



2.54 mm Single Row Connector (SRC) MaxiBridge™



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2.54 mm Single Row Connectors (SRC) MaxiBridge™

General



The 2.54 mm single row cable connector system is ideally suitable for high reliable and space saving connections between PCBs and decentral units, e.g. lamps or info-panels, front plate elements like buttons, switches, fuses or LEDs, motors, fans etc. The cable system can be used in different applications, for example: automotive, telecom, industrial, medical or even consumer electronics.

Thanks to the availability of vertical and right angle male connectors and female connectors with 180° cable outlet the system can be used in a versatile manner. Emphasis is put on flexibility of the usable cable sizes. Thus the required current carrying capacity can be adjusted over a wide range.

The male connector provides SMT-terminals and the female connector has contact cavities according to the crimp contacts. The plastic material used is suitable for lead-free reflow soldering.

Tape-and-Reel packaging and pick and place pad for fully automatic assembly is a standard. The crimp contacts are secured twice and reach highest retention forces. There are 4 mechanical and different coloured coding versions with high blocking forces against mismatching. Cable and male connector have a locking system which prevents the contact from loosening due to vibration. The cable connector can be removed without an additional tool.

Technical Features

- Number of pins: 2, 3, 5, 6 and 8
- Pitch: 2.54 mm
- Current carrying capacity per contact: up to 12 A*
(8 Pos connector up to 96 A* per connector)
- Termination: Male connector SMT
Female connector crimp
- Single stranded wires: AWG 20, 22, 24
- Vertical and right angle male connector
Female connector 180° cable outlet
- Robust positive locking feature
- 4 coding versions: black, red, green, blue

* For specific data, please see the corresponding derating curve.

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Electrical and Mechanical Characteristics

	Standard	Male Connectors Type A and P	Female Connectors Type A with crimp contact
Number of Pins		2, 3, 5, 6 and 8	2, 3, 5, 6 and 8
Technical data			
Climate category	DIN EN 60068-1 test b	55/125/56	55/125/56
Beraring and operating temperature area		-55/150 °C	-55/150 °C
Current rating per contact		Depending on used cable and limit temperature; see derating curve.	Depending on used cable and limit temperature; see derating curve.
Air – and creepage distance		contact - contact 1.2 mm	contact - contact 1.2 mm
Voltage rating	IEC60664	The permissible operating voltages depend on the customer application and on the applicable or specified safety requirements. Insulation coordination according to IEC 60664-1 has to be regarded for the complete electrical device. Therefore, the maximum creepage and clearance distances of the mated connectors are specified for consideration as a part of the whole current path. In practice, reductions in creepage or clearance distances may occur due to the conductive pattern of the printed board or the wiring used, and have to be taken into account separately. As a result the creepage and clearance distances for the application may be reduced compared to those of the connector.	
Dielectric strength	IEC 60512 test 4a	contact – contact 1000 V _{rms}	contact – contact 1000 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 disturbance (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 disturbance (while shock test)	IEC 60512 test 2e	< 1μs	< 1μs
Mechanical operation (mating cycles)	IEC 60512 test 9a	> 250 mating cycles	> 250 mating cycles
Insertion and withdrawal force	IEC 60512 test 13b	5 pin version ≤ 5 N	5 pin version ≤ 5 N
Gauge retention force	IEC 60512 test 16e	> 0.15 N	> 0.15 N

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Electrical and Mechanical Characteristics

