



1.27 mm SRC Single Row Connector MiniBridge™ Cable System

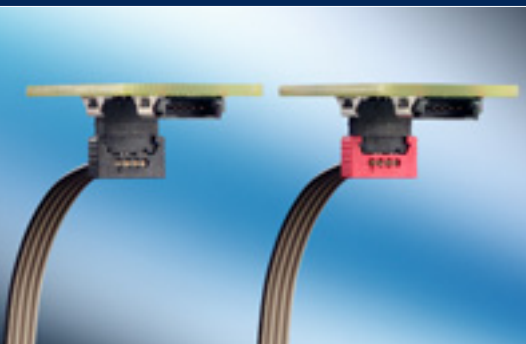




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General

The small size of the single-row, 1.27 mm pitch SRC connector system makes it ideal for space-saving board to cable connections. The cable connector system is used in the widest range of applications in various sectors such as automotive, industrial, consumer or medical. The versatile applications can be realized thanks to the various connection options, with right angle or vertical male connectors and female connectors with 90° or 180° cable outlet.

The male connector is available with SMT terminals, the female connector has IDC cable connections. The plastic housing of the male connector is able to withstand high temperatures, so the connector is suitable for lead-free reflow soldering processes. The male connectors are available in tape-and-reel packaging for automatic assembly.

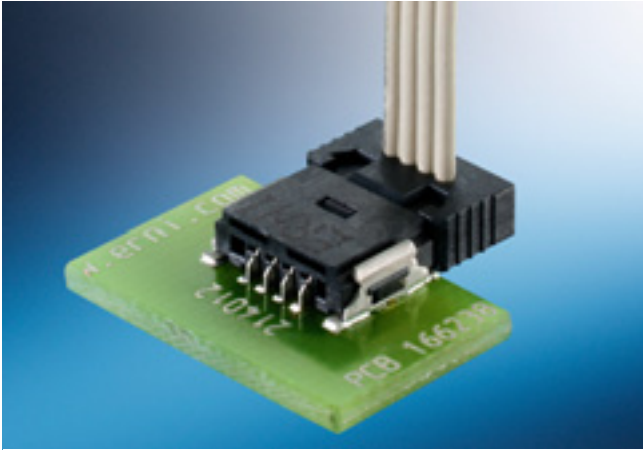
With the female connector the cable guide ensures that attaching the cable or single strands is a simple operation.

Standard cable assemblies are available. Customized cable assemblies can be easily ordered on request.

Features

- Pitch: 1.27 mm
- Number of pins: 2, 3, 4, 6 and 8
- Current capacity (with high temperature cable):
 - 4 A at 20 °C
 - 3 A at 70 °C
 - 2 A at 100 °C
- Termination: Male Connector SMT
Female Connector IDC
- Cable: AWG 26 ribbon cable,
Single wire stranded or solid
- Connectors: Vertical and right angle male connectors
Female connectors with 90° or 180° cable outlet
- Interlocking:
 - Positive lock (red): unlockable only with tool
(high vibration/shock load)
 - Friction lock (black): unlockable without tool
(normal vibration/shock load)

Available Terminations



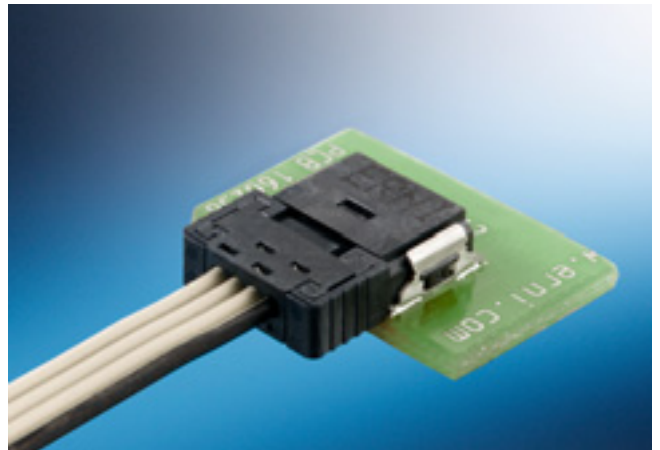
Right angle male - Female 90° cable outlet



Vertical male - Female 90° cable outlet



Vertical male - Female 180° cable outlet



Right angle male - Female 180° cable outlet

1.27 mm SRC Single Row Connector - MiniBridge™ Cable System Features



Processing Results



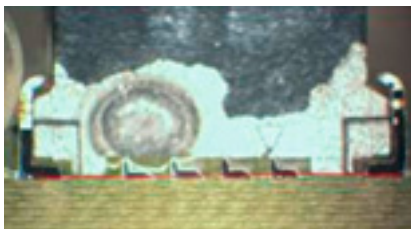
Cross Section Right Angle Male Connector



