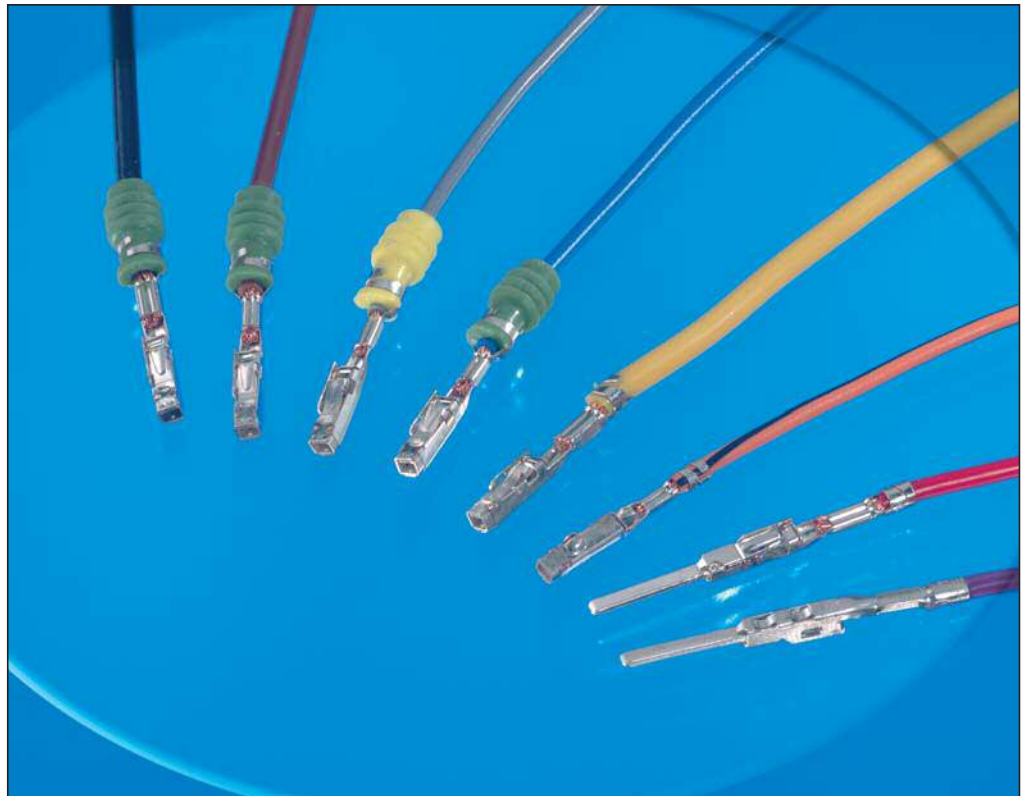


Introduction



The MCON New Generation Contact System is mainly used in the automotive industry. Each contact consists of a flat receptacle, which mates with a flat tab. Base material of contact spring and body is copper alloy.

The two-piece contact design means that the electrical and mechanical properties are separated. One end of the contact body is crimped to wire and the other end mates with the matching tab.

- Protection of the contact springs
- No over elongation of the contact springs possible under normal circumstances
- No possibility to connect from the rear side
- Protection against mechanical damage
- Good guiding in the cavity
- Secondary locking possible (from 3 directions)
- Assembly into housing fully-automatically

**The Main Advantages of the MCON System are:**

- Base material with high current capacity
- 8 or more defined contact points for increased reliability
- Improved vibration resistance
- Good guiding inside the cavity
- Protected contact spring due to the closed box
- Overstress protection of the contact springs
- Box with secondary locking feature
- Protected locking lance

Tabs and receptacles can be applied in both sealed and unsealed connectors.

MCON contacts can be fast and economically arranged to the lead using Tyco Electronics application tooling.

Receptacle Contacts – Locking Lance (LL)

**Technical Features**

**Contact Material:**

CuSn0.15/0.2;  
Insert Spring: CuNiSi

**Contact Finish:**

Tin-silver plated, selective silver  
plated, selective gold plated

**Wire Size Range:**

0.14–0.22 mm<sup>2</sup>,  
0.25–0.35 mm<sup>2</sup>,  
0.50–0.75 mm<sup>2</sup>,  
1.00–1.50 mm<sup>2</sup>

**Current Carrying Capacity:**

up to 20 Ampere  
(at 20 °C ambient temperature)

**Temperature Range:**

–40 °C ... +140 °C (tin-silver plated)  
–40 °C ... +140 °C (silver plated)  
–40 °C ... +150 °C (gold plated)

**Contact Resistance:**

New State ≤ 2 mΩ

**Mating Cycles:** ●

up to 20 cycles (tin-silver plated)  
up to 50 cycles (silver plated)  
up to 100 cycles (gold plated)

**Dimension of Male Contacts:**

(1.2 ±0.1 x 0.6 ±0.03 mm)

