

MiniBridge - Koshiri

SINGLE ROW CONNECTOR

GENERAL



MiniBridge Koshiri
Female- and Male
Connector

The single row MiniBridge connector Koshiri version with a 1.27 mm pitch offers very high level of mating reliability. The housing geometry avoids damage of the male contacts even in case of improper skewed insertion.

In addition to Koshiri Secure*, the MiniBridge connector fulfils the applicable requirements of LV214 for automotive connectors in IDC technology. Due to its compact design, the cable connector system is ideally suited for space saving connections between PCBs and decentralised function units, particularly in the automotive segment.

Several connection options can be achieved using the straight and angled male and female connectors with 90° and 180° cable outlets.

The male connector has a SMT terminal, the female connector is available with an IDC terminal. The plastic housing is temperature resistant, making the connector suitable for lead-free reflow soldering procedures. Male connectors are supplied in Tape-on-Reel packaging for automatic assembly.

*Requirement for Koshiri Secure:

Signal and current carrying components (contacts) may only be touched by their signal and current carrying opposites (and their catch funnels) during assembly/disassembly. Contact with housing components is structurally not permitted.

Source LV 214

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TECHNICAL DETAILS

Pitch	1.27 mm
No. of Pins	2, 3, 4, 6, 8, 10, 12
Current rating per contact	up to 8,7 A (depends on cable)
Termination	Male connector SMT, female connector IDC
Cable	Discrete wire AWG 22/7
Variants	Vertical male connector type P, Right angle male connector type A, Female connector type A with 180° cable outlet, Female connector type P with 90° cable outlet,
Interlocking	Female connector red (high vibration/shock load) - unlockable only with a tool, e.g. pen with a round tip

MATING ADVANTAGES



- Additional tongues at the male and grooves at the female connector allow a pre-alignment and guarantee an exact mating procedure.
- The male connector contact pins are not damaged during improper or skewed mating.

MiniBridge - Koshiri

ELECTRICAL AND MECHANICAL CHARACTERISTICS

TECHNICAL DATA

Description	Standard	Male Connector SMT Type A and P	Female Connector IDC with Cable Type A und P
Climate category	DIN EN 60068-1 test b	55 / 150 / 56	
Temperature range		-55 / 150 °C	
Current rating per contact	IEC60512 test 5b	2-pin version: 20 C° max. 8,7 A 70 C° max. 6,8 A 100 C° max. 5,4 A	depends on cable
Air- and creepage distance		contact - contact 0.4 mm	
Operating voltage	IEC 60664	<p>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.</p>	
Dielectric strength	IEC 60512 test 4a	contact – contact 500 V _{rms}	
Contact resistance	IEC 60512 test 2a	< 25 mΩ	
Insulation resistance	IEC 60512 test 3a	> 10 ⁴ MΩ	
Mechanical operation	IEC 60512 test 9a	500 mating cycles	
Pull-out force from the IDC	LV214 PG10 E 10.2	–	Conductor 0,35 mm ² , 7x0,05 mm ² Mocar 125S: > 53 N Mocar 150C: > 51 N
Insertion and withdrawal force	IEC 60512 test 13b	1 N per contact	
Gauge retention force	IEC 60512 test 16e	> 0,1 N	

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ELECTRICAL AND MECHANICAL CHARACTERISTICS

Description	Standard	Male Connector SMT Type A and P	Female Connector IDC with Cable Type A und P
Process-conditions			
Hand soldering temperature max.	IEC 68-2-20	3.5 s at 350 °C	
Reflow soldering temperature max.	JEDEC J-STD-020	> 30 s at 260 °C	
Coplanarity		< 0.1 mm	–
Housing Material			
Plastic material		LCP	
CTI value	IEC 112	175	
UL flame rating		UL 94 V-0	
UL file		E83005	
Contact Material			
Base material		Cu alloy	
Mating area		gold plating	
Termination area		Sn	
Environment compatibility			
Recycling		no flame-retardent additives, no toxic additives allow easy recycling	