Clip



Contact



Cross Section Vertical Male Connector



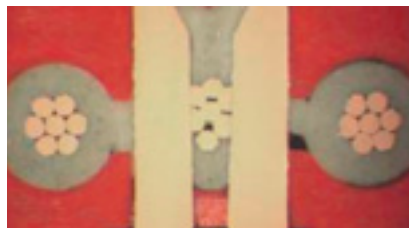
Clip



Contact



Cross Section ribbon cable AWG-26 solid wire 90° cable outlet



Cross section ribbon cable AWG-26 stranded wire 180° cable outlet

Cable Type



Ribbon Cable



Ribbon cable for higher clearance and creepage distances



Single Wire

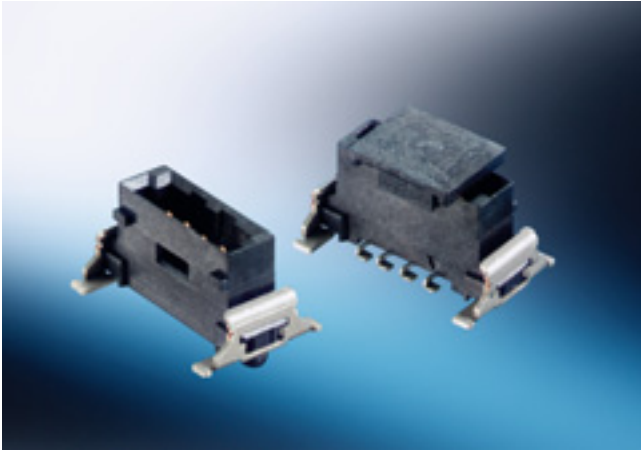


Round Cable



1.27 mm SRC Single Row Connector - MiniBridge™ Cable System Features

Easy Assembly



Pick-and-place cover for automatic assembly with a vacuum pipette.
Reliable retention force due to ruggedized metal clips on both sides of each male.

Guiding Elements



The rugged insulation body of the male connector ensures an optimal cable connector guide.
Two pegs (round and oval) for exact positioning on the pcb.

Interlocking



Positive lock (red): unlockable only with tool
(high vibration/Shock load)
Friction lock (black): unlockable without tool
(normal vibration/shock load)

1.27 mm SRC Single Row Connector - MiniBridge™ Cable System

Electrical and Mechanical Characteristics



	Standard	Male Connector Type A and P	Female Connector Type A and P
Number of Pins		2, 3, 4, 6 and 8	2, 3, 4, 6 and 8
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	4 pin version: Ambient temperature 20 °C 4.0 A 70 °C 3.0 A 100 °C 2.0 A	Depends on cable
Clearance and creepage distance		contact - contact 0.4 mm	contact - contact 0.4 mm
Comperative figure of voltage	IEC 60112	CTI 175	CTI 175
Voltage rating	IEC 60664	Has to be determined according to client-specific using case (degree of environmental pollution) according to IEC 60664.	Has to be determined according to client-specific using case (degree of environmental pollution) according to IEC 60664.
Dielectric strength	IEC 60512	contact - contact 500 V _{rms}	contact - contact 500 V _{rms}
Contact resistance	IEC 60512 test 2a	< 25 mΩ	< 25 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	500 mating cycles	500 mating cycles
Insertion and withdrawal force	IEC 60512 test 13b	2 cont.: 2 N 3 cont.: 3 N 4 cont.: 4 N 6 cont.: 6 N 8 cont.: 8 N	2 cont.: 2 N 3 cont.: 3 N 4 cont.: 4 N 6 cont.: 6 N 8 cont.: 8 N
Gauge retention force	IEC 60512 test 16e	> 0.1 N	> 0.1 N



MiniBridge™ - SMC Single Row Cable Connector System

Electrical and Mechanical Characteristics

	Standard	Male Connector Type A and P	Female Connector Type A and P
Number of Pins		2, 3, 4, 6 and 8	2, 3, 4, 6 and 8
Process-conditions			
Solder 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	
Materials			
Housing: Plastic material (symbol)		LCP	LCP
CTI value	IEC 60112	175	175
UL flame rating		UL 94 V-0	UL 94 V-0
UL file		E83005	E83005
Contact and mating area			
Base material		Cu alloy	Cu alloy
Plating		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			
Base material		Cu alloy	Cu alloy
Plating		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-retardent additives, no toxic additives allow easy recycling	
Product-approval			
UL		in preparation	in preparation
CSA		in preparation	in preparation