**Extraction Tool:**

Part No. **5-1579007-3**

**Mating Force:**

Max. 5 N

**Unmating Force:**

Max. 2.5 N

**Product Group Drawing:**

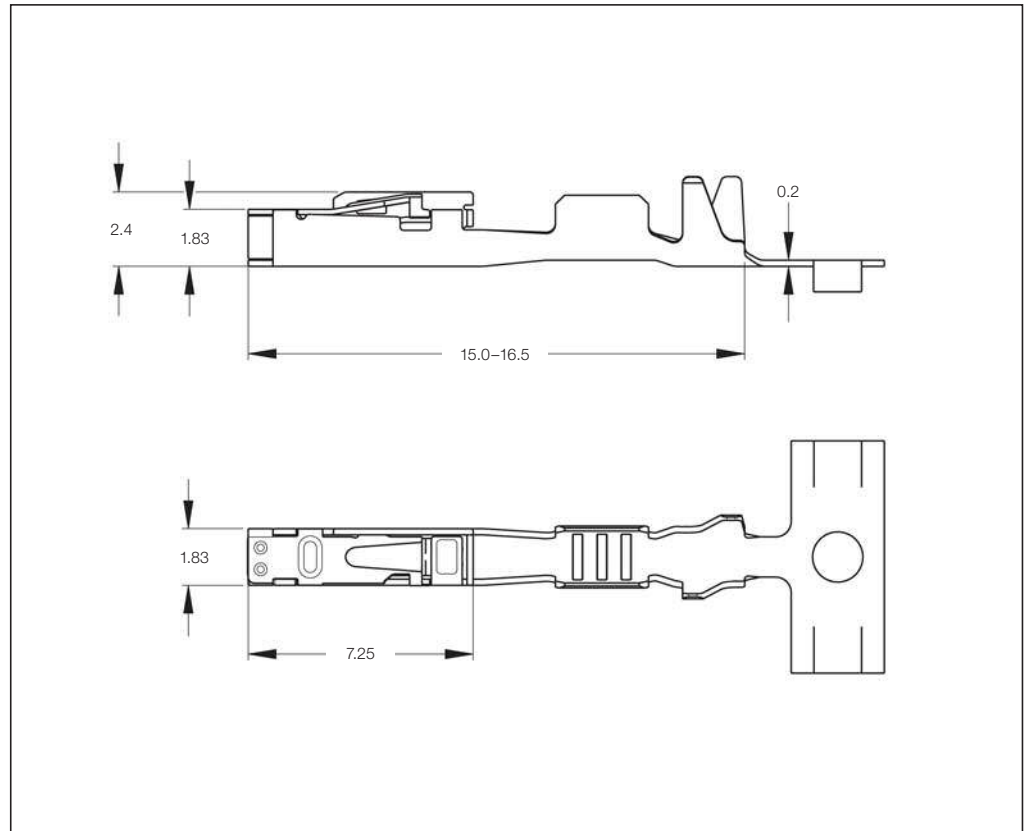
1452674

**Product Specification:**

108-18782

**Application Specification:**

114-18464



**Modular Dimensions (Centerline):**

max. 0.75 mm <sup>2</sup>	2.5 x 2.5 mm	
max. 1.0 mm <sup>2</sup>	2.5 x 3.0 mm	sealed 4.0 x 4.0 mm; sealed staggered 3.5 x 4.0 mm, cavity 3.55 mm diameter
max. 1.5 mm <sup>2</sup>	2.5 x 3.5 mm 3.0 x 3.5 mm	sealed 4.5 x 4.5 mm; sealed staggered 4.0 x 4.5 mm, cavity 3.95 mm diameter

●) Mating Cycles are depending on various technical influences and must be clarified in each individual case.

Receptacle Contacts – Locking Lance (LL) (continued)

**Standard Receptacle Contacts (SRC)**

Wire Size Range (mm <sup>2</sup> )	Insulation Diameter (mm)		Material and Finish*	Part Numbers					
	FLK	FLR		Strip Form	Package Quantity	Loose-Piece	Package Quantity	Applicator*	Hand Tool 539635-1 with Die Set
0.14–0.22	–	1.05–1.20	-1 / -2 / -3	1452650	10,000	1452651	500	x-1528155-x	4-1579001-4
0.25–0.35	–	1.10–1.75	-1 / -2 / -3	1452653	10,000	1452654	500	x-1528156-x	4-1579001-3
0.50–0.75	–	1.4–1.9	-1 / -2 / -3	1452656	8,000	1452657	500	x-1528157-x	4-1579001-2
1.0–1.5	–	1.9–2.4	-1 / -2 / -3	1452659	8,000	1452660	500	x-1528159-x	4-1579001-1

**Receptacle Contacts with Single Wire Sealing System (SWS)**

Wire Size Range (mm <sup>2</sup> )	Insulation Diameter (mm)		Material and Finish*	Part Numbers					
	FLK	FLR		Strip Form	Package Quantity	Loose-Piece	Package Quantity	Applicator*	Hand Tool 539635-1 with Die Set
0.14–0.22	–	1.05–1.20	-1 / -2 / -3	1452662	6,500	1452663	500	x-1528160-x	4-1579001-8
0.25–0.35	–	1.10–1.75	-1 / -2 / -3	1452665	6,500	1452666	500	x-1528161-x	4-1579001-7
0.50–0.75	–	1.4–1.9	-1 / -2 / -3	1452668	6,500	1452669	500	x-1528162-x	4-1579001-6
1.0–1.5	–	1.9–2.4	-1 / -2 / -3	1452671	6,500	1452672	500	x-1528163-x	4-1579001-5

**\*) Material and Finish:**

xxx-1 = CuNiSi, pre-tin/silver plated  
xxx-2 = CuNiSi, selective gold plated  
xxx-3 = CuNiSi, selective silver plated

**Note:** All part numbers are RoHS and ELV compliant.

\*) The pre- and suffix for the applicators depends on the applied termination equipment.

