



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.

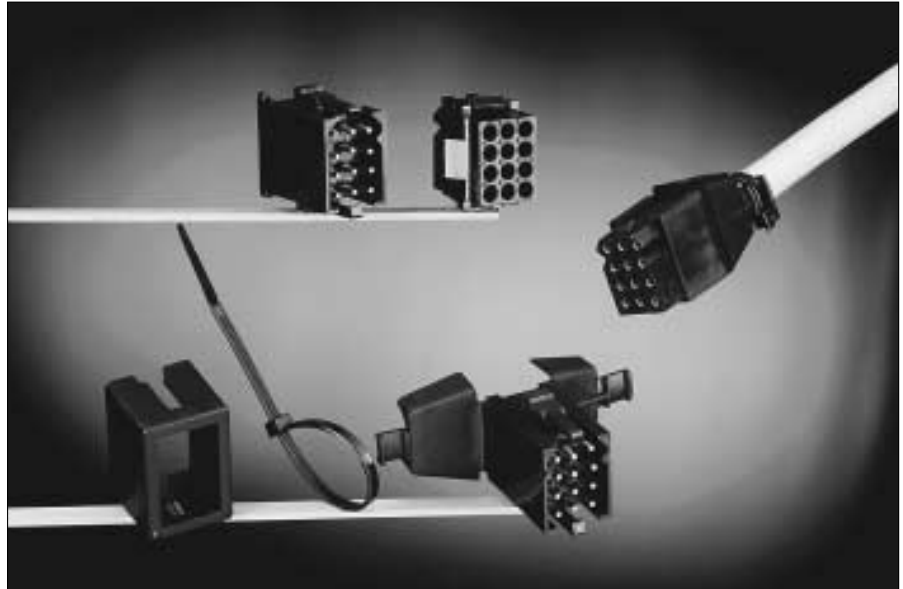
It is a range of multiway connectors using N° 16 TRIM TRIO .0625” (1.6mm) diameter contacts and available in 10 contact arrangements from 2 to 36 positions. Having no additional hardware, Panel receptacle connectors snap and lock into panel cutouts and cable plugs quick connect and disconnect with positive 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 mismatching.
- 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

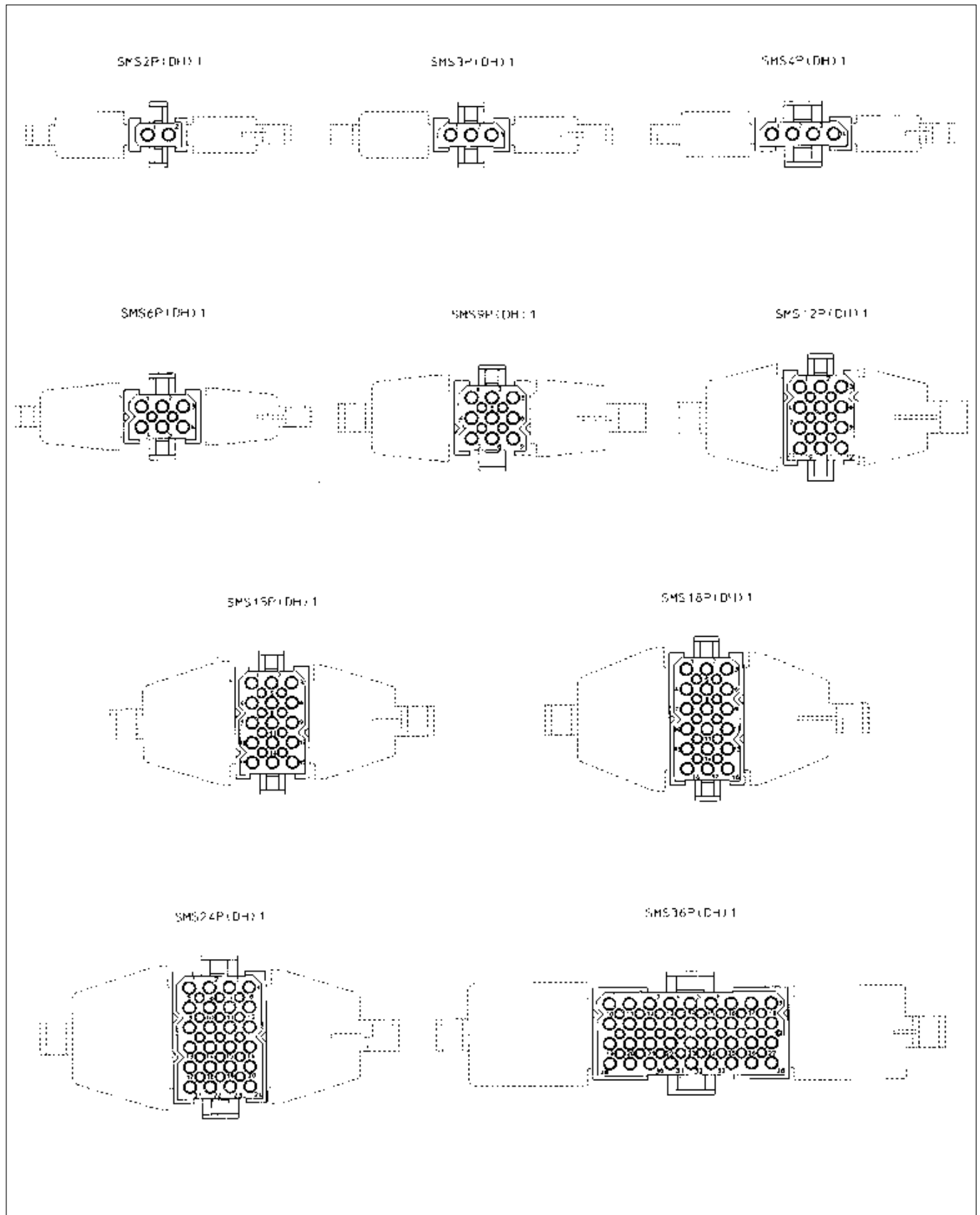
- “SMS” Qikmate connectors accept Trim-Trio removable snap-lock contacts (see contact section)
- Contacts to be ordered separately.

How to order

Connector family		SMS SMS	12 12	PDH1 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		



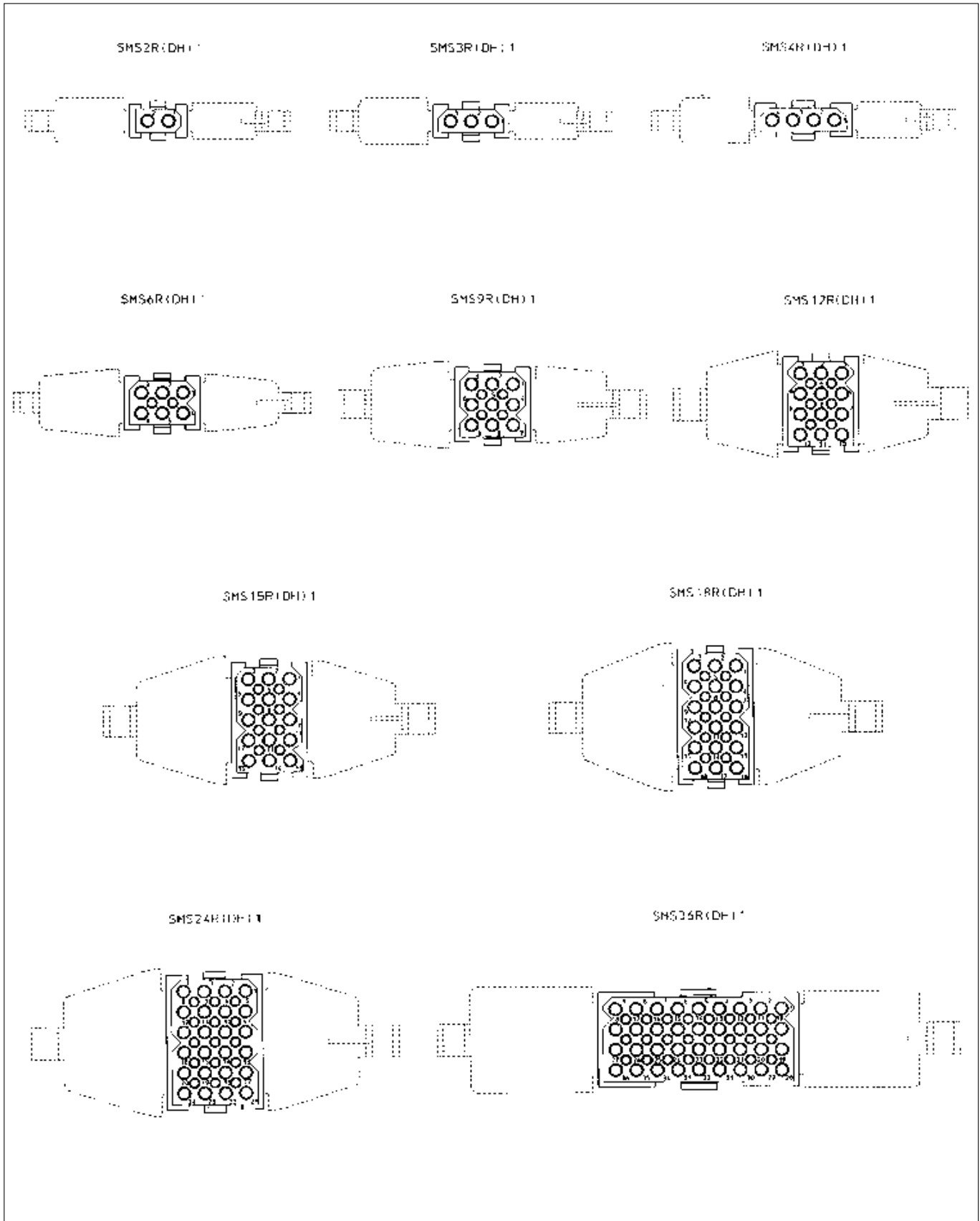
Contact arrangements for cable plug connectors (SMS--P1 and SMS--PDH1)



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



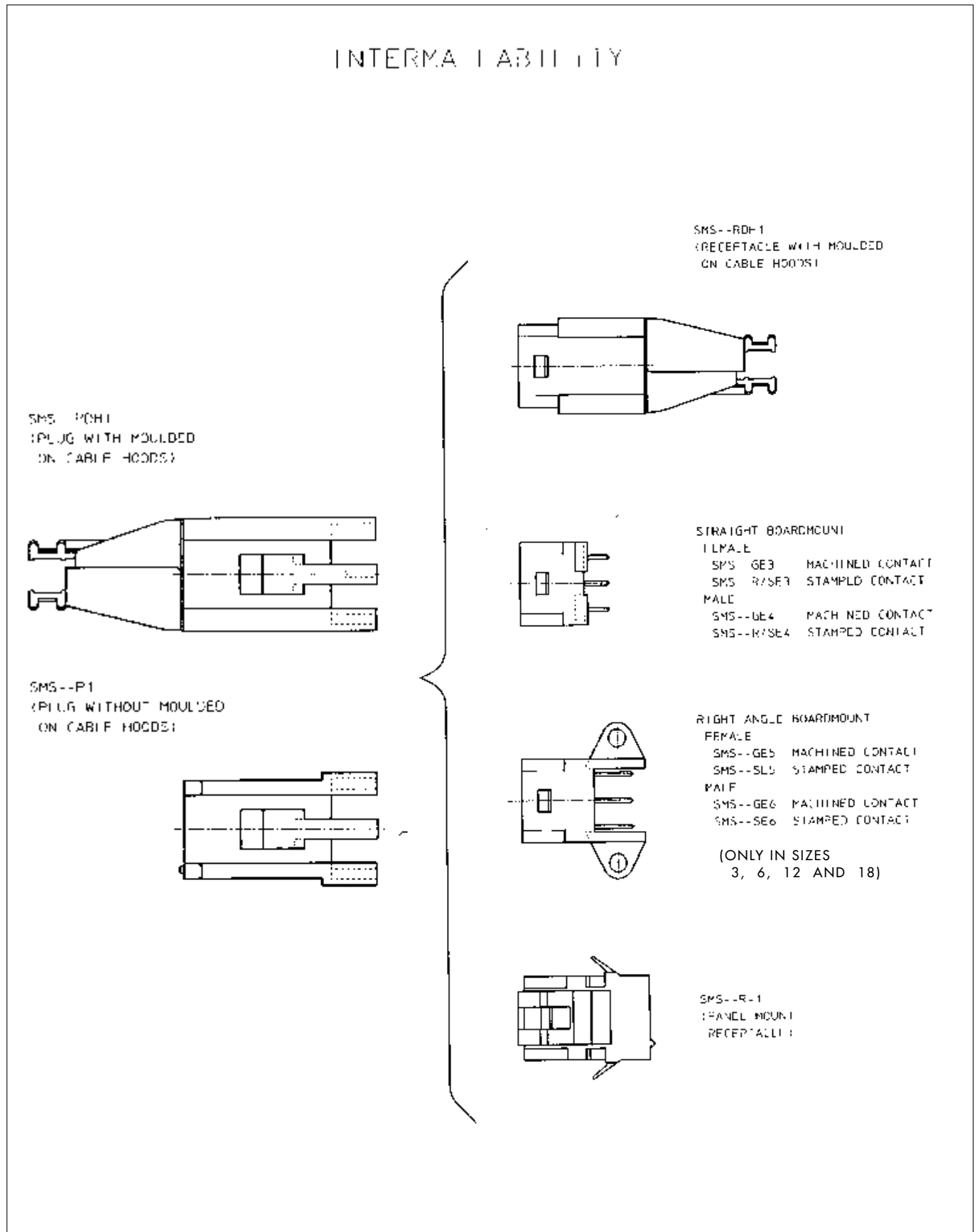
Contact arrangements for cable and panel mount receptacle connectors (SMS--R1 and SMS--RDH1)

