Features & Specification

Mating Cycles: 500
Ingress Protection: IP67, IP68, IP69K
Operating Temperature: -40 to +105°C
Salt Spray Resistance: 48 hours
Application: Indoor, Outdoor
Additional Attributes: EMI shieldable

For many years, Northern Connectors have assisted the UK supply chain by assembling a variety of the connectors from Eaton's vast Souriau UTO series from the smaller piece parts that, when snapped together, form the finished options seen in the master catalogue.

Lots of UTO series connectors share the same components and the process of assembling the shells in-house on demand allows greater flexibility and can significantly reduce lead-times. This attribute is often used to the customers advantage and we regularly supply large quantities in 2-3 days.
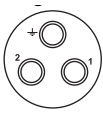
At Northern Connectors we understand that selecting connectors for specific applications can be a difficult and sometimes confusing process, so as a responsible Value-Added Distributor (VAD) of Souriau UTO Connectors, we have produced this supplementary brochure to assist in the process of choosing sizes, layouts and accessories, that can be quickly assembled from components held in stock at our UK distribution facility in St. Helens.
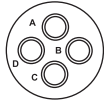
Insert Configurations

There are often a variety of pin arrangements (layouts) within a series of connectors and users have to consider which one would be best suited for their applications needs.

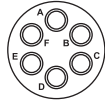The UTO Series has 8 shell sizes with a total of 26 different pin configurations.

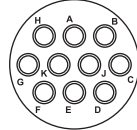Here are the most popular layouts that we assemble in-house;

103	104	106	1210	128	147	1412	1419
16A 150V	13A 150V	7A 80V	6A 40V	10A 125V	16A 150V	10A 150V	5A 40V
2 contacts	4 contacts	6 contacts	10 contacts	8 contacts	6 contacts	12 contacts	19 contacts
+ ground	4 x Ø1.6 (#16)	6 x Ø1.0 (#20)	10 x Ø1.0 (#20)	8 x Ø1.6 (#16)	+ ground	12 x Ø1.6 (#16)	19 x Ø1.0 (#20)
3 x Ø1.6 (#16)					7 x Ø1.6 (#16)		
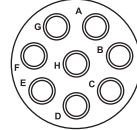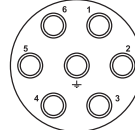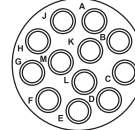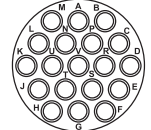
— *Those layouts suggesting 1.6mm (#16) cavities are referred to as standard-density layouts whilst those suggesting 1.0mm (#20) cavities are referred to as high-density layouts and will therefore need smaller pin & socket contacts.*

— *Some layouts feature a dedicated PE cavity as noted by the ground symbol. With those layouts that don't feature a dedicated PE this can be achieved by using a leading contact.*

— *The above layouts are shown with IEC power ratings, see catalogue for further detail.*

Shell Types

Connector shells follow basic principles that make them compatible. They must share the same layout, shell size and locking mechanism, plus a mating pair must always be opposite genders.

To offer the user ultimate flexibility, shells often have lots of variations. On one hand this means that solutions can cater for a multitude of applications, on the other hand it often leaves engineers perplexed when they are looking to put together a bill of materials.

Here are the most popular types that we assemble from the UTO series;

Cable Connector
(Supplied without backshell as multiple choices)

Square Flanged Panel Connector

Jam-Nut Panel Connector

Each shell type above is available in both male and female gender

Connector Gender

UTO series connectors are available in male and female genders, therefore you must decide if the connector of choice should be fitted with male pin or female socket contacts.

The gender that you choose is determined by the direction of power that your application dictates. If the direction of power is from the cable side, you will want the cable connector to be designed to accept female socket contacts.

Conversely, if the power is flowing in the opposite direction, from the chassis mounted connector, you will want the cable connector to be fitted with male pin contacts.

The gender you choose is indicated in the connector part number with either a P for male pins and S for female sockets as per the following examples;

| UT06128PH | UT06128SH | UT07128PH | UT07128SH |
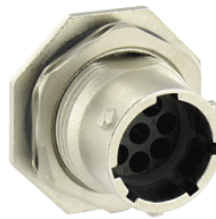
Crimp Contacts

Although some customers select solder or dip-solder contacts, the range is predominantly used with crimp contacts.