**Receptacle Contacts with Short Circuit Area**

Wire Size Range (mm <sup>2</sup> )	Insulation Diameter (mm)		Material and Finish*	Part Numbers					
	FLK	FLR		Strip Form	Package Quantity	Loose-Piece	Package Quantity	Applicator*	Hand Tool 539635-1 with Die Set
0.5	–	1.4–1.7	-1	1563888	8,000	1563889	500	x-1528944-x	1-1579001-0

**\*) Material and Finish:**

xxx-1 = CuNiSi, selective gold plated

**Note:** All part numbers are RoHS and ELV compliant.

\*) The pre- and suffix for the applicators depends on the applied termination equipment.

Receptacle Contacts – Clean Body (CB)

**Technical Features**

**Contact Material:**  
CuSn0.15/0.2; Insert Spring: CuNiSi

**Contact Finish:**  
Tin-silver plated, selective silver plated, selective gold plated

**Wire Size Range:**  
0.14–0.22 mm<sup>2</sup>, 0.25–0.35 mm<sup>2</sup>,  
0.50–0.75 mm<sup>2</sup>, 1.00–1.50 mm<sup>2</sup>

**Current Carrying Capacity:**  
up to 20 Ampere  
(at 20 °C ambient temperature)

**Temperature Range:**  
–40 °C ... +140 °C (tin-silver plated)  
–40 °C ... +140 °C (silver plated)  
–40 °C ... +150 °C (gold plated)

**Contact Resistance:**  
New State ≤ 2 mΩ

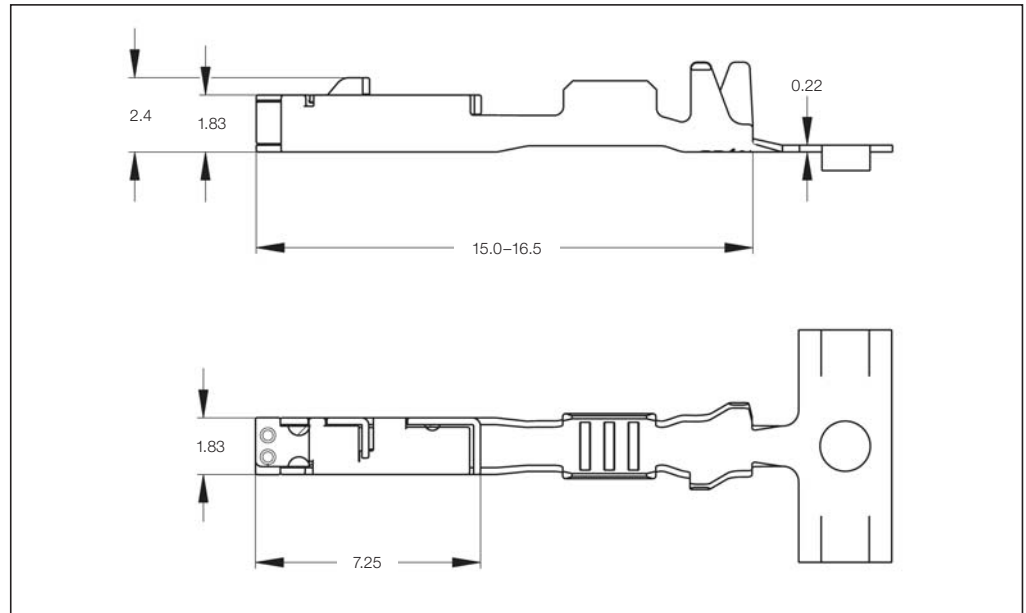
**Mating Cycles:** ●  
up to 20 cycles (tin-silver plated)  
up to 50 cycles (silver plated)  
up to 100 cycles (gold plated)

**Dimension of Male Contacts:**  
(1.2<sup>+0.1</sup> x 0.6<sup>+0.03</sup> mm)

**Extraction Tool (For Example):**  
Part No. **1579007-8**

**Mating Force:** Max. 5 N

**Unmating Force:** Max. 2.5 N



**Modular Dimensions (Centerline):**

max. 0.75 mm <sup>2</sup>	2.5 x 2.5 mm	sealed 4.0 x 4.0 mm; sealed staggered 3.5 x 4.0 mm, cavity 3.55 mm diameter sealed 4.5 x 4.5 mm; sealed staggered 4.0 x 4.5 mm, cavity 3.95 mm diameter
max. 1.0 mm <sup>2</sup>	2.5 x 3.0 mm	
	2.5 x 3.5 mm	
	3.0 x 3.5 mm	
max. 1.5 mm <sup>2</sup>	3.0 x 3.5 mm	

**Product Group Drawing:**  
1534326

**Product Specification:**  
108-18782

**Application Specification:**  
114-18464

●) Mating Cycles are depending on various technical influences and must be clarified in each individual case.