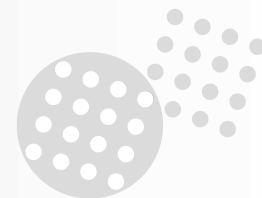


Contact identifications shown are for mating face. Contact identifications of wiring face are identical as shown on the plug arrangements

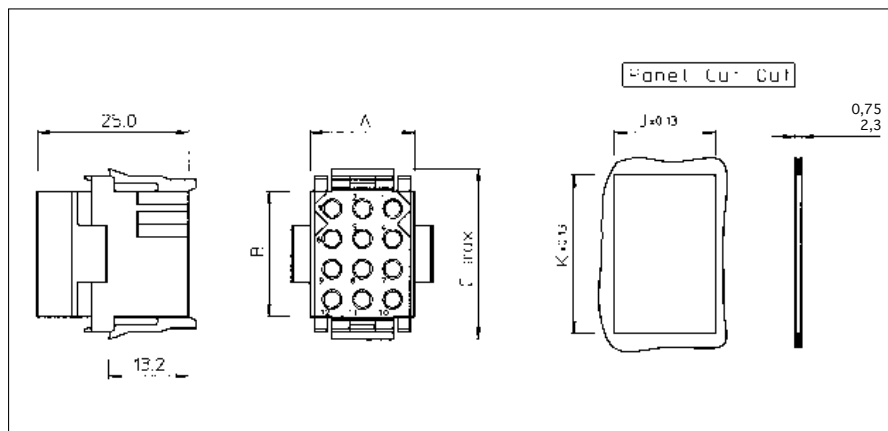
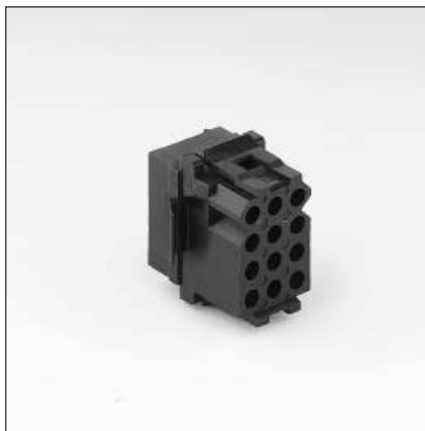


SMS - Standard Qikmate intermateability chart



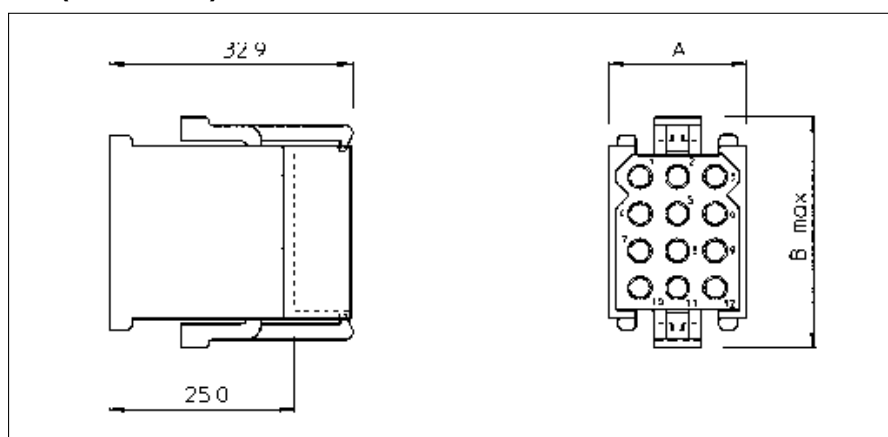


Panel mount receptacle (SMS--R1)



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	16.7	21.6
SMS12R1	12		21.1	30.5		26.7
SMS15R1	15		26.2	35.6		31.8
SMS18R1	18		31.2	40.6		36.9
SMS24R1	24	21.2	21.1	30.5	21.7	26.7
SMS36R1	36	46.6			47.1	

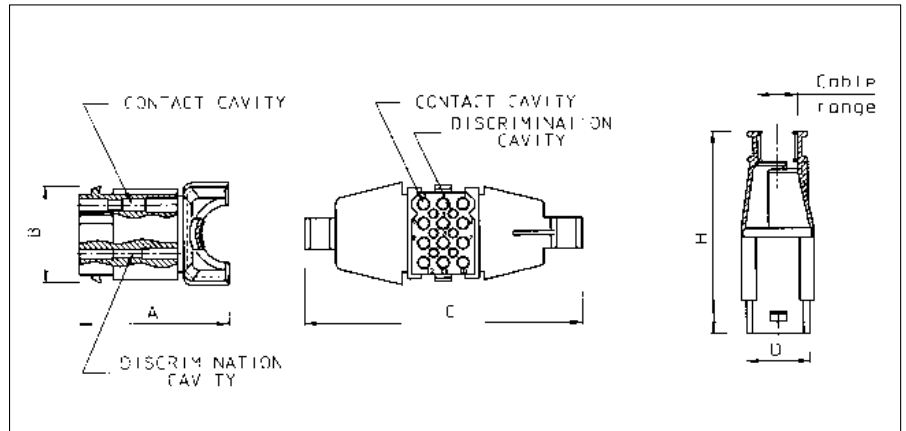
Cable plug without strain relief hood (SMS--P1)



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	33.0
SMS36P1	36	49.1	

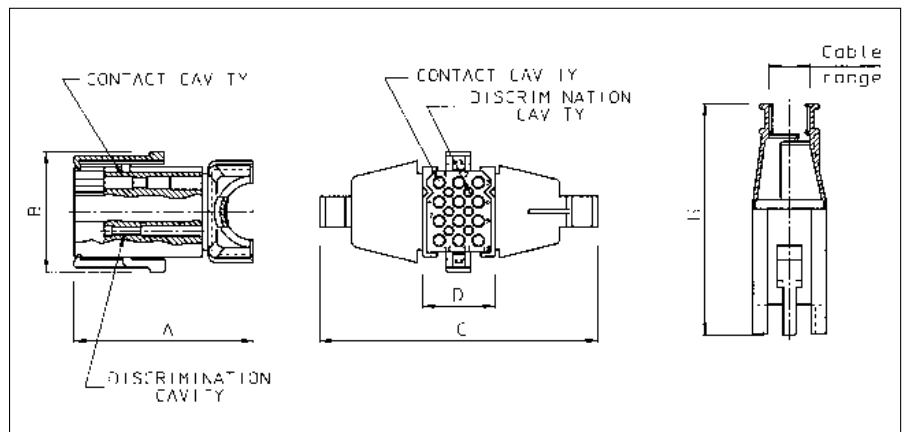


Cable receptacle with integrated strain relief hood (SMS--RDH1)

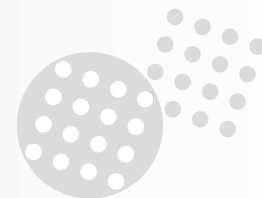


Part number	Number of contact pos.	Number of discrimination pos.	A	B	C	D	H	Cable range	Recommended unipolar cable type	
SMS2RDH1	2	0	31.6	9.9	64.8	11.1	49.2	0.5 - 8.4	TF4D	
SMS3RDH1	3	0	35.1		69.0	16.2		0.8 - 7.3		
SMS4RDH1	4	0	38.2		74.4	21.2		1.5 - 10.0		
SMS6RDH1	6	2	34.6	15.0	72.6	16.2	50.9	1.7 - 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	90.4		21.2	57.2		7.1 - 20.4
SMS24RDH1	24	15	39.7	25.1		128.0		46.6	63.3	8.8 - 24.5
SMS36RDH1	36	24	54.6							

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

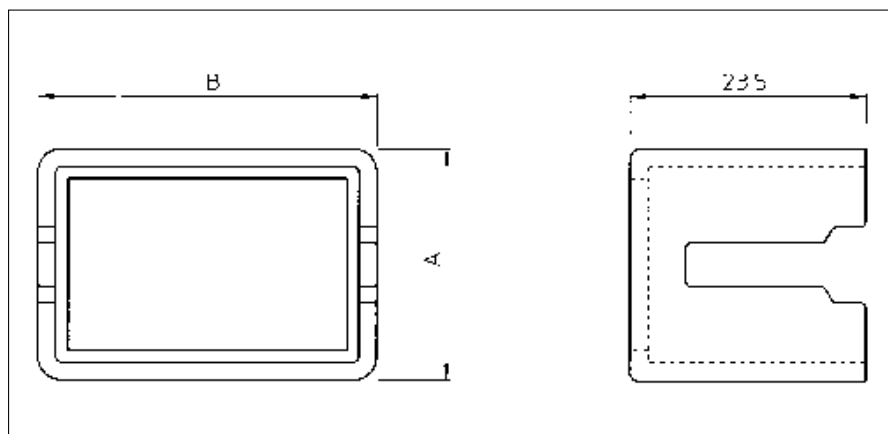


Part number	Number of contact pos.	Number of discrimination pos.	A	B	C	D	H	Cable range	Recommended unipolar cable type	
SMS2PDH1	2	0	39.5	16.4	64.8	14.1	57.1	0.5 - 8.4	TF4D	
SMS3PDH1	3	0	43.0		69.0	18.6		0.8 - 7.3		
SMS4PDH1	4	0	46.1		74.4	23.7		1.5 - 10.0		
SMS6PDH1	6	2	42.5	21.5	72.6	18.6	58.8	1.7 - 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	90.4		23.7	65.1		7.1 - 20.4
SMS24PDH1	24	15	47.6	31.7		128.0		49.1	71.2	8.8 - 24.5
SMS36PDH1	36	24	62.5							



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	34.0
SMS36CSB1	36	54.1	

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 cable 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.

SMS - Boardmount Qikmate



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.

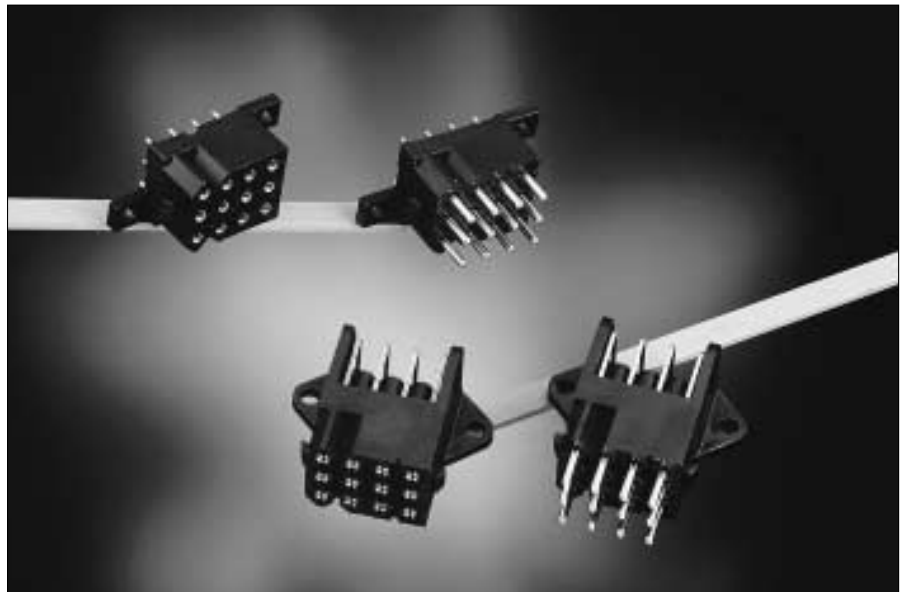
Right-angled boardmount QIKMATE is available in 3, 6, 12 and 18 positions.

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

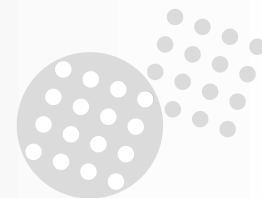
Intermateability

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

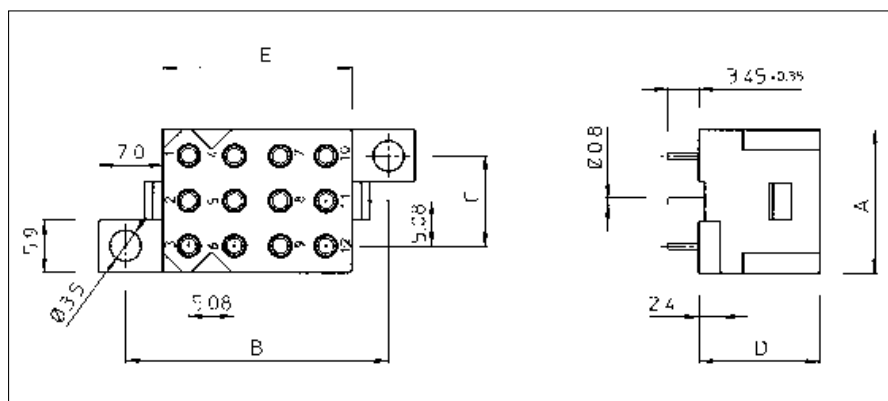
How to order

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					

SMS - Boardmount Qikmate



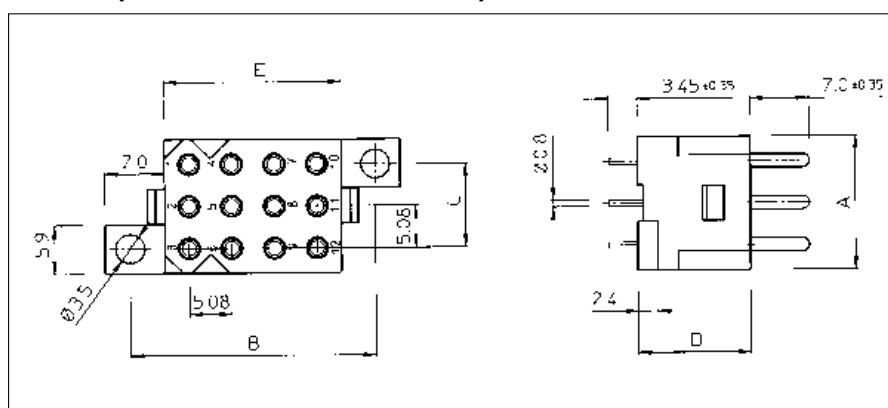
Straight boardmount with female contacts (SMS--GE3 / SMS--SE3K9)



