of spring-tempered, heat-treated, berylium copper.
The socket inner spring supplies high contact pressure to ensure low-resistance contact between pin and socket. The socket contact features closed entry to prevent probe damage. Crimp barrels have insulation grips for vibration support and are provided with a cable stop and inspection hole.

Features and benefits

- Made from high conductive copper alloy with gold or tin over nickel plate finish.
- Heat-treated beryllium copper locking springs assure proper locking and alignment of contacts in the housing.
- Closed entry design on RC socket contact to prevent probe damage.
- Special "RCS" contacts with large lead-in design
- Contacts available in bulk packing

Performance characteristics

Current rating:	13 Amp
Contact resistance:	≤ 3 mΩ
Contact retention in body:	110 N min.
Individual insertion force:	3.5 N max.
Individual withdrawal force:	0.55 N min.



Construction

Contact body: High conductive copper alloy.

Outer spring: Tempered, heat-treated, beryllium copper.

Inner spring socket: Tempered, heat-treated, plated beryllium copper.

Plating table

K (std)	= Min. 0.4 µ Gold all over,over Nickel
T	= 3 - 5 µ Tin all over, over Nickel
D28	= Min. 0.75 µ Gold over Nickel
T3	= 7,5µ - 12,5 µ Tin all over

Connector accommodation

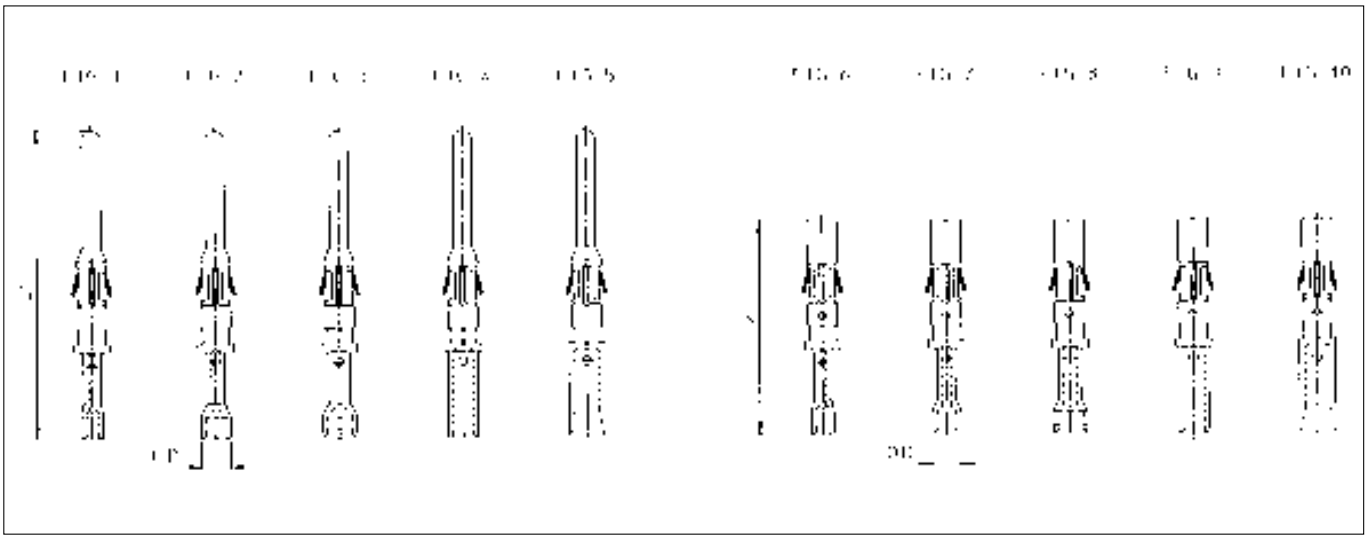
Any TRIM TRIO contact can be used in any contact position in any connector in the TRIM TRIO interconnection system.

- MS-M / MSG Rectangular connectors
- SMS Qikmate
- G - Bantamate
- UT-Bantam
- UTG Metalok bantam
- UTP Full plastic bantam
- UTGS Shielded bantam
- MBG Bantamate II

How to order

		(K) RM	**16**	**M**	**23**	**(GE1)**	**K**	**–**
		(K) RC	**16**	**M**	**23**	**(GE1)**	**K**	**–**
Contact type:	**RM:** Male contact bulk packing **RC:** Female contact bulk packing **KRM:** Male contact on plastic carrier strip **KRC:** Female contact on plastic carrier strip							
AWG Size:	16, 20, 24, 28							
Size 16:	.063" (1.6mm) Diameter contacts							
Design variation:	Crimp barrel							
Grounding contact:								
Plating indication:	See plating table							
Packing quantity:	**No digit (std)** : 50 pcs. bulk packing (RM/RC) : 2000 pcs on reel (KRM/KRC) **1000** : 1000 pcs bulk packing (RM/RC)							

Standard RM/RC crimp contacts: Contact size 16 - Pin diameter 1.6mm (.063")



Dimensional table

Pin contacts	Part number Fig.	Socket contacts Standard	Socket contacts RCS-Type	Fig.	Wire size AWG	Wire size mm²	Max. wire dia.	Max. insul. dia.	Wire strip length	O.D.	L1	L2
RM28M1(*)	1	RC28M1(*)	--	6	30-28	0.05-0.08	0.55	1.1	4.8	1.90	26.2	18.2
RM24M9(*)	2	RC24M9(*)	RCS24M9(*)	7	26-24	0.13-0.20	0.8	1.6		2.55		
RM20M14(*)	3	RC20M14(*)	RCS20M14(*)	8	22-20	0.32-0.52	1.18	2.6		3.10		
RM20M13(*)		RC20M13(*)	RCS20M13(*)					1.8		2.92		
RM20M12(*)		RC20M12(*)	RCS20M12(*)					2.2		2.92		
RM16M23(*)	4	RC16M23(*)	RCS16M23(*)	9	20-16	0.52-1.50	1.80	3.2	7.1	2.55	27.2	19.7
RM16M23GE1(*)		RC16M23GE1(*)	--	9								
RM16M31(*)		--	--	-							28.4	--
RM14M50(*)	5	RC14M50(*)	RCS14M50(*)	10	14	2	2.05			3.10	26.2	18.2
RM14M30(*)	5	RC14M30(*)	--	10	--	2,5	2.28			3.10		

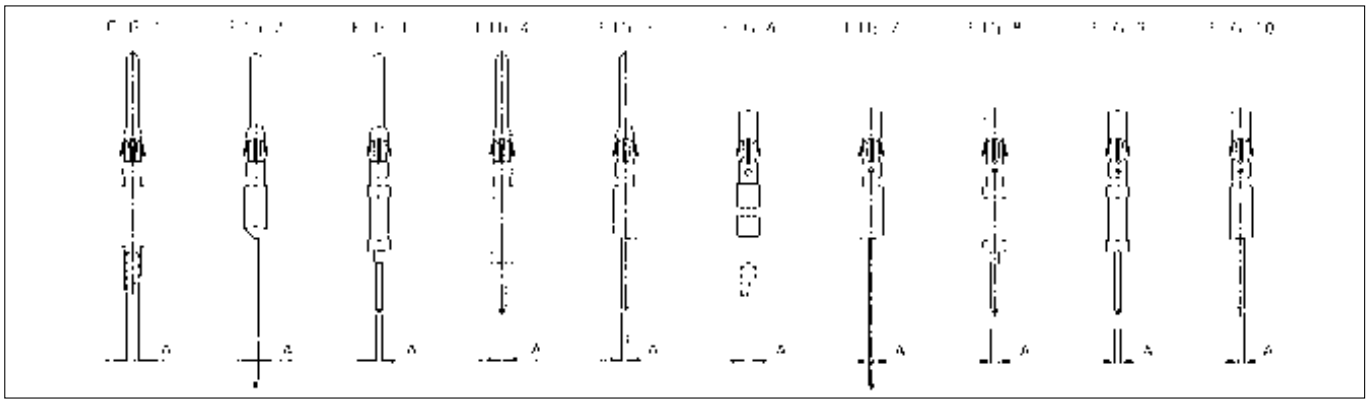
(*) Plating indication : See plating table
For machined contact reeled on plastic carrier: put "K" in front of part number e.g. KRM16M23K

Crimptooling table

Size	Hand crimp tooling for loose contacts: Hand tools die set included	MH860 Positioner (not incl.)	MH860 Locator setting	M10S1 Die set (not incl.)	M10S1 Stop bushing (not incl.)	M8ND Die set (not incl.)	Automatic crimp tooling for contacts on strip: P100MAN (Press) Left side applicator KRM/KRC (not incl.)	P100MAN (Press) Stripper unit (not incl.)	Extraction tools
28-1	Y16RCM	MH86164G	4/6	S9	SL40	N24RT10	--	Consult Factory	RX2025GE1 or RX2025GE2 or RX16D11D1
24-9			5/6				MLSP2763		
20-12/13			5/7	S10		N20RT30	MLSP2764		
16-23			6/8	S3D1	SL39	N16RT21	MLSP2765		
16-GE1		MH86186			SL115	N16RT25			
16-31	--	--	--				--		
20-14	--	MH86164G	5/7	S10J	SL40J	N20RT30J	--		
14-50		--	--	S3-14	SL39	--	--		
14-30	AF8 + TP120	--	--	--	--	--	--		

For detailed information on crimp tooling : See crimp tooling section

Special RM / RC contacts: Contact size 16 - Pin diameter 1.6mm (.063")

