PRODUCT SPECIFICATION

M12 TO RJ45 CAT6A CORDSETS

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1.0 SCOPE

This Product Specification covers the M12 to RJ45 CAT6A cordsets from M12 CAT6A series.

2.0 PRODUCT DESCRIPTION

The M12 to RJ45 CAT6A cordsets from M12 CAT6A series are for high speed data transmission suited to transmit up to 10GBit Ethernet Data.
The design covers the need for POE Transmission, and keeps the benefit of sealing and form Factor coming from the M12 standard.

2.1 PRODUCT NAME AND SERIES NUMBER(S)

1203410500	M12 TO RJ45 CAT6A CORDSET STANDARD PUR AWG26	0.5M
1203410501	M12 TO RJ45 CAT6A CORDSET STANDARD PUR AWG26	1M
1203410502	M12 TO RJ45 CAT6A CORDSET STANDARD PUR AWG26	2M
1203410503	M12 TO RJ45 CAT6A CORDSET STANDARD PUR AWG26	3M
1203410504	M12 TO RJ45 CAT6A CORDSET STANDARD PUR AWG26	4M
1203410505	M12 TO RJ45 CAT6A CORDSET STANDARD PUR AWG26	5M
1203410506	M12 TO RJ45 CAT6A CORDSET STANDARD PUR AWG26	10M
1203410507	M12 TO RJ45 CAT6A CORDSET STANDARD PUR AWG26	15M
1203410508	M12 TO RJ45 CAT6A CORDSET STANDARD PUR AWG26	20M
1203410509	M12 TO RJ45 CAT6A CORDSET STANDARD PUR AWG26	30M
1203410510	M12 TO RJ45 CAT6A CORDSET STANDARD PUR AWG26	40M

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate sales drawings for information on dimensions, materials, platings and markings

2.3 SAFETY AGENCY APPROVALS

None

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

See the sales drawings and the other sections of this specification for the necessary referenced documents and specifications

IEC 61076-2-109 Ed 1.0
IEC 60512-29-100 Ed 1.0

4.0 RATINGS

4.1 VOLTAGE

48 Volts AC (RMS) PoE acc. IEEE 802.3a
57 Volts AC (RMS) PoE+ acc. IEEE 802.3a+

Test voltage 500 V RMS

4.2 CURRENT

0.5 Amps

4.3 TEMPERATURE

Operating: - 40°C to + 70°C (Cable limit this)

5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Rated voltage – Rated impulse voltage – Pollution degree	Mated connectors IEC 60664-1	Rated voltage – 48V Rated impulse voltage – 1.5kV Pollution degree - 3
2	Voltage proof	Mated connectors IEC 60512-4-1, Test 4a Standard atmospheric conditions	0.5 kV
3	Current-carrying capacity	IEC 60512, Test 5a All contacts Values at 40 °C ambient temperature	0.5 A
4	Contact Resistance	IEC 60512, Test 2a Standard atmospheric conditions	5mΩ MAXIMUM
5	Insulation Resistance	Mated connectors IEC 60512, Test 3a, Method A Standard atmospheric conditions	100 MΩ MINIMUM

5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
7	IP degree of protection	According to IEC 60529 connectors in mated and locked position	IP65 and IP67
8	Mechanical operation	IEC 60512, Test 9a Standard atmospheric conditions Max. speed of operations = 10 mm/s Rest: 30 s, unmated.	100 (gold)
9	Insertion and withdrawal forces	IEC 60512, Test 13b Standard atmospheric conditions Max. speed = 10 mm/s	30 N MAXIMUM
10	Contact retention in insert	Not applicable	Not applicable
11	Polarizing method	IEC 60512, Test 13e	Engaging force: 1,5 x total insertion force but 35 N min.
12	Vibration (sinusoidal)	IEC 60512, Test 6d Standard atmospheric conditions Connectors in mated and locked position The fixed and free connector shall be rigidly installed in a suitable fixture as specified in dynamic stress tests. F = 10 Hz to 500 Hz Ampl. = 0.35 mm	Contact disturbance: Discontinuity 10 µs. maximum No damage Dielectric withstanding voltage: No breakdown Contact Resistance: Max. change from initial 5 mΩ (shield. 100 MΩ)
13	Shock	IEC 60512 Test 6c Connectors in mated and locked position The fixed and free connector shall be rigidly installed in a suitable fixture as specified in dynamik stress tests. Half sine shock acceleration 490m/s² Duration of impact: 11ms	Visual: No Damage Contact Resistance: Max. change from initial 4.5MΩ (SHIELD. 100 MΩ)

5.3 TEST SCHEDULE

According to: IEC 60512**,** IEC 61076-2-109 and IEC 60512-29-100

5.3.1 TEST GROUP P- PRELIMINARY

According to: IEC 60512, Test 1

5.3.2 TEST GROUP AP – DYNAMIC/ CLIMAT

According to: IEC 60512, Test 6c, Test 6d, Test 11a, Test 11d, Test 11i, Test 11j, Test 11m und Test 13e

5.3.3 TEST GROUP BP – MECHANICAL ENDURANCE

According to: IEC 60512, Test 9a und Test 11g

5.3.4 TEST GROUP CP – ELECTRICAL LOAD

According to: IEC 60512, Test 9a, Test 9b und Test 11d

5.3.5 TEST GROUP DP – CHEMICAL RESISTIVITY

According to: IEC 60512, Test 12b, Test 12e und Test 19c

5.3.6 TEST GROUP EP – CONNECTION METHOD TESTS

According to: IEC 60512, Test 16d

5.3.7 TEST GROUP FP – ELECTRICAL TRANSMISSION REQUIREMENTS

According to: IEC 60512, Test 29a, Test 29b, Test 29c, test 29d, Test 29f und 29g

6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage.
Please refer to packaging specification:

PK-120341-140.