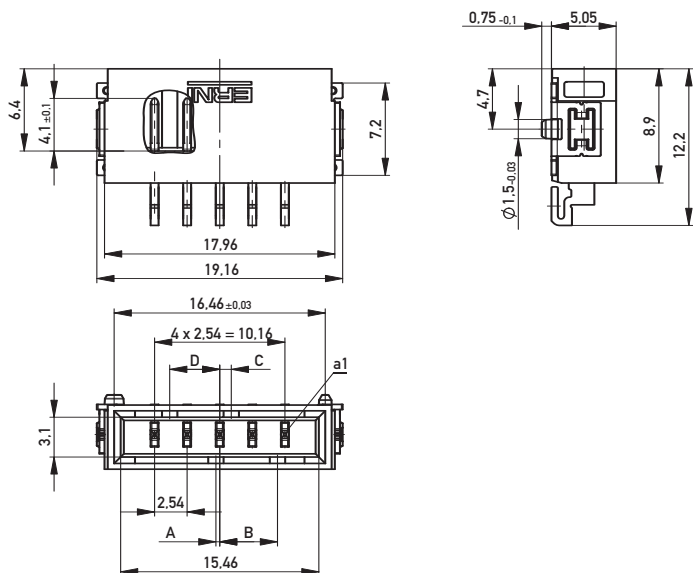
	Standard	Male Connectors Type A and P	Female Connectors Type P with crimp contact
Number of Pins		2, 3, 5, 6 and 8	2, 3, 5, 6 and 8
Process-conditions			
Soldering temperature max.	IEC 68-2-20		
Hand soldering temperature max.		3.5 s at 350 °C	
Dip soldering temperature max.		10 s at 260 °C	
Reflow soldering temperature max.	JEDEC J-STD-020C	20 - 40 s at 260 °C	
Coplanarity		< 0.1 mm	
Housing Materials			
Plastic material		LCP	PA46
CTI value	IEC 60112	175	250
UL flame rating		UL 94 V-0	UL 94 V-0
UL file		E83005	E47960
Contact Materials			
Base material		Cu alloy	Cu alloy
Mating area		min. 1.0 µm PdNi 0.1 µm Au over 2-3 µm Ni	min. 1.0 µm PdNi 0.1 µm Au over 2-3 µm Ni
Termination area		4-6 µm Sn matt over 2-3 µm Ni	0.5-2 µm Sn matt over 2-3 µm Ni
Environment compatibility			
Recycling		no flame-retardant additives, no toxic additives allows easy recycling	
Product-approval			
UL		in preparation	in preparation

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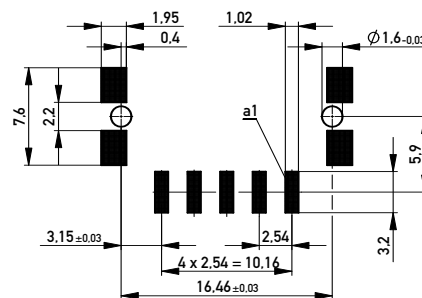


Right Angle Male Connectors

Dimensional Drawings 5 Pin Version

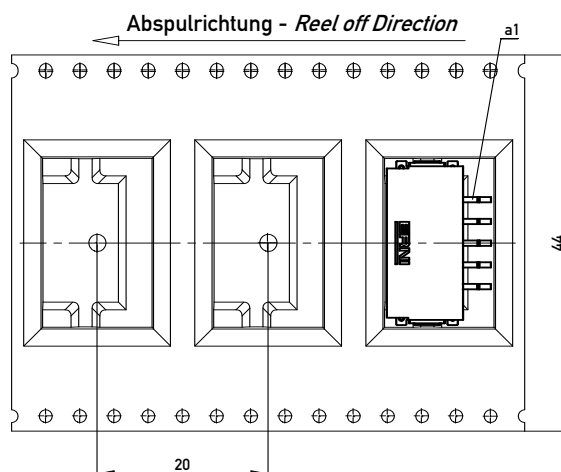
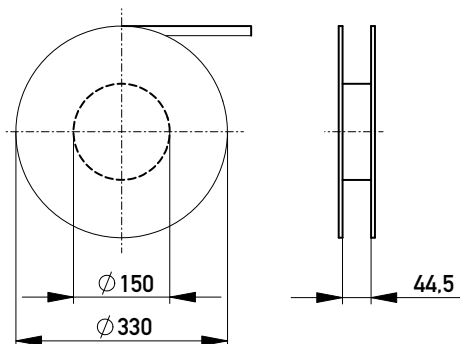


Leiterplatten-Layout Vorschlag für SMT
PCB-Layout Proposal for SMT



254826		rot <i>red</i>	3,9	0,9	4,5	0,3
254825		grün <i>green</i>	2,7	2,1	3,3	1,5
254824		blau <i>blue</i>	1,5	3,3	2,1	2,7
254823		schwarz <i>black</i>	0,3	4,5	0,9	3,9
Ident-Nr. <i>part-no.</i>	Codierung <i>coding</i>	Farbe <i>color</i>	A	B	C	D

