tBL® - TP Trunk Cable both ends RJ45 DC 6fold Module (one enclosed) Cat.6_A UC Future 24x2xAWG26 LSHF





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. 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

System platforms	tML®/ tSML
	4x tBL® - 6fold Modules can be integrated in a tSML - TP Module.
	1x tBL® - 6fold Module can be integrated in a tML® - TP Module.
Equipping	6x tBL® RJ45 DC Module Cat.6_A

TP RJ45 Modules

Mechanical properties

Type	RJ45 Jack shielded
Connector standard	IEC 60603-7-5-1
Certification	GHMT
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	30 µ"
Contacting	AWG 27-22
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+

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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
Gold plating termination block	30 µ"
Color	transparent white
Application	Flex cable AWG 26 - AWG 27, alternative AWG 26 Solid Wire
	Plug bears small flag-like installation guide with color codes for pin-out according to EIA/TIA 568 A and B.

TP Cable

Construction

Type	UC FUTURE COMPACT AWG26/1 Cat.7 S/FTP 24P
Conductor	Bare copper wire, diamter 0.4 mm (AWG26)
Insulation	Foam-skin PP, diameter 1.0 mm
Twisting	2 insulated wires to the pair
Pair screening	Pet-Al foil around each pair
Stranding	6 (5+1) bundles with 4 foiled pairs blue, orange, green, brown
	Coloured tapes are around each bundle
Screen	Tinned copper braid 85% coverage
Sheath	LSHF-FR, diameter 13.9 mm

Application

IEEE 802.3: 10Base-T; 100Base-T; 10GBase-T, ISDN; xDSL
IEEE 802.5 16 MB; ISDN; TPDDI; ATM155Mbit/s
The conductor diameter is smaller compared to the standard installation cables. This leads to an increased attenuation and therefore the
operating distance is reduced (60m instead of 90m installation cable in standard permanent link).

Standards

IEC 61156-6 work area cable
ISO/IEC 11801 2nd ed.
EN 50173-5
EN 50288-4-2

Flame resistance

PVC IEC 60332-1
LSHF-FR IEC 60332-3-24; IEC 60754-2; IEC 61034 ; EN 50399 Class D_{ca}

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Mechanical properties

Minimum bending radius	Without load	≥ 55 mm
	With load	≥ 110 mm
Temperature range	During operation	-20°C up to +60°C
	During installation	10°C up to +40°C

Electrical properties at 20°C

Loop resistance		≤ 280 Ω/km
Resistance unbalance		≤ 2%
Test voltage	core/core	1000 V_{DC} 1 min
	core/screen	1000 V_{DC} 1 min
Capacitance	800 Hz	Nom. 44 nF/km
Capacitance unbalance		≤ 1600 pF/km
Impedance	100 MHz	100 Ω± 5 Ω
Nominal velocity of propagation		ca. 76%
Insulation resistance	500 V	≥ 2000 MΩkm
Transfer impedance	at 1 MHz	≤ 5 mΩ /m
	at 10 MHz	≤ 5 mΩ /m
	at 30 MHz	≤ 10 mΩ /m

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

F MHZ	Atten-uation dB/10m	NEXT dB	PS-NEXT dB	ELFEXT dB/100m	PS-ELFEXT dB/100m	Return loss dB
1.0	0.3	90	87	80	77	23
4.0	0.6	90	87	80	77	24
10.0	1.0	90	87	80	77	25
16.0	1.3	90	87	76	73	25
20.0	1.4	90	87	74	71	25
31.2	1.8	90	87	70	67	25
62.5	2.6	90	87	64	61	23
100.0	3.2	87	84	60	57	21
125.0	3.6	85	82	58	55	20
155.5	4.0	84	81	56	53	19
175.0	4.3	83	80	55	52	19
200.0	4.6	82	79	54	51	18
250.0	5.1	81	78	52	49	18
300.0	5.6	80	77	50	47	17
450.0	6.9	77	74	47	44	17
600.0	7.9	75	72	44	41	17

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Technical Data

Designation	J-02YS(ST)CH
Type	24x2x0.4PiMF
Outer diameter	13.9 mm
Fire load	2.171 MJ/km
Fire load	0.603 kWh/m
Reaction to Fire	D_{ca}-s2, d2, a1
Weight	230 kg/km
Copper content	115 kg/km
Tensile force	500 N

Product variants & accessories

Art.-No.	Description
T-T6D/T6D-N26Cxxxx	tBL® - TP Trunk Cable both ends RJ45 DC 6fold Module Cat.6_A UC Future 24x2xAWG26 LSHF
T-T6D/T6D-N26CxxxxU	tBL® - TP Trunk Cable both ends RJ45 DC 6fold Module (one enclosed) Cat.6_A UC Future 24x2xAWG26 LSHF
T-TKT/TKT-N26Cxxxx	tBL® - TP Trunk Cable both ends preterminated 6x termination block Cat.6_A UC Future 24x2xAWG26 LSHF

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