MiniBridge™ - SMC Single Row Cable Connector System

Electrical and Mechanical Characteristics



	Standard	Standard Cable (PVC)	High Temperature Cable (TPE-ET)
Number of Pins		2, 3, 4, 6 and 8	2, 3, 4, 6 and 8
Cable Assembly			
Cross Section		AWG 26 / 7 / 0.14 mm ²	AWG 26 / 7 / 0.14 mm ²
Conductor		Cu wire tin-plated	Cu wire tin-plated
Marking	DIN 57207 / VDE 0207	Red	Black
Insulation		PVC	TPE-ET wall thickness min. 0.2 mm
Shore hardness		94 ±3 (Shore A)	96 ±3 (Shore A)
Technical data			
Temperature range		-20/105 °C (unmoved)	-60/125 °C (unmoved) -40/125 °C (moved)
Current rating		Ambient temperature 20 °C 2.8 A	Ambient temperature 20 °C 4 A
Voltage rating		max. 300 V	max. 300 V
Dielectric strength		2000 V _{rms}	1500 V _{rms}
Conductor resistance		≤ 135 Ω/km	≤ 138 Ω/km at 20 °C
Insulation resistance		≥ 100 MΩ x km at 20 °C	≥ 20 MΩ x km at 20 °C
Capacitance at 1 kHz		ground-signal-ground 60 pF/m	-
Inductance at 10 kHz		ground-signal-ground 0.5 μH/m	-
Impedance		ground-signal-ground 110 Ω	-
Crosstalk		Cable length 3 m: NE 5.4 / FE 6.8	-
Propagation delay		4.6 ns/m	-
UL flamability		UL 94 VW-1	-
Product-approval			
UL Style		2651	-
CSA Specification		AWM IA 105°C 300V, FT1	-

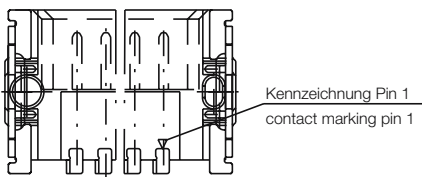


1.27 mm SRC Single Row Connector - MiniBridge™ Cable System Right Angle Male Type A

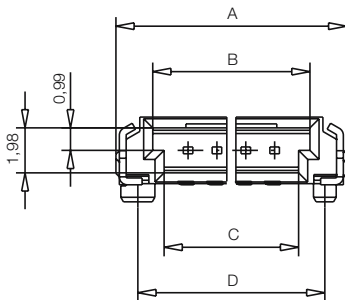


The male connector with 1.27 mm pitch is available with SMT terminals. The plastic housing of the male connector is able to withstand high temperatures, this makes connector suitable for a lead-free reflow soldering processes. The connectors are available in tape-and-reel packaging for automated pick-and-place assembly.

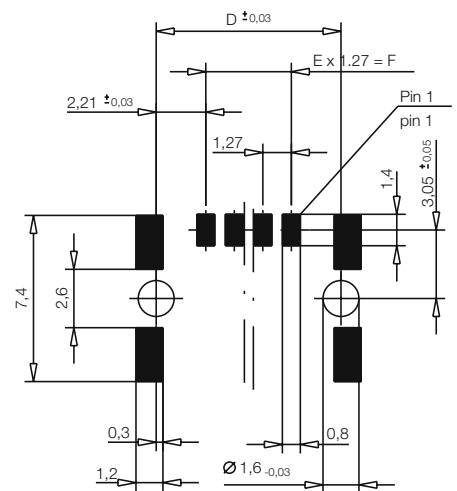
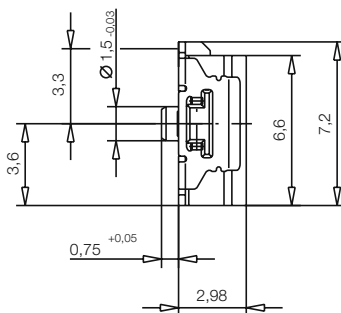
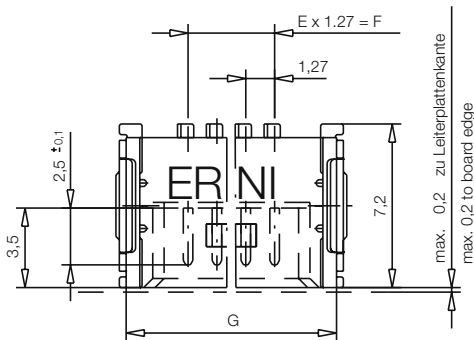
Dimensional Drawing



2	7.62	4.38	3.38	5.69	1	1.27	6.72
3	8.89	5.65	4.65	6.96	2	2.54	7.99
4	10.16	6.92	5.92	8.23	3	3.81	9.26
6	12.7	9.46	8.46	10.77	5	6.35	11.8
8	15.24	12.0	11.0	13.31	7	8.89	14.34
Polzahl No. of contacts	A	B	C	D	E	F	G



