



DIN 41612 / IEC 60603-2 Connectors

Special Contacts for Type M Male and Female

Special Contacts, Electrical and Mechanical Specifications

Coaxial Contacts	Standard	
Technical Specifications		
Temperature Range	DIN EN 60068-1	-55/125 °C
Wave impedance		50 Ω and 75 Ω
Dielectric withstanding voltage 50 Hz	IEC 60512-2 Test 4a	750 V
Insulation resistance	IEC 60512-2 Test 3a	≥ 10 ¹⁰ Ω
Volume resistance		
Inner conductor	DIN 41640-5 Test 2b	≤ 6 mΩ
Outer conductor		≤ 3 mΩ
Frequency range		max. 3 GHz
Reflection factor	DIN 47275-3	max. 0.05 to 1 GHz max. 0.07 to 4 GHz max. 0.10 to 10 GHz

Materials

Outer Conductor	Cu Alloy
Female contact	Cu Be hardened
Insulation part	PTFE
Crimp Sleeve	Cu

PERFORMANCE CLASSES

Class 1 Meets the requirements of DIN 41626. Internal conductor and external conductor gold-plated. Performance class 1 ≥ 500 mating cycles.

Class 2 As per performance class 1 but performance class 2 ≥ 400 mating cycles.

High Current Contacts

High Current Contacts	Standard	
Technical Specifications		
Temperature Range	DIN EN 60068-1	-55/125 °C
Current-Carrying Capacity	DIN 41640-3 Test 5b	30 A at 70° C
Dielectric withstanding voltage 50 Hz	IEC 60512-2 Test 4a	2500 V
Volume resistance	DIN 41640-5 Test 2b	≤ 1 mΩ

Materials

Male Contact	Cu Alloy
Female Contact	Cu Be hardened

PERFORMANCE CLASSES

Class 1 Meets the requirements of DIN 41626. Contacts are gold-plated. Performance class 1 ≥ 500 mating cycles

Class 2 As per performance class 1 but performance class 2 ≥ 400 mating cycles.

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D-Sub Connectors

Housings for Female High Current Contacts

Ordering Information

No. of Pins	Accessory Mating Side	Accessory Terminal Side	Part Number
3W3	Through hole	–	053437
3WK3	Through hole	–	114612
5W5	Through hole	–	063507
8W8	Through hole	–	103450

Female High Current Contacts for Handsolder

No. of Pins	Termination	Cable Type	Current	Part Number
–	Hand solder	AWG 16-20	10 A	594172
–	Hand solder	AWG 12-16	20 A	594174
–	Hand solder	AWG 8-12	40 A	594176

Female High Current Crimp Contacts

No. of Pins	Termination	Cable Type	Current	Part Number
–	Crimp	AWG 16-20	10 A	594178
–	Crimp	AWG 12-16	20 A	594180
–	Crimp	AWG 8-12	40 A	594182

Application Tooling

Configuration	Part Number
Hand Crimp tool	594184
Extraction tool	043736
Jacket if needed for replacement (for extraction tool)	043737

D-Sub Connectors

Housings for Male High Current Contacts

Ordering Information

No. of Pins	Accessory Mating Side	Accessory Terminal Side	Part Number
3W3	Through hole	–	054134
3WK3	Through hole	–	114611
5W5	Through hole	–	103748
8W8	Through hole	–	103448

Male High Current Contacts for Handsolder

No. of Pins	Termination	Cable Type	Current	Part Number
–	Hand solder	AWG 16-20	10 A	594221
–	Hand solder	AWG 12-16	20 A	594223
–	Hand solder	AWG 8-12	40 A	594225

Male High Current Crimp Contacts

No. of Pins	Termination	Cable Type	Current	Part Number
–	Crimp	AWG 16-20	10 A	594227
–	Crimp	AWG 12-16	20 A	594229
–	Crimp	AWG 8-12	40 A	594231

Application Tooling

Configuration	Part Number
Hand Crimp tool	594184
Extraction tool	043736
Jacket if needed for replacement (for extraction tool)	043737

DIN 41612 / IEC 60603-2 Connectors Special Contacts for Type M Male and Female





These special contacts, available in both Coax and High Current are inserted into the empty cavities provided in the Type M connector. The special contacts must be ordered separately as they are typically crimped or soldered onto the cable before insertion into the connector housing.

The coax contacts are available in 50 and 75 Ω in both right angle and straight configurations. ERNI offers contacts that can be crimped or soldered to cable or even soldered directly onto the PC board.