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	20.9		
SMS36GE3	SMS36SE3K9	36	0	46.5	15.2			54.6

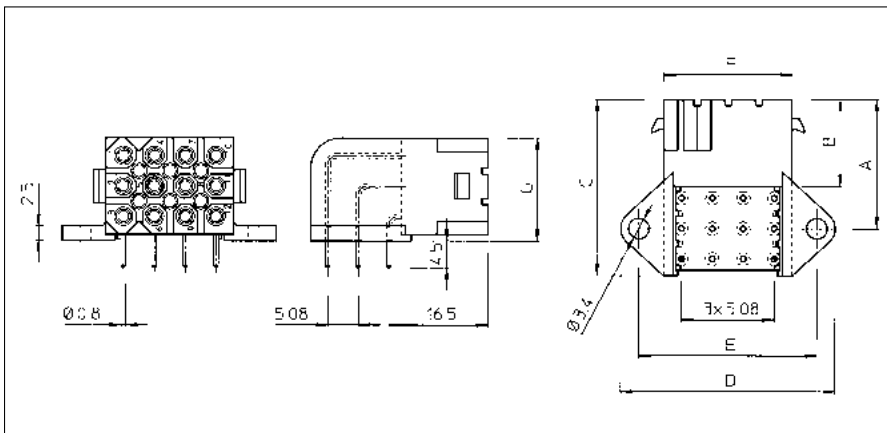
For other platings: see plating table

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

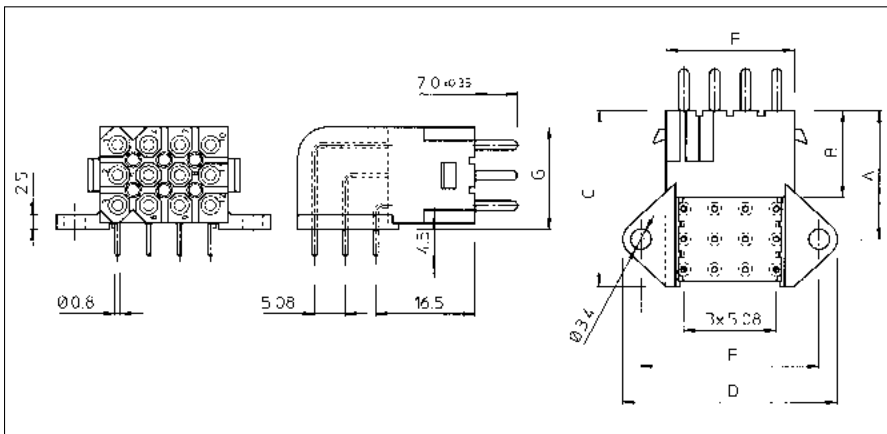


Part number Solid machined contacts	Part number Stamped and formed contacts	Number of contact pos.	Number of discrimination pos.	A	B	C	D	E
SMS2GE4	SMS2SE4K9	2	0	11.1	-	19.1	13.4	5.9
SMS3GE4	SMS3SE4K9	3	0	16.2	14.0	10.2		
SMS4GE4	SMS4SE4K9	4	0	21.3		15.2		
SMS6GE4	SMS6SE4K9	6	0	16.2	19.2	10.2		10.9
SMS9GE4	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	20.9		
SMS36GE4	SMS36SE4K9	36	0	46.5	15.2			20.9

For other platings: see plating table



For other platings: see plating table

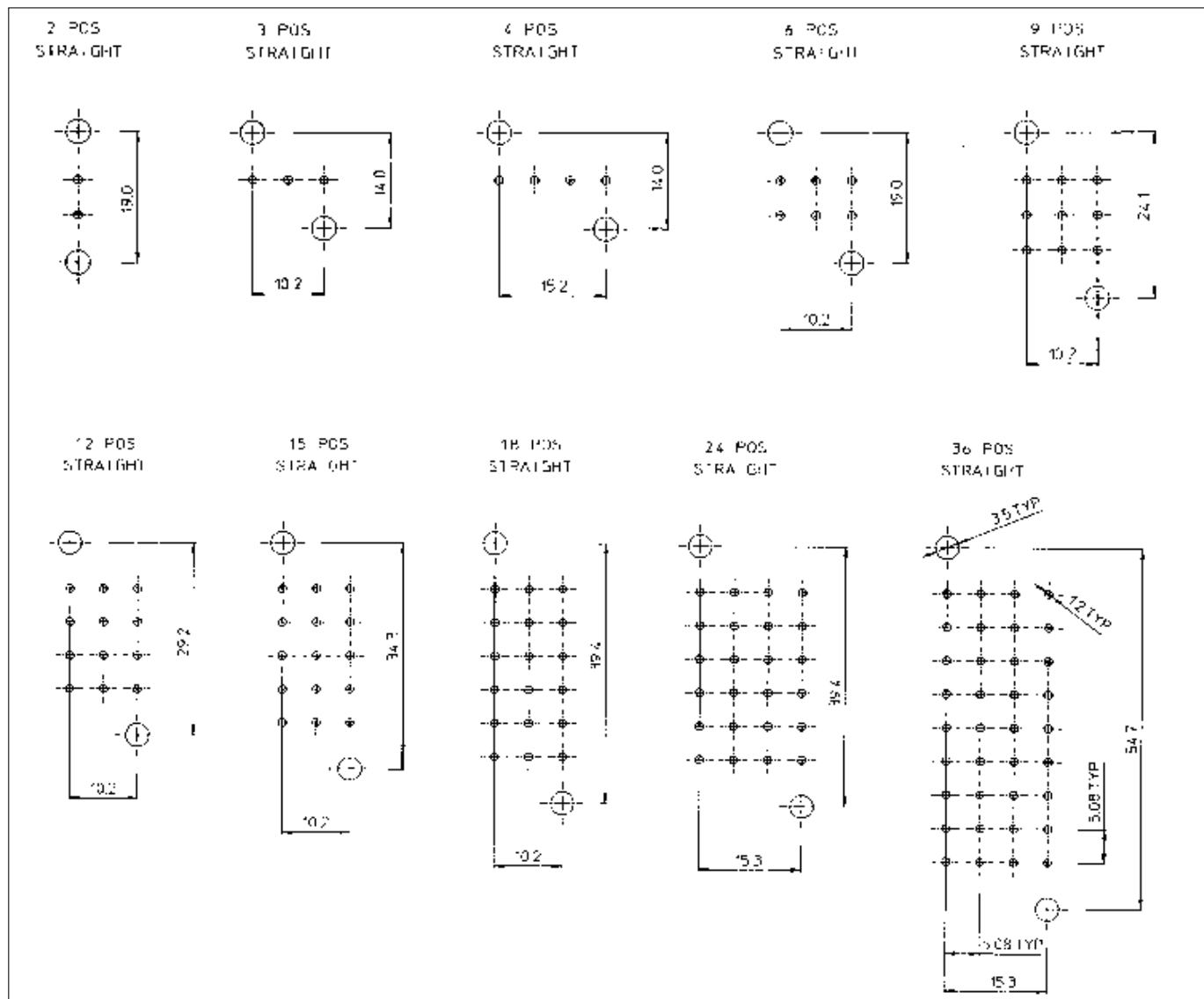


For other platings: see plating table

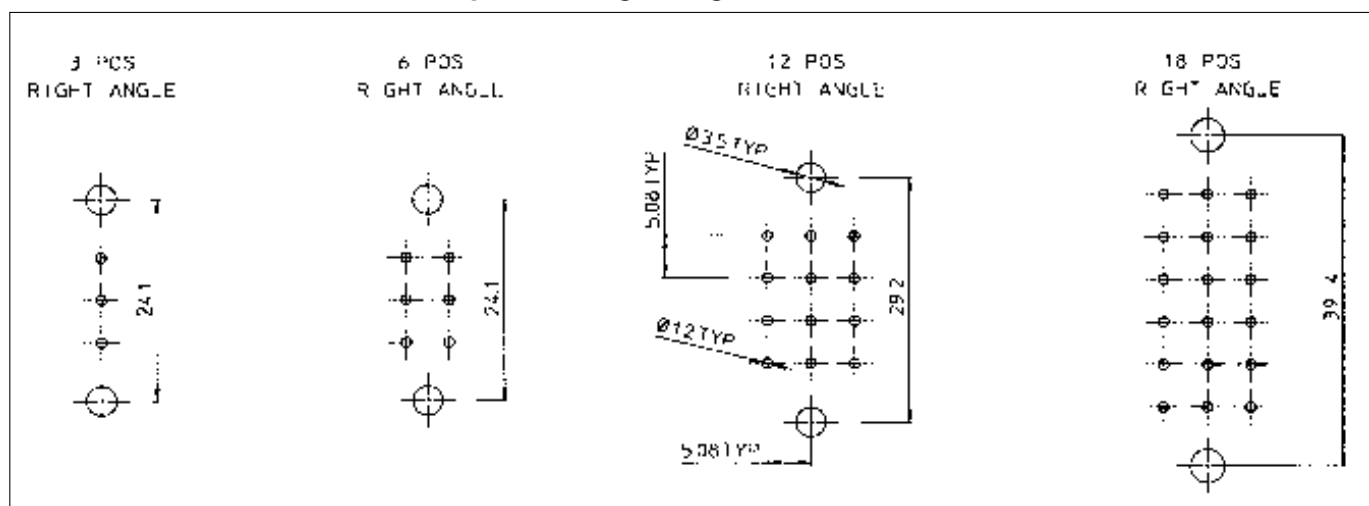
SMS - Boardmount Qikmate



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



SMS - Qikmate Pin Header



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 positive 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.

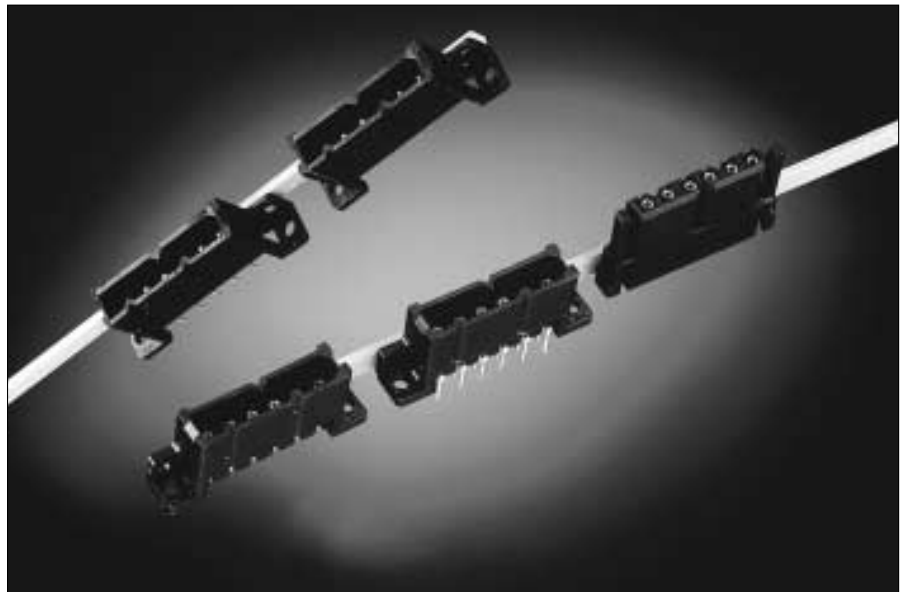
Construction

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 separately.

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)

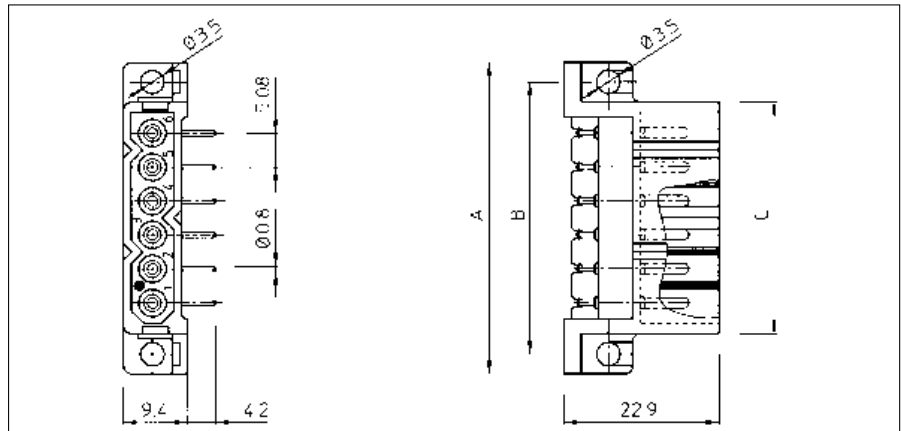
How to order

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)

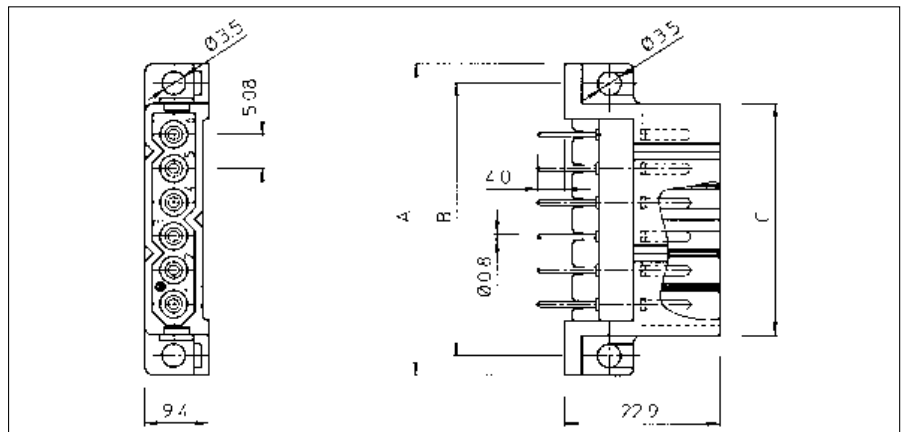


Part number Stamped and formed contacts	Part number Solid machined contacts	Number of contact positions	A	B	C
SMS3PH3TR29	SMS3PHGE6	3	31.2	25.4	19.3
SMS4PH3TR29	SMS4PHGE6	4	36.3	30.4	24.4
SMS6PH3TR29	SMS6PHGE6	6	46.5	40.6	34.5
SMS9PH3TR29	SMS9PHGE6	9	61.7	55.9	49.8
SMS10PH3TR29	SMS10PHGE6	10	66.8	61.0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

For other platings: see plating table.