To suit the aforementioned popular layouts, we have two contact diameters to choose from. 1.6mm (#16) contacts are suited for the standard-density configurations and the smaller 1mm (#20) contacts are designed to suit the high-density configurations.

These two contact sizes are available in lower cost stamped & formed (open barrel) types or a higher quality machined (closed barrel) option. The physical differences can be observed in the following examples;

| 1mm Stamped & Formed Crimp Pin Contact | 1mm Stamped & Formed Crimp Socket Contact | 1mm Machined Crimp Pin Contact | 1mm Machined Crimp Socket Contact |

Once you have chosen the contact type that will cater for the connector and application in question, its then just a matter of selecting the choice that will cater for the wire gauge that you intend on using.

Accessories

Connector series often have a variety of additional accessories and peripherals that assist in making the solution more versatile.

Here we've simplified this offering by showcasing the most common UTO accessories that we stock and where a quick turnaround can be guaranteed.

Short Backshell with Small Entry

Short Backshell with Large Entry

Long Backshell with Small Entry

Long Backshell with Large Entry

Short Shieldable Backshell with Small Entry

Short Shieldable Backshell with Large Entry

Long Shieldable Backshell with Small Entry

Long Shieldable Backshell with Large Entry

Panel Connector Gasket

Discrimination Pin

Panel Connector Protection Cap

Cable Connector Protection Cap

Cable Clamp

Tooling

A great feature of the UTO series, and the other series that belong to the Souriau Trim-Trio connector portfolio, is that they share common tooling for crimping and extracting contacts.

The contact crimp tooling system works whereby a set of common handles has interchangeable crimp heads which are tailored to the crimp contacts in question.

Handles

Crimp Tool Head

The contact extraction tooling system uses one tool for any 1.6mm (#16) crimp contact and one tool for any 1mm (#20) crimp contact.

1.6mm (#16) Contact Extraction Tool

1mm (#20) Contact Extraction Tool

Now that we have a better understanding of the core choices, lets explore the part numbers of the most readily available options that Northern Connectors stock and assemble in the UK.