Leiterplatten-LAYOUT Vorschlag
PCB-LAYOUT Proposal

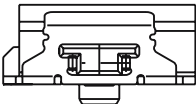
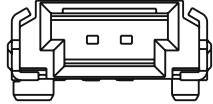
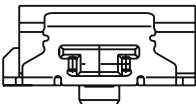
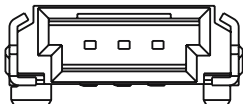
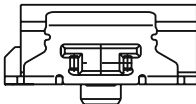
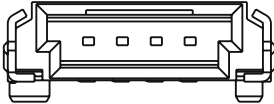
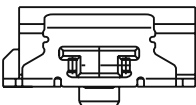
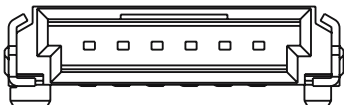
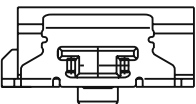
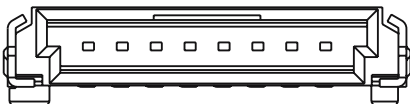


All dimensions in mm

1.27 mm SRC Single Row Connector - MiniBridge™ Cable System Right Angle Male Type A



Ordering Information

Configuration	Termination	No. of Pins SMC	Part Number
			
Type A, tape and reel, 1000 pcs/reel	SMT	2	214011
			
Type A, tape and reel, 1000 pcs/reel	SMT	3	234450
			
Type A, tape and reel, 1000 pcs/reel	SMT	4	214012
			
Type A, tape and reel, 1000 pcs/reel	SMT	6	214013
			
Type A, tape and reel, 1000 pcs/reel	SMT	8	214014

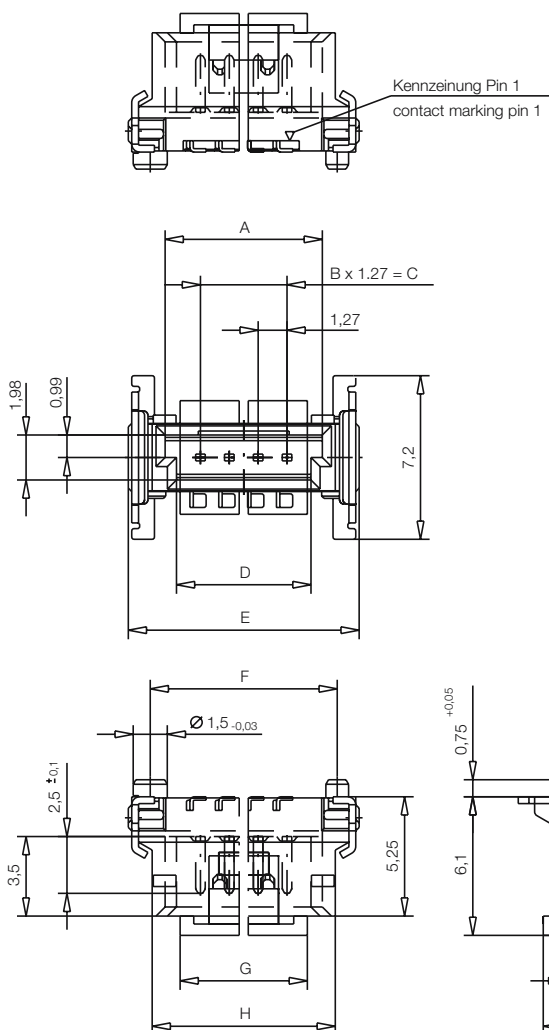


1.27 mm SRC Single Row Connector - MiniBridge™ Cable System Vertical Male Type P



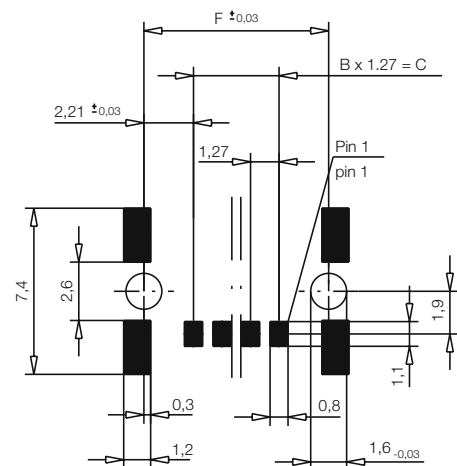
The male connector with 1.27 mm pitch is available with SMT terminals. The plastic housing of the male connector is able to withstand high temperatures, so the connector is suitable for lead-free reflow soldering processes. The connectors are available in tape-and-reel packaging for automatic pick-and-place assembly.

Dimensional Drawing



2	4.38	1	1.27	3.38	7.62	5.69	5.6
3	5.65	2	2.54	4.65	8.89	6.96	6.79
4	6.92	3	3.81	5.92	10.16	8.23	8.06
6	9.46	5	6.35	8.46	12.7	10.77	10.6
8	12.0	7	8.89	11.0	15.24	13.31	13.14
Polzahl No. of contacts	A	B	C	D	E	F	G