Other solder tail lengths 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

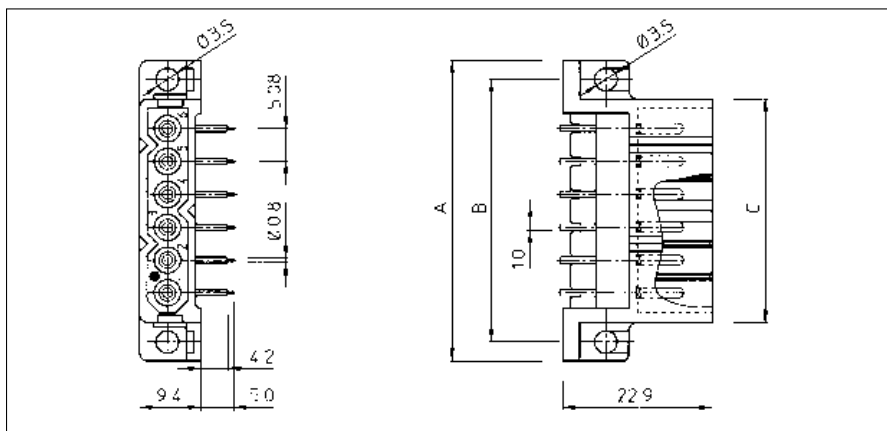
For other platings: see plating table.

Other solder tail lengths on request

SMS - Qikmate Pin Header



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

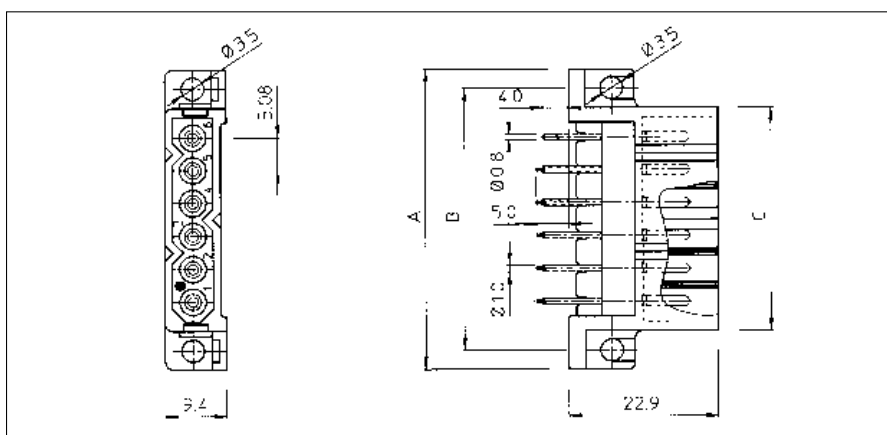


Part number positions	Number of contact	A	B	C
SMS3CH1Z17	3	31.2	25.4	19.3
SMS4CH1Z17	4	36.3	30.4	24.4
SMS6CH1Z17	6	46.5	40.6	34.5
SMS9CH1Z17	9	61.7	55.9	49.8
SMS10CH1Z17	10	66.8	61.0	54.9

For plating spec.: see plating table.

SMS

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



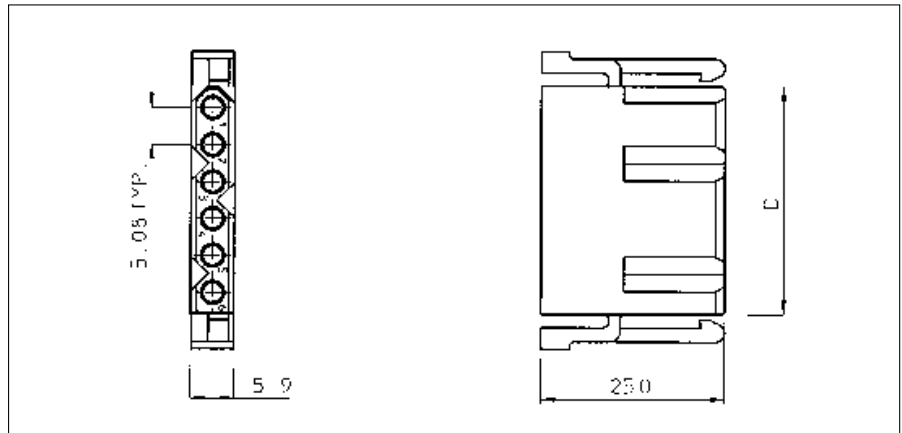
Part number positions	Number of contact	A	B	C
SMS3CH2Z17	3	31.2	25.4	19.3
SMS4CH2Z17	4	36.3	30.4	24.4
SMS6CH2Z17	6	46.5	40.6	34.5
SMS9CH2Z17	9	61.7	55.9	49.8
SMS10CH2Z17	10	66.8	61.0	54.9

For plating spec.: see plating table.

SMS - Qikmate Pin Header

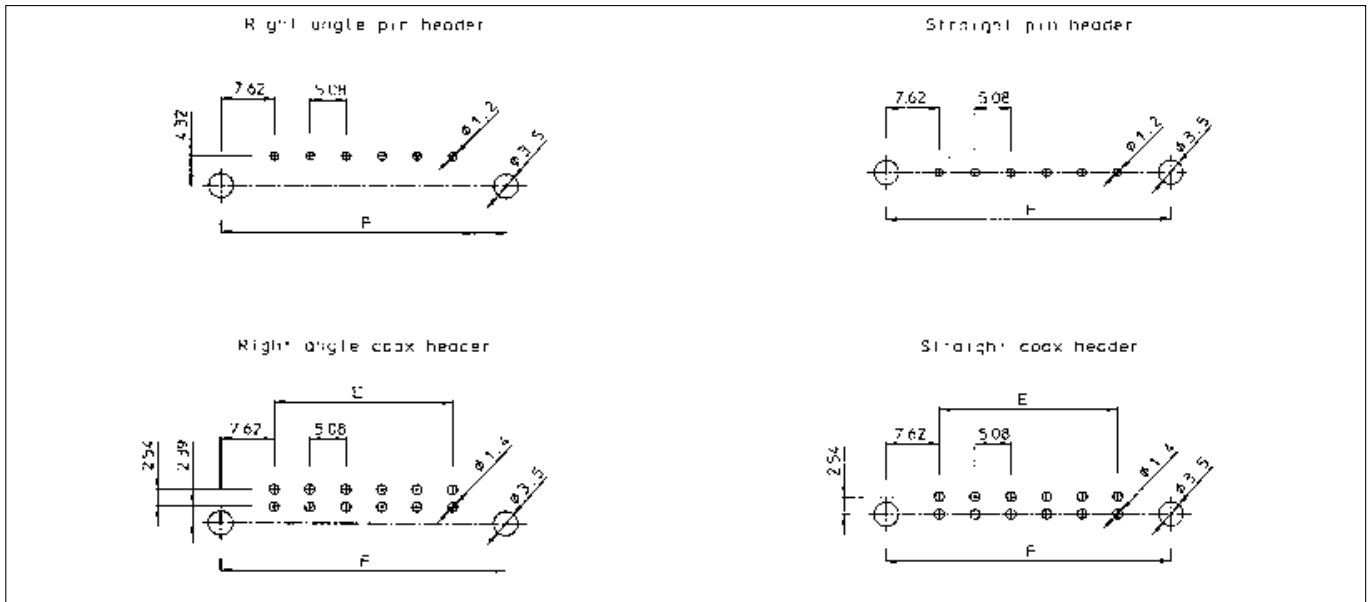


Socket cable plug for pin and coax boardmount header (SMS--P3)



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

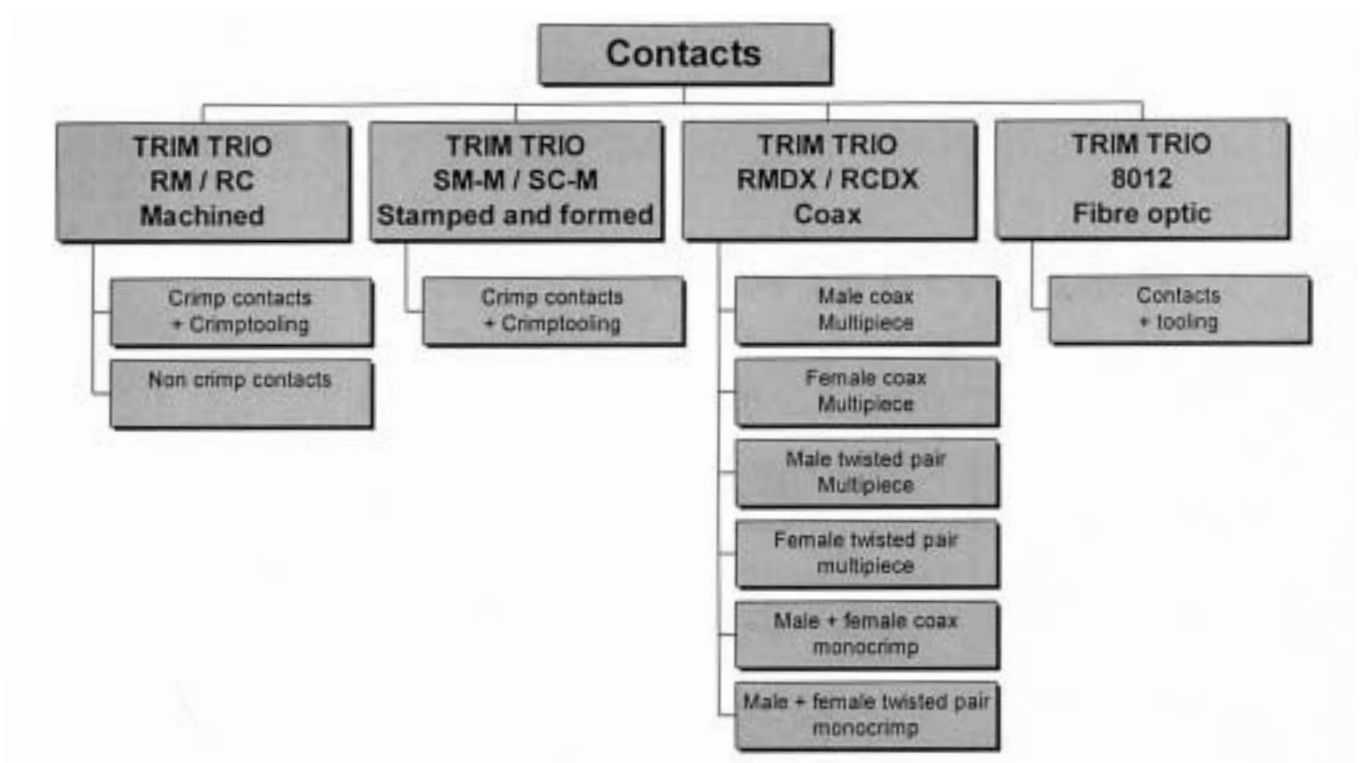
Contacts - intro



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 interpret 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 exceed 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. carrying Amp.	max. operating curr. Amp.	recomm. cont. curr. Amp.
16	.062* 1.6 mm	RM / RC machined	22	13	10
		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.

Contacts



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:
 $72 : 48 = 1.5 \text{ A per conductor}$

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
 $72 - 25 = 47 \text{ A}$ 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:
 $18.2 : 14 = 1.3 \text{ A per conductor}$

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:
 $44.7 : 4 = 11.2 \text{ A per conductor}$

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

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:

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

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 mm ²	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

Contacts



Crimping instructions

The conductor and insulation crimp section

Are designed to accommodate wire-conductor and insulation diameters, expressed in AWG (American Wire Gauge) or mm².

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 strength force is equal or higher as indicated on the graph below. E.g. a conductor of AWG20 (0.52 mm²) has a good crimp if the tensile strength is min 84N.

