Pushing Performance
Since 1945

ix Industrial 10B-1 plug A1-S



Image is for illustration purposes only. Please refer to product description.

Part number	09 45 181 9020 XL
Specification	ix Industrial 10B-1 plug A1-S
HARTING eCatalogue	https://b2b.harting.com/09451819020XL

Identification

Category	Connectors
Series	HARTING ix Industrial®
Identification	Signal
Element	Cable connector
Specification	Angled bottom

Version

Termination method	Solder termination
Shielding	Fully shielded, 360° shielding contact
Number of contacts	10
Coding	Type B
Pack contents	Bulk packaging

Technical characteristics

Conductor cross-section	AWG 28/7 ... AWG 22/7
Wire outer diameter	≤1.55 mm
Rated current	1.5 A
Rated current	3 A when used with 4 contacts (1,2,6,7)
Rated voltage	50 V AC 60 V DC
Insulation resistance	>500 MΩ
Contact resistance	≤30 mΩ
Shielding resistance	≤100 mΩ

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Technical characteristics

Limiting temperature	-40 ... +85 °C
Storage temperature	-30 ... +60 °C
Relative humidity	95 % Non-condensing (operation) 95 % Non-condensing (storage/transport)
Insertion force	≤25 N
Withdrawal force	≤25 N
Mating cycles	≥5,000
Degree of protection acc. to IEC 60529	IP20
Cable diameter	5.5 ... 7.2 mm
Test voltage $U_{r.m.s.}$	0.5 kV
Retention force	≥80 N locking

Material properties

Material (insert)	Polyamide (PA)
Colour (insert)	Black
Material (shielding)	Stainless steel Ni ≥ 1 µm Termination side (shielding case) Ni ≥ 0.2 µm Termination side (shielding shell)
Material (contacts)	Copper alloy
Surface (contacts)	Au ≥ 0.2 µm over Ni ≥ 2 µm Mating side Au ≥ 0.03 µm over Ni ≥ 2 µm Termination side
Material (hood/housing)	Polycarbonate (PC)
Colour (hood/housing)	Grey
Material flammability class acc. to UL 94	V-0
RoHS	compliant
ELV status	compliant
China RoHS	e
REACH Annex XVII substances	Not contained
REACH ANNEX XIV substances	Not contained
REACH SVHC substances	Not contained
California Proposition 65 substances	Yes
California Proposition 65 substances	Lead Nickel

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Specifications and approvals

Specifications	IEC 61076-3-124
	EN 45545-2
	IEEE 802.3af Power over Ethernet (PoE)
	IEEE 802.3at Power over Ethernet (PoE+)
	IEEE 802.3bt Power over Ethernet (4PPoE)
UL / CSA	UL 1977 ECBT2.E102079
	CSA-C22.2 No. 182.3 ECBT8.E102079

Commercial data

Packaging size	100
Net weight	11 g
Country of origin	Japan
European customs tariff number	85366990
GTIN	5713140223325
ETIM	EC002636
eCl@ss	27440114 Rectangular connector (for field assembly)

Contact configuration



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Environmental specifications

Rapid change of temperature (IEC 60512-11d)	10 cycles between -55°C and 85°C with 30 minutes dwell at temp. extremes and 2 to 3minutes transition between temperatures
Dry heat (IEC 60512-11i)	+85°C, 500 h
Damp heat cycles (IEC 60068-2-38)	25°C to 65°C; cold sub-cycle: -10°C; relative humidity 93%; 10 cycles, 1 cycle/24h
Cold (IEC 60512-11j)	-55°C, 240h
Flow mixed gas test (IEC 60068-2-60)	4 d, Method 4 (mated and unmated)
Corrosion salt mist	Exposed at 5% salt water, 35°C, 48h (unmated); no heavy corrosion of contacts
Vibration, sinusoidal (IEC 60512-test 6d)	10 to 500 Hz; 0.35 mm, 50 m/s2, 2h / 3 axis; no contact disturbances ≥ 1µs
Mechanical shock (IEC 60512-test 6d)	half-sine shock 300 m/s^2, 11 ms 3 shocks / both directions / 3 axis - totally 18 shocks no contact disturbances ≥ 1µs
Fretting Corrosion	490 m/s^2, 30 times/min at 1000 times no contact disturbances ≥ 1µs

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