**Standard Receptacle Contacts (SRC)**

Wire Size Range (mm <sup>2</sup> )	Insulation Diameter (mm)		Material and Finish*	Part Numbers					
	FLK	FLR		Strip Form	Package Quantity	Loose-Piece	Package Quantity	Applicator <sup>†</sup>	Hand Tool 539635-1 with Die Set
0.14–0.22	–	1.05–1.20	-1 / -2 / -3	1452500	10,000	1452501	500	x-1528146-x	3-1579001-6
0.25–0.35	–	1.10–1.75	-1 / -2 / -3	1534594	10,000	1534595	500	x-1528147-x	1579001-6
0.50–0.75	–	1.4–1.9	-1 / -2 / -3	1670144#	8,000	1670145#	500	x-1528673-x	2-1579016-1
				1394897	8,000	1534063	500	x-1528148-x	1579001-5
1.0–1.5	–	1.9–2.4	-1 / -2 / -3	1452503	8,000	1452504	500	x-1528150-x	1-1579001-3

**Receptacle Contacts with Single Wire Sealing System (SWS)**

Wire Size Range (mm <sup>2</sup> )	Insulation Diameter (mm)		Material and Finish*	Part Numbers					
	FLK	FLR		Strip Form	Package Quantity	Loose-Piece	Package Quantity	Applicator <sup>†</sup>	Hand Tool 539635-1 with Die Set
0.14–0.22	–	1.05–1.20	-1 / -2 / -3	1418841	6,500	1418842	500	x-1528151-x	4-1579001-0
0.25–0.35	–	1.10–1.75	-1 / -2 / -3	1418844	6,500	1418845	500	x-1528152-x	3-1579001-9
0.50–0.75	–	1.4–1.9	-1 / -2 / -3	1670146#	6,500	1670147#	500	x-1528674-x	2-1579016-2
				1418847	6,500	1418848	500	x-1528153-x	3-1579001-8
1.0–1.5	–	1.9–2.4	-1 / -2 / -3	1418850	6,500	1418851	500	x-1528154-x	3-1579001-7

**\*) Material and Finish:**  
xxx-1 = CuNiSi, pre-tin/silver plated  
xxx-2 = CuNiSi, selective gold plated  
xxx-3 = CuNiSi, selective silver plated

†) The pre- and suffix for the applicators depends on the applied termination equipment.

**‡) CAUTION: Future Strip Form Orders will be replaced.**  
Because of change of the wire crimp at the new Part No. 1670144 and Part No. 1670146 they will be processed with new crimp heights. See latest Application Specification 114-18464.

**Tab Contacts – Locking Lance (LL)**

**Technical Features**

**Contact Material:**

CuNiSi;  
Insert Tab: CuSn0.15/0.2

**Contact Finish:**

Tin-silver plated,  
selective silver plated,  
selective gold plated

**Wire Size Range:**

0.14–0.22 mm<sup>2</sup>,  
0.25–0.35 mm<sup>2</sup>,  
0.50–0.75 mm<sup>2</sup>,  
1.00–1.50 mm<sup>2</sup>

