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
Technical data			
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_{rms} contact - ground 1550 V_{rms}	contact - contact 1000 V_{rms} contact - ground 1550 V_{rms}
Contact resistance	IEC 60512 test 2a	< 20 mΩ	< 20 mΩ
Insulation resistance	IEC 60512 test 3a	> 10^4 MΩ	> 10^4 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 halfsine	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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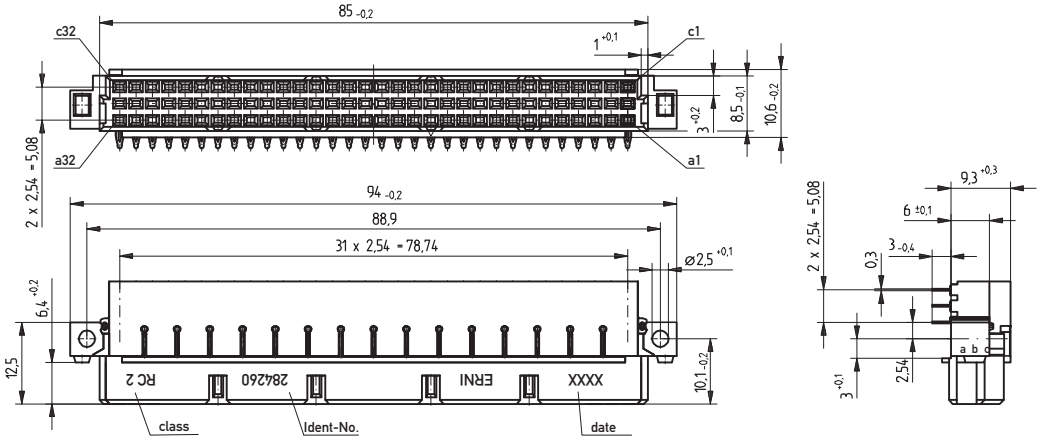
	Standard	B, B/2, B/3, C, C/2, C/3, Q, Q/2, Q/3, R, R/2, R/3, CD, RD, TE, E80, E160, ECC	M
Number of Pins		20, 30, 32, 48, 64, 80, 96, 128, 160	6, 24, 42, 60, 78
Process-conditions			
Solder temperature max.	IEC 68-2-20		
Hand soldering temperature max.		3.5 s at 350 °C	3.5 s at 350 °C
Dip soldering temperature 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.
Materials			
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
Contact and mating area			
Base material		Cu alloy	Cu alloy
Plating		Gold plated	Gold plated
Termination area			
Base material		Cu alloy	Cu alloy
Solder, pressfit and THR		Sn	Sn
Environment compatibility			
Recycling		no flame-retardent additives, no toxic additives, allows easy recycling	
Product-approval and customer specific tests			
UL		E84703	E84703
CSA		LR62504	LR62504

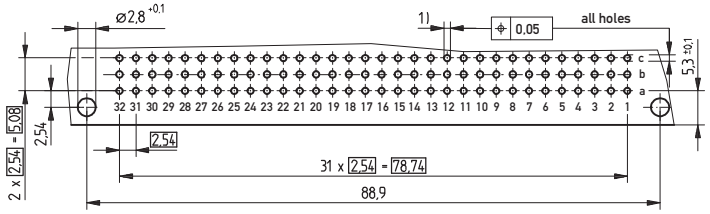
DIN 41612 / IEC 60603-2 Connectors

Type R Female

Dimensional Drawing Pressfit



PCB drillhole pattern



1) ø 1,0 +0,09 +0,06 Diameter of finished plated-through hole
ø 1,15 ±0,025 Diameter of drilled hole