Connector Part Numbers

Item Code	Item Description
Cable Connector	
Standard Density	
UT06103PH	3 Way Cable Connector for Pin Contacts, without Backshell, IP67, IP68 & IP69K
UT06103SH	3 Way Cable Connector for Socket Contacts, without Backshell, IP67, IP68 & IP69K
UT06104PH	4 Way Cable Connector for Pin Contacts, without Backshell, IP67, IP68 & IP69K
UT06104SH	4 Way Cable Connector for Socket Contacts, without Backshell, IP67, IP68 & IP69K
UT06128PH	8 Way Cable Connector for Pin Contacts, without Backshell, IP67, IP68 & IP69K
UT06128SH	8 Way Cable Connector for Pin Contacts, without Backshell, IP67, IP68 & IP69K
UT06147PH	7 Way Cable Connector for Pin Contacts, without Backshell, IP67, IP68 & IP69K
UT06147SH	7 Way Cable Connector for Socket Contacts, without Backshell, IP67, IP68 & IP69K
UT061412PH	12 Way Cable Connector for Pin Contacts, without Backshell, IP67, IP68 & IP69K
UT061412SH	12 Way Cable Connector for Socket Contacts, without Backshell, IP67, IP68 & IP69K
High Density	
UT0W6106PH	6 Way Cable Connector for Pin Contacts, without Backshell, IP67, IP68 & IP69K
UT0W6106SH	6 Way Cable Connector for Socket Contacts, without Backshell, IP67, IP68 & IP69K
UT0W61210PH	10 Way Cable Connector for Pin Contacts, without Backshell, IP67, IP68 & IP69K
UT0W61210SH	10 Way Cable Connector for Socket Contacts, without Backshell, IP67, IP68 & IP69K
UT0W61419PH	19 Way Cable Connector for Pin Contacts, without Backshell, IP67, IP68 & IP69K
UT0W61419SH	19 Way Cable Connector for Socket Contacts, without Backshell, IP67, IP68 & IP69K
Square Flanged Panel Connector	
Standard Density	
UT00103PH	3 Way Square Flanged Panel Connector for Pin Contacts, IP67
UT00103PH6	3 Way Square Flanged Panel Connector for Pin Contacts, IP68 & IP69K
UT00103SH	3 Way Square Flanged Panel Connector for Socket Contacts, IP67
UT00103SH6	3 Way Square Flanged Panel Connector for Socket Contacts, IP68 & IP69K
UT00104PH	4 Way Square Flanged Panel Connector for Pin Contacts, IP67
UT00104PH6	4 Way Square Flanged Panel Connector for Pin Contacts, IP68 & IP69K
UT00104SH	4 Way Square Flanged Panel Connector for Socket Contacts, IP67
UT00104SH6	4 Way Square Flanged Panel Connector for Socket Contacts, IP68 & IP69K
UT00128PH	8 Way Square Flanged Panel Connector for Pin Contacts, IP67
UT00128PH6	8 Way Square Flanged Panel Connector for Pin Contacts, IP68 & IP69K
UT00128SH	8 Way Square Flanged Panel Connector for Socket Contacts, IP67
UT00128SH6	8 Way Square Flanged Panel Connector for Socket Contacts, IP68 & IP69K
UT00147PH	7 Way Square Flanged Panel Connector for Pin Contacts, IP67
UT00147PH6	7 Way Square Flanged Panel Connector for Pin Contacts, IP68 & IP69K
UT00147SH	7 Way Square Flanged Panel Connector for Socket Contacts, IP67
UT00147SH6	7 Way Square Flanged Panel Connector for Socket Contacts, IP68 & IP69K
UT001412PH	12 Way Square Flanged Panel Connector for Pin Contacts, IP67
UT001412PH6	12 Way Square Flanged Panel Connector for Pin Contacts, IP68 & IP69K
UT001412SH	12 Way Square Flanged Panel Connector for Socket Contacts, IP67
UT001412SH6	12 Way Square Flanged Panel Connector for Socket Contacts, IP68 & IP69K
High Density	
UT0W0106PH	6 Way Square Flanged Panel Connector for Pin Contacts, IP67
UT0W0106PH6	6 Way Square Flanged Panel Connector for Pin Contacts, IP68 & IP69K
UT0W0106SH	6 Way Square Flanged Panel Connector for Socket Contacts, IP67
UT0W0106SH6	6 Way Square Flanged Panel Connector for Socket Contacts, IP68 & IP69K
UT0W01210PH	10 Way Square Flanged Panel Connector for Pin Contacts, IP67
UT0W01210PH6	10 Way Square Flanged Panel Connector for Pin Contacts, IP68 & IP69K
UT0W01210SH	10 Way Square Flanged Panel Connector for Socket Contacts, IP67
UT0W01210SH6	10 Way Square Flanged Panel Connector for Socket Contacts, IP68 & IP69K
UT0W01419PH	19 Way Square Flanged Panel Connector for Pin Contacts, IP67
UT0W01419PH6	19 Way Square Flanged Panel Connector for Pin Contacts, IP68 & IP69K
UT0W01419SH	19 Way Square Flanged Panel Connector for Socket Contacts, IP67
UT0W01419SH6	19 Way Square Flanged Panel Connector for Socket Contacts, IP68 & IP69K
Jam-Nut Panel Connector	
Standard Density	
UT07103PH	3 Way Jam-Nut Panel Connector for Pin Contacts, IP67
UT07103PH6	3 Way Jam-Nut Panel Connector for Pin Contacts, IP68 & IP69K

Connector Part Numbers (Continued)