The high current contacts are available for 10, 20 and 40 amps. They can be soldered directly to the board or soldered or crimped to cable. Again, they are offered in both right angle or straight. Special high current versions are also available to assemble into the board. The pressfit contacts are designed to be used with the modified female connectors and to sit flush on the board.




Both the coax and high current contacts are simply snapped into the housing. No special tooling is required for insertion with the exception of the pressfit high current contact. A pressfit tool is required to press the entire assembly with the power contact into the board. An extraction tool is available if it would become necessary to remove any one of the special contacts.

Coaxial Male Contacts For DIN Backplane Connectors

Part-No.	RATING	CLASS	DESCRIPTION	CABLE	
053400	50 ohm	1	Straight, double braided	RG316 DB	
594213	50 ohm	1	Straight	RG174/U, RG188A/U, RG316/U	
053408	75 ohm	1	Straight	RG179B/U, RG187A/U	
594215	50 ohm	1	Right Angle	RG174/U, RG188A/U, RG316/U	
064755	50 ohm	2	Right Angle for .125" panel	RG174/U, RG188A/U, RG316/U	
064757	50 ohm	1	Right Angle, thick back-plane, double braided	RG316 DB	
064312*	50 ohm	1	Straight, 3 leg (sits flush on PCB)	PCB	

* To be used with Modified Female Connector Housings Type M.

Coaxial Female Contacts For DIN Daughter Card Connectors

Part-No.	RATING	CLASS	DESCRIPTION	CABLE	
053395	50 ohm	1	Straight, double braided	RG316 DB	
594207	50 ohm	1	Straight	RG174/U, RG188A/U, RG316/U	
053410	75 ohm	1	Straight	RG179B/U, RG187A/U	
594209	50 ohm	1	Right Angle	RG174/U, RG188A/U, RG316/U	
053412	70 ohm	1	Right Angle	RG179B/U, RG 187A/U	
594211	50 ohm	1	Right Angle, 5 leg	PCB	
123211	75 ohm	1	Right Angle, 5 leg	PCB	



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DIN 41612 / IEC 60603-2 Connectors

Special Contacts for Type M Male and Female

High Current Female Contacts For DIN Backplane Connectors

Part-No.	RATING	CLASS	DESCRIPTION	CABLE
594172	10 amp	1	Solder	Awg 16-20
594174	20 amp	1	Solder	Awg 12-16
594176	40 amp	1	Solder	Awg 8-12
594178	10 amp	1	Crimp	Awg 16-20
594180	20 amp	1	Crimp	Awg 12-16
594182	40 amp	1	Crimp	Awg 8-12
913637	40 amp	2	Straight, 1 leg, 5.5 mm diameter	PCB



Pressfit High Current Contacts For DIN Backplane Connectors

Part-No.	RATING	CLASS	Description	Plated PCB Hole Diameter	Drilled PCB Hole Diameter
034190	20 amp	2	Straight, FD	3,0 +.04 / - .06	3,1 +0 / - .03
044639*	40 amp	2	Straight, Pressfit	3,5 +.04 / - .06	3,6 +0 / - .03

* To be used with Modified Female Connector Housings Type M.

High Current Male Contacts For DIN Daughter Card Connectors

Part-No.	RATING	CLASS	DESCRIPTION	CABLE
594221	10 amp	1	Solder	Awg 16-20
594223	20 amp	1	Solder	Awg 12-16
594225	40 amp	1	Solder	Awg 8-12
594227	10 amp	1	Crimp	Awg 16-20
594229	20 amp	1	Crimp	Awg 12-16
594231	40 amp	1	Crimp	Awg 8-12
594170	10 amp	1	Right Angle, 1 leg	PCB
594168	40 amp	1	Right Angle, 4 leg, .200" sq. FTPT	PCB
913716	40 amp	2	Right Angle, 4 leg, EMLB	PCB