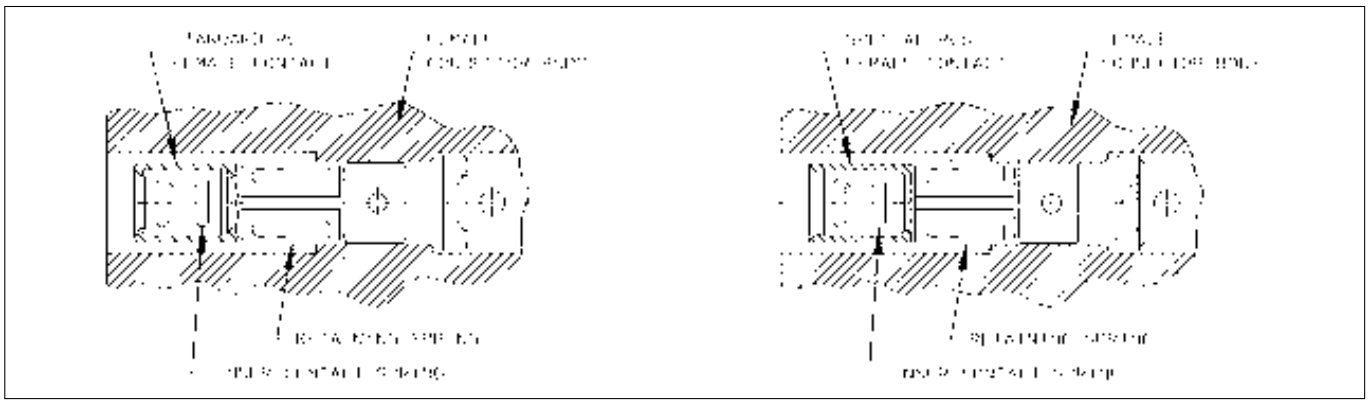


Part number				Type	Wire size		Post cross section A	Length out of TRIM TRIO cavity	Anti-rotating bushing part number
Pin contacts	Fig.	Socket contacts	Fig.		AWG	mm²			
RM16MSC(*)	**1**	**RC16MSC(*)**	**6**	Handsolder	16 - 20	1,50 - 0,52	ø1.7	--	-
RM16SEO(*)	**1**	**RC16SE4(*)**	**6**	Handsolder	16 - 20	1.50 - 0.52	ø1.7	3.5	-
RM20M12G4(*)	**2**	**RC20M12G4(*)**	**7**	Mini - wrap	28 - 30	0.08 - 0.05	⍁.636	16.0	J1661
RM20M12E8(*)	**5**	**RC20M12E8(*)**	**10**	Dipsolder	-	-	ø 0.9	5.2	-
		RC20M12E83(*)		Dipsolder	-	-	ø 0.9	10.4	-
		RC20M12E84(*)		Dipsolder	-	-	ø 0.9	13.9	-
RM20M12G50(*)	**4**	**RC20M12G50(*)**	**9**	Dipsolder	-	-	ø 0.8	6	-
RM20M12G60(*)	**3**	**RC20M12G60(*)**	**8**	Dipsolder	-	-	ø 0.8	6	-

(*) Plating indication : See plating table.

The RC contact principle

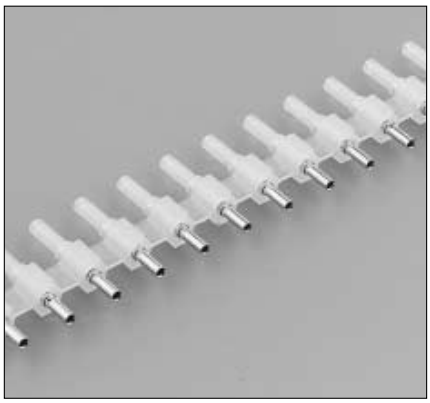
The RCS contact principle



The RM/RC contact packing

50 pcs bulk packing (standard)

1000 pcs bulk packing



Reeled contacts on plastic carrier (qty 2000 pcs)

Size 16 stamped and formed contacts for TRIM TRIO connectors

Description

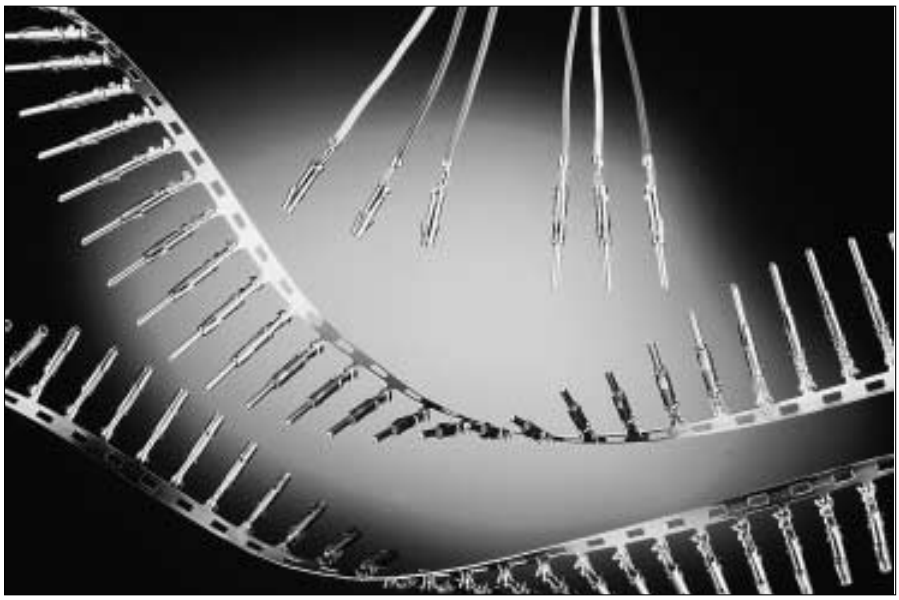
Size 16 SM/SC .063" (1.6mm) diameter contacts are two piece strip formed crimp snap-in pin and sockets.
These contacts consist of a crimp body made of high conductive copper alloy, and a stainless steel retaining spring featuring retention in the housing cavity and a closed entry socket to prevent probe damage.
The contact with its open barrel is standard available on srtip and packaged with 3000 pcs on reel. This reel packaging combined with semi or even full automatic crimp tooling provides the added advantage of a lower installed cost.

Features and benefits

- Made from high conductive copper alloy with gold or tin over nickel plate finish.
- Two piece construcion with dual purpose spring which serves for contact retention and protects the body against damage.
- Contacts available on reel (standard) and in bulk packing (100 pcs).
- Suitable for high volumes and lower installation cost.

Performance characteristics

Current rating:	13 Amp
Contact resistance:	≤ 6 mΩ
Contact retention in body:	65 N min.
Individual insertion force:	3.5 N max.
Individual withdrawal force:	0.55 N min.



Construction

Contact body: High conductive copper alloy.
Outer spring: Stainless steel

Plating table

S6 = 0.75m Gold min. in contact area, flash on crimp barrel over Nickel.
D70 = Gold flash all over, over Nickel.
TK6 = Preplated Tin all over.

Connector accommodation

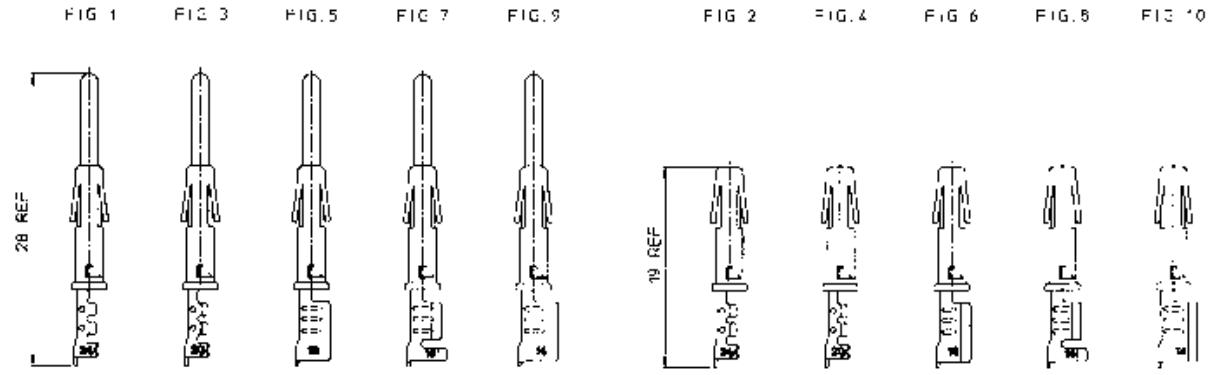
Any TRIM TRIO contact can be used in any contact position in any connector in the TRIM TRIO interconnection system.

- MS-M / MSG Rectangular connectors
- SMS Qikmate
- G - Bantamate
- UT-Bantam
- UTG Metalok bantam
- UTP Full plastic bantam
- UTGS Shielded bantam
- MBG Bantamate II

How to order

		SM SC	16 16	M M	(L) (L)	1 1	S6 S6
Contact type:	**SM:** Male contact **SC:** Female contact						
AWG Size:	14, 16, 20, 24						
Type of crimp barrel:	American open crimp barrel						
Packing:	**No digit:** Contacts on strip (qty 3000 per reel) **L:** Preformed loose piece contacts						
Design variation	**1 :** Only wire crimp for size 14 and 16 **:** Wire + insulation crimp for sizes 20 and 24 **11 :** Wire + insulation crimp for size 16						
Plating indication:	See plating table						

Standard SM/SC crimp contacts: Contact size 16 - Pin diameter 1.6mm (.063")



Dimensional table

Part number: contacts on strip Loose pieces				Wire size		Insulation diameter	Wire strip length
Pin contacts	Fig.	Socket contacts	Fig.	AWG	mm²		
SM24M1S6 **SM24ML1S6**	**1**	**SC24M1S6** **SC24ML1S6**	**2**	26 - 24	0.13 - 0.25	0.89 - 1.58	4.0
SM20M1S6 **SM20ML1S6**	**3**	**SC20M1S6** **SC20ML1S6**	**4**	22 - 20	0.35 - 0.50	1.17 - 2.08	4.0
SM16M1S6 **SM16ML1S6**	**5**	**SC16M1S6** **SC16ML1S6**	**6**	18 - 16	0.80 - 1.50	3.0	6.35
SM16M11S6 **SM16ML11S6**	**7**	**SC16M11S6** **SC16ML11S6**	**8**	18 - 16	0.80 - 1.50	2.0 - 3.0	4.65
SM14M1S6 **SM14ML1S6**	**9**	**SC14M1S6** **SC14ML1S6**	**10**	14	2.0	3.2	6.35

For other platings: See plating table.

