



Contacts



Description

The UTS series is delivered with (solder and PCB versions) or without contact (crimp version). When contacts are not loaded, this series offers the unique possibility to use the same contact in any layout as long as it receives the same active part size. Thus it is possible to buy only one contact reference and equip all connectors even if housings are different.

The main benefit is the standardisation which means reduction of inventory cost.

Bearing in mind that any additional tool or complicated assembly process should be avoided, our contacts are based on a snap-in principle which avoid the use of an insertion tool.

Crimp contacts are available in different versions:



• machined



• stamped & formed



• coaxial



• fiber optic

In addition, UTS series can obviously be equipped with solder contacts, PCB contacts, screw termination.



Contact plating selector guide

As soon as you know what contact size you need, you next have to decide on which type to use.

Souriau proposes mainly two different types of electrical contacts:

- Machined
- Stamped & formed

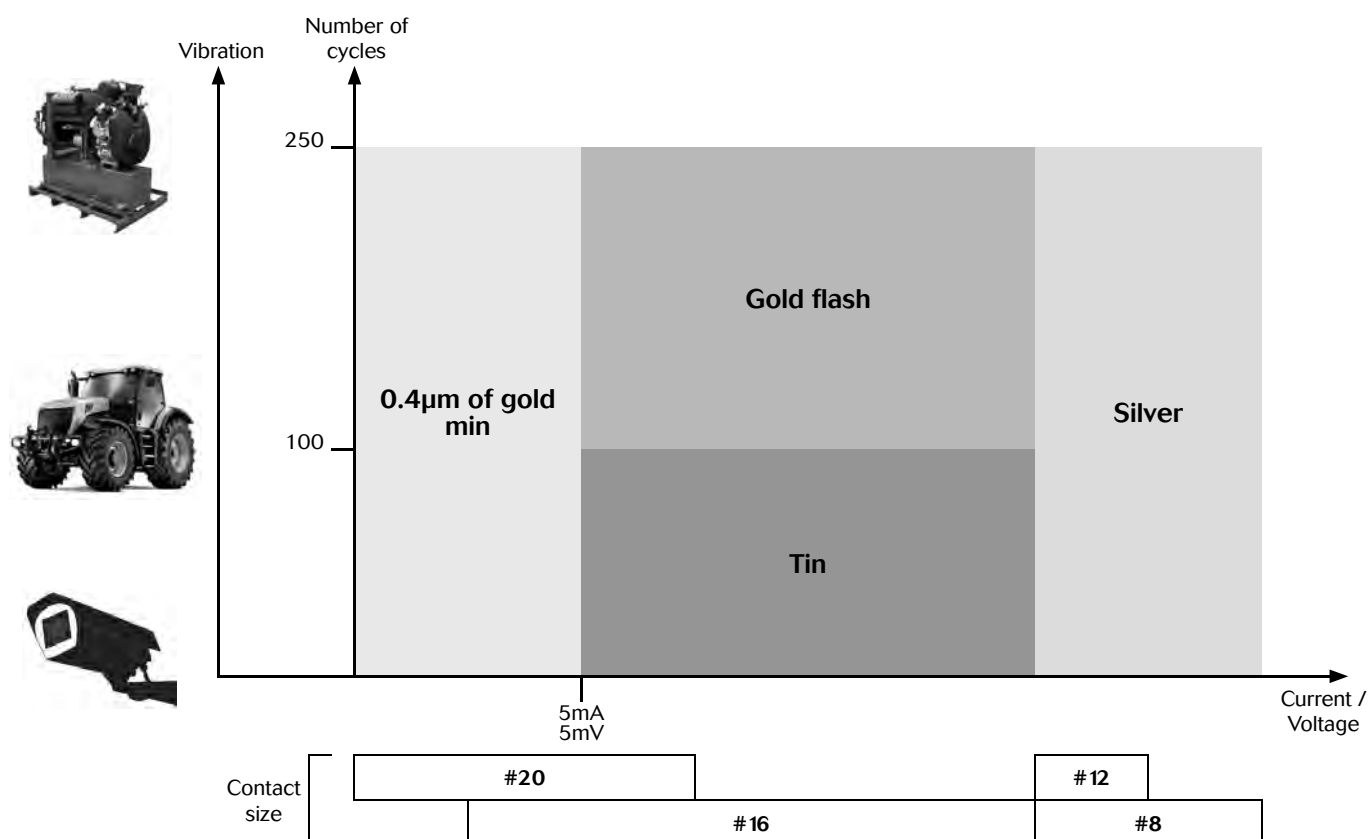
Machined contacts are generally chosen for low quantities purpose as well as a better solution for power applications.