Leiterplatten-Layout Vorschlag
PCB-Layout Proposal

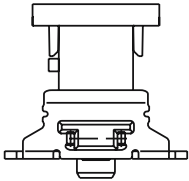
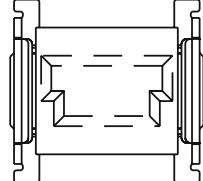
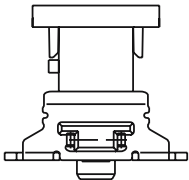
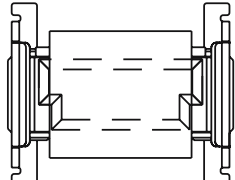
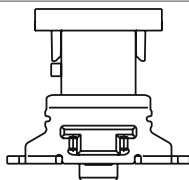
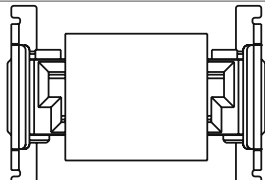
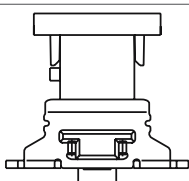
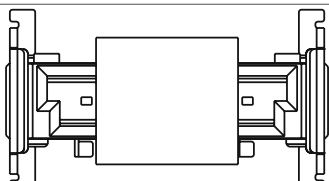
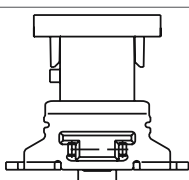
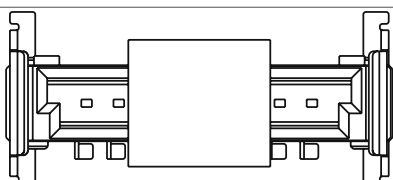


All dimensions in mm

1.27 mm SRC Single Row Connector - MiniBridge™ Cable System Vertical Male Type P

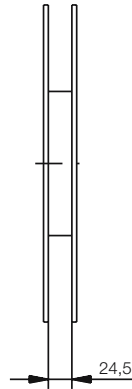
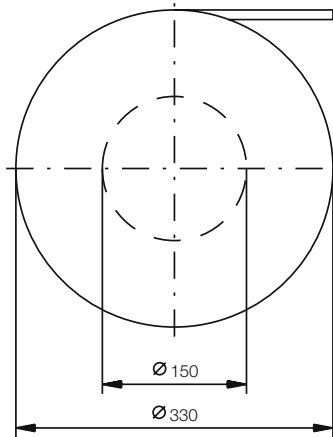


Ordering Information

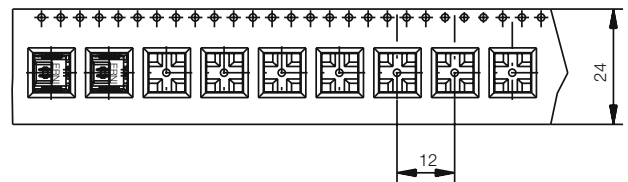
Configuration	Termination	No. of Pins SMC	Part Number
			
Type P, tape and reel, 700 pcs/reel	SMT	2	214016
			
Type P, tape and reel, 700 pcs/reel	SMT	3	234457
			
Type P, tape and reel, 700 pcs/reel	SMT	4	214017
			
Type P, tape and reel, 700 pcs/reel	SMT	6	214018
			
Type P, tape and reel, 700 pcs/reel	SMT	8	214019

Right Angle and Vertical Male Connectors 2, 3, 4 and 6 Pins

Verpackt in Gurtverpackung - Tape on Reel Packaging

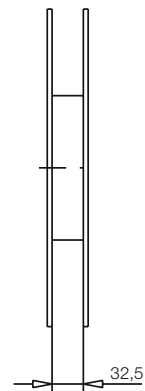
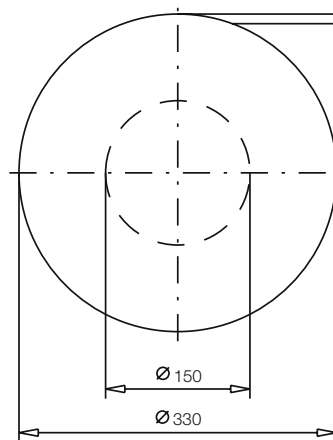