Crimptooling table

Size	Hand crimp tooling for loose contacts		Automatic crimp tooling for contacts on strip		Extraction tooling
	Hand tools die set included	M8ND Die set (not included)	P100 MAN Mini Applicator (not included)	K750 ASC (Stripper - crimper) Mini Applicator (not included)	
24	Y16SCM2 (ratchet)	N24RT11	MLS0318B	MLS20M1	RX2025GE1 or RX2025GE2 or RX16D11D1
20	Y14MTV (ratchet)	N20RT29	MLS0555A		
16M(L)11	Y16SCM2 (ratchet)	N16RT26	MLS0356A	MLS16M11	
16M(L)1	Y14SCM (ratchet) Y14MTV (ratchet)	N16RT24	MLS1579	MLS16M1	
14	Y14SCM (ratchet) Y14MTV (ratchet)	N14RT13	MLS1047	MLS14M1	

For detailed information on crimp tooling : See crimp tooling section

Size 16 MULTIPIECE coaxial contacts for TRIM TRIO connectors

Description

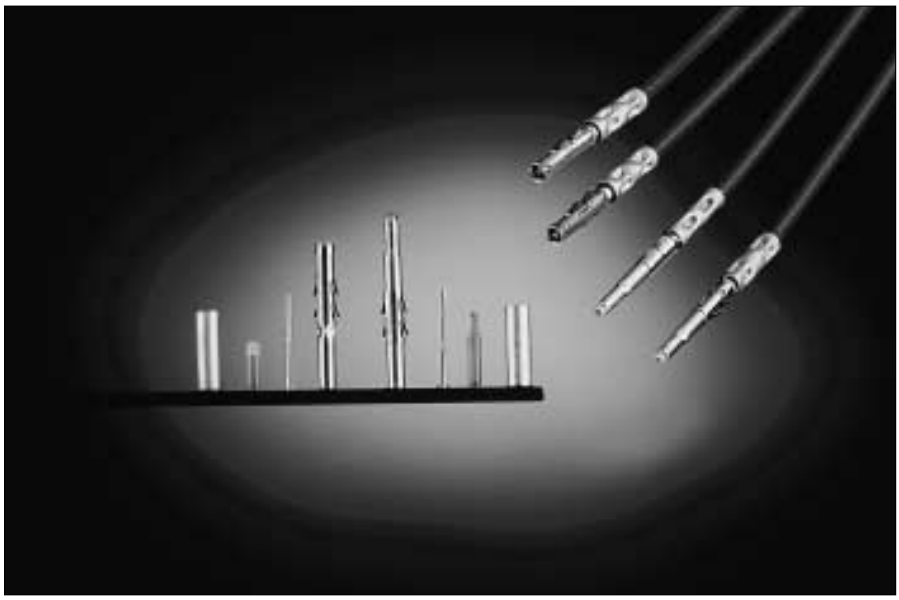
Size 16 RMDX/RCDX Multipiece .063" (1.6mm) diameter contacts are subminiature coaxial contacts to cover a wide range of subminiature coaxial and twisted pair cables.
They are suitable in applications where a mix of signal, power and coaxial cable terminations for low frequency, shielded signal and high frequency applications are needed.
The contact consist of an inner pin/socket and an outer male/female body.
The thermoplastic insulating bushing in the outer body is designed to accept and permanently retain the inner contact.
The outer ferrule hold the outer braid to the outer contact and act as an insulating support to ensure against bending and vibrating stresses.
The inner and the outer conductor are crimped individually, thereby enabling inspection of both critical crimp points.

Features and benefits

- The inner and outer conductors are crimped individually
- The thermoplastic insulating bushing in the outer body is designed to accept and permanently retain the inner contact.
- Outer ferrule hold the outer braid to the outer contact and act as an insulating support to ensure against bending and vibration.

Performance characteristics

Operating voltage between inner / outer contact:	230 VDC
Test potential between inner / outer contact	750 VAC 1 min.
Operating temperature:	-55°C t0 + 125°C
Contact retention in body:	65 N min.
Contact voltage drop a 1A:	25m V max.
Isolation at 30 MHZ:	140 db.



Construction

Inner and outer contacts: High conductive copper alloy
Retaining spring: berylium copper
Insulating bushing: Polyamide 6.6

Plating table

Retaining spring: Nickel plated
Inner and outer contacts:
D28: 0.75 µ Gold min. over Nickel

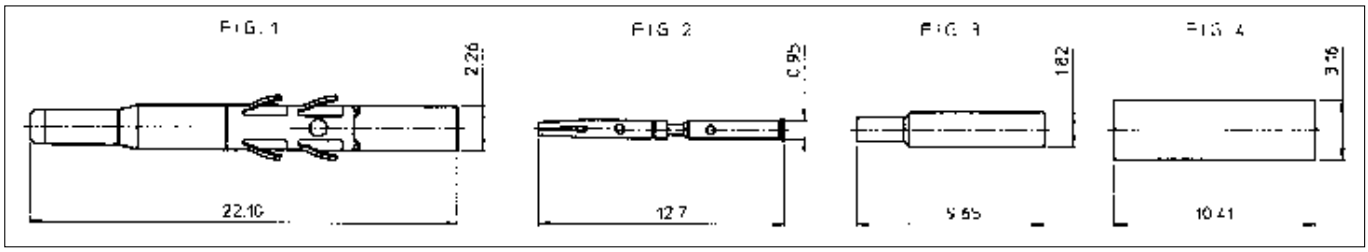
Connector accommodation

Any TRIM TRIO contact can be used in any contact position in any connector in the TRIM TRIO interconnection system.
- MS-M/ MSG Rectangular connectors
- SMS Qikmate
- G - Bantamate
- UT-Bantam
- UTG Metalok bantam
- UTP Full plastic bantam
- UTGS Shielded bantam
- MBG Bantamate II

How to order

		RMDX RCDX	K10 K1	D28 D28
Contact type:	**RMDX** = Male subminiature coax. **RCDX** = Female subminiature coax.			
Multipiece coax kit	**K10** = Kit male coax. **K1** = Kit female coax			
Plating indication				

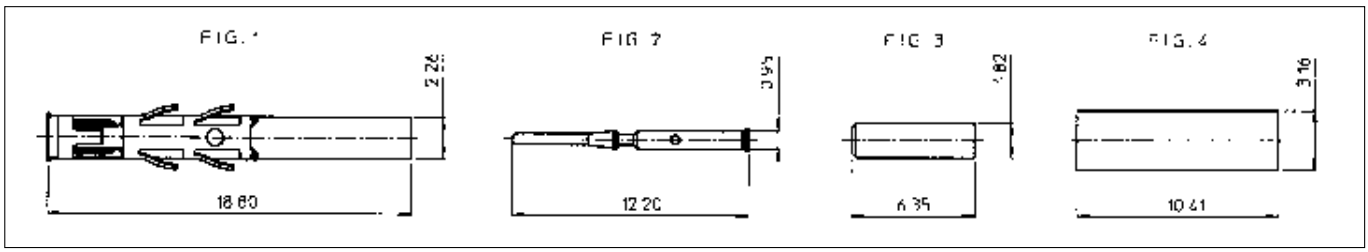
MULTIPIECE Subminiature coax - Male contact for coaxial cable



Type of coaxial cable	Contact for inner conductor				Contact for outer braid						Extrac tool
	Inner female contact		Crimp tool M10S1		Outer male contact		Hyring		Crimp tool M10S1		
	Part number	Fig.	Die Set	Stop Bushing	Part number	Fig	Part number	Fig	Die Set	Stop Bushing	
RG161U RG179A/U RG179B/U RG187U	RFD26L1D28	2	S23D2	SL46D2	RMDX602D28	1	YOC074	4	S22-1	SL47-1	RX2025 GE1
RG174/U RG188/U Amphenol 21-598			S26D2				YOC074	4			RX16D11 D1
RG178A/U RG196U			S23D2				YOC074 + RMDXB0553	4 3			

Kit reference RMDXK10D28 includes RMDX602D28 + RFD26L1D28 + YOC074 + RMDXB0553 and are packed in plastic bag.