Additional High Current contacts in Performance Class 2 on request

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Tooling

High Current Contacts

Hand tool for crimp contacts
Contact Locator

Part-No. **594184**
Part-No. **914004**



Coaxial Contacts

Hand tools for crimp contacts
Insert for crimping tools

Part-No. **594219**
Part-No. **594220**



Extraction Tool For Coaxial And High Current Contacts

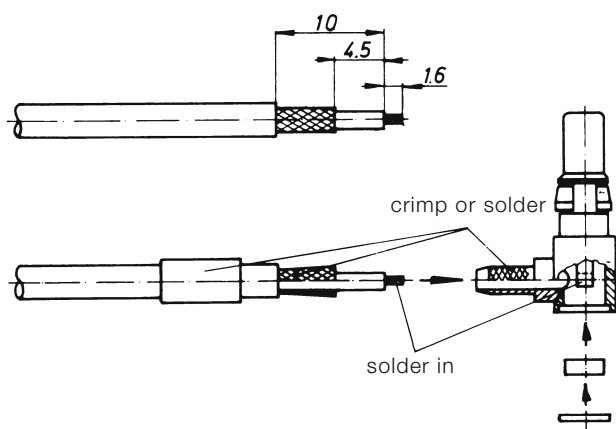
For replacing special contacts in
male or female connectors
Replacement inserts for press-out tool

Part-No. **594233**
Part-No. **433222**

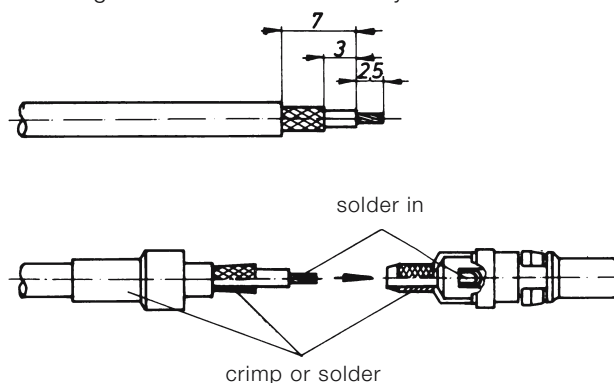


Assembly Instructions For Cable Connections

For Angled Coaxial Contact Assembly



For Straight Coaxial Contact Assembly



Special Contacts For Type L, M And N



Ordering Information For Coax Contacts

Characteristic Impedance	Contact Version	Cable Type	Part Number
50 Ohm	Male; Crimp-Version	RG 178 B/U; RG 196 A/U	013686
50 Ohm	Female; Crimp-Version	RG 178 B/U; RG 196 A/U	013687
50 Ohm	Male; PCB-Solder-Version; Right Angle		053299
50 Ohm	Female; Crimp-Version	RG 316 Protected	053395
50 Ohm	Male; Crimp-Version	RG 316 Protected	053400
50 Ohm	Female; Crimp-Version	RG 174 /U; RG 188 A/U; RG 316 /U	054238
50 Ohm	Male; Press-Fit-Version; Right Angle		104875
50 Ohm	Female; Crimp-Version	RG 174 /U; RG 188 A/U; RG 316 /U	594207
50 Ohm	Male; Crimp-Version	RG 174 /U; RG 188 A/U; RG 316 /U	594213
50 Ohm	Female; Press-Fit-Version R1		914382
75 Ohm	Male; PCB-Solder-Version; Right Angle		053306
75 Ohm	Male; Crimp-Version	RG 179 B/U; RG 187 A/U	053408
75 Ohm	Female; Crimp-Version	RG 179 B/U; RG 187 A/U	053410

Ordering Information for High Power Contacts

Max. Current	Contact Version	Comments	Part Number
10 A	Female; Crimp-Version		594178
20 A	Female; Crimp-Version		594180
30 A	Female; Crimp-Version		053452
40 A	Female; Crimp-Version		594182
40 A	Female; Press-Fit-Version R3		044965
10 A	Female; Solder-Version		594172
20 A	Female; Solder-Version		594174
40 A	Female; Solder-Version		594176
40 A	Female; Solder-Version; Right Angle		053298
10 A	Male; Crimp-Version		594227
20 A	Male; Crimp-Version	First Made Last Break; Only Usable With Part No. 044965	053430
20 A	Male; Crimp-Version		594229
30 A	Male; Crimp-Version		033319
40 A	Male; Crimp-Version		594231
10 A	Male; Press-Fit-Version R1	First Made Last Break	103855
40 A	Male; Press-Fit-Version R1	First Made Last Break; Only Usable With Part No. 044965	044846
40 A	Male; Press-Fit-Version R1		044847
10 A	Male; Solder- Version		594221
20 A	Male; Solder- Version		594223
40 A	Male; Solder- Version		594225
10 A	Male; Solder-Version	First Made Last Break; Only Usable With Part No. 044965	053444