**Extraction Tool:**

Part No. **5-1579007-3**

**Product Group Drawing:**

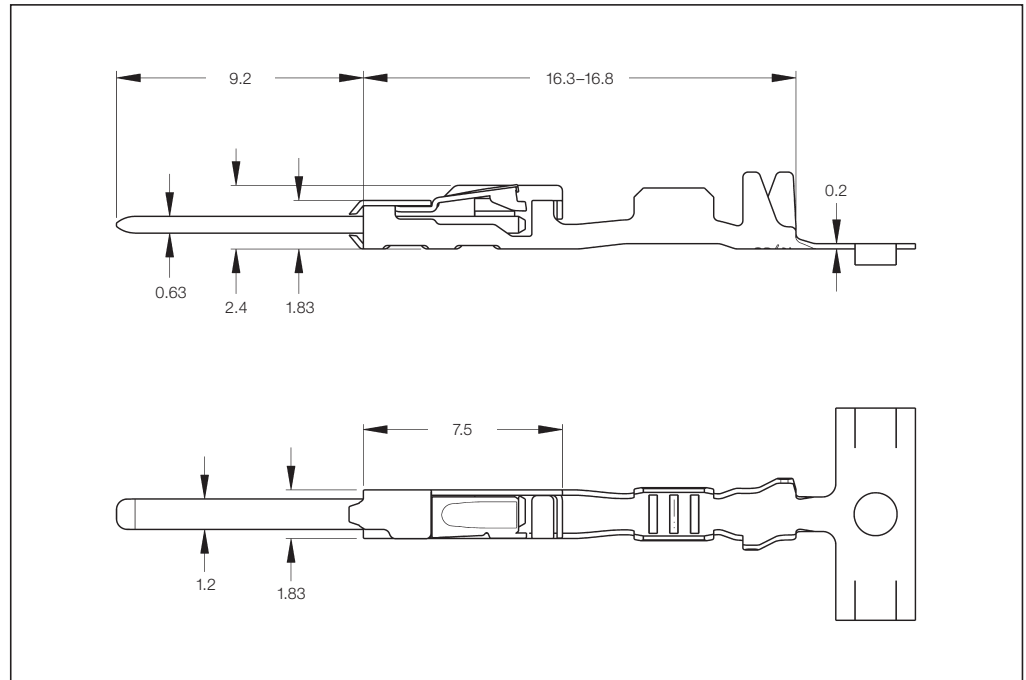
1418754

**Product Specification:**

108-18782

**Application Specification:**

114-18464



**Modular Dimensions (Centerline):**

max. 0.75 mm <sup>2</sup>	2.5 x 2.5 mm	
max. 1.0 mm <sup>2</sup>	2.5 x 3.0 mm	sealed 4.0 x 4.0 mm; sealed staggered 3.5 x 4.0 mm, cavity 3.55 mm diameter
max. 1.5 mm <sup>2</sup>	2.5 x 3.5 mm	sealed 4.5 x 4.5 mm;
	3.0 x 3.5 mm	sealed staggered 4.0 x 4.5 mm, cavity 3.95 mm diameter

**Standard Tab Contacts**

Wire Size Range (mm <sup>2</sup> )	Insulation Diameter (mm)		Material and Finish*	Part Numbers					
	FLK	FLR		Strip Form	Package Quantity	Loose-Piece	Package Quantity	Applicator*	Hand Tool 539635-1 with Die Set
0.14–0.22	–	1.05–1.20	-1 / -2 / -3	1418756	9,000	1418757	500	x-1528427-x	4-1579001-4
0.25–0.35	–	1.10–1.75	-1 / -2 / -3	1418758	9,000	1418759	500	x-1528428-x	4-1579001-3
0.50–0.75	–	1.4–1.9	-1 / -2 / -3	1418760	8,000	1418761	500	x-1528506-x	4-1579001-2
1.0–1.5	–	1.9–2.4	-1 / -2 / -3	1418762	7,000	1418763	500	x-1528507-x	4-1579001-1

**Tab Contacts with Single Wire Sealing System (SWS)**

Wire Size Range (mm <sup>2</sup> )	Insulation Diameter (mm)		Material and Finish*	Part Numbers					
	FLK	FLR		Strip Form	Package Quantity	Loose-Piece	Package Quantity	Applicator*	Hand Tool 539635-1 with Die Set
0.14–0.22	–	1.05–1.20	-1 / -2 / -3	1718756	6,500	1718757	500	x-1528508-x	4-1579001-8
0.25–0.35	–	1.10–1.75	-1 / -2 / -3	1718758	6,500	1718759	500	x-1528509-x	4-1579001-7
0.50–0.75	–	1.4–1.9	-1 / -2 / -3	1718760	6,000	1718761	500	x-1528510-x	4-1579001-6
1.0–1.5	–	1.9–2.4	-1 / -2 / -3	1718762	6,000	1718763	500	x-1528511-x	4-1579001-5

**\*) Material and Finish:**

xxx-1 = CuNiSi, pre-tin  
xxx-2 = CuNiSi, selective gold plated  
xxx-3 = CuNiSi, selective silver plated

**Note:** All part numbers are RoHS and ELV compliant.

**\*)** The pre- and suffix for the applicators depends on the applied termination equipment.

**Tab Contacts – Clean Body (CB)**

**Technical Features**

**Contact Material:**

CuSn0.15/0.2;  
Insert Tab: CuSn0.15/0.2

**Contact Finish:**

Tin-silver plated,  
selective silver plated,  
selective gold plated

**Wire Size Range:**

0.25–0.35 mm<sup>2</sup>,  
0.50–0.75 mm<sup>2</sup>

**Modular Dimensions**

**(Centerline):**

max. 0.75 mm <sup>2</sup>	2.5 x 2.5 mm
max. 1.0 mm <sup>2</sup>	2.5 x 3.0 mm
max. 1.5 mm <sup>2</sup>	2.5 x 3.5 mm
	3.0 x 3.5 mm