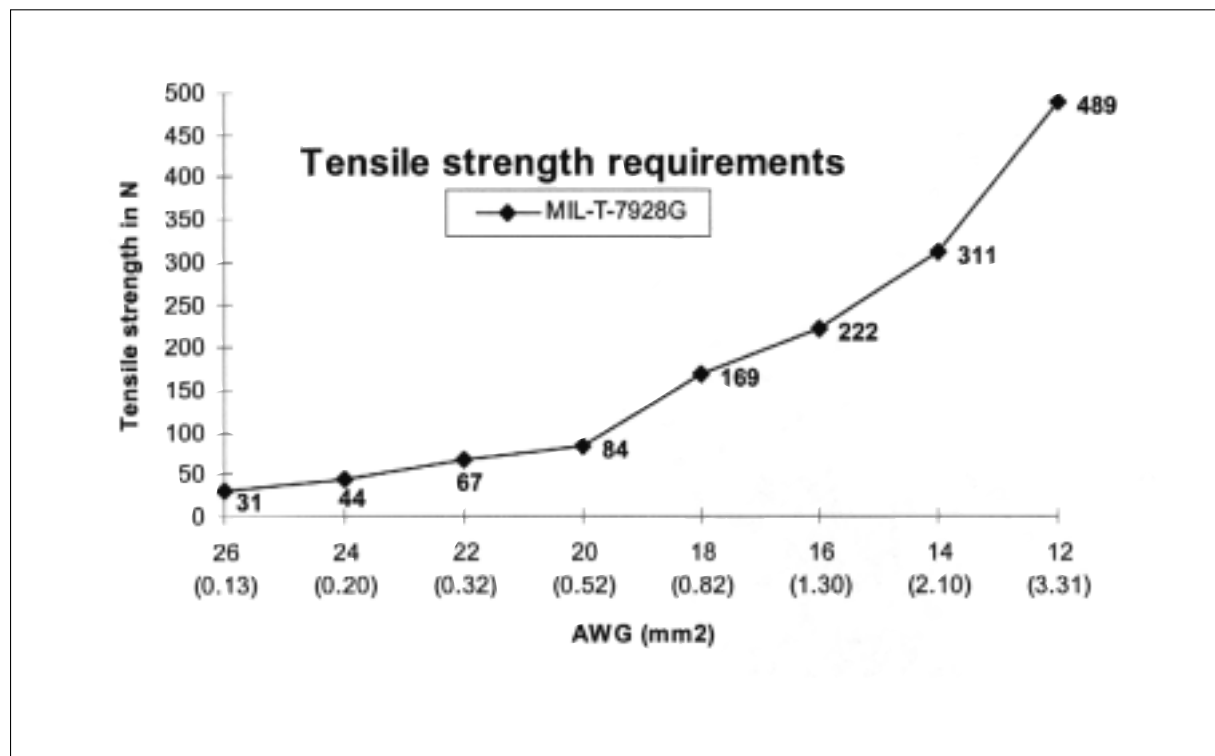
The tensile strength force is measured in Newtons and is the wire-to-contact connection that will withstand when a straight axial load is applied to the terminated wire. This is however a destructive test and is therefore inappropriate as a 100% inspection method.

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.



RM/RC - Machined contacts



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, beryllium 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.

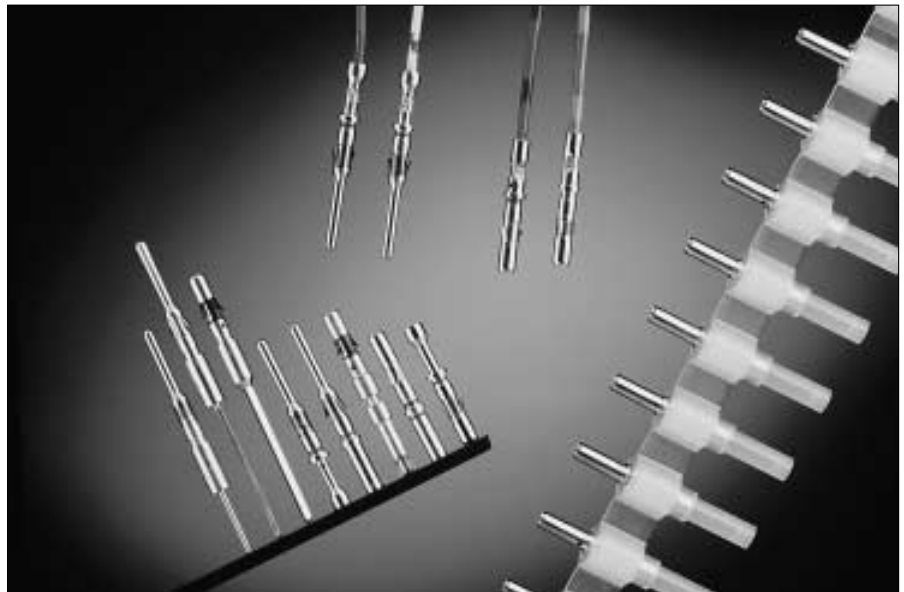
Features and benefits

- 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

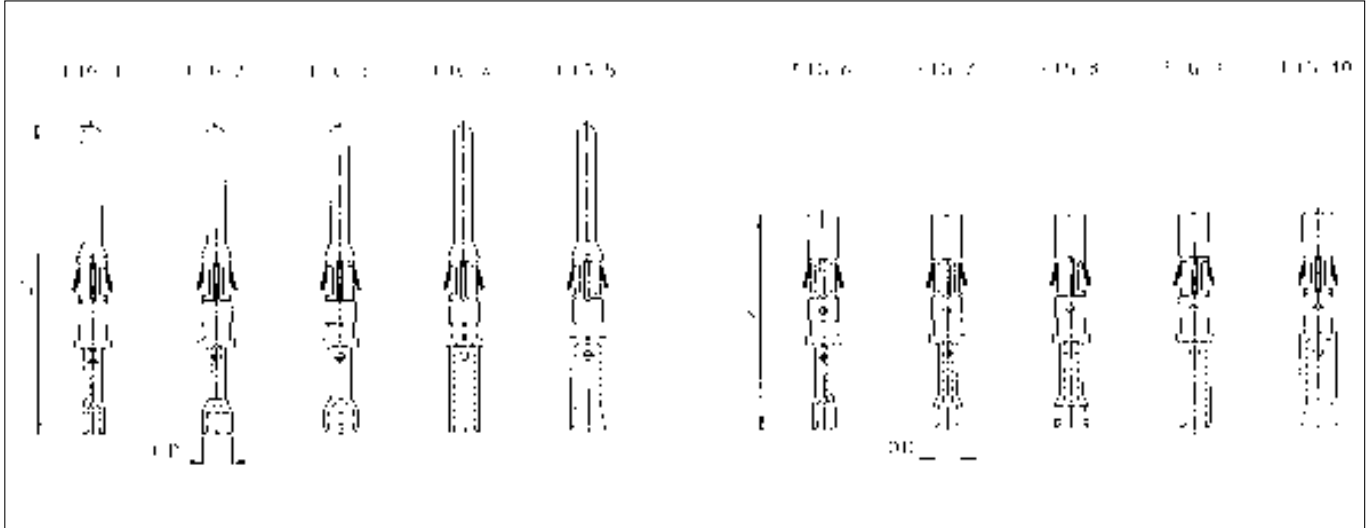
How to order

	(K) RM (K) RC	16 16	M M	23 23	(GE1) (GE1)	K 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)						

RM/RC - Machined contacts



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



Dimensional table

Pin contacts	Part number			Fig.	Wire size		Max. wire dia.	Max. insul. dia.	Wire strip length	O.D.	L1	L2
	Fig.	Socket contacts			AWG	mm²						
		Standard	RCS-Type									
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							28.4	--
RM16M31(*)		--	--	-								
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

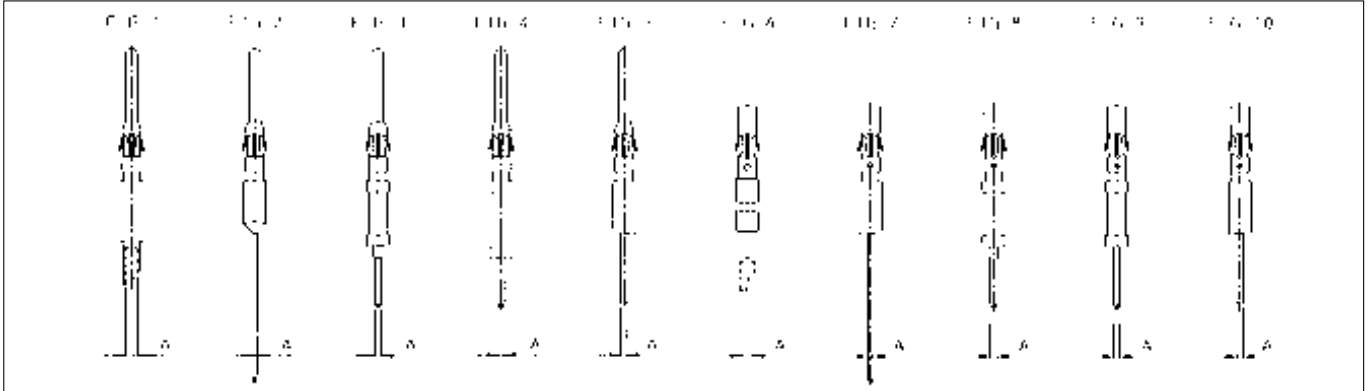
Size	Hand crimp tooling for loose contacts						Automatic crimp tooling for contacts on strip		Extraction tools
	Hand tools	MH860		M10S1		M8ND	P100MAN (Press)		
		Positioner (not incl.)	Locator setting	Die set (not incl.)	Stop bushing (not incl.)	Die set (not incl.)	Left side applicator KRM/KRC (not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

For detailed information on crimp tooling : See crimp tooling section

RM/RC - Machined contacts



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

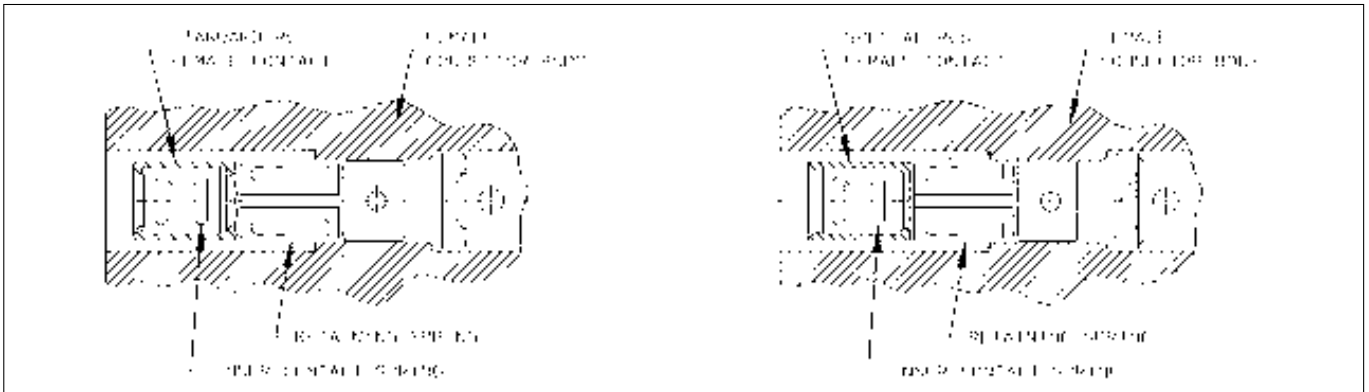


Part number				Type	Wire size		Post cross section A	Length out of TRIM TRIO cavity	Anti-rotating bushing part number
Pin contacts	Fig.	Socket contacts	Fig.		AWG	mm²			
RM16MSC(*)	1	RC16MSC(*)	6	Handsolder	16 - 20	1,50 - 0,52	ø1.7	--	-
RM16SEO(*)	1	RC16SE4(*)	6	Handsolder	16 - 20	1.50 - 0.52	ø1.7	3.5	-
RM20M12G4(*)	2	RC20M12G4(*)	7	Mini - wrap	28 - 30	0.08 - 0.05	ø.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



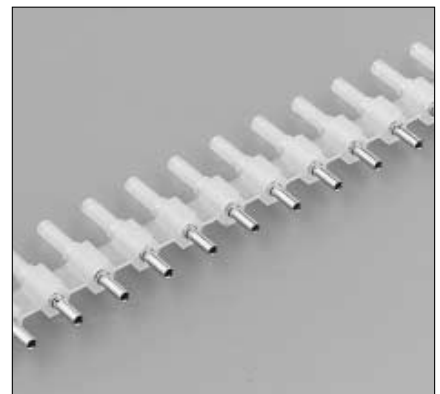
The RM/RC contact packing



50 pcs bulk packing (standard)

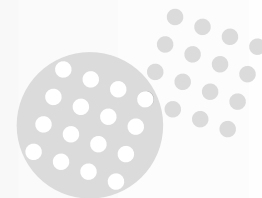


1000 pcs bulk packing



Reeled contacts on plastic carrier (qty 2000 pcs)

SM/SC-M Stamped contacts



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 srtp 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.