Abspulrichtung - Reel off Direction

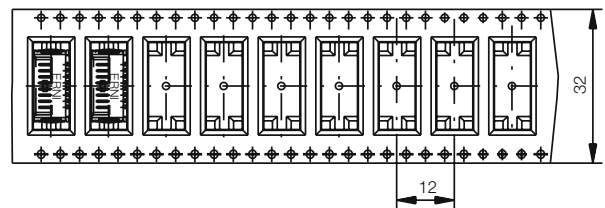


Right Angle and Vertical Male Connectors 8 Pins

Verpackt in Gurtverpackung - Tape on Reel Packaging



Abspulrichtung - Reel off Direction



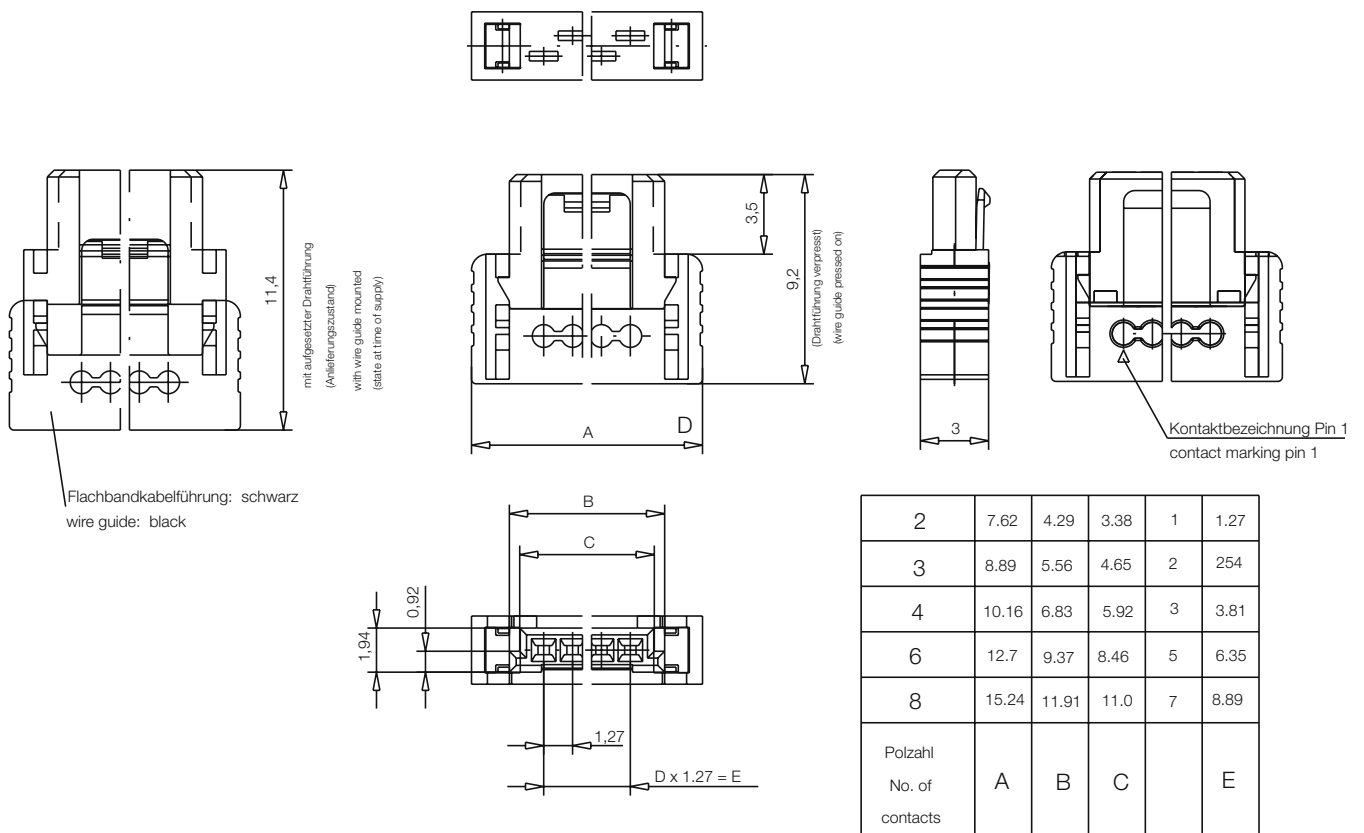
1.27 mm SRC Single Row Connector - MiniBridge™ Cable System Cable Assemblies



Standard cable assemblies are available from ERNI. Thanks to the versatile options of our female connectors, the widest range of applications can be realized. The female connectors are available with different types of locking latches for normal vibration/shock loads (black model) as well as applications involving heavy vibration/shock loads (red model). The robust version (red) requires a tool for releasing. The IDC terminal is designed for AWG-24 or AWG-26 conductors (solid or stranded). Partial loading is also possible using single wire. Cable outlet is 90° or 180°.

