

PCB-PLUS

300 MHz/Category 6 and 100 MHz/Category 5e PCB Modules



Application

PCB-Modules are circuit board connectors in which copper conductors are terminated using the LSA-PLUS® Quick Connection System.

Features

- The modules are suitable for installation in Category 6 and Category 5e components.
- Printable with colour code and/or lettering.
- Simple installation of all components using ADC KRONE PCB Module technology.
- The ADC KRONE LSA-PLUS® contact system ensures high reliability.
- Optimum solder preparation via closed module base.

	Conductor diameter	Diameter of insulation	Retermination	Double connection
Solid wire Category 5e and Category 6	AWG 27 (0.36 mm)	0.7 – 0.75 mm	Up to 50x	No
	AWG 26 - AWG 22 (0.4 - 0.64 mm)	0.7 - 1.4 mm		Up to 10x
Category 6 only	AWG 24 - 20 (0.51 - 0.81 mm)	1.0 - 1.4 mm		No
Stranded wire Category 5e and 6	AWG 24 (7 x 0.2 mm)	1.1 - 1.4 mm		No
Other conductor diameters on request and after testing. Double termination (two wires on the same LSA-PLUS contact) only with the identical wire dimensions				

General technical values

Environmental: Operation temperature range: -40°C to +65°C

Mechanical Values

Compatible sheathing: PE or PVC plastic insulated copper conductors

Material of the conductor: Copper wire tinned or blank
Copper stranded wire tinned

Circuit board thickness: 1.6 mm max.

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Material

Plastics: Polybutylenterephthalat (PBT)

Flammability: In accordance with UL94 V-0 (self extinguishing)

Contact material: Category 6: Tinned
Category 5e: Brass, tinned or silvered

Comparative Tracking Index (CTI): 600

All materials used are RoHS compliant.

Electrical values

Insulation resistance: $> 5 \times 10^4 \text{ m}\Omega$

AC voltage strength: $2 \text{ kV}_{\text{eff}}$

Surge strength:
(with waveform 1.2/ 50 μs) 3.6 kV

Contact resistance: $\leq 2.5 \text{ m}\Omega$

Operating Voltage: 120V, Applications for SELV – or TNV – areas

Recommendations for the soldering process

Solder lead-free: Solder SnAg3.5

Double-wave-soldering machine manufactured by ERSA of the type N-Wave 330

Residual oxygen concentration of 35 – 60 ppm

Machine setting:

Transport speed: 90 cm/min
 Spray flux dosage: Level 7 (1.....14)
 Preheating: 190°C
 (forced convection1)
 Preheating: 205°C
 (forced convection2)
 Preheating (Emitterpower1): 30 %
 Preheating (Emitterpower 2): 30 %
 Preheating (Emitterpower 3): 35 %
 Preheating (Emitterpower 4): 40 %
 Chip-Solder-wave flow: 390 l/min
 Main-Solder-wave flow: 510 l/min
 Bath temperature: 268°C
 Flux type: INTERFLUXE 2005C

Soldering with leaded materials (according to test results from ADC Krone)

Transport speed: 90 cm/min
 Spray flux dosage: 3.0
 Preheating: 208°C
 Chip-solder-wave-flow: 202 (315) l/min
 Bath temperature: 268°C
 Solder: L-Sn 60/40
 Flux type: L-3 Typ F-SW 34 DIN 8511