Item Code	Item Description
UT07103SH	3 Way Jam-Nut Panel Connector for Socket Contacts, IP67
UT07103SH6	3 Way Jam-Nut Panel Connector for Socket Contacts, IP68 & IP69K
UT07104PH	4 Way Jam-Nut Panel Connector for Pin Contacts, IP67
UT07104PH6	4 Way Jam-Nut Panel Connector for Pin Contacts, IP68 & IP69K
UT07104SH	4 Way Jam-Nut Panel Connector for Socket Contacts, IP67
UT07104SH6	4 Way Jam-Nut Panel Connector for Socket Contacts, IP68 & IP69K
UT07128PH	8 Way Jam-Nut Panel Connector for Pin Contacts, IP67
UT07128PH6	8 Way Jam-Nut Panel Connector for Pin Contacts, IP68 & IP69K
UT07128SH	8 Way Jam-Nut Panel Connector for Socket Contacts, IP67
UT07128SH6	8 Way Jam-Nut Panel Connector for Socket Contacts, IP68 & IP69K
UT07147PH	7 Way Jam-Nut Panel Connector for Pin Contacts, IP67
UT07147PH6	7 Way Jam-Nut Panel Connector for Pin Contacts, IP68 & IP69K
UT07147SH	7 Way Jam-Nut Panel Connector for Socket Contacts, IP67
UT07147SH6	7 Way Jam-Nut Panel Connector for Socket Contacts, IP68 & IP69K
UT071412PH	12 Way Jam-Nut Panel Connector for Pin Contacts, IP67
UT071412PH6	12 Way Jam-Nut Panel Connector for Pin Contacts, IP68 & IP69K
UT071412SH	12 Way Jam-Nut Panel Connector for Socket Contacts, IP67
UT071412SH6	12 Way Jam-Nut Panel Connector for Socket Contacts, IP68 & IP69K
High Density	
UT0W7106PH	6 Way Jam-Nut Panel Connector for Pin Contacts, IP67
UT0W7106PH6	6 Way Jam-Nut Panel Connector for Pin Contacts, IP68 & IP69k
UT0W7106SH	6 Way Jam-Nut Panel Connector for Socket Contacts, IP67
UT0W7106SH6	6 Way Jam-Nut Panel Connector for Socket Contacts, IP68 & IP69K
UT0W71210PH	10 Way Jam-Nut Panel Connector for Pin Contacts, IP67
UT0W71210PH6	10 Way Jam-Nut Panel Connector for Pin Contacts, IP68 & IP69K
UT0W71210SH	10 Way Jam-Nut Panel Connector for Socket Contacts, IP67
UT0W71210SH6	10 Way Jam-Nut Panel Connector for Socket Contacts, IP68 & IP69K
UT0W71419PH	19 Way Jam-Nut Panel Connector for Pin Contacts, IP67
UT0W71419PH6	19 Way Jam-Nut Panel Connector for Pin Contacts, IP68 & IP69K
UT0W71419SH	19 Way Jam-Nut Panel Connector for Socket Contacts, IP67
UT0W71419SH6	19 Way Jam-Nut Panel Connector for Socket Contacts, IP68 & IP69K

