

## DIN 41612 / IEC 60603-2 Connectors

### Electrical and Mechanical Characteristics



	Standard	B, B/2, B/3, C, C/2, C/3, Q, Q/2, Q/3, R, R/2, R/3, CD, RD, TE, E80, E160, ECC	M
Number of Pins		20, 30, 32, 48, 64, 80, 96, 128, 160	6, 24, 42, 60, 78
<b>Technical data</b>			
Climate Category	DIN EN 60068-1 test b	55/125/56	55/125/56
Temperature range		-55/125 °C	-55/125 °C
Current rating	IEC60512 test 5b	Ambient temperature 20 °C 2.0 A 70 °C 1.6 A 100 °C 1.0 A	Ambient temperature 20 °C 2.0 A 70 °C 1.6 A 100 °C 1.0 A
Clearance and creepage distance		contact - contact 1.2 mm contact - ground 1.8 mm contact - ground 1.6 mm (clearance)	contact - contact 1.2 mm contact - ground 3.0 mm contact - ground 2.5 mm (clearance)
CTI value	IEC 60112	225 (Standard and THR) 250 (Inverted Versions)	225
Voltage rating	IEC 60664	Has to be determined according to customer application (degree of environmental pollution) according to IEC 60664	Has to be determined according to customer application (degree of environmental pollution) according to IEC 60664
Dielectric strength	IEC 60512	contact - contact 1000 V <sub>rms</sub> contact - ground 1550 V <sub>rms</sub>	contact - contact 1000 V <sub>rms</sub> contact - ground 1550 V <sub>rms</sub>
Contact resistance	IEC 60512 test 2a	< 20 mΩ	< 20 mΩ
Insulation resistance	IEC 60512 test 3a	> 10 <sup>4</sup> MΩ	> 10 <sup>4</sup> MΩ
Vibration sine	IEC 60512 test 6d	10 – 2000 Hz 20 g	10 – 2000 Hz 20 g
Contact interruption (while vibration test)	IEC 60512 test 2e	< 1 μs	< 1 μs
Shock halvesine	IEC 60512 test 6c	50 g 11 ms	50 g 11 ms
Contact interruption (while shock test)	IEC 60512 test 2e	< 1 μs	< 1 μs
Mechanical operation (mating cycles)	IEC 60512 test 9a	Class 1: 500 mating cycles Class 2: 400 mating cycles	Class 1: 500 mating cycles Class 2: 400 mating cycles
Insertion and withdrawal force	IEC 60512 test 13b	20 cont.: 18 N max. 30 cont.: 28 N max. 32 cont.: 30 N max. 48 cont.: 45 N max. 64 cont.: 60 N max. 96 cont.: 90 N max. 128 cont.: 100 N max. 160 cont.: 110 N max.	6 cont.: 5 N max. 24 cont.: 22 N max. 42 cont.: 40 N max. 60 cont.: 57 N max. 78 cont.: 74 N max.  With special contacts max. 100 N
Gauge retention force per contact	IEC 60512 test 16e	> 0.15 N	> 0.15 N

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Number of Pins	20, 30, 32, 48, 64, 80, 96, 128, 160	6, 24, 42, 60, 78
<b>Process-conditions</b>		
Solder temperature max.	IEC 68-2-20	
Hand soldering temperature max.	3.5 s at 350 °C	3.5 s at 350 °C
Dip soldering temperature max.	10 s at 260 °C	10 s at 260 °C
Reflow soldering temperature max.	10 s at 260 °C (THR versions)	
Warning	Soldering of pressfit connectors not recommended.	Soldering of pressfit connectors not recommended.
<b>Materials</b>		
Housing: Plastic material (symbol)	PBT GF PA 46 GF (THR)	PBT GF
CTI value	IEC 60112 225 (Standard and THR) 250 (Inverted Versions)	225
UL flame rating	UL 94 V-0	UL 94 V-0
UL file	E47960 (Standard and THR) E41938 (Inverted Versions)	E47960
<b>Contact and mating area</b>		
Base material	Cu alloy	Cu alloy
Plating	Gold plated	Gold plated
<b>Termination area</b>		
Base material	Cu alloy	Cu alloy
Solder, pressfit and THR	Sn	Sn
<b>Environment compatibility</b>		
Recycling	no flame-retardent additives, no toxic additives, allows easy recycling	
<b>Product-approval and customer specific tests</b>		
UL	E84703	E84703
CSA	LR62504	LR62504