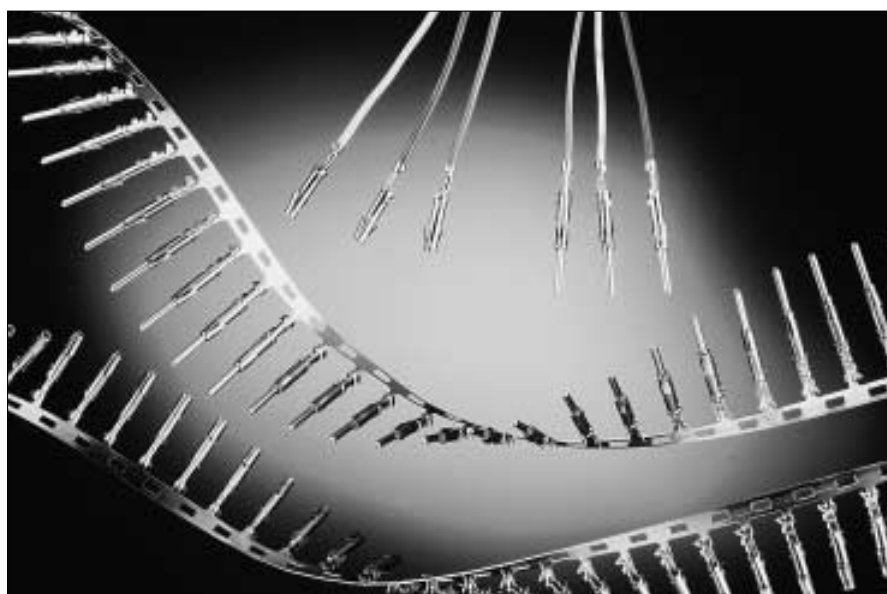
Features and benefits

- Made from high conductive copper alloy with gold or tin over nickel plate finish.
- Two piece construction 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

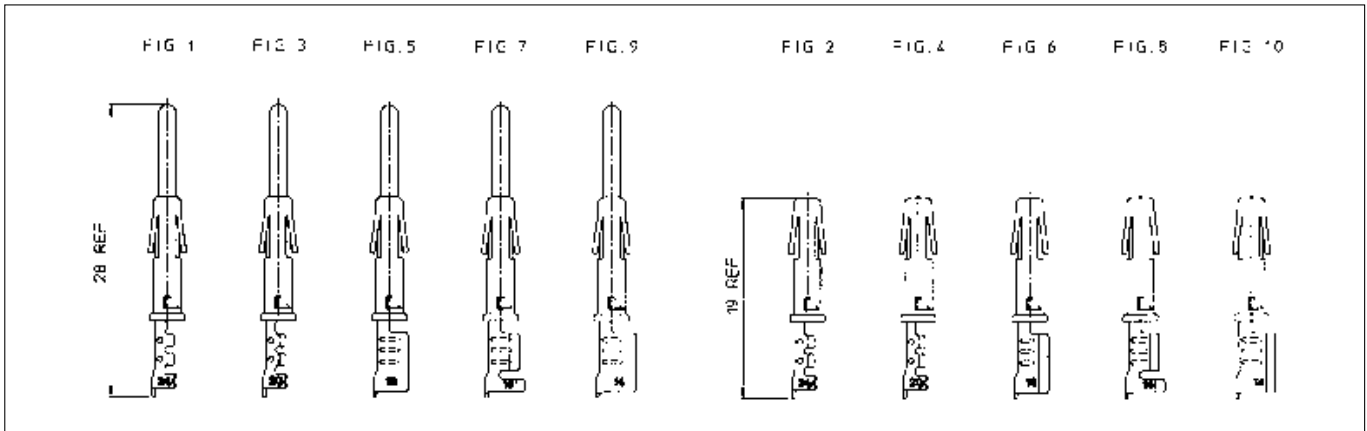
How to order

	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					

SM/SC-M Stamped contacts



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	mm ²		
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

RMDX/RCDX



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 consists 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 holds the outer braid to the outer contact and acts as an insulating support to ensure against bending and vibrating stresses.

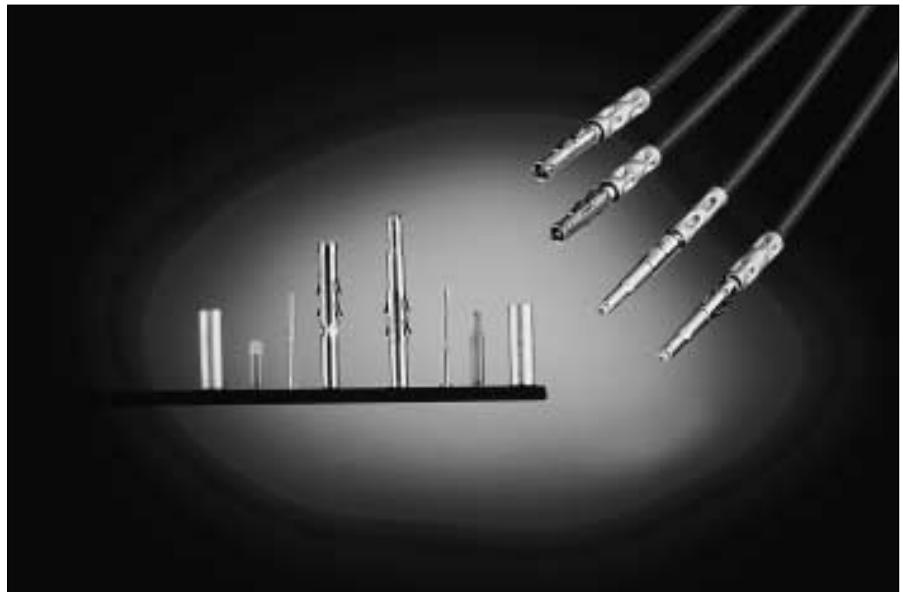
The inner and the outer conductor are crimped individually, thereby enabling inspection of both critical crimp points.

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 holds the outer braid to the outer contact and acts 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 to +125°C
Contact retention in body:	65 N min.
Contact voltage drop at 1A:	25mV max.
Isolation at 30 MHz:	140 db.



Construction

Inner and outer contacts: High conductive copper alloy

Retaining spring: beryllium 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

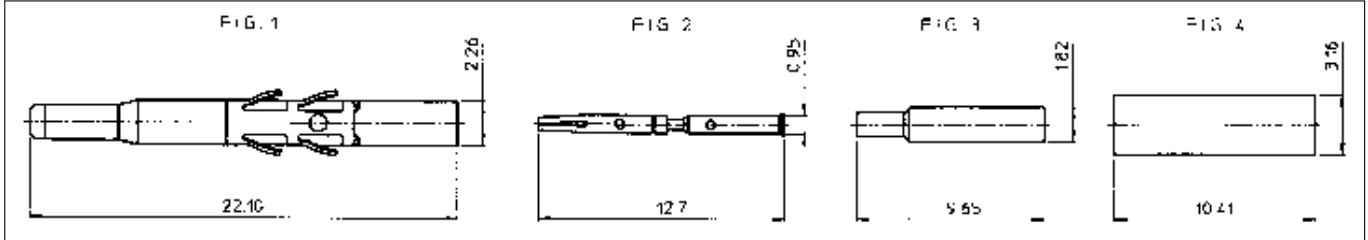
How to order

	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			

RMDX/RCDX



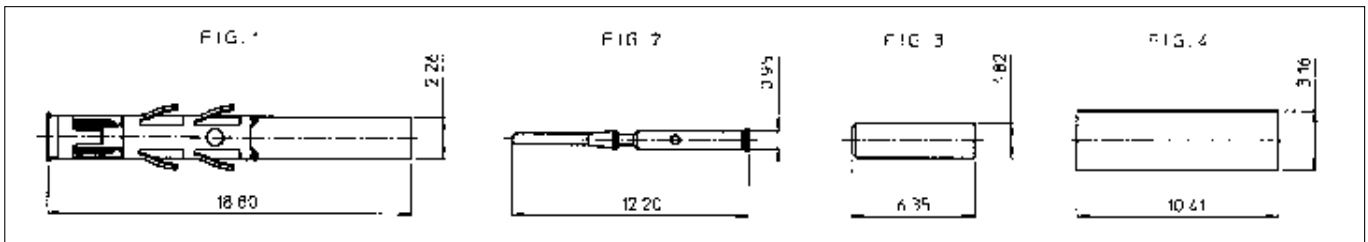
MULTIPIECE Subminiature coax - Male contact for coaxial cable



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			
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



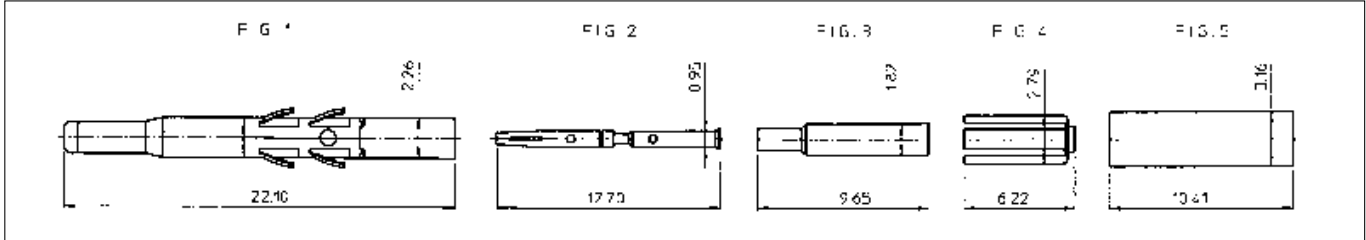
Type of coaxial cable	Contact for inner conductor				Contact for outer braid						Extrac tool
	Inner male contact		Crimp tool M10S1		Outer female contact		Hyring		Crimp tool M10S1		
	Part number	Fig.	Die Set	Stop Bushing	Part number	Fig	Part number	Fig	Die Set	Stop Bushing	
RG161U RG179A/U RG179B/U RG187U	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
RG178A/U RG196U			S23D2				YOC074 + RCDXB0551	4 3			RX16D11 D1

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

RMDX/RCDX

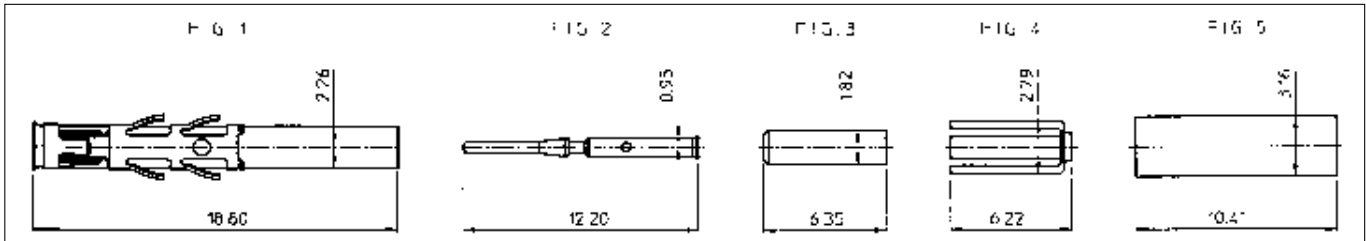


MULTIPIECE Subminiature coax - Male contact for twisted pair cable



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	RFD26L1D28	2	S26D2	SL46D2	RMDX602D28	1	YORX090	4	S221	SL471	RX2025 GE1 or RX16D11D1
2 #26 str							YOC074	5			
							RMDXB0553	3			
2 #24											
7/0,20 str.							YORX090	4			
MIL-W-76 or							YOC074	5			
MIL-W-16878							RMDXB0554	3			
type B											
#28 per							YORX090	4			
MIL-W-							YOC074	5			
81822/3							RMDXB0553	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	RMD26L1D28	2	S26D2	SL46D2	RCDX602D28	1	YORX090	4	S221	SL471	RX2025 GE1 or RX16D11D1
2 #26 str							YOC074	5			
2 #24							RCDXB0551	3			
7/0,20 str.							YORX090	4			
MIL-W-76 or MIL-W-16878 type B							YOC074	5			
#28 per MIL-W-81822/3							RCDXB0552	3			
							YORX090	4			
							YOC074	5			
							RCDXB0551	3			

RMDX/RCDX



Size 16 monocrimp coaxial contacts for TRIM TRIO connectors

Description

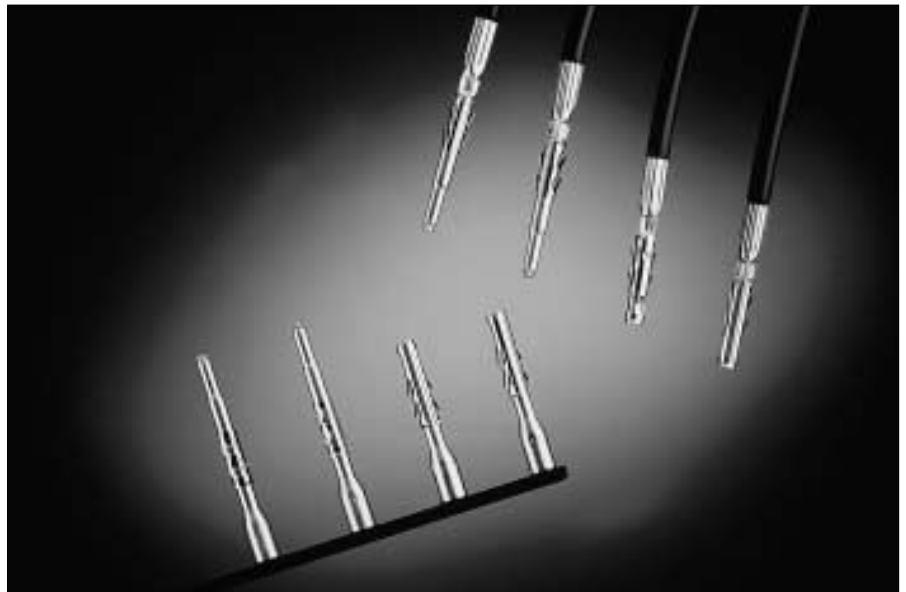
Size 16 RMDX/RCDX Monocrimp .063" (1.6mm) diameter contacts are one-piece monocrimp subminiature coaxial contacts to cover a wide range of subminiature coaxial and twisted pair cables. They provide cost effective solutions in applications where a mix of signal, power and coaxial cable terminations for 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:	beryllium 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

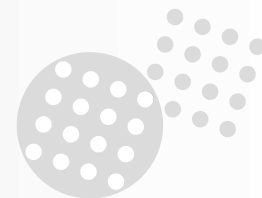
Any TRIM TRIO contact can be used in any contact position in any connector in the TRIM TRIO interconnection system.