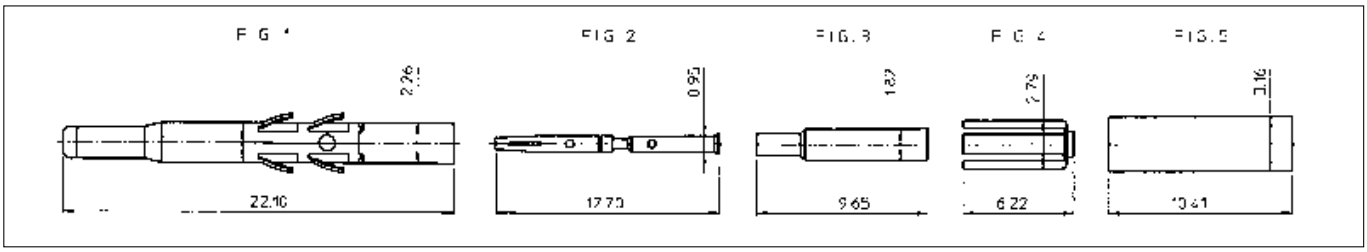
MULTIPIECE Subminiature coax - Female contact for coaxial cable



Type of coaxial cable	Contact for inner conductor				Contact for outer braid						Extrac tool
	Inner male contact		Crimp tool M10S1		Outer female contact		Hyring		Crimp tool M10S1		
	Part number	Fig.	Die Set	Stop Bushing	Part number	Fig	Part number	Fig	Die Set	Stop Bushing	
RG161U RG179A/U RG179B/U RG187U	RMD26L1D28	2	S23D2	SL46D2	RCDX602D28	1	YOC074	4	S22-1	SL47-1	RX2025 GE1
RG174/U RG188/U Amphenol 21-598			S26D2				YOC074	4			or RX16D11 D1
RG178A/U RG196U			S23D2				YOC074 + RCDXB0551	4 3			

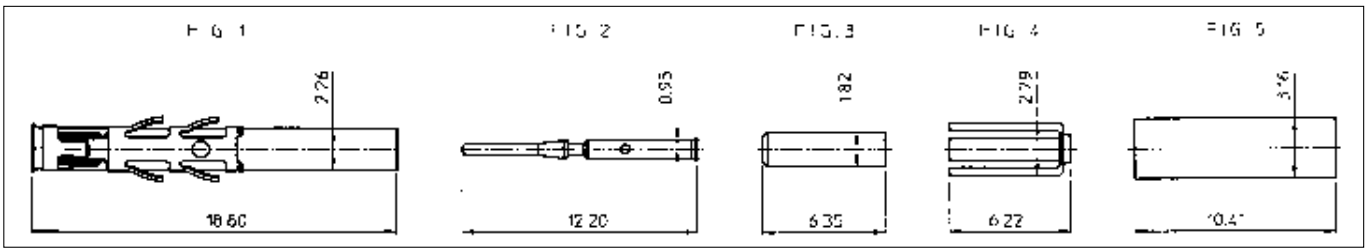
Kit reference RCDXK1D28 includes RCDX602D28 + RMD26L1D28 + YOC074 + RCDXB0551 and are packed in plastic bag.

MULTIPIECE Subminiature coax - Male contact for twisted pair cable



Type of coaxial cable	Contact for inner conductor				Contact for outer braid						Extrac tool
	Inner female contact		Crimp tool M10S1		Outer male contact		Hyring		Crimp tool M10S1		
	Part number	Fig.	Die set	Stop bushing	Part number	Fig	Part number	Fig	Die set	Stop bushing	
2 #24 solid or stranded 2 #26 str	RFD26L1D28	2	S26D2	SL46D2	RMDX602D28	1	YORX090 YOC074 RMDXB0553	4 5 3	S221	SL471	RX2025 GE1
2 #24 7/0,20 str. MIL-W-76 or MIL-W-16878 type B							YORX090 YOC074 RMDXB0554	4 5 3			or RX16D11D1
#28 per MIL-W-81822/3							YORX090 YOC074 RMDXB0553	4 5 3			

MULTIPIECE Subminiature coax - Female contact for twisted pair cable



Type of coaxial cable	Contact for inner conductor				Contact for outer braid						Extrac tool
	Inner male contact		Crimp tool M10S1		Outer female contact		Hyring		Crimp tool M10S1		
	Part number	Fig.	Die set	Stop bushing	Part number	Fig	Part number	Fig	Die set	Stop bushing	
2 #24 solid or stranded 2 #26 str	RMD26L1D28	2	S26D2	SL46D2	RCDX602D28	1	YORX090 YOC074 RCDXB0551	4 5 3	S221	SL471	RX2025 GE1
2 #24 7/0,20 str. MIL-W-76 or MIL-W-16878 type B							YORX090 YOC074 RCDXB0552	4 5 3			or RX16D11D1
#28 per MIL-W-81822/3							YORX090 YOC074 RCDXB0551	4 5 3			

Size 16 monocrimp coaxial contacts for TRIM TRIO connectors

Description

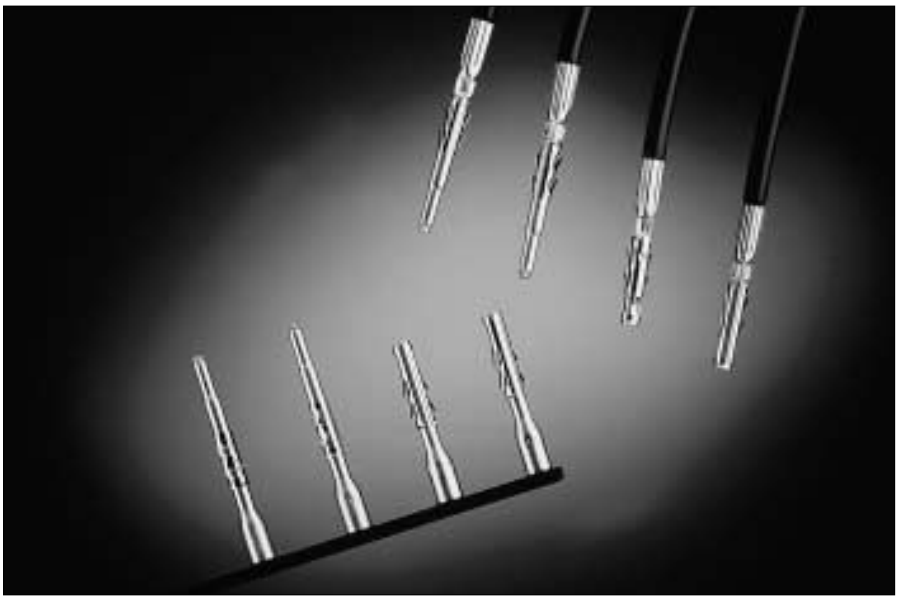
Size 16 RMDX/RCDX Monocrimp .063" (1.6mm) diameter contacts are one-piece monocrimp subminiature coaxial contacts to cover a wide range of subminiature coaxial and twisted pair cables.
They provide cost effective solutions in applications where a mix of signal, power and coaxial cable terminations for low frequency, shielded signal and high frequency applications are needed.
Monocrimp one piece coaxial contacts offer high reliability plus the economic advantage of a 95% reduction in installation time over conventional assembly methods currently in use.

Features and benefits

- The monocrimp one-piece coaxial contacts offer high reliability plus the economic advantage of a 95% reduction in installation time over conventional assembly methods.
- This economy is achieved by simultaneously crimping of both the inner and outer conductor

Performance characteristics

Operating voltage between inner / outer contact:	230 VDC
Test potential between inner / outer contact	450 VAC 1 min.
Operating temperature:	-55°C to + 125°C
Contact retention in body:	65 N min.
Contact voltage drop a 1A:	30m V max.
Isolation at 30 MHZ:	140 db.



Construction

Inner and outer contacts: High conductive copper alloy
Retaining spring: berylium copper
Insulating bushing: Polyamide 6.6

Plating table

Retaining spring: Nickel plated
Inner and outer contacts:
D28: 0.75µ Gold min. over Nickel

Connector accommodation

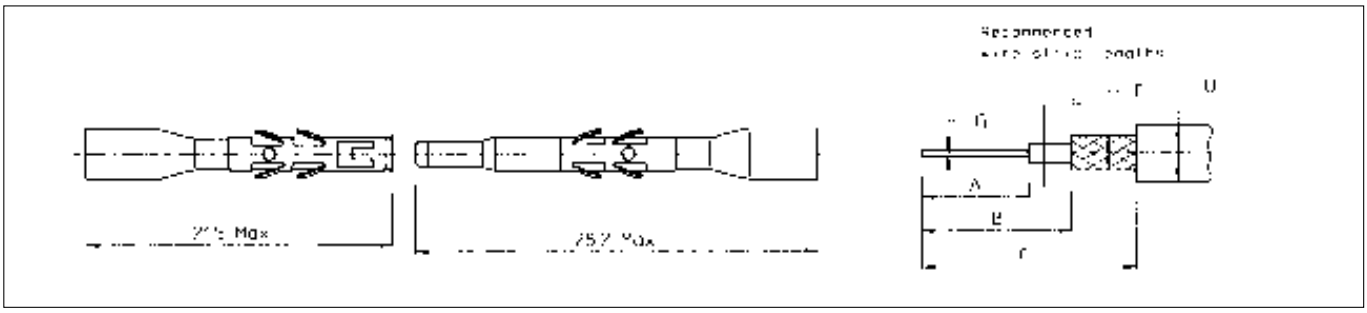
Any TRIM TRIO contact can be used in any contact position in any connector in the TRIM TRIO interconnection system.