Dimensional Drawing

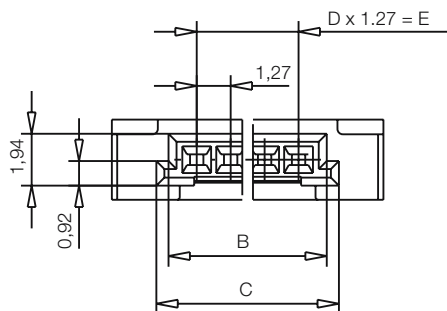
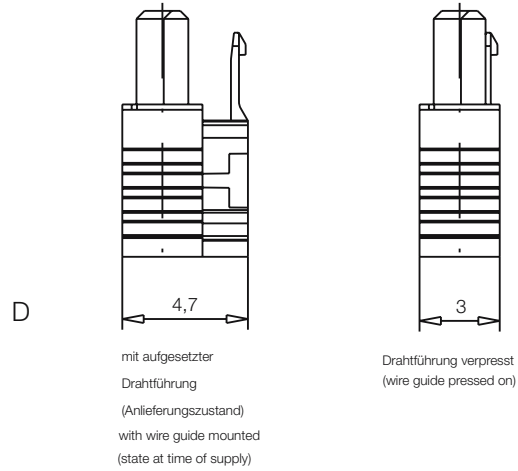
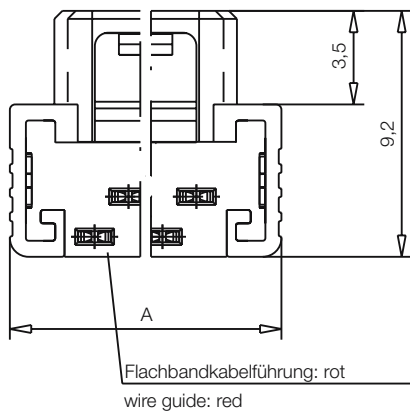
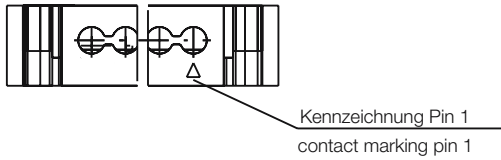
Female Connector Cable Outlet 90°



All dimensions in mm

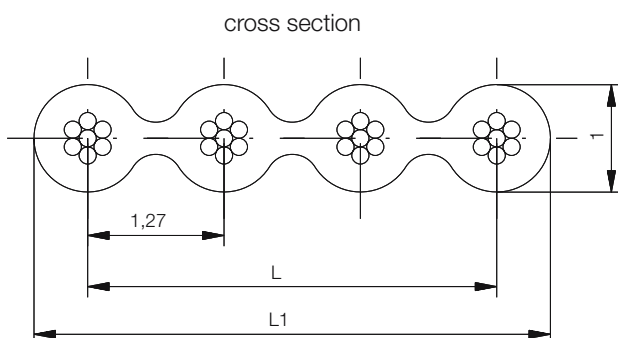
Dimensional Drawing

Female Connector Cable Outlet 180°



2	7.62	4.29	3.38	1	1.27
3	8.89	5.56	4.65	2	2.54
4	10.16	6.83	5.92	3	3.81
6	12.7	9.37	8.46	5	6.35
8	15.24	11.91	11.0	7	8.89
Polzahl No. of contacts	A	B	C		E

Dimensional Drawing Ribbon Cable



8,89	9,89	8
6,35	7,35	6
3,81	4,81	4
2,54	3,54	3
1,27	2,27	2
L	L1	Polzahl Number of Conductors

All dimensions in mm

1.27 mm SRC Single Row Connector - MiniBridge™ Cable System Cable Assemblies




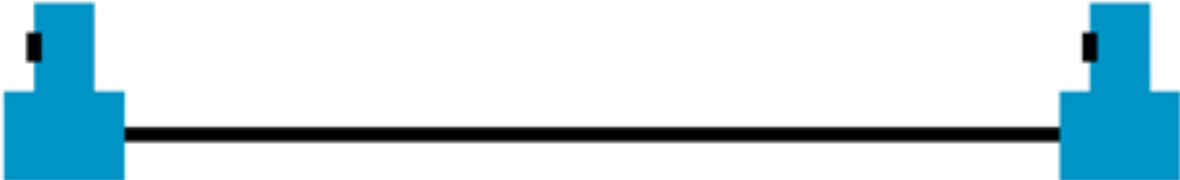
Ordering Information

No. of Pins	Length	Cable Type (AWG-26)	Connector 1	Connector 2	Part Number
2	100 mm	PVC	SFX	SFX	839010
2	200 mm	PVC	SFX	SFX	839011
2	300 mm	PVC	SFX	SFX	839012
3	100 mm	PVC	SFX	SFX	839013
3	200 mm	PVC	SFX	SFX	839014
3	300 mm	PVC	SFX	SFX	839015
4	100 mm	PVC	SFX	SFX	839016
4	200 mm	PVC	SFX	SFX	839017
4	300 mm	PVC	SFX	SFX	839018
6	100 mm	PVC	SFX	SFX	839019
6	200 mm	PVC	SFX	SFX	839020
6	300 mm	PVC	SFX	SFX	839021
8	100 mm	PVC	SFX	SFX	839022
8	200 mm	PVC	SFX	SFX	839023
8	300 mm	PVC	SFX	SFX	839024