**Product Group Drawing:**

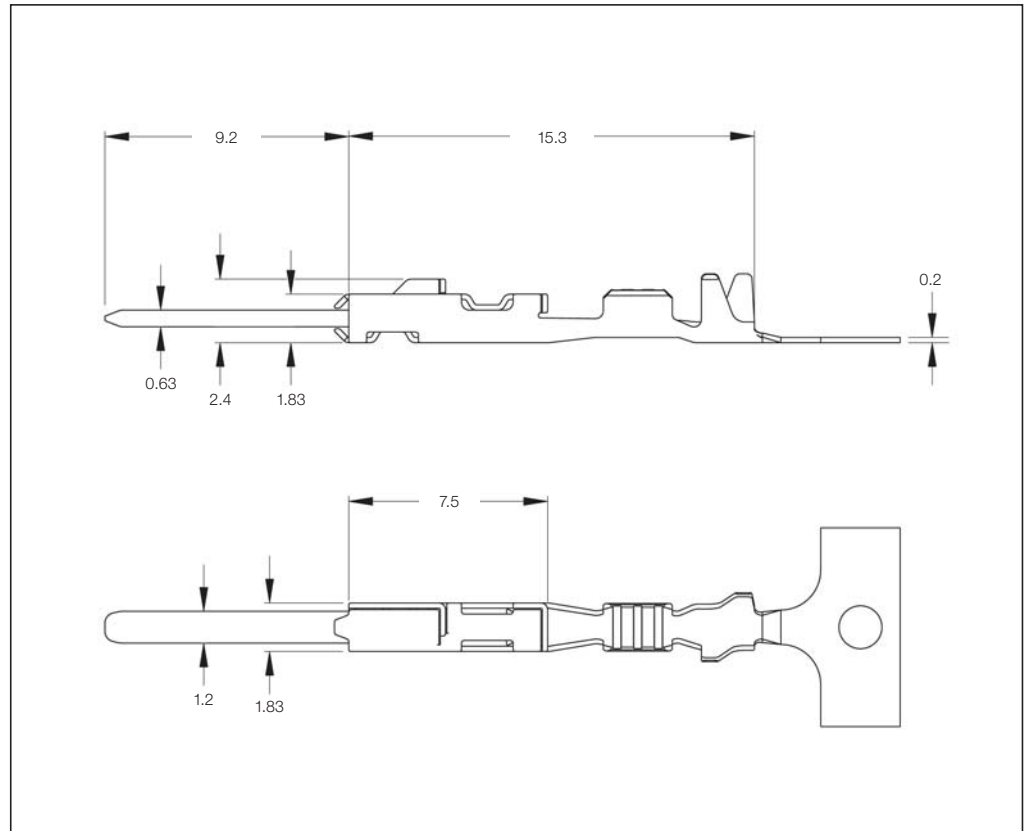
1718398

**Product Specification:**

108-18782

**Application Specification:**

114-18464



**Standard Tab Contacts**

Wire Size Range (mm <sup>2</sup> )	Insulation Diameter (mm)		Material and Finish*	Part Numbers				Applicator*	Hand Tool 539635-1 with Die Set
	FLK	FLR		Strip Form	Package Quantity	Loose-Piece	Package Quantity		
0.25–0.35	–	1.10–1.75	-1 / -2 / -3	1718348	9,000	1703698	500	x-1528156-x	4-1579001-3
0.50–0.75	–	1.4–1.9	-1 / -2 / -3	1718350	8,000	1718390	500	x-1528157-x	4-1579001-2

**\*) Material and Finish:**

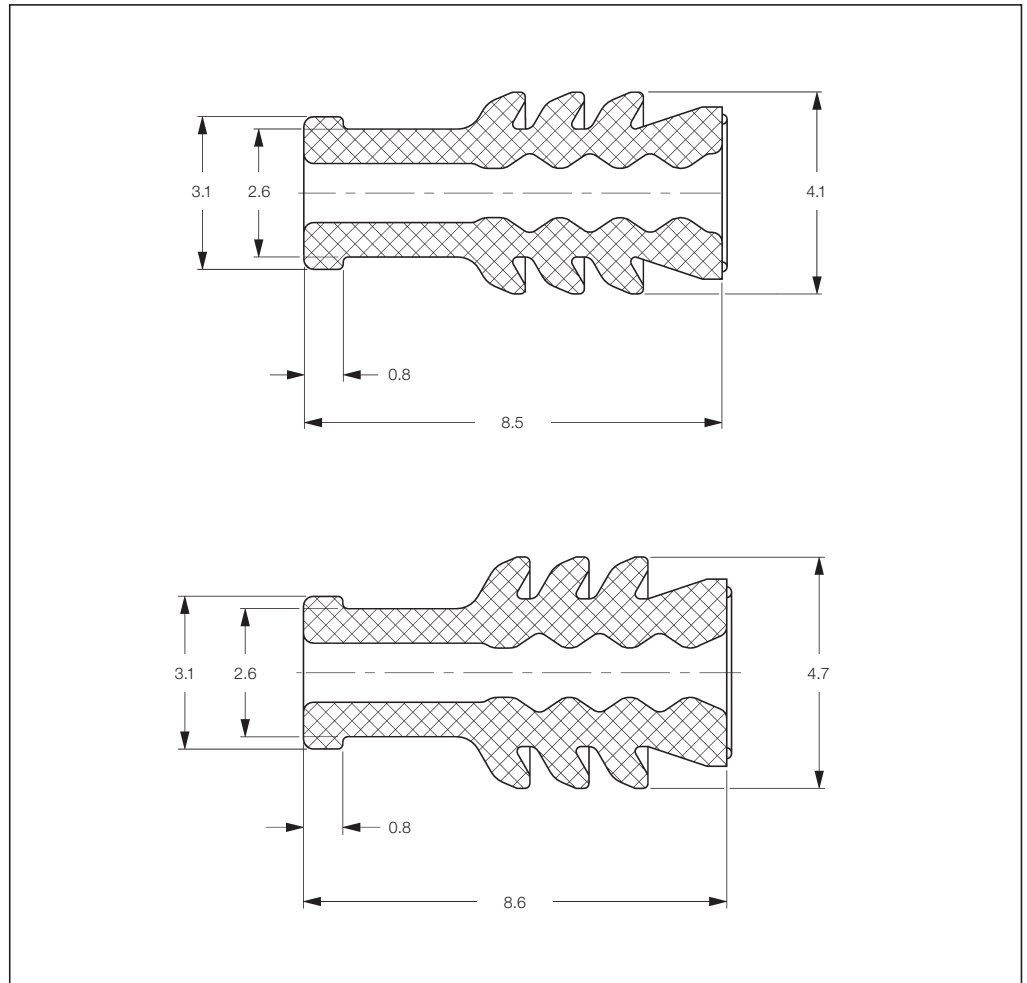
xxx-1 = CuNiSi, pre-tin  
xxx-2 = CuNiSi, selective gold plated  
xxx-3 = CuNiSi, selective silver plated

**Note:** All part numbers are RoHS and ELV compliant.

\*) The pre- and suffix for the applicators depends on the applied termination equipment.