Stamped & formed contacts offer the ability to be crimped automatically which makes them more suitable for high volume production applications.

Then comes the question: What plating should I choose ?

Hereunder is a graph with criteria to guide you:

NB: do not mix different plating (e.g. tin plated pin contact with gold plated socket contact).





Contact selector guide

Contact preloaded

Electrical characteristics: contact resistance		
#20 Ø1mm	Machined	< 4mΩ
#16 Ø1.6mm	Machined	< 3mΩ

Available platings (contact preloaded)

Min 0.4μ gold over 2μ Ni

Contact supply separately

Electrical characteristics: contact resistance		
#20 Ø1mm	Machined	< 6mΩ
	Stamped & formed	< 15mΩ
#16 Ø1.6mm	Machined	< 3mΩ
	Stamped & formed	< 6mΩ
#12 Ø2.4mm	Machined	< 5mΩ
#8 Ø3.6mm	Machined	< 5mΩ

Available platings (contact supply separately)

A	2μ Ni + 2μ Ag
J	Gold flash over 2μ Ni
K	Min 0.4μ gold over 2μ Ni
S31	Active part: Gold flash over Ni Crimp area: Nickel
S18	Active part: 0.75μ gold min over 2μ Ni Crimp area: 1.3μ tin over Ni Other: Nickel
S25 S26	Active part: 0.75μ Au over Ni Crimp area: flash Au over Ni
T	T: 2μ Ni mini all over + 3 to 5 μm Sn all over
TK6	2-5μ Sn pre-plated

Packaging

Conscious of the wide variety of applications, contact packaging has been considered for small series (bulk packaging) and high volume production (reeled contacts):

Size contacts #20 & #16



- 25 pieces bulk packing (stamped & formed contacts)



- 50 pieces bulk packing (machined contacts)



- 1000 pieces bulk packing (machined contacts)



- 3000 pieces reeled (stamped & formed contacts)



- 5000 pieces reeled (machined contacts)

Size contacts #12 & #8



- 100 pieces bulk packing (stamped & formed contacts)



Crimp contacts

Standard version



Contact size	Type	Wire size		Part number		Max wire Ø	Max insulator Ø	Plating available
		AWG	mm²	Male	Female			
#20 Ø1 mm	Machined	26-24	0.13-0.20	RM24W3K	RC24W3K		1.58 max	K
	Stamped & Formed	26-24	0.13-0.25	SM24W3 - (1)	SC24W3 - (1)		0.89-1.58	TK6 S25 (female) S26 (male)
				SM24WL3 - (2)	SC24WL3 - (2)			
	Machined	22-20	0.32-0.52	RM20W3K	RC20W3K		1.58 max	K
	Stamped & Formed	22-20	0.35-0.5	SM20W3 - (1)	SC20W3 - (1)		1.17-2.08	TK6 S25 (female) S26 (male)
				SM20WL3 - (2)	SC20WL3 - (2)			
#16 Ø1.6 mm	Machined	20-18	0.50-0.93	RM18W3K	RC18W3K		2.10 max	K
	Machined	30-28	0.05-0.08	RM28M1 -	RC28M1 -	0.55	1.1	K, J, T
	Machined	26-24	0.13-0.2	RM24M9 -	RC24M9 -	0.8	1.6	K, J, T
	Stamped & Formed	26-24	0.13-0.25	SM24M1 - (1) SM24ML1 - (2)	SC24M1 - (1) SC24ML1 - (2)	0.89-1.28	Insulation grip	S31, S18, TK6
	Machined	22-20	0.32-0.52	RM20M13 - RM20M12 -	RC20M13 - RC20M12 -	1.18	1.8 2.2	K, J, T
	Stamped & Formed	22-20	0.35-0.5	SM20M1 - (1) SM20ML1 - (2)	SC20M1 - (1) SC20ML1 - (2)	1.17-2.08	Insulation grip	S31, S18, TK6
	Machined	20-16	0.52-1.5	RM16M23 -	RC16M23 -	1.8	3.2	K, J, T
	Stamped & Formed	18-16	0.8-1.5	SM16M1 - (1) SM16ML1 - (2)	SC16M1 - (1) SC16ML1 - (2)	3.0	No insulation grip	S31, S18, TK6
#12 Ø2.4 mm	Machined	22	0.13-0.4	82911457NA	82911456A	-	4.9	A, K
		20	0.5	82911459NA	82911458A			
		18	0.75-1.0	82911461NA	82911460A			
		16	1.5	82911463NA	82911462A			
		14	2.5	82911465NA	82911464A			
		12	4	82911467NA	82911466A			
#8 Ø3.6 mm	Machined	16	1.5	82913601A	82913600A	-	6.5	A
		14	2.5	82913603A	82913602A			
		12	4	82913605A	82913604A			
		10	6.0	82913607A	82913606A			
		8	10.0	82913609A	82913608A			