Verpackt in Gurtverpackung - *Tape on Reel Packaging*
Verpackungseinheit: 440 Stück - *Packaging unit: 440 pcs*

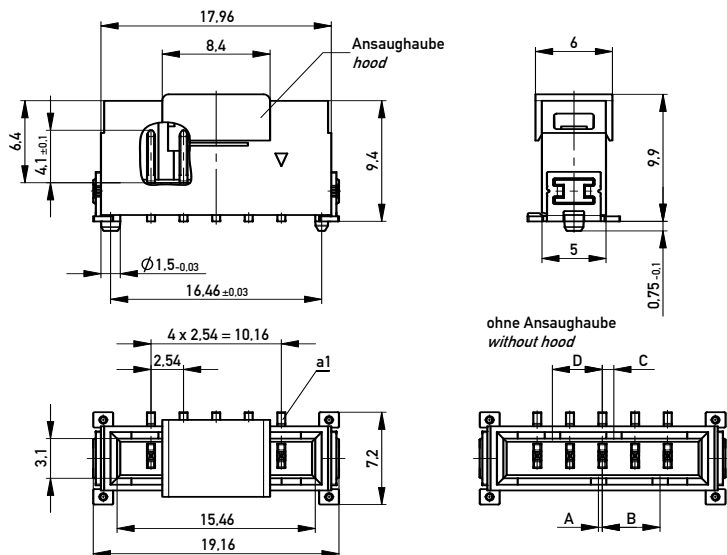


2.54 mm Single Row Connectors (SRC) MaxiBridge™

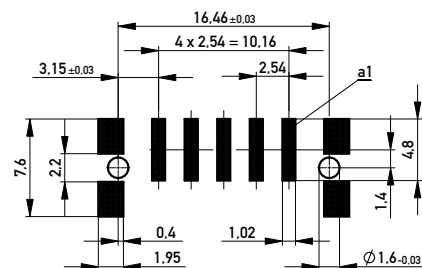


Vertical Male Connectors

Dimensional Drawing 5 Pin Version



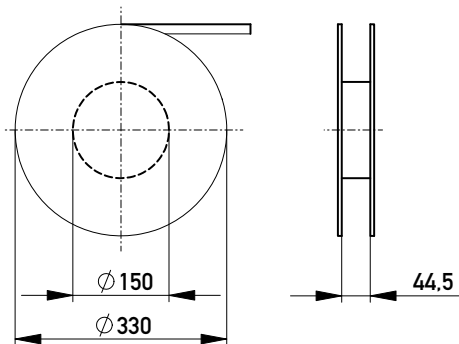
Leiterplatten-Layout Vorschlag für SMT PCB-Layout Proposal for SMT



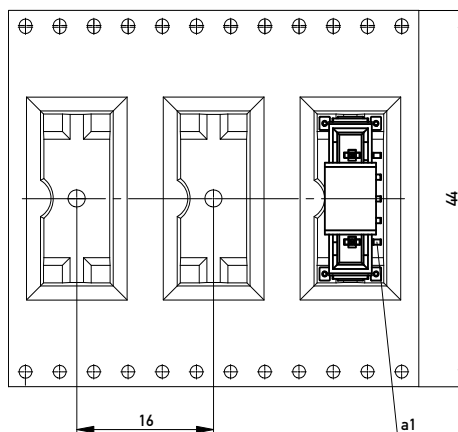
Leiterplatten-Layout Vorschlag für SMT

254834		rot <i>red</i>	3.9	0.9	4.5	0.3
254833		grün <i>green</i>	2.7	2.1	3.3	1.5
254832		blau <i>blue</i>	1.5	3.3	2.1	2.7
254831		schwarz <i>black</i>	0.3	4.5	0.9	3.9
Ident-Nr. <i>part-no.</i>	Codierung <i>coding</i>	Farbe <i>color</i>	A	B	C	D

Verpackt in Gurtverpackung - *Tape on Reel Packaging*
Verpackungseinheit: 320 Stück - *Packaging unit: 320 pcs*