Single Wire Seals and Sealing Plugs

**Single Wire Seals  
and Sealing Plugs for  
MCON Contact System  
(Cavity Diameter 3.55 mm  
and 3.95 mm)**



**Cavity Diameter 3.55 mm**

Insulation Diameter		Color	Part Number	Package Quantity
FLK (mm)	FLR (mm)			
-	0.9-1.4	Yellow	967067-2	20,000
-	1.4-2.1	Green	967067-1	20,000
Sealing Plug		Blue	967056-1	5,000

**Cavity Diameter 3.95 mm**

Insulation Diameter		Color	Part Number	Package Quantity
FLK (mm)	FLR (mm)			
-	0.9-1.9	Grey	963142-2	20,000
-	1.9-2.4	Green	967067-1	20,000
Sealing Plug		White	963143-1	20,000

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Engineering Notes

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**Receptacle Contacts**

**Technical Features**

**Contact Material:**  
CuSn0.15/0.2;  
Insertion Spring: CuNiSi

**Contact Finish:**  
Tin-silver plated,  
selective silver plated

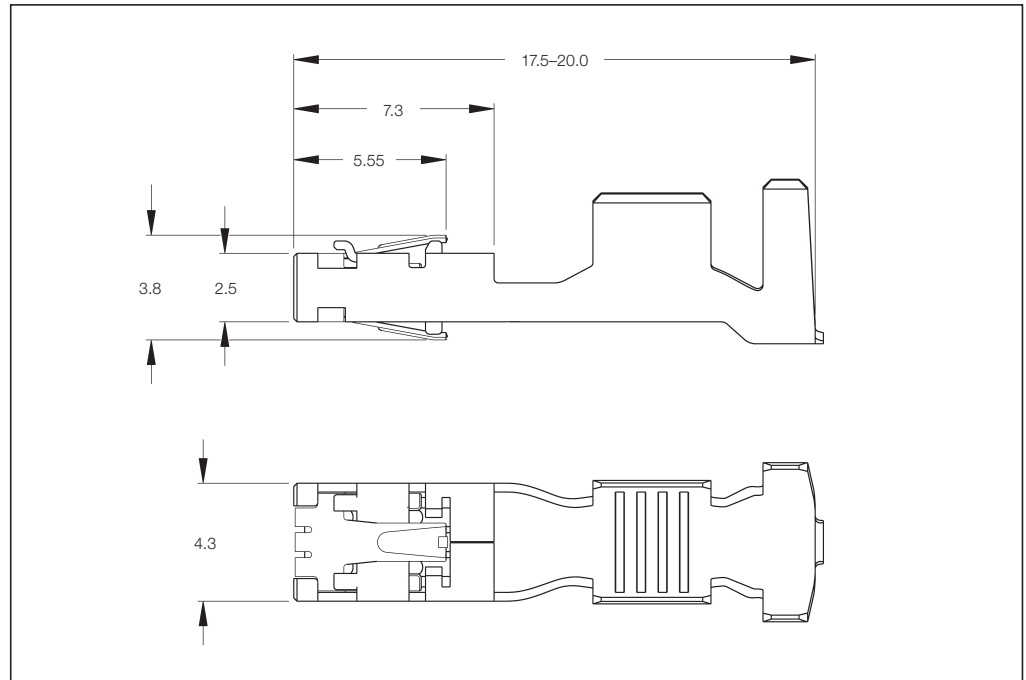
**Wire Size Range:**  
0.20–0.35 mm<sup>2</sup>,  
0.50 mm<sup>2</sup>,  
0.75–1.00 mm<sup>2</sup>,  
>1.0–2.5 mm<sup>2</sup>  
>2.5–4.0 mm<sup>2</sup>

**Extraction Tool:**  
Part No. **5-1579008-2**

**Product Group Drawing:**  
1719797

**Product Specification:**  
108-94002

**Application Specification:**  
114-18718



**Modular Dimensions (Centerline):**

max. 2.5 mm <sup>2</sup>	5.0 x 5.5 mm	sealed 5.5 x 5.5 mm
	staggered 4.5 x 5.5 mm	sealed staggered 5.0 x 5.5 mm
		cavity diameter 4.9 mm
max. 4.0 mm <sup>2</sup>	5.5 x 5.5 mm	sealed 7.2 x 7.2 mm
	staggered 5.0 x 5.5 mm	sealed staggered 6.0 x 7.2 mm
		cavity diameter 6.4 mm