- MS-M/MSG Rectangular connectors
- SMS Qikmate
- G - Bantamate
- UT-Bantam
- UTG Metalok bantam
- UTP Full plastic bantam
- UTGS Shielded bantam
- MBG Bantamate II

How to order

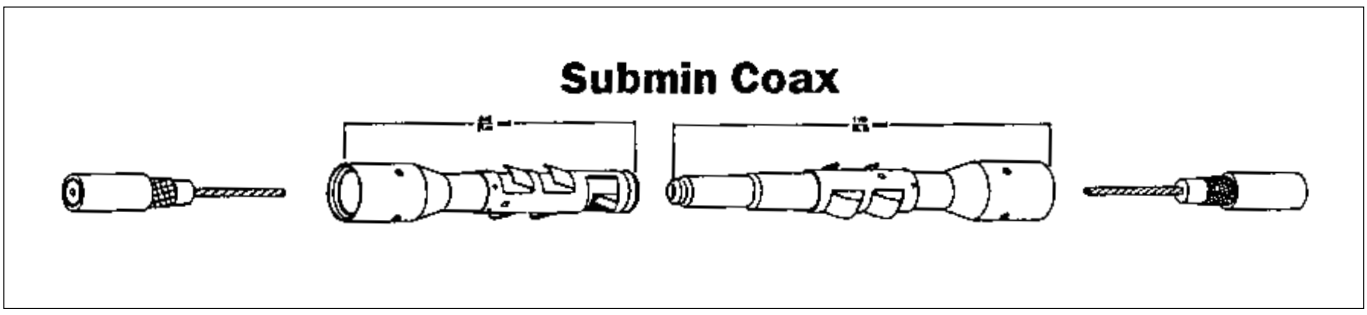
		RMDX60 **RCDX60**	**36** **36**	**D28** **D28**
Contact type:	**RMDX** = Male subminiature coax. **RCDX** = Female subminiature coax.			
Monocrimp design variation				
Plating indication				

MONOCRIMP Subminiature coax

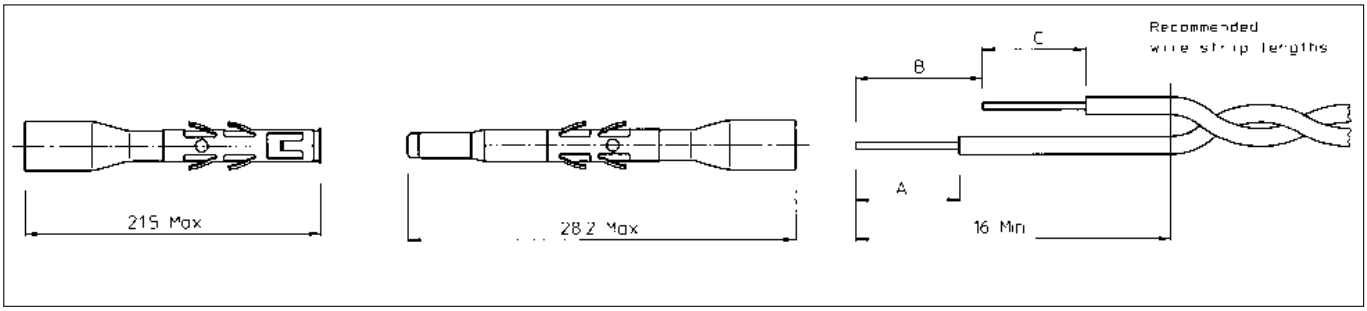


Part number Male / Female	AWG inner conduct.	Cable type	Coax dimensions D max	E	F	G	Coax strip lengths A	B	C	Crimp tool M10S1 Die set not incl.	stop bushing not incl.	Extraction tool
RMDX6050D28 **RCDX6050D28**	30	-	2.64	2.11	1.70	0.30	5.1		8.9	S80		
RMDX6050D28 **RCDX6050D28**		-	2.29	1.63	1.22		4.2		8.5	S87		
RMDX6032D28 **RCDX6032D28**	28	-	2.90	2.29	1.91	0.38			11.7	S80		
RMDX6024D28 **RCDX6024D28**		-	1.78	1.37	0.97	0.48				S82		
RMDX6032D28 **RCDX6032D28**		RG174/U	2.92	2.24	1.52	0.48	5.1	6.35		S80	SL105	RX2025GE1
RMDX6026D28 **RCDX6026D28**	26	-	3.05	2.44	1.96	0.41				S82		OR
RMDX6036D28 **RCDX6036D28**		RG188A/U	2.79			0.51			11.7	S80		RX16D11D1
RMDX6036D28 **RCDX6036D28**		RG316/U	2.72	1.98	1.52							
RMDX6018D28 **RCDX6018D28**			2.62			0.53			8.9	M10SG8* crimping kit		
RMDX6018D28 **RCDX6018D28**	26		2.34	1.70	1.27	0.64						

* M10SG8 consists of die set, stop bushing and M10S1 tool

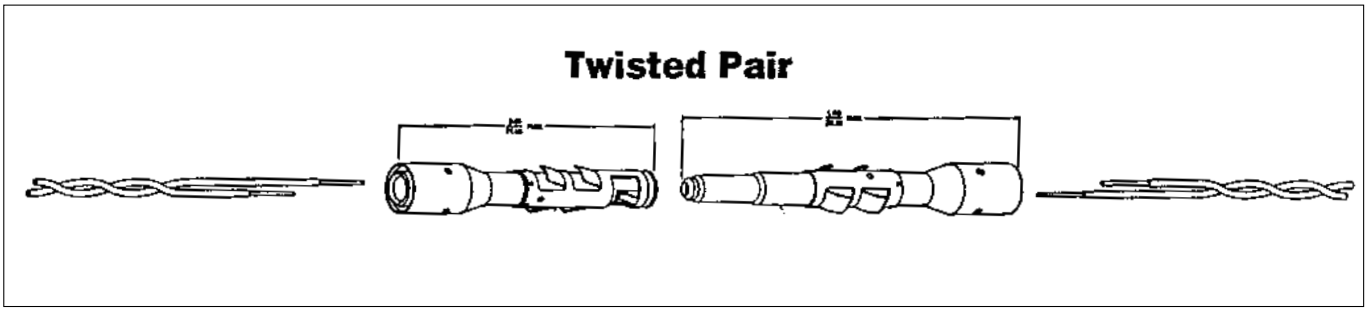


MONOCRIMP Twisted pair



Part number Male Female	AWG inner conduct.	Dia. outer jacket (single wire)	Cable strip lenghts A	 B	 C	Crimp tool M10S1 Die set not incl.	 Stop bushing not. incl.	Extraction tool
RMDX6019D28	26 (19 x 0.10)	1.25	4.7	6.0	4.0	M10SG8* Crimping kit		RX2025GE1 or RX16D11D1
RCDX6019D28	24 (7 x 0.20)	1.25						
	24 (19 x 0.13)	1.45						
RMDX6031D28	26 (7 x 0.16)	0.70				S80	SL105	
RCDX6031D28								

* M10SG8 consist of die set, stop bushing and M10S1 tool.



Size 16 Fibre optic contacts for TRIM TRIO connectors

Description

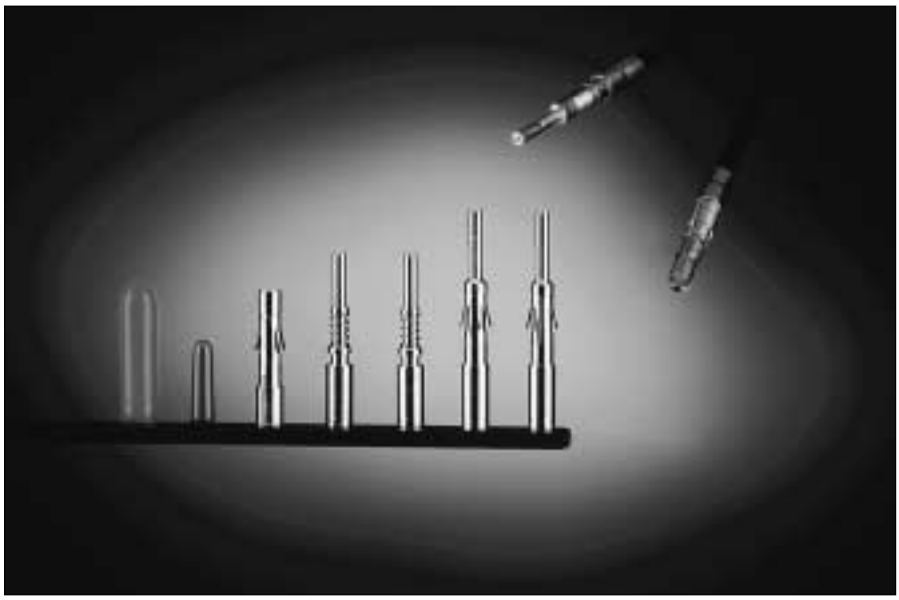
Size 16 (1.6mm) Fibre optic contacts series 8012 are optical contacts designed for the integration of optical links in all TRIM TRIO cable connectors.
The F.O. contacts are designed to accomodate 1000m plastic fibres with a cable diameter of 2.2 mm.

Features and benefits

- Socket contact is spring loaded to avoid any air gap between the two optical faces.
- Low insertion loss is provided by high precision pieces.
- Single jumpers, multiway harness and active device housings can be supplied according customer requirement.

Performance characteristics for plastic fibre (depends on supplier)

Temperatur range:	-20°C to + 70°C
Attenuation at 0.660 µm (at +20°C):	< 200 db/Km
Min radius:	25 mm
Tensile strength	5 daN
Weight:	5 daN/Km
Cable retention:	25 N
Typical insertion loss	1.5 dB at 650 nm



Construction

Contact body: Arcap (rustproof)
Outer spring: Stainless steel

Connector accommodation

Fibre optic contacts can be used in any contact position in any connector in the TRIM TRIO interconnection system.
- MS-M / MSGRectangular connectors
- SMS Qikmate
- G - Bantamate
- UT-Bantam
- UTG Metalok bantam
- UTP Full plastic bantam
- UTGS Shielded bantam

How to order

Contacts

Male contact: 8012P14J262
Female contact: 8012S14J262

Tool kit

Crimping / polishing technic

The tool kit contains all necessary tools to terminate contacts for plastic fibre, such as
- Stripping plier
- Crimping plier
- Polishing plate and tool
- Miscallaneous

Part number tool kit: 80MS0004

Separate tools

• **Cutting tool**	80WD0005
• **Stripping plier**	80WD0025
• **Crimping plier**	80WS0002
• **Polishing plate**	80WP0005
• **Polishing tool**	80WP0018
• **10 polishing discks 30 µm**	80WP0019
• **10 polishing discks 9 µm**	80WP0014
• **Extraction tool**	RX2025GE1

For other fibres consult factory.