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

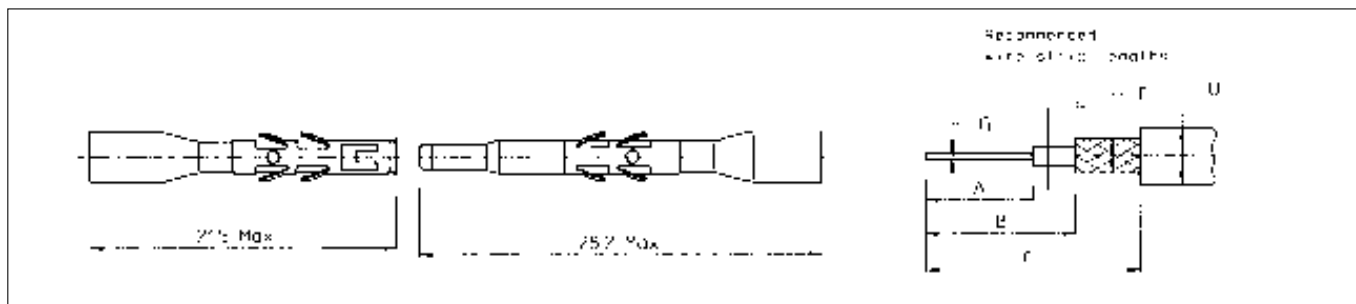
How to order

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

RMDX/RCDX

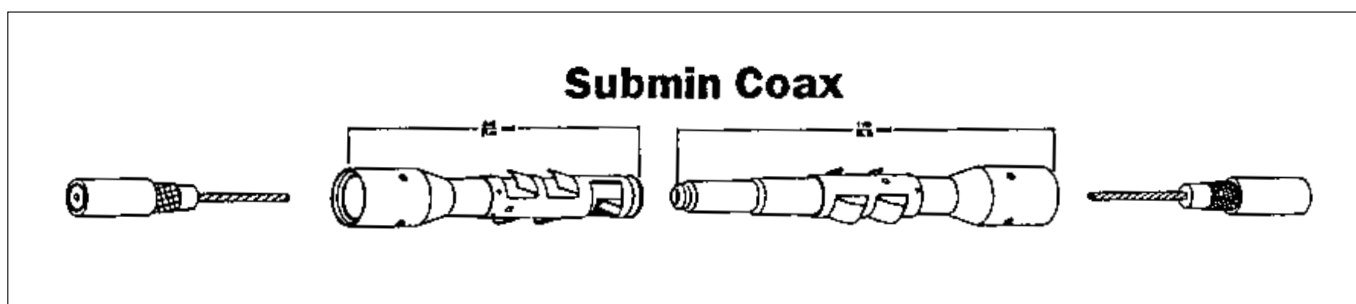


MONOCRIMP Subminiature coax



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

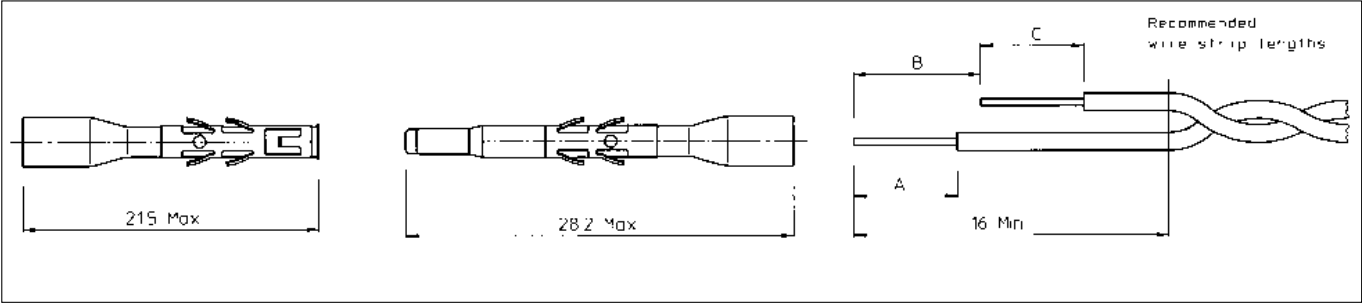
* M10SG8 consists of die set, stop bushing and M10S1 tool



RMDX/RCDX

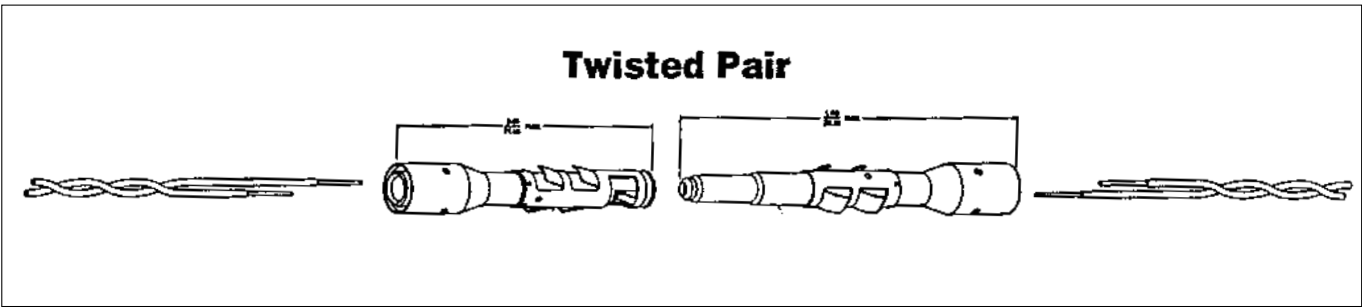


MONOCRIMP Twisted pair



Part number		AWG inner conduct.	Dia. outer jacket (single wire)	Cable strip lengths			Crimp tool M10S1		Extraction tool
Male	Female			A	B	C	Die set not incl.	Stop bushing not. incl.	
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.



Fibre optic contacts



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.

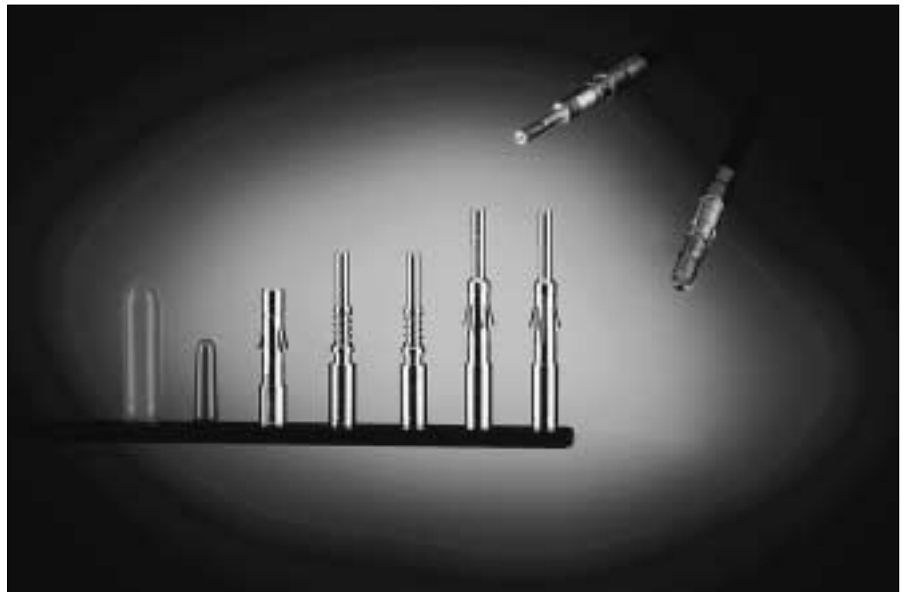
The F.O. contacts are designed to accommodate 1000m plastic fibres with a cable diameter of 2.2 mm.

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
- Miscellaneous

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

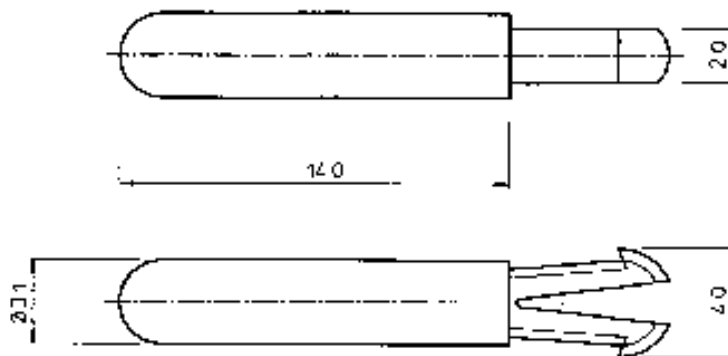
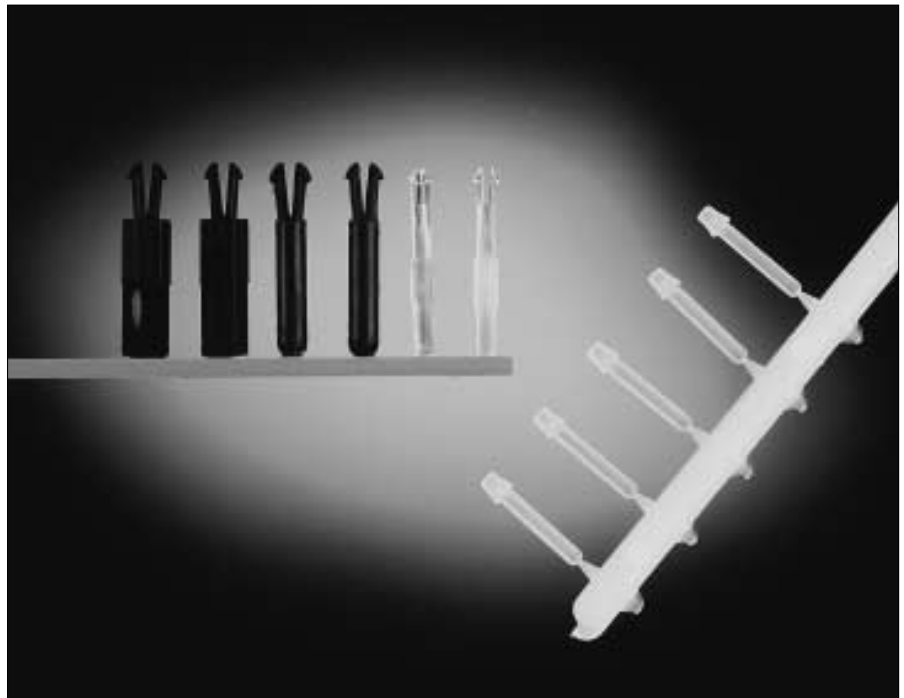
Description

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.

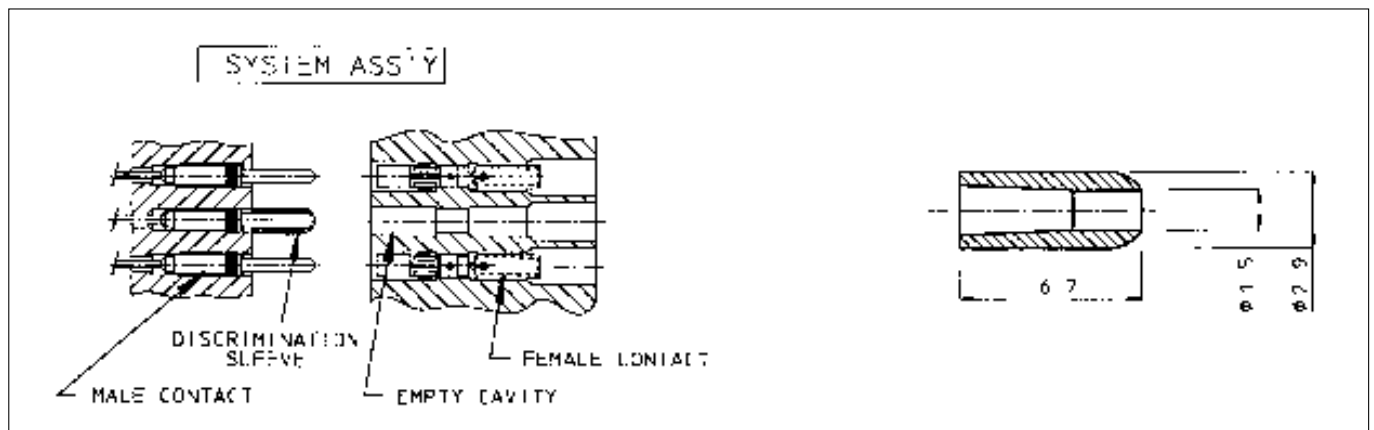
This system offers boundless opportunities for all applications which involve several identical TRIM TRIO connectors.

The material used is polyamide 6.6



SMSPKE0

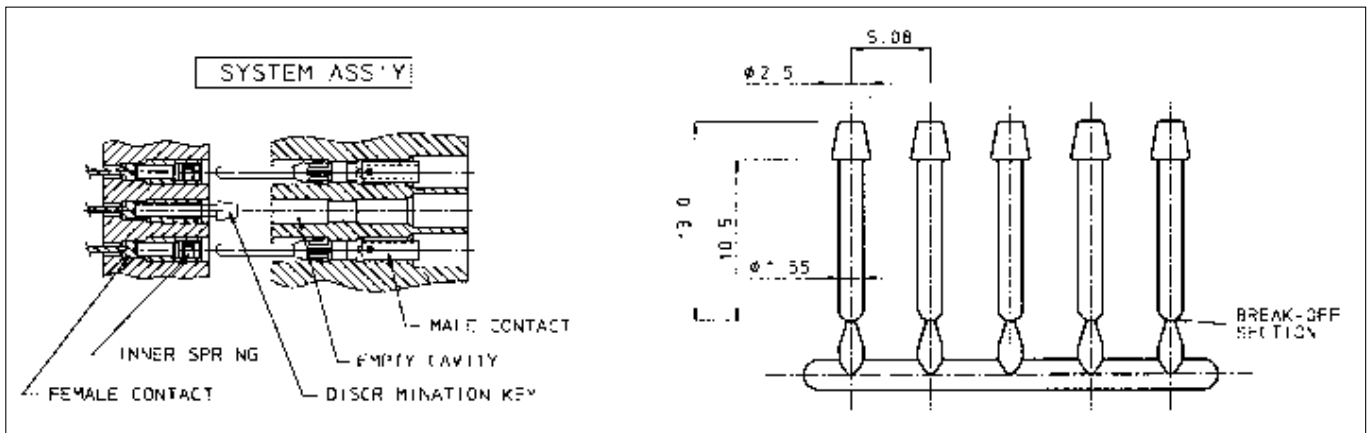
A dummy contact, which can be inserted into an empty contact cavity in any of the TRIM TRIO connectors.



