tBL® - TP Installation Cable both ends 1x RJ45 Keystone Modules Cat.6_A UC900 SS23

tBL® - tde Basic Link (TP)

tBL® tde Basic Link (TP) is a complete system solution for structured cabling in Cat6A for transfer rates of up to 10GbE in real time. The tBL® - cabling link corresponds to a permanent link in accordance with ISO / IEC 11801 (EN 50173). The RJ45 modules are available in the form factors Keystone (KS) and Data Center (DC). The compact design of the 6fold RJ45 DC module allows a high packing density of up to 48 RJ45 ports on 1U. The RJ45 module is connected to the tBL® - cable termination block by simply plugging. The slim cable termination block can be easily assembled on the cable by using the tBL® - crimp tool and is suitable for preterminated cables. The modular design of individual RJ45 modules are interchangeable at any time without termination. The RJ45 modules are optional with a LID - Light ID function available. This feature facilitates searching of related ports within a cable link. A cost effective alternative product is the RJ45 keystone module without cable termination block in the tool-less design.

The system solution is complemented by an extensive portfolio of carrier systems. These include design-capable data outlets, floor box frames, Consolidation points, DIN rail modules and patch panels in 1/2 and 1U.

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Technical Data

xxxx	Length in cm

TP RJ45 Modules

Mechanical properties

Type	RJ45 Jack shielded
Connector standard	IEC 60603-7-5-1
Installation dimension	19.3 x 14.7 mm
Mating force	≤ 30 N
Mating cycles (RJ45 side)	≥ 750
Mating cycles (opposite side)	≥ 100
Housing material	nickel-plated die-cast zinc
Insulation components material	PC aqua
Gold plating in contact area	50 µ"
Gold plating IDC	30 µ"
Cable diameter	5-10 mm

Environmental requirements

Connection class	IP20
Temperature range	-40°C to +70°C

Electrical properties

Contact resistance	≤ 20 mΩ
Insulation resistance between contacts	≥ 500 MΩ
Dielectric withstanding voltage contact – contact	≥ 1000 V DC/AC
Dielectric withstanding voltage contact – screen	≥ 1500 V DC/AC
Current-carrying capacity at 50°C	1.25 A
PoE+ per IEEE 802.3at	PoE+

Transmission characteristics

10 GbE	supported
Cat.6_A	ISO/IEC 11801 AM1 and AMD2, Link length: > 1 m

TP Termination Block

Construction	plastic with insulation displacement connection

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Gold plating termination block	30 µ"
Color	transparent yellow
Application	Installation cable with solid wire, AWG 22 to AWG 24 and flex.
	Plug bears small flag-like installation guide with color codes for pin-out according to EIA/TIA 568 A and B.

TP Cable

Construction

Conductor	bare copper wire, Ø 0.56 mm (AWG 23/1)
Insulation	foamskin PE, Ø 1.38 mm
Twisting	2 cores to the pair
Pair screen	Al-laminated plastic foil
Cable lay up	4 pairs (PiMF) to the core
Sreen	copper braid, tinned
Sheath	LSHF or LSHF-FR orange RAL 2003

Mechanical properties

Minimum bending radius	Without load	≥ 30 mm
	With load	≥ 60 mm
Temperature range	During operation	-20°C to +60°C
	During installation	0°C to +50°C

Electrical properties at 20°C ± 5°C

Loop resistance		≤ 154 Ω/km
Resistance unbalance		≤ 2%
Insulation resistance	(500 V)	≥ 5000 MΩ*km
Mutual capacitance	at 800 Hz	Nom. 43 nF/km
Capacitance unbalance	(pair/ground)	≤ 1500 pF/km
Characteristic impedance	100 MHz	(100 ± 5) Ω
Nominal velocity of propagation		ca. 79%
Propagation delay		≤ 425 ns/100m
Delay skew		≤ 9 ns/100m
Test voltage	(DC, 1 min) core/core and core/screen	1000 V
Transfer impedance	at 1 MHz	5 mΩ/m
	at 10 MHz	5 mΩ/m
	at 30 MHz	10 mΩ/m
Coupling attenuation		85 dB
Segregation classification acc. EN 50174-2		"d"

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Electrical Data (nominal) acc. to Cat.7 (at 20°C)

F MHZ	Attenuation dB/10m	NEXT dB	PS-NEXT dB	ACR dB/100m	PS-ACR dB/100m	ELFEXT dB/100m	PS-ELFEXT dB/100m	Return loss dB
1.0	1.8	104	101	102	99	105	105	-
4.0	3.4	100	97	97	94	105	102	27
10.0	5.4	100	97	95	92	97	94	30
16.0	6.8	100	97	93	90	93	90	30
20.0	7.7	100	97	92	89	91	88	30
31.2	9.6	100	97	90	87	87	84	30
62.5	13.7	100	97	86	83	81	78	30
100.0	17.4	100	97	83	80	77	74	30
125.0	19.5	95	92	75	72	75	72	26
155.5	21.9	94	91	72	69	73	70	26
175.0	23.3	93	90	70	67	72	69	25
200.0	25.0	92	89	67	64	71	68	25
250.0	28.1	90	87	62	59	69	66	24
300.0	30.9	89	86	58	55	67	64	24
450.0	38.3	87	84	48	45	64	61	23
600.0	44.8	85	82	40	37	61	58	22
750.0	52.0	83	80	31	28	59	56	21
900.0	59.4	82	79	23	20	59	55	20
1000.0	63.1	80	77	17	14	57	54	20

Outerdiameter	7.5 mm
Fire load	585 MJ/km
	0.163 kWh/m
Weight	75 kg/km
Copper content	38
Tensile force	340 N

Product variants & accessories

Art.-No.	Description
T-T6K/T6K-N23-xxxx	tBL® - TP Installation Cable both ends 1x RJ45 Keystone Modules Cat.6_A UC900 SS23
T-T6K/T6K-N23-xxxxL	tBL® - TP Installation Cable both ends 1x RJ45 Keystone Modules w. LID Cat.6_A UC900 SS23
T-T6K/T6K-N23-xxxxLU	tBL® - TP Installation Cable both ends 1x RJ45 Keystone Modules w. LID (one enclosed) Cat.6_A UC900 SS23
T-T6K/T6K-N23-xxxxU	tBL® - TP Installation Cable both ends 1x RJ45 Keystone Modules (one enclosed) Cat.6_A UC900 SS23
T-TKT/TKT-N23-xxxx	tBL® - TP Installation Cable both ends 1x termination block Cat.6_A UC900 SS23 LSHF