Accessory Part Numbers

Item Code	Item Description
Cable Clamp	
UT010AC	Shell Size 10 Cable Clamp for UTO Series, 5mm Max. Straight Cable Entry
UT012AC	Shell Size 12 Cable Clamp for UTO Series, 8.2mm Max. Straight Cable Entry
UT014AC	Shell Size 14 Cable Clamp for UTO Series, 10mm Max. Straight Cable Entry
Short Backshell with Small Cable Entry	
UT010JCS	Shell Size 10 Backshell for UTO Series, 3-6mm Straight Cable Entry, IP68 & IP69K
UT012JCS	Shell Size 12 Backshell for UTO Series, 6-10mm Straight Cable Entry, IP68 & IP69K
UT014JCS	Shell Size 14 Backshell for UTO Series, 6-10mm Straight Cable Entry, IP68 & IP69K
Short Backshell with Large Cable Entry	
UT010JCSL	Shell Size 10 Backshell for UTO Series, 5-8mm Straight Cable Entry, IP68 & IP69K
UT012JCSL	Shell Size 12 Backshell for UTO Series, 8-12mm Straight Cable Entry, IP68 & IP69K
UT014JCSL	Shell Size 14 Backshell for UTO Series, 8-12mm Straight Cable Entry, IP68 & IP69K
Long Backshell with Small Cable Entry	
UT010JC	Shell Size 10 Backshell for UTO Series, 3-6mm Straight Cable Entry, IP68 & IP69K
UT012JC	Shell Size 12 Backshell for UTO Series, 6-10mm Straight Cable Entry, IP68 & IP69K
UT014JC	Shell Size 14 Backshell for UTO Series, 6-10mm Straight Cable Entry, IP68 & IP69K
Long Backshell with Large Cable Entry	
UT010JCL	Shell Size 10 Backshell for UTO Series, 5-8mm Straight Cable Entry, IP68 & IP69K
UT012JCL	Shell Size 12 Backshell for UTO Series, 8-12mm Straight Cable Entry, IP68 & IP69K
UT014JCL	Shell Size 14 Backshell for UTO Series, 8-12mm Straight Cable Entry, IP68 & IP69K
Shielded Short Backshell with Small Cable Entry	
UT0S10JCS	Shell Size 10 Backshell for UTO Series, 4-6.5mm Straight Cable Entry, Shieldable, IP68 & IP69K
UT0S12JCS	Shell Size 12 Backshell for UTO Series, 7-10.5mm Straight Cable Entry, Shieldable, IP68 & IP69K
UT0S14JCS	Shell Size 14 Backshell for UTO Series, 7-10.5mm Straight Cable Entry, Shieldable, IP68 & IP69K
Shielded Short Backshell with Large Cable Entry	
UT0S10JCSL	Shell Size 10 Backshell for UTO Series, 5-8.5mm Straight Cable Entry, Shieldable, IP68 & IP69K
UT0S12JCSL	Shell Size 12 Backshell for UTO Series, 8-12.5mm Straight Cable Entry, Shieldable, IP68 & IP69K
UT0S14JCSL	Shell Size 14 Backshell for UTO Series, 8-12.5mm Straight Cable Entry, Shieldable, IP68 & IP69K
Shielded Long Backshell with Small Cable Entry	
UT0S10JC	Shell Size 10 Backshell for UTO Series, 4-6.5mm Straight Cable Entry, Shieldable, IP68 & IP69K
UT0S12JC	Shell Size 12 Backshell for UTO Series, 7-10.5mm Straight Cable Entry, Shieldable, IP68 & IP69K
UT0S14JC	Shell Size 14 Backshell for UTO Series, 7-10.5mm Straight Cable Entry, Shieldable, IP68 & IP69K
Shielded Long Backshell with Large Cable Entry	
UT0S10JCL	Shell Size 10 Backshell for UTO Series, 5-8.5mm Straight Cable Entry, Shieldable, IP68 & IP69K
UT0S12JCL	Shell Size 12 Backshell for UTO Series, 8-12.5mm Straight Cable Entry, Shieldable, IP68 & IP69K
UT0S14JCL	Shell Size 14 Backshell for UTO Series, 8-12.5mm Straight Cable Entry, Shieldable, IP68 & IP69K
Protection Caps	
UT010DCG	Shell Size 10 Protection Cover for UTO Series Panel Connector, with Fixing Rope, IP67
UT012DCG	Shell Size 12 Protection Cover for UTO Series Panel Connector, with Fixing Rope, IP67
UT014DCG	Shell Size 14 Protection Cover for UTO Series Panel Connector, with Fixing Rope, IP67
UTG610DCG	Shell Size 10 Protection Cover for UTO Series Cable Connector, with Fixing Rope, IP65
UTG612DCG	Shell Size 12 Protection Cover for UTO Series Cable Connector, with Fixing Rope, IP65
UTG614DCG	Shell Size 14 Protection Cover for UTO Series Cable Connector, with Fixing Rope, IP65
Coding	
SMSPKE0	Dummy Pin Contact for Souriau Trim-Trio 1.6mm Connector Cavity
Gaskets	
UTFD12B	Shell Size 10 Gasket for Souriau Square Flanged Panel Connector
UTFD13B	Shell Size 12 Gasket for Souriau Square Flanged Panel Connector
UTFD14B	Shell Size 14 Gasket for Souriau Square Flanged Panel Connector

Crimp Contact & Tooling Part Numbers

Stamped & Formed (Open Barrel)

Standard Density (1.6mm)

Item code	Item description	Crimp Tool Handles	Crimp Tool Head	Contact Extraction Tool
SM24ML1S31	1.6mm Crimp Pin Contact, Stamped & Formed Construction, Gold Plating, 0.12-0.25mm²	SHANDLES	S16SCM20	RX2025GE1
SC24ML1S31	1.6mm Crimp Socket Contact, Stamped & Formed Construction, Gold Plating, 0.12-0.25mm²	SHANDLES	S16SCM20	RX2025GE1
SM20ML1S31	1.6mm Crimp Pin Contact, Stamped & Formed Construction, Gold Plating, 0.32-0.50mm²	SHANDLES	S16SCM20	RX2025GE1
SC20ML1S31	1.6mm Crimp Socket Contact, Stamped & Formed Construction, Gold Plating, 0.32-0.50mm²	SHANDLES	S16SCM20	RX2025GE1
SM16ML11S31	1.6mm Crimp Pin Contact, Stamped & Formed Construction, Gold Plating, 0.82-1.50mm²	SHANDLES	S16SCML11	RX2025GE1
SC16ML11S31	1.6mm Crimp Socket Contact, Stamped & Formed Construction, Gold Plating, 0.82-1.50mm²	SHANDLES	S16SCML11	RX2025GE1
SM14ML1S31	1.6mm Crimp Pin Contact, Stamped & Formed Construction, Gold Plating, 2.10-2.50mm²	SHANDLES	S16SCML1	RX2025GE1
SC14ML1S31	1.6mm Crimp Socket Contact, Stamped & Formed Construction, Gold Plating, 2.10-2.50mm²	SHANDLES	S16SCML1	RX2025GE1