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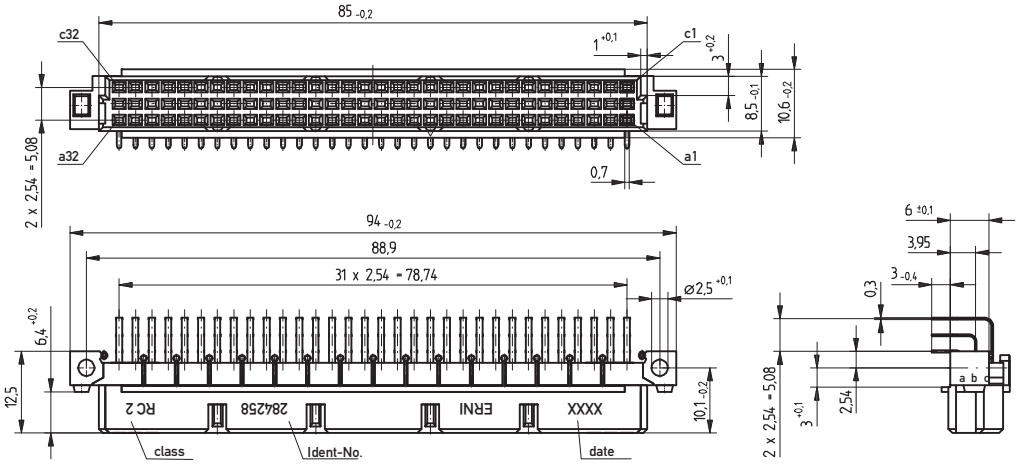
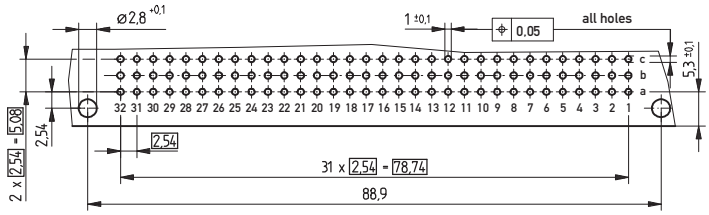
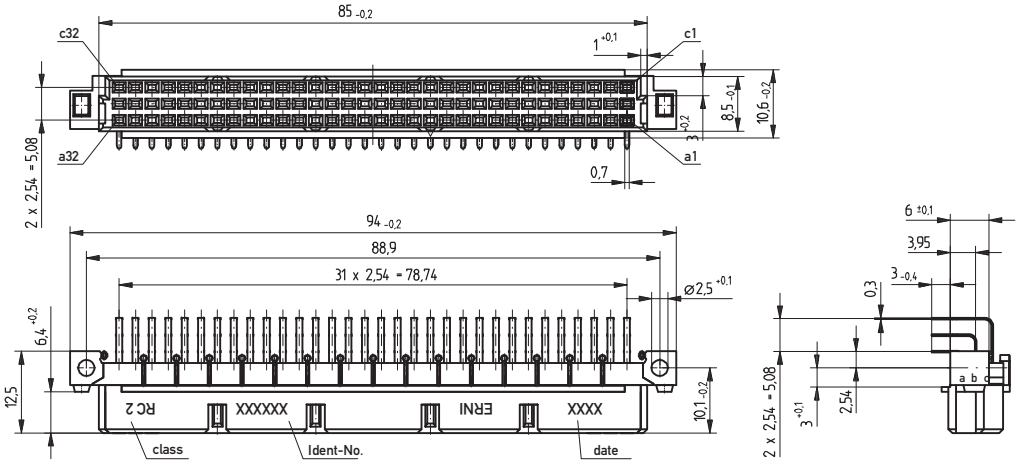
Dimensional Drawing Solder