1.27 mm SRC Single Row Connector - MiniBridge™ Cable System Cable Assemblies

Ordering Information

No. of Pins	Length	Cable Type (AWG-26)	Connector 1	Connector 2	Part Number
					
2	100 mm	PVC	AFU	AFU	839025
2	200 mm	PVC	AFU	AFU	839026
2	300 mm	PVC	AFU	AFU	839027
3	100 mm	PVC	AFU	AFU	839028
3	200 mm	PVC	AFU	AFU	839029
3	300 mm	PVC	AFU	AFU	839030
4	100 mm	PVC	AFU	AFU	839031
4	200 mm	PVC	AFU	AFU	839032
4	300 mm	PVC	AFU	AFU	839033
6	100 mm	PVC	AFU	AFU	839034
6	200 mm	PVC	AFU	AFU	839035
6	300 mm	PVC	AFU	AFU	839036
8	100 mm	PVC	AFU	AFU	839037
8	200 mm	PVC	AFU	AFU	839038
8	300 mm	PVC	AFU	AFU	839039

1.27 mm SRC Single Row Connector - MiniBridge™ Cable System Cable Assemblies



Ordering Information

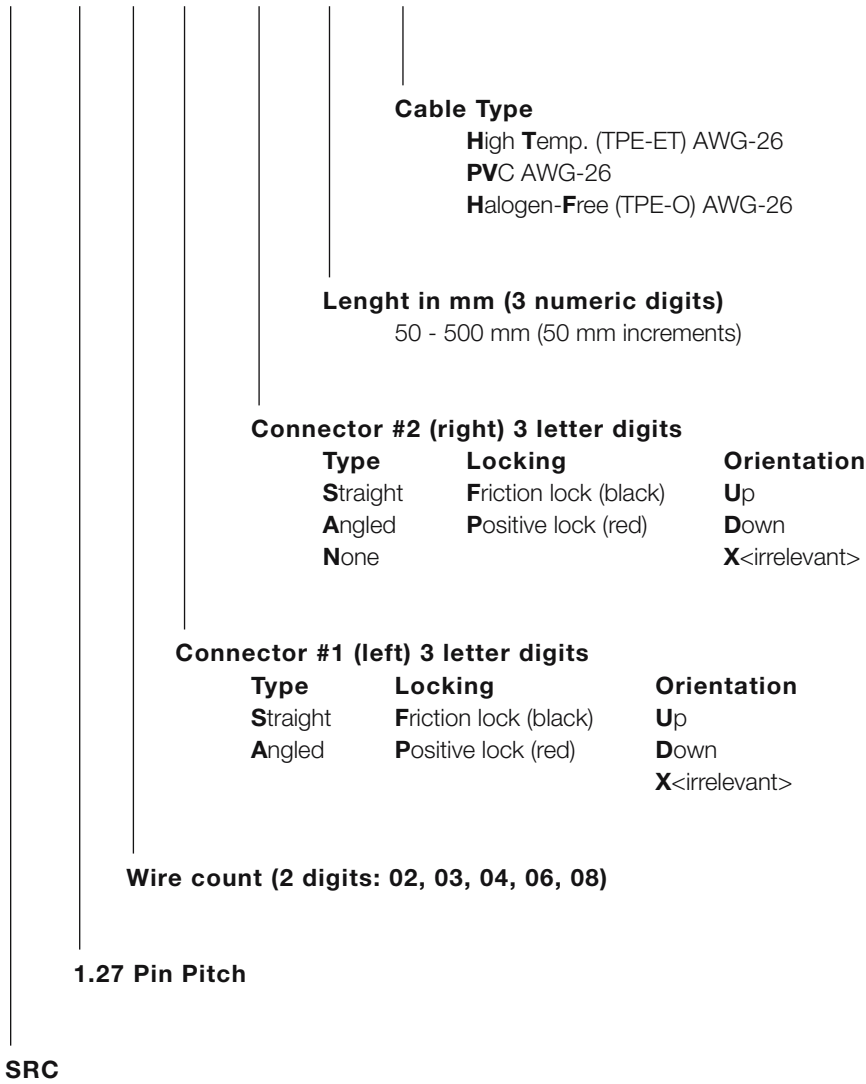
No. of Pins	Length	Cable Type (AWG-26)	Connector 1	Connector 2	Part Number
2	100 mm	PVC	SFX	AFU	839040
2	200 mm	PVC	SFX	AFU	839041
2	300 mm	PVC	SFX	AFU	839042
3	100 mm	PVC	SFX	AFU	839043
3	200 mm	PVC	SFX	AFU	839044
3	300 mm	PVC	SFX	AFU	839045
4	100 mm	PVC	SFX	AFU	839046
4	200 mm	PVC	SFX	AFU	839047
4	300 mm	PVC	SFX	AFU	839048
6	100 mm	PVC	SFX	AFU	839049
6	200 mm	PVC	SFX	AFU	839050
6	300 mm	PVC	SFX	AFU	839051
8	100 mm	PVC	SFX	AFU	839052
8	200 mm	PVC	SFX	AFU	839053
8	300 mm	PVC	SFX	AFU	839054



1.27 mm SRC Single Row Connector - MiniBridge™ Cable System Cable Assemblies

Order Code

IDCCS_SRC_1.27_□□_□□□_□□□_□□□_□□



Note:

Please use the order code for orderings differing to the standard cable assemblies. A partnumber will be specified during series order.



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