Discrimination keys for TRIM TRIO connectors

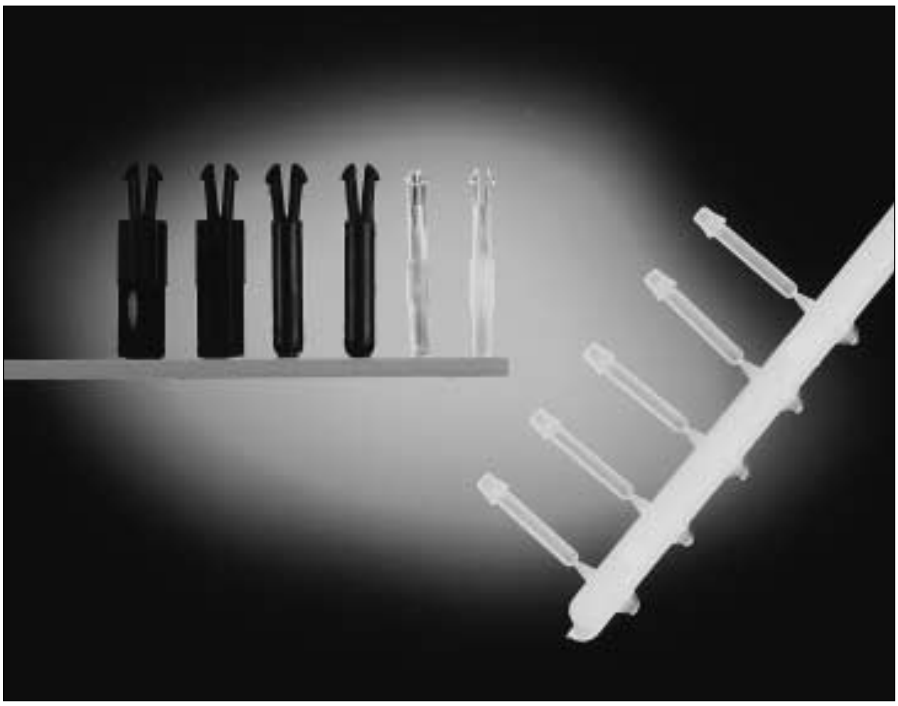
Description

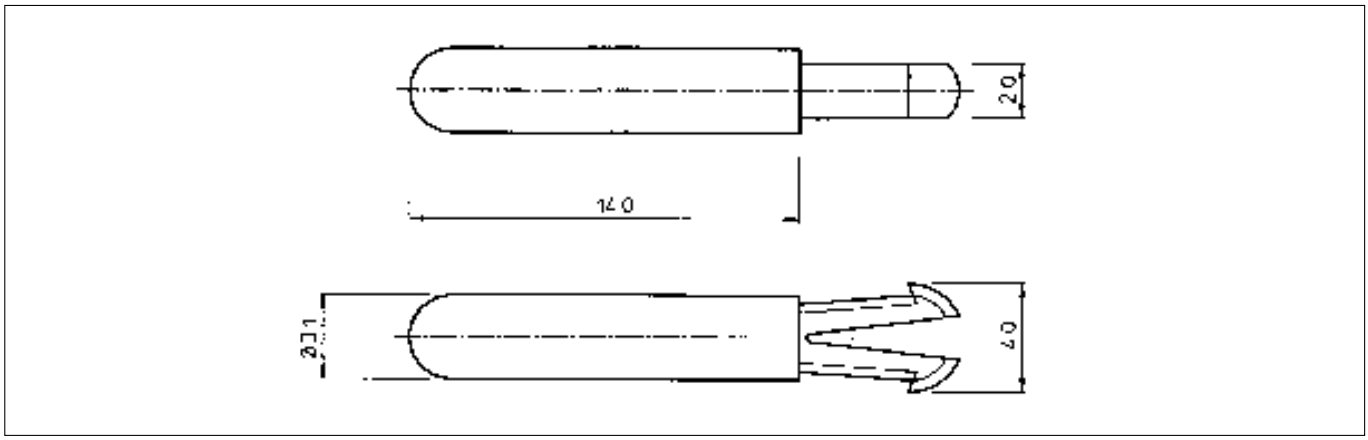
In applications where similar connectors are used next to each other, mismatching can be a reason for disturbances, system failure or even danger to operating personnel.
To eliminate mismatching, all TRIM TRIO connectors can be equipped with discrimination keys, which offer unlimited possibilities for a “fool - proof” interconnection system.

When one of these discrimination keys is used, the TRIM TRIO connector will only mate with a connector which has a vacant contact or discrimination cavity at the corresponding position.

This system offers boundless opportunities for all applications which involve several identical TRIM TRIO connectors.

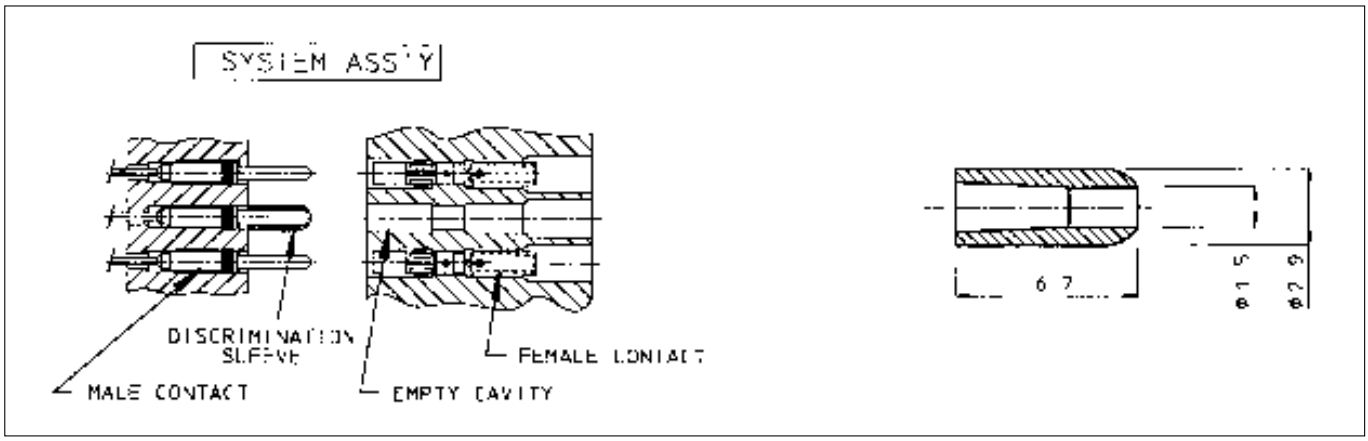
The material used is polyamide 6.6





SMSPKE0

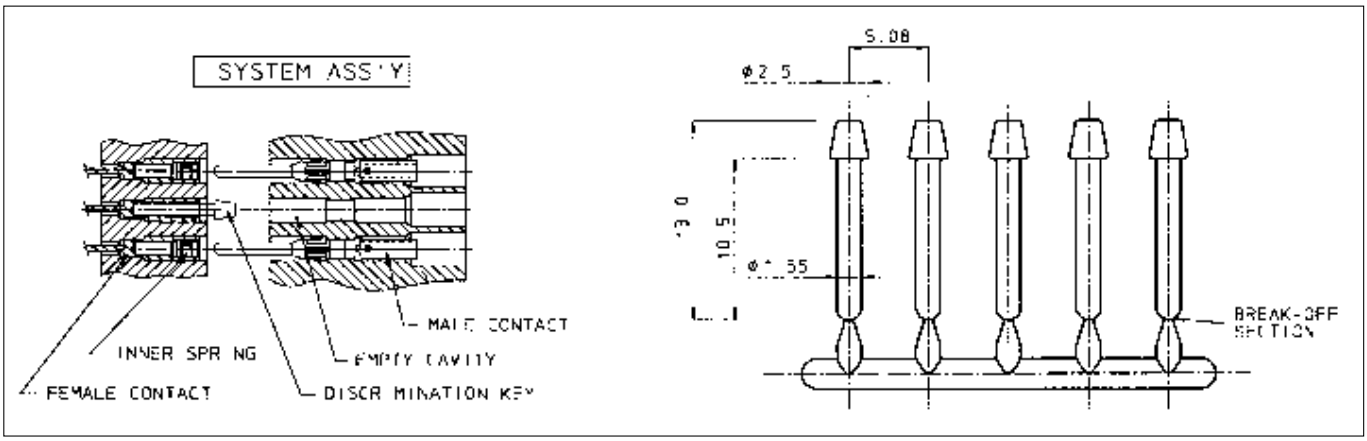
A dummy contact, which can be inserted into an empty contact cavity in any of the TRIM TRIO connectors.



SMSPKB2

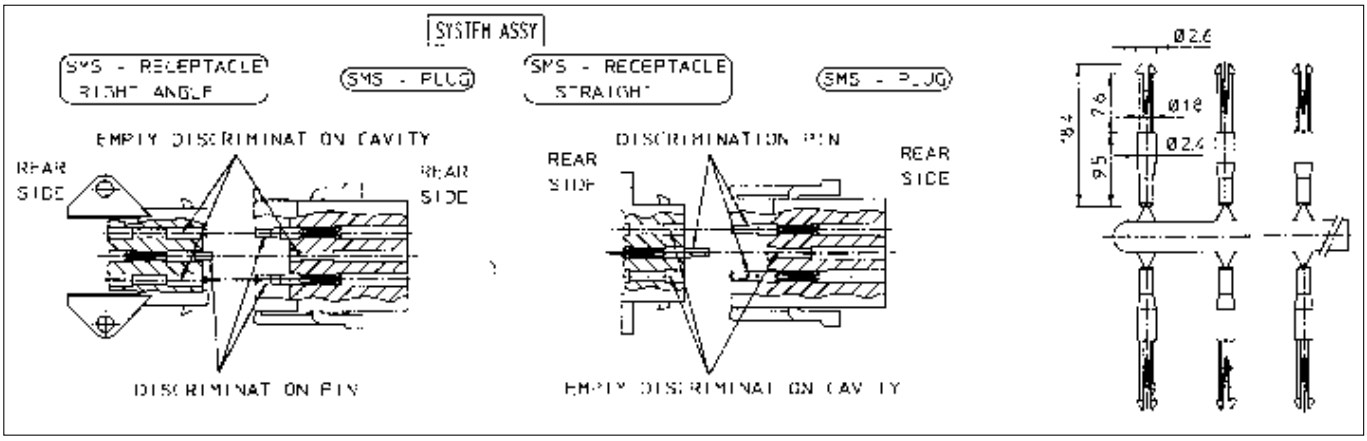
A tube, which can be fitted over a preassembled male contact in all TRIM TRIO male boardmount connectors MSO, SMS, MSG.