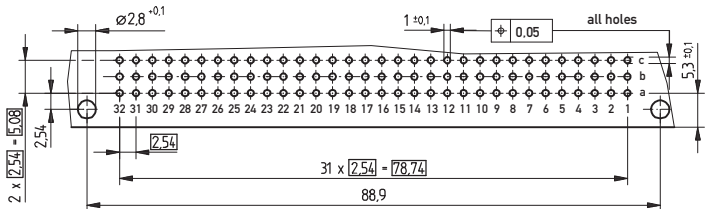
PCB drillhole pattern



Dimensional Drawing THR



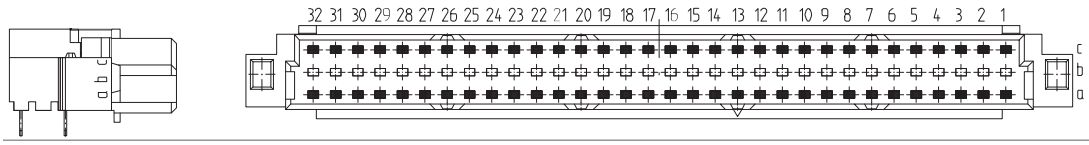
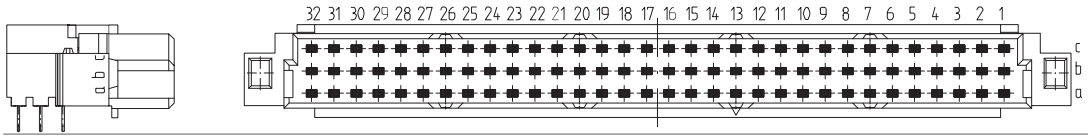
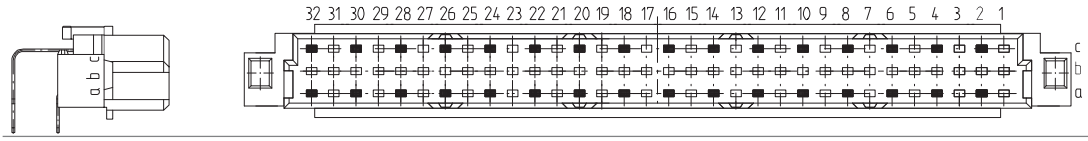
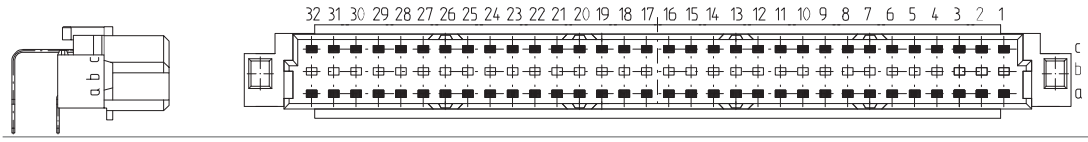
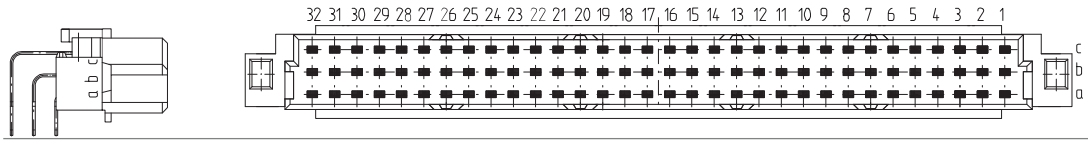
PCB drillhole pattern



DIN 41612 / IEC 60603-2 Connectors

Type R Female

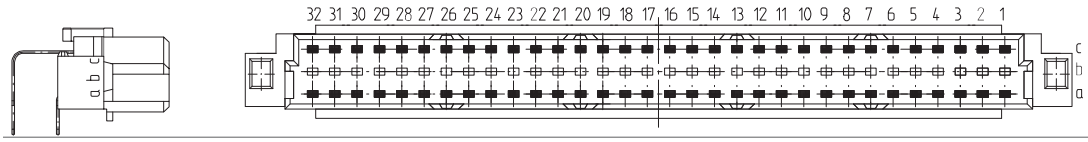
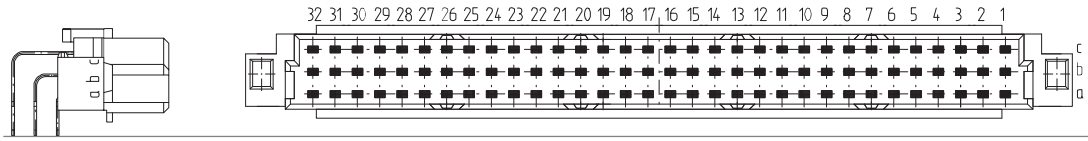
Ordering Information

No. of Pins	Termination	Term. Length	Pin Dimensions	Class	Pressfit Zone	Part Number
						
64	Pressfit	3 mm	0.7 x 0.3 mm	2	–	**284262**
						
96	Pressfit	3 mm	0.7 x 0.3 mm	2	–	**284260**
						
32	Solder	3 mm	0.7 x 0.3 mm	2	–	**284261**
						
64	Solder	3 mm	0.7 x 0.3 mm	2	–	**284259**
64	Solder with Clip	3 mm	0.7 x 0.3 mm	2	–	**284263**
						
96	Solder	3 mm	0.7 x 0.3 mm	1	–	**354135**
96	Solder	3 mm	0.7 x 0.3 mm	2	–	**284258**
96	Solder with Clip	3 mm	0.7 x 0.3 mm	2	–	**284264**

DIN 41612 / IEC 60603-2 Connectors

Type R Female

Ordering Information

No. of Pins	Termination	Term. Length	Pin Dimensions	Class	Pressfit Zone	Part Number
						
64	THR	3 mm	0.7 x 0.3 mm	2	–	**284270**
64	THR with Clip	3 mm	0.7 x 0.3 mm	2	–	**284653**
						
96	THR	3 mm	0.7 x 0.3 mm	2	–	**244139**
96	THR with Clip	3 mm	0.7 x 0.3 mm	2	–	**284269**