SMSPKB2

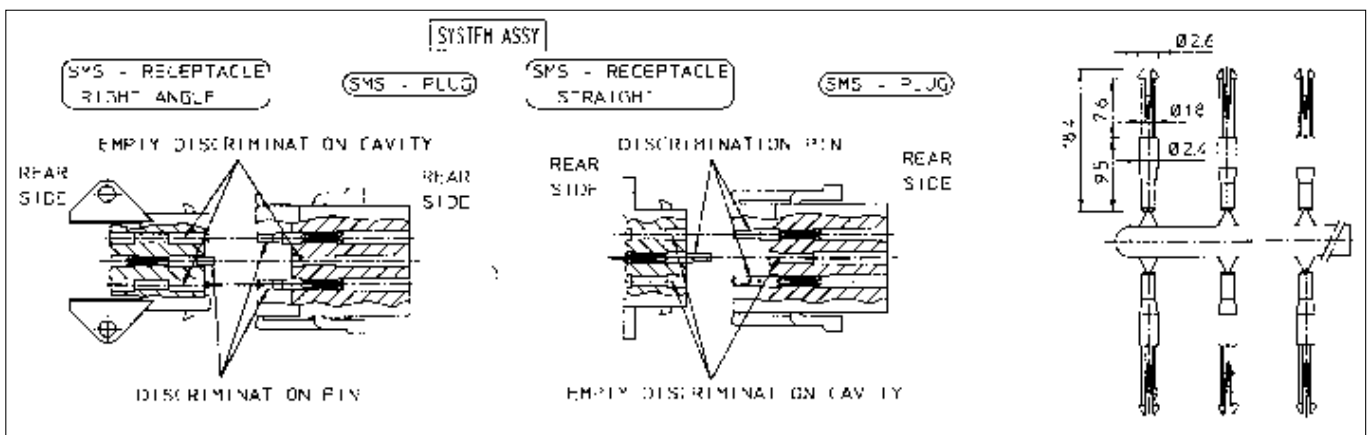
A tube, which can be fitted over a preassembled male contact in all TRIM TRIO male boardmount connectors MSO, SMS, MSG.

Accessories



SMS-PKE2V1

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



SMS-PKE3

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.

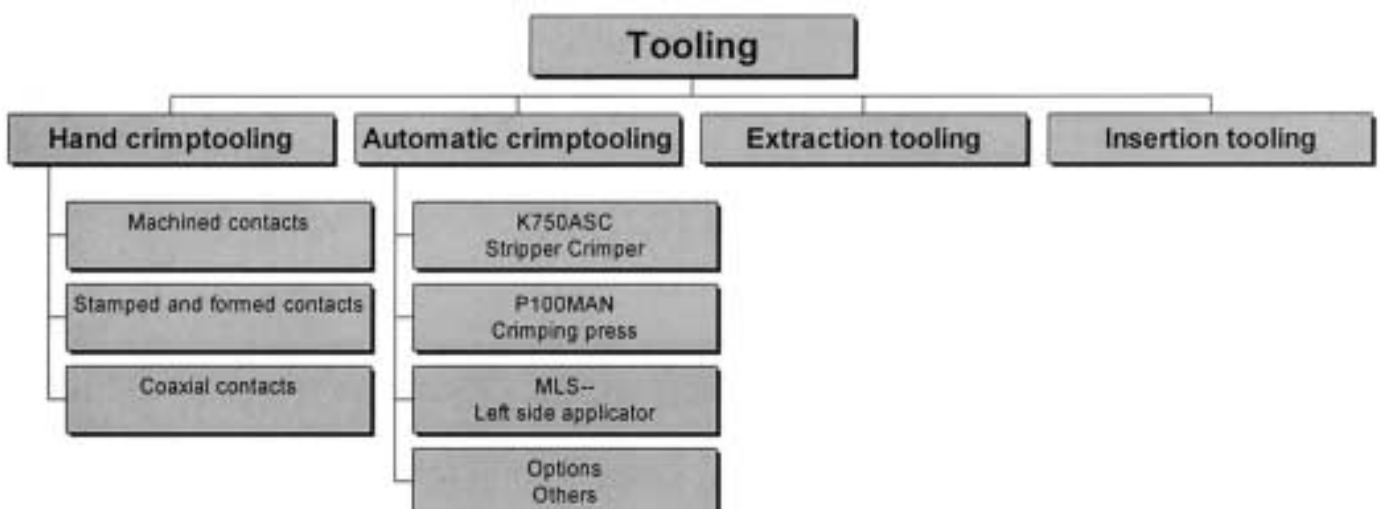
To unlock the discrimination pin, insert the extraction tool in the discrimination cavity at the rear side of the connector. Meanwhile, the pin can be extracted manually at the mating side.



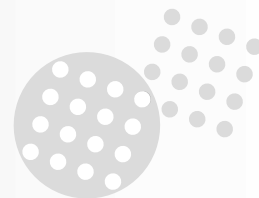
Overview TRIM TRIO tooling



Selection matrix TRIM TRIO tooling



Crimptooling



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.

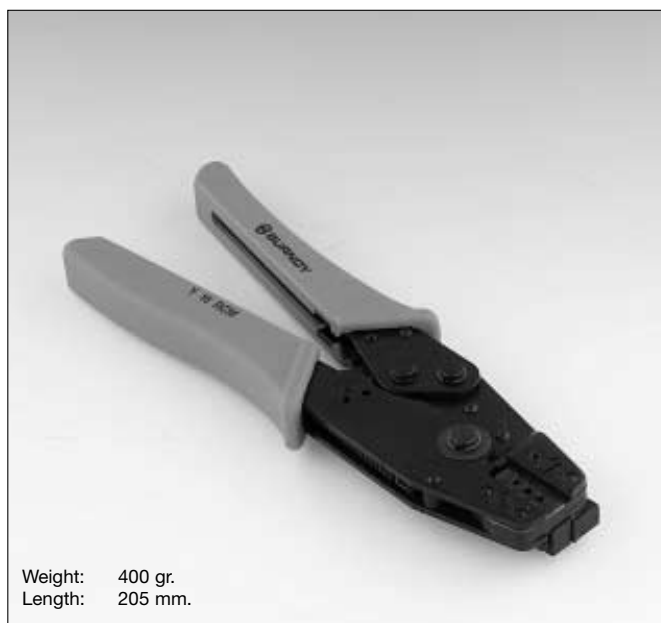


Weight: 425 gr.
Length: 250 mm.

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 crimping tool 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 crimping tool is supplied with a locator to guarantee a perfect crimp indent positioning.

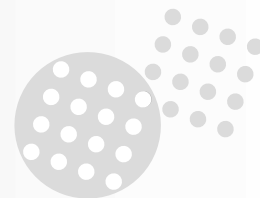


Weight: 300 gr.
Length: 170 mm.

MH860 - for machined contacts

A light weight crimping tool 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.

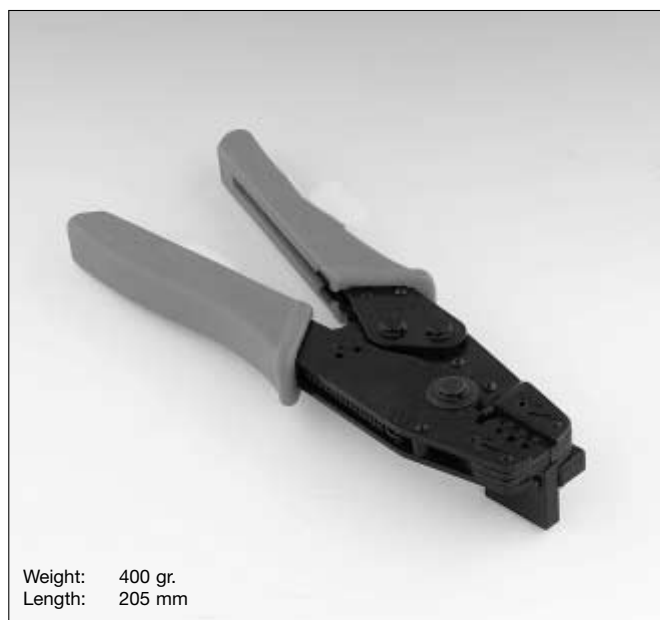


Weight: 400 gr.
Length: 230 mm.

Y14MTV - for formed contact

A light weight crimping tool 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

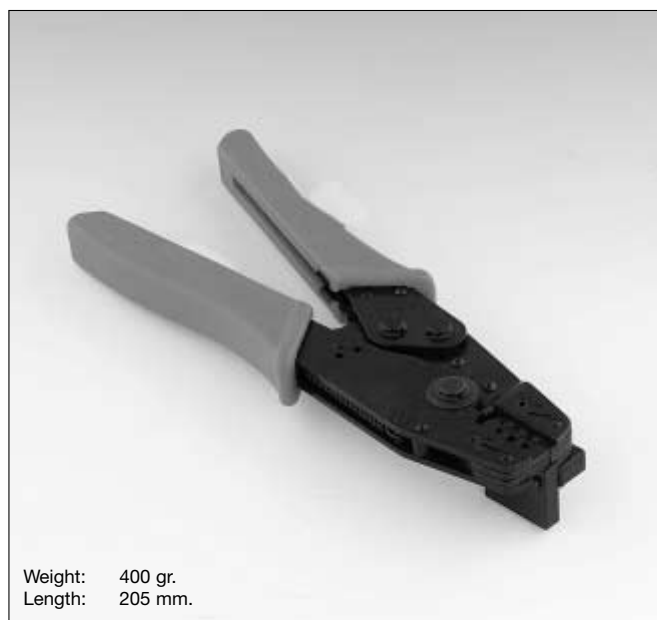
Y16SCM2 - for formed contacts

A light weight crimping tool 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 crimping tool 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 crimping tool 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 crimping tool 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 mm².

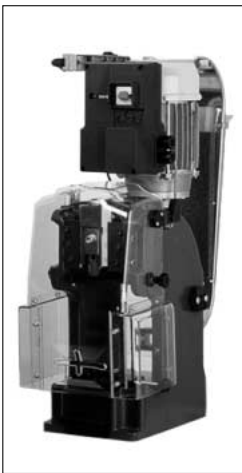
The press has a 40mm stroke and can be used with all UNI-C applicators as well as side-feed mini-style applicators.

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 2.5mm².

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

Miniapplicators 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

Crimptooling



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.



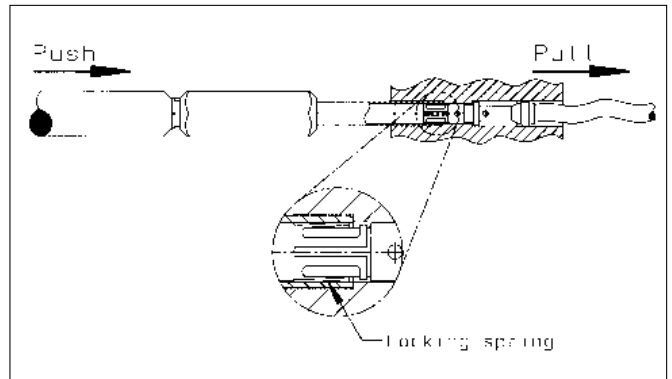
RX2025GE2

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.

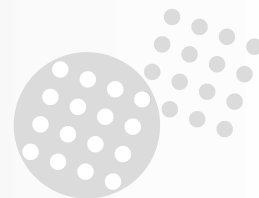
Insertion tooling



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.

Specials - TRIM TRIO



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

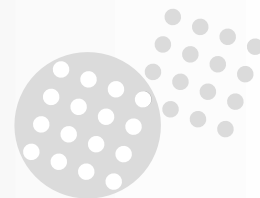
The next page lists some of the Special TRIM TRIO connector configurations.

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



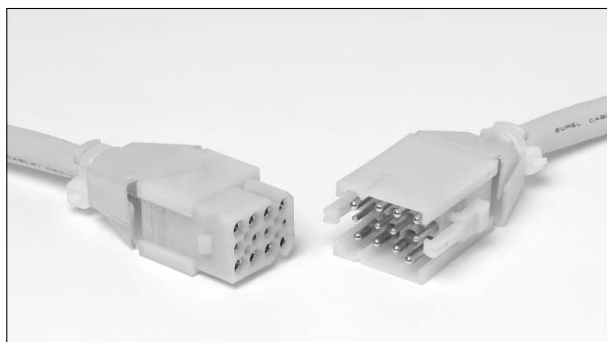
- UTG 12-3 with 3 power contacts up to 26 Amps



- 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



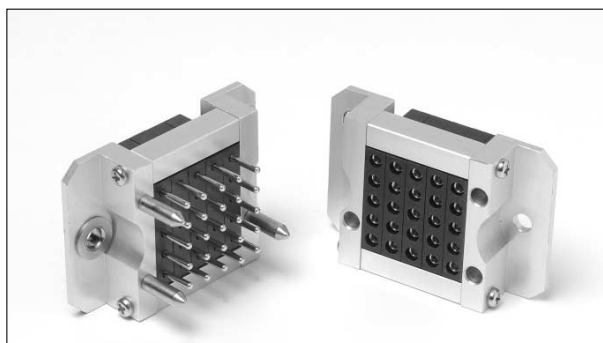
- SMS12 with 8 power and 4 standard Trim Trio contacts - Up to 26 Amps



- 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



Notes

A series of horizontal dotted lines for taking notes.

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