Accessories



SMSPKE2V1

A pin, which can be inserted into a preassambled female contact in all TRIM TRIO female boardmount connectors MSO, SMS.

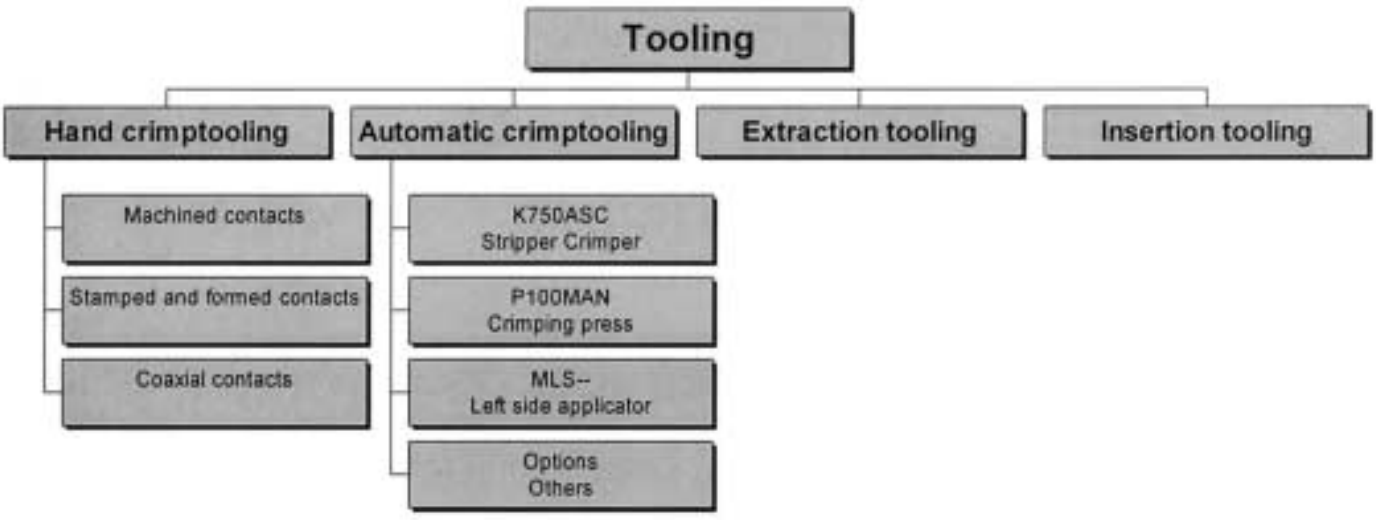


SMSPKE3

A pin, Which can be inserted in the discrimination cavities of the SMS Qikmate cable and boardmount connectors. The discrimination cavities are in between of the contact cavities and offer the advantage that no contact cavities are lost due to discrimination.
As extraction tool, the RX2025GE1 without the “extraction tool tip” can be used.
To unlock the discrimination pin, insert the extraction tool in the discrimination cavity at the rear side of the connector. Meanwhile, the pin can be extracted manually at the mating side.

Overview TRIM TRIO tooling

Selection matrix TRIM TRIO tooling



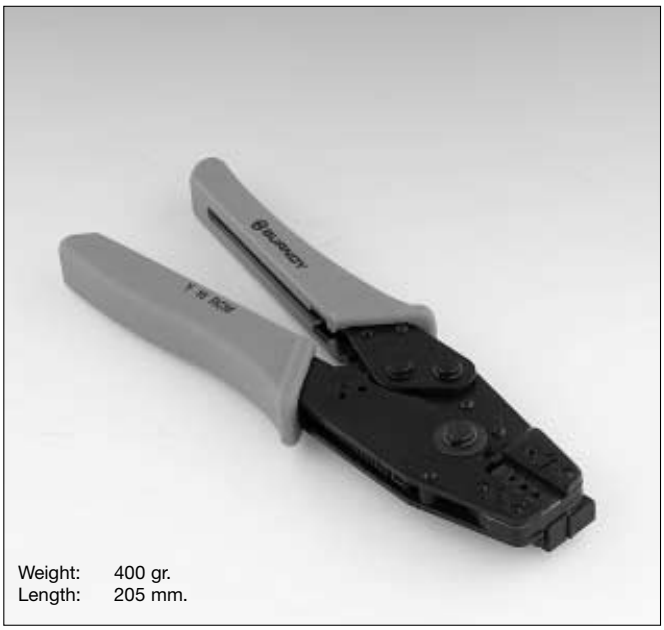
Crimptooling for TRIM TRIO contacts

The TRIM TRIO connection system not only offers versatility in connectors but production versatility in tooling as well.
All information needed on tooling ranges from simple handtools for small production, over semi-automatic to full automatic strip-and-crimp machines can be found on the hereafter paragraphs.
All the TRIM TRIO tooling and this for machined, stamped and formed and coax contacts, is specially designed for this system to make reliable, trouble-free connections.

Weight: 425 gr.
Length: 250 mm.

M10S1 - for machined contacts

A robust, versatile, full cycling handtool which is fully qualified to the requirements of MIL-C-22520. Interchangeable 4-indent die sets are available for a wide range of machined contacts and gives a simultaneous crimp on both wire and insulation.
This tool is suitable for application of RM/RC machined contacts and coaxial from the TRIM TRIO range.



Weight: 400 gr.
Length: 205 mm.

Y16RCM - for machined contacts

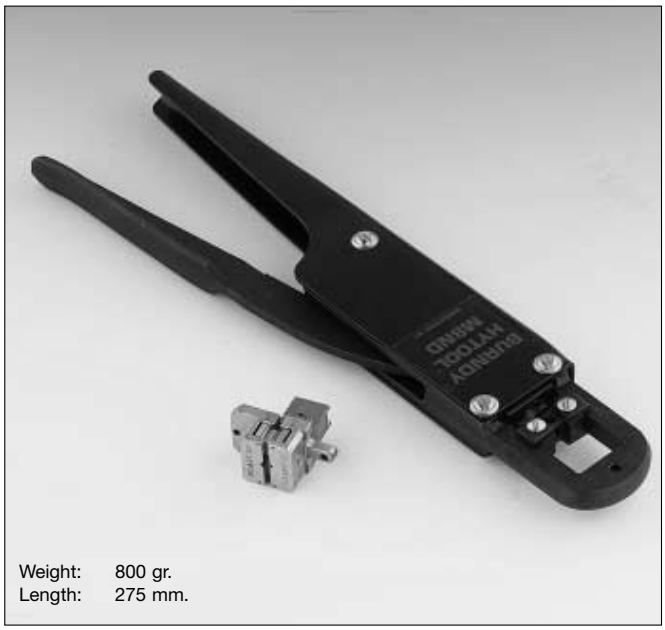
A light weight, low cost crimptool with fixed, 3-groove die set to crimp **Size 16 TRIM TRIO RM/RC loose piece machined contacts**.
The tool is ratchet controlled to guarantee a complete crimp cycle. Each crimptool is supplied with a locator to guarantee a perfect crimp indent positioning.

Weight: 300 gr.
Length: 170 mm.

MH860 - for machined contacts

A light weight crimptool Qualified to MIL-C-22520/7 that gives an 8 impression crimp with a precision cycle-controlled ratcheting mechanism. It features an 8 step crimp-depth selector knob and is designed to crimp **Size 16 TRIM TRIO RM/RC loose piece machined contacts**. The tool can be provided with different locators heads to crimp different contact types.

Crimptooling



Weight: 800 gr.
Length: 275 mm.

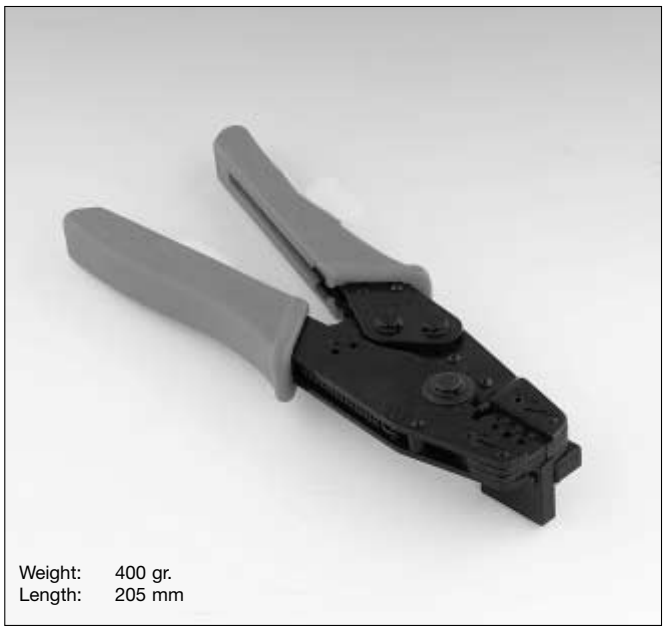
M8ND - for machined and formed contacts

A robust full cycling hand ratchet tool which utilises interchangeable "N" die sets to crimp
Size 16 TRIM TRIO RM/RC loose piece machined contacts.
Size 16 TRIM TRIO SM-M/SC-M loose piece formed contacts.

Weight: 400 gr.
Length: 230 mm.