Performance parameters according EN 50173-1:2002

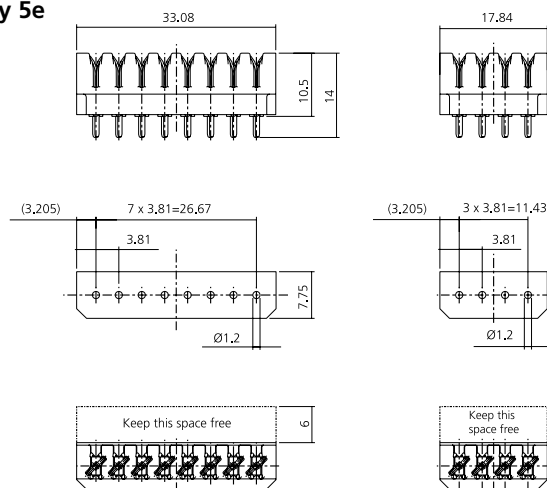
Frequency (MHz)	Next [dB]					Insertion Loss [dB]			
	Requirements		Typical measurements			Requirements		Typical measurements	
	Cat 5e	Cat 6	Cat 5e	Cat 6 shielded	Cat 6 unshielded	Cat 5e	Cat 6	Cat 5e	Cat 6
1.0	80.0	80.0	> 83.3	> 95.3	> 103.2	0.1	0.0	< 0.00	< 0.01
4.0	71.0	80.0	> 73.1	> 82.9	> 90.6	0.1	0.0	< 0.01	< 0.01
8.0	64.9	75.9	> 66.5	> 77.0	> 84.2	0.1	0.0	< 0.01	< 0.01
10.0	63.0	74.0	> 64.7	> 75.3	> 82.6	0.1	0.1	< 0.01	< 0.01
16.0	58.9	69.9	> 60.5	> 71.0	> 78.4	0.16	0.1	< 0.01	< 0.01
20.0	57.0	68.0	> 58.5	> 69.1	> 76.5	0.2	0.1	< 0.02	< 0.01
25.0	55.0	66.0	> 56.6	> 67.2	> 74.4	0.2	0.1	< 0.02	< 0.01
31.3	53.1	64.1	> 54.7	> 65.3	> 72.5	0.2	0.1	< 0.02	< 0.02
62.5	47.1	58.1	> 48.7	> 59.3	> 66.6	0.3	0.2	< 0.05	< 0.04
100.0	43.0	54.0	> 44.1	> 55.0	> 62.7	0.4	0.2	< 0.06	< 0.05
150.0	N/A	50.5	N/A	> 51.6	> 60.0	N/A	0.2	N/A	< 0.08
250.0	N/A	46.0	N/A	> 50.2	> 59.3	N/A	0.32	N/A	< 0.11

Ordering Information

Description	Catalogue Number
PCB-Module Category 5e, 8-pin	6048 1 080-00
PCB-Module Category 5e, 4-pin	6048 1 090-00
PCB-Module Category 6, 8-pin and additional screen contacts	6048 1 180-00
PCB-Module Category 6, 4-pin and additional screen contacts	6048 1 190-00

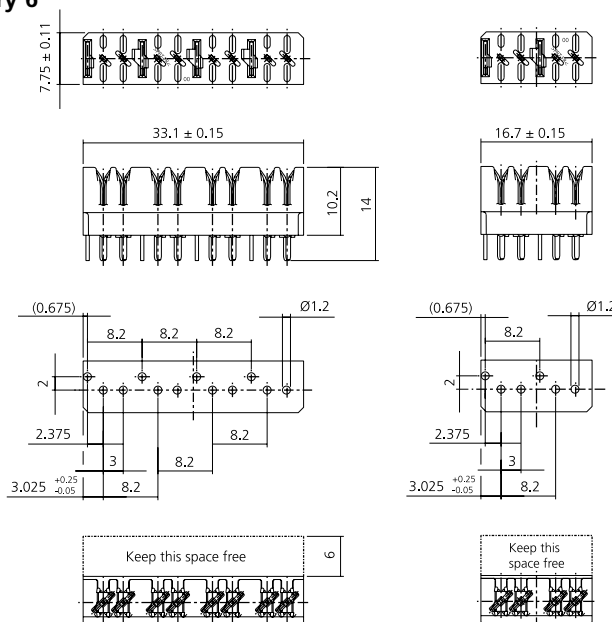
Colour coding and printed options on request

Category 5e



Category 6

(Dimensions in mm)



TECHNICAL DATA



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