High Density (1mm)

Item code	Item description	Crimp Tool Handles	Crimp Tool Head	Contact Extraction Tool
SM24WL3S26	1mm Crimp Pin Contact, Stamped & Formed Construction, Gold Plating, 0.12-0.25mm²	SHANDLES	S20SCM20	RX20D44
SC24WL3S26	1mm Crimp Socket Contact, Stamped & Formed Construction, Gold Plating, 0.12-0.25mm²	SHANDLES	S20SCM20	RX20D44
SM20WL3S25	1mm Crimp Pin Contact, Stamped & Formed Construction, Gold Plating, 0.32-0.50mm²	SHANDLES	S20SCM20	RX20D44
SC20WL3S25	1mm Crimp Socket Contact, Stamped & Formed Construction, Gold Plating, 0.32-0.50mm²	SHANDLES	S20SCM20	RX20D44

Machined (Closed Barrel)

Standard Density (1.6mm)

Item code	Item description	Crimp Tool Handles	Crimp Tool Head	Contact Extraction Tool
RM24M9K	1.6mm Crimp Pin Contact, Machined Construction, Gold Plating, 0.12-0.25mm²	SHANDLES	S16RCM20	RX2025GE1
RC24M9K	1.6mm Crimp Socket Contact, Machined Construction, Gold Plating, 0.12-0.25mm²	SHANDLES	S16RCM20	RX2025GE1
RM20M12K	1.6mm Crimp Pin Contact, Machined Construction, Gold Plating, 0.32-0.50mm²	SHANDLES	S16RCM20	RX2025GE1
RC20M12K	1.6mm Crimp Socket Contact, Machined Construction, Gold Plating, 0.32-0.50mm²	SHANDLES	S16RCM20	RX2025GE1
RM16M23K	1.6mm Crimp Pin Contact, Machined Construction, Gold Plating, 0.50-1.50mm²	SHANDLES	S16RCM16	RX2025GE1
RC16M23K	1.6mm Crimp Socket Contact, Machined Construction, Gold Plating, 0.50-1.50mm²	SHANDLES	S16RCM16	RX2025GE1
RM14M30K	1.6mm Crimp Pin Contact, Machined Construction, Gold Plating, 1.50-2.50mm²	SHANDLES	S16RCM14	RX2025GE1
RC14M30K	1.6mm Crimp Socket Contact, Machined Construction, Gold Plating, 1.50-2.50mm²	SHANDLES	S16RCM14	RX2025GE1

High Density (1mm)

Item code	Item description	Crimp Tool Handles	Crimp Tool Head	Contact Extraction Tool
RM24W3K	1mm Crimp Pin Contact, Machined Construction, Gold Plating, 0.12-0.25mm²	SHANDLES	S20RCM	RX20D44
RC24W3K	1mm Crimp Socket Contact, Machined Construction, Gold Plating, 0.12-0.25mm²	SHANDLES	S20RCM	RX20D44
RM20W3K	1mm Crimp Pin Contact, Machined Construction, Gold Plating, 0.32-0.50mm²	SHANDLES	S20RCM	RX20D44
RC20W3K	1mm Crimp Socket Contact, Machined Construction, Gold Plating, 0.32-0.50mm²	SHANDLES	S20RCM	RX20D44
RM18W3K	1mm Crimp Pin Contact, Machined Construction, Gold Plating, 0.50-0.82mm²	SHANDLES	S20RCM	RX20D44
RC18W3K	1mm Crimp Socket Contact, Machined Construction, Gold Plating, 0.50-0.82mm²	SHANDLES	S20RCM	RX20D44

Contacts with alternative platings available on request

Reeled stamped & formed versions for higher production volumes available on request