Abspulrichtung - *Reel off Direction*

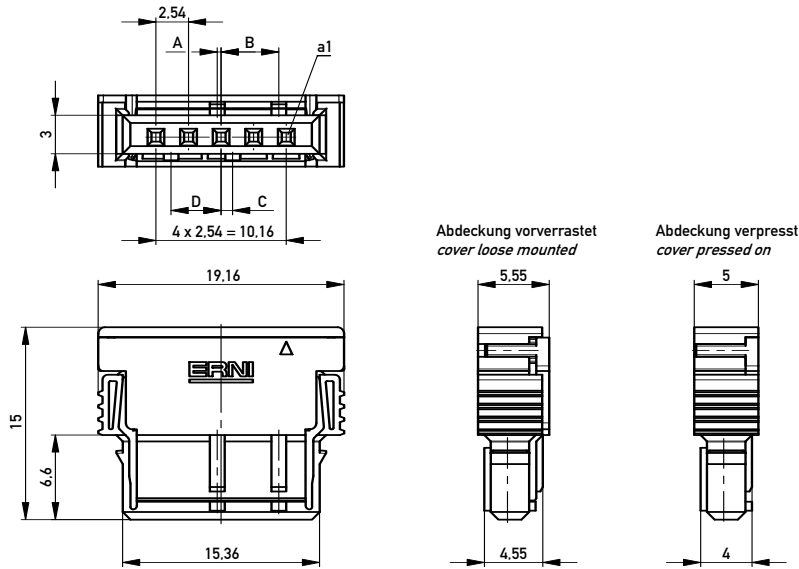


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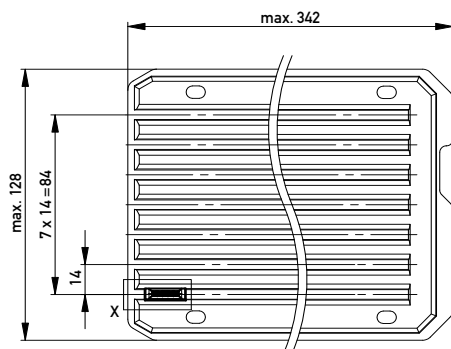
Vertical Female Connectors

Dimensional Drawing 5 Pin Version



254830		rot <i>red</i>	3.9	0.9	4.5	0.3
254829		grün <i>green</i>	2.7	2.1	3.3	1.5
254828		blau <i>blue</i>	1.5	3.3	2.1	2.7
254827		schwarz <i>black</i>	0.3	4.5	0.9	3.9
Ident-Nr. <i>part-no.</i>	Codierung <i>coding</i>	Farbe <i>color</i>	A	B	C	D

Verpackt in Tray - *tray packaging*
Verpackungseinheit 112 Stück - *packaging unit 112*



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Right Angle Male Connectors

Ordering Information

Configuration	Number of Pins	Termination	Coding	Packaging/Unit	Part Number
Right Angle Male	2	SMT	black	Tape and reel/440 pcs	234832
Right Angle Male	2	SMT	blue	Tape and reel/440 pcs	234833
Right Angle Male	2	SMT	green	Tape and reel/440 pcs	234834
Right Angle Male	2	SMT	red	Tape and reel/440 pcs	234835
Right Angle Male	3	SMT	black	Tape and reel/440 pcs	284052
Right Angle Male	3	SMT	blue	Tape and reel/440 pcs	284053
Right Angle Male	3	SMT	green	Tape and reel/440 pcs	284054
Right Angle Male	3	SMT	red	Tape and reel/440 pcs	284055
Right Angle Male	5	SMT	black	Tape and reel/440 pcs	254823
Right Angle Male	5	SMT	blue	Tape and reel/440 pcs	254824
Right Angle Male	5	SMT	green	Tape and reel/440 pcs	254825
Right Angle Male	5	SMT	red	Tape and reel/440 pcs	254826
Right Angle Male	6	SMT	black	Tape and reel/440 pcs	254699
Right Angle Male	6	SMT	blue	Tape and reel/440 pcs	254700
Right Angle Male	6	SMT	green	Tape and reel/440 pcs	254701
Right Angle Male	6	SMT	red	Tape and reel/440 pcs	254702
Right Angle Male	8	SMT	black	Tape and reel/440 pcs	284121
Right Angle Male	8	SMT	blue	Tape and reel/440 pcs	284122
Right Angle Male	8	SMT	green	Tape and reel/440 pcs	284123
Right Angle Male	8	SMT	red	Tape and reel/440 pcs	284124