Y14MTV - for formed contact

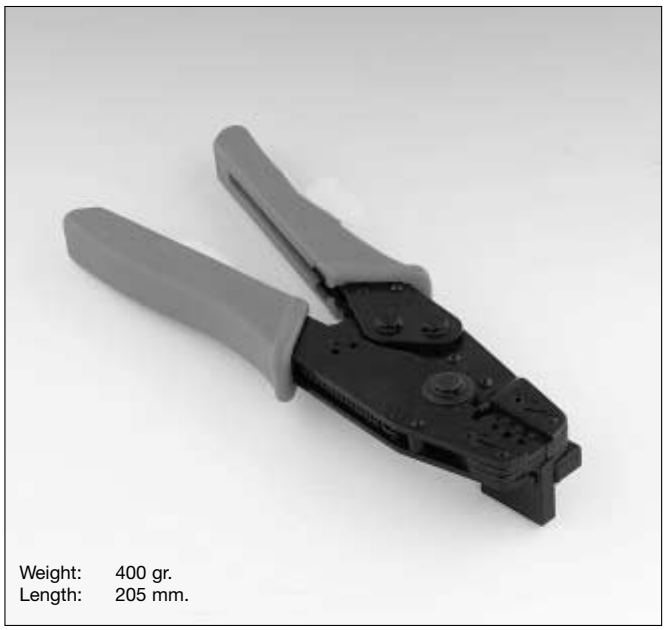
A light weight crimptool with fixed 3-groove die set for AWG26 to 14 for: **Size 16 TRIM TRIO SM-M/SC-M loose piece formed contacts.**
Ratchet controlled to guarantee a complete crimp cycle.



Weight: 400 gr.
Length: 205 mm

Y16SCM2 - for formed contacts

A light weight crimptool with fixed 3-groove die set for AWG26 to 16 for:
Size 16 TRIM TRIO SM-M/SC-M loose piece formed contacts.
Ratchet controlled to guarantee a complete crimp cycle.
Each crimptool is supplied with a locator to guarantee a perfect crimp indent
positioning.



Weight: 400 gr.
Length: 205 mm.

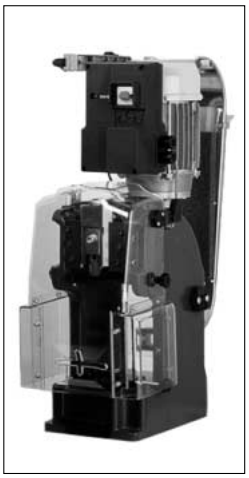
Y14SCM - for formed contacts

A light weight crimptool with fixed 3-groove die set for AWG18 to 14 for:
Size 16 TRIM TRIO SM-M/SC-M loose piece formed contacts.
Ratchet controlled to guarantee a complete crimp cycle.
Each crimptool is supplied with a locator to guarantee a perfect crimp indent positioning.

K750ASC
Stripper / Crimper machine for Trim Trio contacts.

Description
The Strip Crimp 750 processes all banded contacts with cross sections from 0.05 – 4.0 mm^2.
The press has a 40mm stroke and can be used with all UNI-C applicators as well as side-feed mini-style applicators.
Built with well proven precision mechanics and state of the art electronics, the machine is extremely user friendly. One example is the graphic display from which all stripping parameters can be set and called up digitally.
Up to 254 different wire programs can be stored in the memory.
Precision stripping and gas tight crimps guarantee maximum processing quality.

Ref.:	K750ASC
Power.:	0.37 kWatt
Weight:	85 kg
Dimensions:	350x460x485



P100MAN (TT Press)
This electromechanical high speed full automatic crimping press is specially designed for mass production and is realised totally in assembled steel parts.
The available force consents the crimping of a wire section up to 2.5mm^2.
The press has a 40mm stroke and can be used together with side feed mini-style applicators.
The noise level of the press is less than 70dB.
There is a safety mechanism that stops the press if the working speed is too high or the press does not complete its cycle. This protects the press or equipment mounted on board from damage.

Ref.:	P100MAN
Power.:	0.75 kWatt
Weight:	41 kg
Dimensions:	200x300x580

MLS--- Left side miniapplicator
Miniapplicatorsn to crimp machined or stamped and formed TRIM TRIO contacts.
All the adjustments requested to make tool correctly functioning (crimp feeding pitch, crimp height...) can be simply made.
Resolution of 0.03mm. Regulation range from 0 to 2.7 mm.

Ref.:	See contact sections
Stroke:	40 mm
Weight:	4.5 kg
Dimensions:	145x107x150

Options
1 - Quality assurance for crimping technology...
A crimping force sensor continuously checks the quality of each individual crimp and records it without impairing the processing speed. The sensor detects bad crimp connections, eliminating the high subsequent costs otherwise caused by them.

For ordering consult factory

Extraction tooling

RX2025GE1

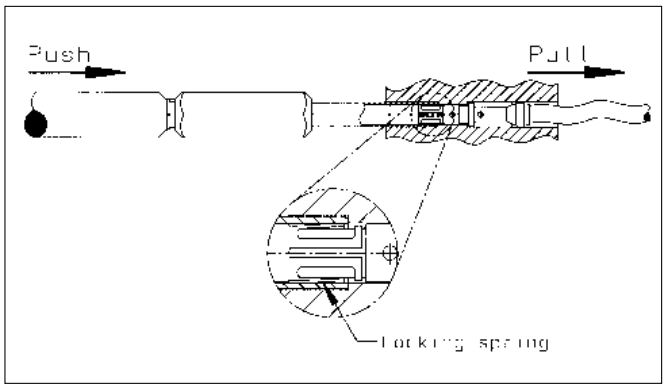
A spring loaded extraction tool **for the full range of TRIM TRIO contacts**. This tool ensures that the contact locking louvres are fully retracted before any pressure is applied to extract a contact.

RX2025GE2

A low cost spring loaded extraction tool for the full range of **TRIM TRIO contacts**.

RX16D11D1

A spring loaded extraction tool **for the full range of TRIM TRIO contacts**. This tool ensures that the contact locking louvres are fully retracted before any pressure is applied to extract a contact. It is especially suitable for applications where the integrity of the assemblies are of the utmost importance.



How to extract a contact out of its cavity?

Slide the extraction tip over contact from mating side till the locking spring from the contact is depressed.
Push on handle to push out the contact with the spring loaded inner plunger.

Insertion tooling

RTM205

This tool is especially designed to ease insertion **of any TRIM TRIO contact** crimped on very flexible or small wire sizes. Simply position the insertion tool so that the tip of the tool bears against the back of the wire barrel, retaining the wire with thumb in the groove of the tool. Push the contact slowly into the connector until it snaps into position.

TRIM TRIO
Special connectors :

- Mixed power / signal
- VDE versions
- Boardmount versions
- Drawer connectors
- High temperatures
- Special applications
- Customised connectors

Description
Special connectors are connectors to meet application-specific requirements.
Based upon design-in projects, this range of special connectors is an extension of the long established and popular TRIM TRIO connector series shown in this catalog, but with the advantage of offering a number of additional features.

Features and benefits
- TRIM TRIO connectors suitable for mixed power / signal application.
- TRIM TRIO connectors with preloaded stamped and formed contacts for boardmount application
- TRIM TRIO connectors for drawer applications and high temperature.
- Design-in flexibility of TRIM TRIO

The next page lists some of the Special TRIM TRIO connector configurations.
It is intended to give you a general idea of our design capabilities.
As the creation of Special TRIM TRIO connectors is an ongoing process, we advise you to contact our nearest FCI sales office if you have specific connector needs.
Our design flexibility is virtually unlimited, so we are always willing to consider any customised design.
Separate data sheets with more detailed technical info of the listed TRIM TRIO Specials are available.

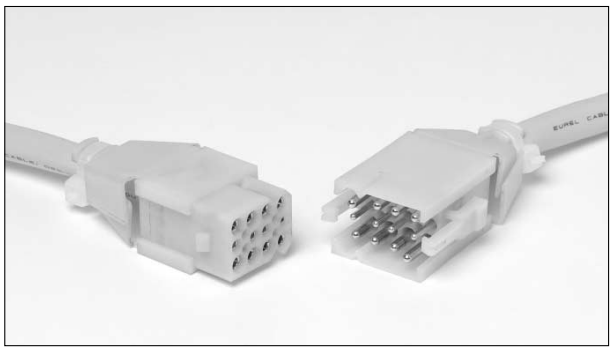
Specials - TRIM TRIO

• UTG 24-7 mixed power with 7 power and
2 std. Trim Trio contacts – up to 44 Amps

• UTG 12-3 with 3 power contacts
up to 26 Amps

• UTG 24-11 with 4 power and 7 standard
Trim Trio contacts – up to 44 Amps

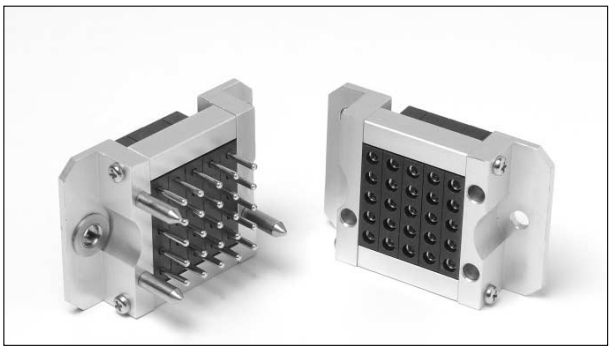
• UTG 14-8 with 4 power and 4 standard
Trim Trio contacts – up to 26 Amps



• SMS12 with 8 power and 4 standard
Trim Trio contacts - Up to 26 Amps

• Power crimp contacts
– dia 2,4 - up to 26 Amps
– dia 3,6 - up to 44 Amps

• MS75 with die cast hood and integrated
shroud, for standard Trim Trio contacts



• QIKRACK Modular drawer connector
For standard and RCS Trim Trio contacts

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