**Standard Receptacle Contacts**

Wire Size Range (mm <sup>2</sup> )	Insulation Diameter (mm)		Material and Finish*	Part Numbers					
	FLK	FLR		Strip Form	Package Quantity	Loose-Piece	Package Quantity	Applicator*	Hand Tool with Die Set
0.20–0.35	–	1.15–1.40	-1 / -3	1719836	2,500	1719837	500	x-1528691-x	9-1579004-6
0.50	–	1.4–1.6	-1 / -3	1563719	2,500	1563720	500	x-1528899-x	9-1579004-7
0.75–1.00	–	1.7–2.1	-1 / -3	1719838	2,500	1719839	500	x-1528632-x	9-1579004-8
>1.0–2.5	–	2.2–3.0	-1 / -3	1719840	2,500	1719841	500	x-1528633-x	9-1579004-9
>2.5–4.0	–	3.4–3.7	-1 / -3	1718475	2,500	1718477	500	x-1528585-x	9-1579004-9

**Receptacle Contacts with Single Wire Sealing System (SWS)**

Wire Size Range (mm <sup>2</sup> )	Insulation Diameter (mm)		Material and Finish*	Part Numbers					
	FLK	FLR		Strip Form	Package Quantity	Loose-Piece	Package Quantity	Applicator*	Hand Tool with Die Set
0.50	–	1.4–1.6	-1 / -3	1563935	2,500	1563936	500	–	–
0.75–1.00	–	1.7–2.1	-1 / -3	1670802	2,500	1670803	500	x-1528773-x	6-1579014-1
>1.0–2.5	–	2.2–3.0	-1 / -3	1670804	2,500	1670805	500	x-1528774-x	6-1579014-2
>2.5–4.0	–	3.4–3.7	-1 / -3	1670806	2,500	1670807	500	x-1528775-x	6-1579014-3

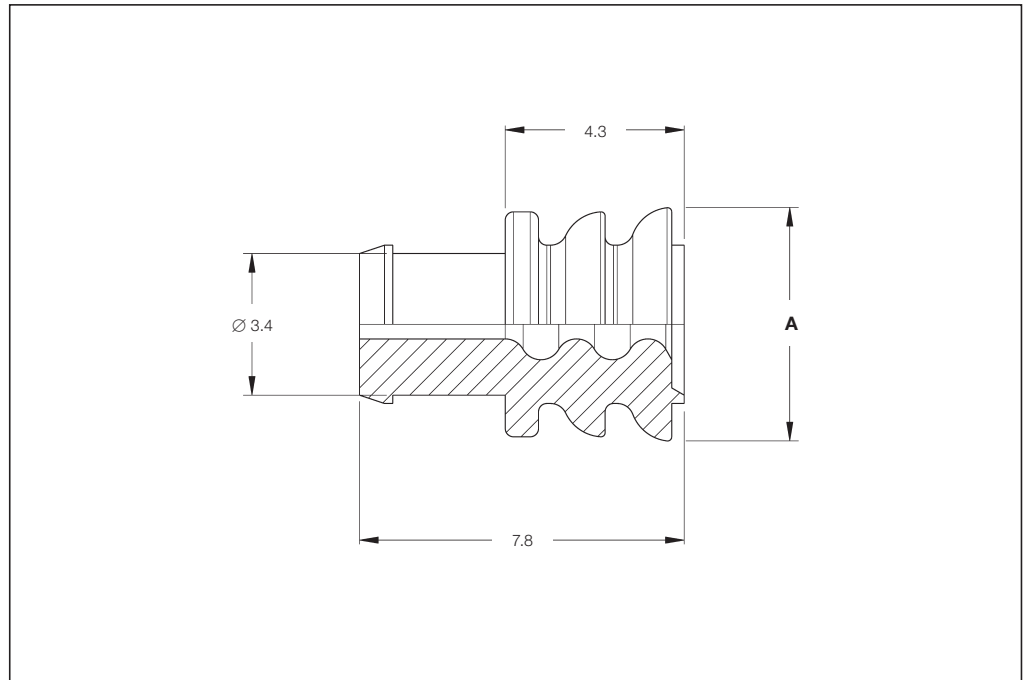
\***) Material and Finish:**  
xxx-1 = CuNiSi, pre-tin/silver plated  
xxx-3 = CuNiSi, selective silver plated

**Note:** All part numbers are RoHS and ELV compliant.

\***)** The pre- and suffix for the applicators depends on the applied termination equipment.

Single Wire Seals and Sealing Plugs

**Single Wire Seals and Sealing Plugs for MCON Contact System (Cavity Diameter 4.9 mm and 6.4 mm)**



**Cavity Diameter 4.9 mm**

Wire Size Range (mm)	Insulation Diameter (mm)	Color	Diameter A (mm)	Part Number	Package Quantity
0.75–1.00	1.4–2.1	Blue	5.6	828904-1	1,000
				828904-2	10,000
>1.5–2.5	2.2–3.0	White	5.6	828905-1	10,000
Sealing Plug		Natural	5.6	828922-1	10,000

**Cavity Diameter 6.4 mm**

Wire Size Range (mm)	Insulation Diameter (mm)	Color	Diameter A (mm)	Part Number	Package Quantity
>2.5–4.0	3.4–3.7	Green	7.2	828985-1	5,000
Sealing Plug		Brown	7.2	828986-1	5,000