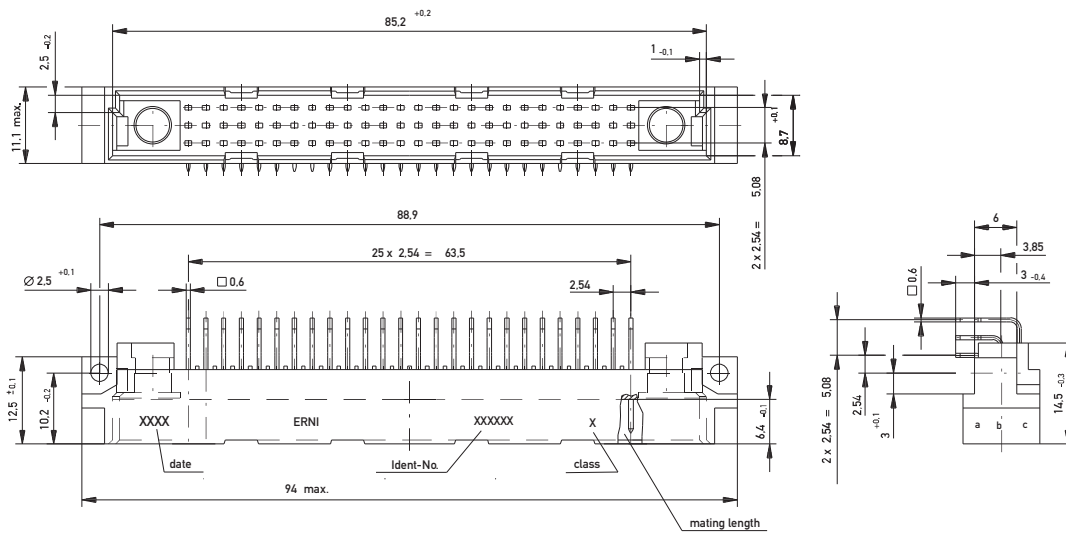
# DIN 41612 / IEC 60603-2 Connectors

## Type M Male

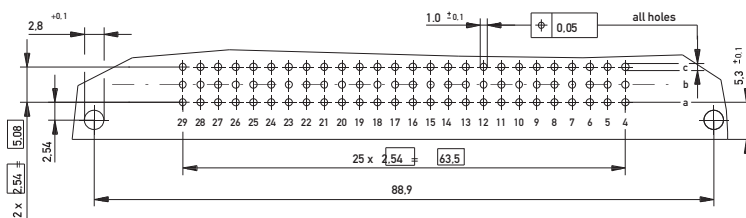


The Type M mixed connector series based on a 100" (2.54mm) pitch in accordance with the DIN41612/IEC 60603-2 specification. This series of connectors is designed to accommodate a variety of coaxial and high current contacts which are also used in other popular connector systems such as the 2mm Hard Metric Type M connectors. The male and female connectors have 2, 4, 6, 8 or 10 empty "cavities" to accommodate the special contacts. The versatility of mixing both signal and either high current or coax contacts increases the usage of this connector in telecommunication and data processing applications.

### Dimensional Drawing Solder



### PCB drillhole pattern



# DIN 41612 / IEC 60603-2 Connectors

## Type M Male



### Ordering Information

**No. of Pins    Termination    Term. Length    Pin Dimensions    Class    Pressfit Zone    Part Number**

		Solder	3 mm	0.6 x 0.6 mm	1	-	<b>024201</b>

		Solder	3 mm	0.6 x 0.6 mm	1	-	<b>594165</b>

16-8	Solder	3 mm	0.6 x 0.6 mm	2	-	<b>594166</b>
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		Solder	3 mm	0.6 x 0.6 mm	1	-	<b>593817</b>

24-8	Solder	3 mm	0.6 x 0.6 mm	2	-	<b>593818</b>
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		Solder	3 mm	0.6 x 0.6 mm	1	-	<b>594162</b>

28-6	Solder	3 mm	0.6 x 0.6 mm	2	-	<b>594163</b>
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		Solder	3 mm	0.6 x 0.6 mm	1	-	<b>593814</b>

42-6	Solder	3 mm	0.6 x 0.6 mm	2	-	<b>593815</b>
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# DIN 41612 / IEC 60603-2 Connectors

## Type M Male



### Ordering Information

No. of Pins	Termination	Term. Length	Pin Dimensions	Class	Pressfit Zone	Part Number
40-4	Solder	3 mm	0.6 x 0.6 mm	1	-	<b>594159</b>
40-4	Solder	3 mm	0.6 x 0.6 mm	2	-	<b>594160</b>
60-4	Solder	3 mm	0.6 x 0.6 mm	1	-	<b>593811</b>
60-4	Solder	3 mm	0.6 x 0.6 mm	2	-	<b>593812</b>
52-2	Solder	3 mm	0.6 x 0.6 mm	2	-	<b>594157</b>
78-2	Solder	3 mm	0.6 x 0.6 mm	1	-	<b>593808</b>
78-2	Solder	3 mm	0.6 x 0.6 mm	2	-	<b>593809</b>