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Vertical Male Connectors



Ordering Information

Configuration	Number of Pins	Termination	Coding	Packaging/Unit	Part Number
Vertical Male	2	SMT	black	Tape and reel/320 pcs	294645
Vertical Male	2	SMT	blue	Tape and reel/320 pcs	294646
Vertical Male	2	SMT	green	Tape and reel/320 pcs	294647
Vertical Male	2	SMT	red	Tape and reel/320 pcs	294648
Vertical Male	3	SMT	black	Tape and reel/320 pcs	284656
Vertical Male	3	SMT	blue	Tape and reel/320 pcs	284657
Vertical Male	3	SMT	green	Tape and reel/320 pcs	284658
Vertical Male	3	SMT	red	Tape and reel/320 pcs	284659
Vertical Male	5	SMT	black	Tape and reel/320 pcs	254831
Vertical Male	5	SMT	blue	Tape and reel/320 pcs	254832
Vertical Male	5	SMT	green	Tape and reel/320 pcs	254833
Vertical Male	5	SMT	red	Tape and reel/320 pcs	254834
Vertical Male	6	SMT	black	Tape and reel/320 pcs	254707
Vertical Male	6	SMT	blue	Tape and reel/320 pcs	254708
Vertical Male	6	SMT	green	Tape and reel/320 pcs	254709
Vertical Male	6	SMT	red	Tape and reel/320 pcs	254710
Vertical Male	8	SMT	black	Tape and reel/320 pcs	294649
Vertical Male	8	SMT	blue	Tape and reel/320 pcs	294650
Vertical Male	8	SMT	green	Tape and reel/320 pcs	294651
Vertical Male	8	SMT	red	Tape and reel/320 pcs	294652

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Vertical Female Connectors

Ordering Information

Configuration	Number of Pins	Termination	Coding	Packaging/Unit	Part Number
Vertical Female	2	crimp	black	Tray/182 pcs	284044
Vertical Female	2	crimp	blue	Tray/182 pcs	284045
Vertical Female	2	crimp	green	Tray/182 pcs	284046
Vertical Female	2	crimp	red	Tray/182 pcs	284047
Vertical Female	3	crimp	black	Tray/154 pcs	284048
Vertical Female	3	crimp	blue	Tray/154 pcs	284049
Vertical Female	3	crimp	green	Tray/154 pcs	284050
Vertical Female	3	crimp	red	Tray/154 pcs	284051
Vertical Female	5	crimp	black	Tray/112 pcs	254827
Vertical Female	5	crimp	blue	Tray/112 pcs	254828
Vertical Female	5	crimp	green	Tray/112 pcs	254829
Vertical Female	5	crimp	red	Tray/112 pcs	254830
Vertical Female	6	crimp	black	Tray/96 pcs	254703
Vertical Female	6	crimp	blue	Tray/96 pcs	254704
Vertical Female	6	crimp	green	Tray/96 pcs	254705
Vertical Female	6	crimp	red	Tray/96 pcs	254706
Vertical Female	8	crimp	black	Tray/77 pcs	284117
Vertical Female	8	crimp	blue	Tray/77 pcs	284118
Vertical Female	8	crimp	green	Tray/77 pcs	284119
Vertical Female	8	crimp	red	Tray/77 pcs	284120

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Crimp Contacts and Tool

Ordering Information

Contacts	Cable Type	Termination	Packaging	Part Number
Female contact	AWG 20, 22, 24	crimp	Reel/10000 pcs	284069
Female contact	AWG 20, 22, 24	crimp	Reel/500 pcs	284070
Female contact	AWG 20, 22, 24	crimp	Bulk/100 pcs	284071

Tool	Cable Type	Packaging	Part Number
Hand Crimp	AWG 20, 22, 24	1 pcs	952050

The tool is designed for use with contact reels (500 contacts per reel) only. A tool for single contacts is not available.

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