(1) contact reeled (2) loose contact

Example: RM24W3K - Size #20, Machined, AWG24 wire.



Crimp contacts

First Mate Last Break contacts

Contact size	Type	Wire size		Part number		Max wire Ø	Max insulator Ø			Plating available
		AWG	mm²	Male	Female			Front	Rear	
#16 Ø1.6 mm Longer male contact (+1mm)	Machined	30-28	0.05-0.08	RM28M1GE1□	-	0.55	1.1	-	Red	□ = K, J or T
		26-24	0.13-0.2	RM24M9GE1□		0.8	1.6	Red	Red	
		22-20	0.32-0.52	RM20M13GE1□		1.18	1.8	Black	Red	
				RM20M12GE1□			2.2	Blue	Red	
		20-16	0.52-1.5	RM16M23GE1□		1.8	3.2	-	Red	
		16-14	1.5-2.5	RM14M50GE1□		2.05	-	-	Red	
		16-14	1.5-2.5	RM14M30GE1□		2.28	-	-	Red	
#16 Ø1.6 mm Shorter female contact (-0.7mm)	Machined	30-28	0.05-0.08	-	RC28M1GE7□	0.55	1.1	-	Blue	□ = K, J or T
		26-24	0.13-0.2		RC24M9GE7□	0.8	1.6	Red	Blue	
		22-20	0.32-0.52		RC20M13GE7□	1.18	1.8	Black	Blue	
					RC20M12GE7□		2.2	Blue	Blue	
		20-16	0.52-1.5		RC16M23GE7□	1.8	3.2	-	Blue	
		16-14	1.5-2.5		RC14M50GE7□	2.05	-	-	Blue	
		16-14	1.5-2.5		RC14M30GE7□	2.28	-	-	Blue	

Example: RM16M3GE1K - Size # 16, Machined, Longer male, AWG16 wire.

How to make FMLB / LMFB connection

Contact 1 Contact 2	Standard male contact	Standard female contact	Longer male contact
Standard male contact		✓	
Standard female contact	✓		✓ FMLB
Shorter female contact	✓ LMFB		

First Mate Last Break contacts should be chosen only if the cavity is not marked with the earth symbol. For cavities marked with the earth symbol, standard contacts will fulfill the same role as a first mate, last break contact used in a standard cavity.



Ground symbol



#16 coaxial contacts

Coaxial contact range

We provide 2 types of coaxial contacts suitable for 50 or 75Ω, coaxial cable or twisted pair cable.

Monocrimp coaxial contact

- 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 both the inner conductor and outer braid or drain wire.



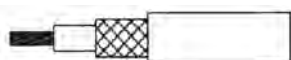
Multipiece crimp coaxial contact

- The inner conductor and outer braid is crimped individually.
- The thermoplastic insulating bushing in the outer body is designed to accept and permanently retain the inner contact.
- An outer ferrule is used to connect the braid to the outer contact and provide cable support to ensure against bending and vibration.



Suitable for Coaxial cable or Twisted cable

- For jacket diameter from 1.78 to 3.05mm
Inner conductor up to 2.44mm diameter



- For jacket diameter from 0.64 to 1.45mm
Inner conductor from AWG30 to AWG24



Contacts for coaxial cable summary

Contact type	Contact range		Contact part number with cable combination	Cabling notice
	Male contact	Female contact		
Multipiece	RMDXK10D28	RCDXK1D28	See page 176	See pages 180 & 181
Monocrimp	RMDX60xxD28	RCDX60xxD28		See page 182

Contacts for twisted pairs cable summary

Contact type	Contact range		Contact part number with cable combination	Cabling notice
	Male contact	Female contact		
Multipiece	RMDXK10D28 + YORK090	RCDXK1D28 + YORK090	See page 177	See page 178
Monocrimp	RMDX60xxD28	RCDX60xxD28		See page 179