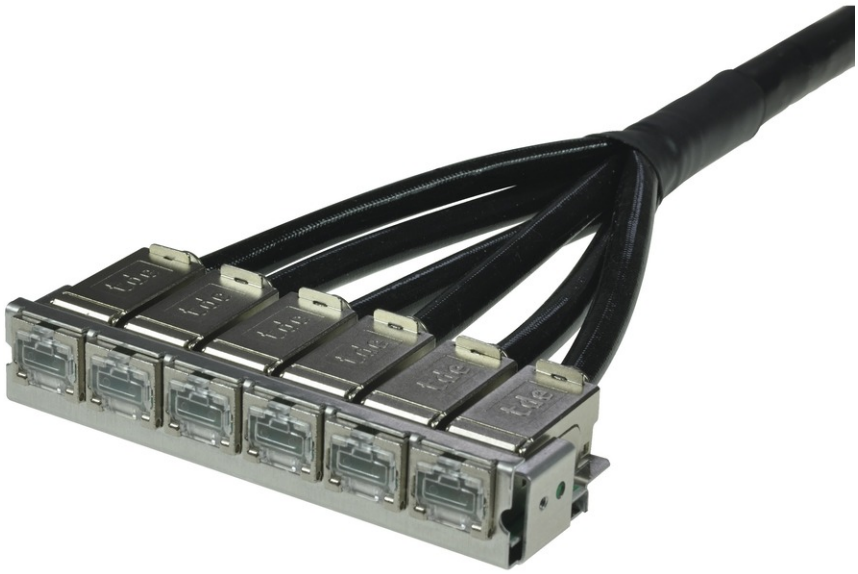
tBL® - TP Trunk Cable both ends RJ45 DC 6fold Module w. LID Cat.6_A UC Future 24x2xAWG23 LSHF



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 LID
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 opak
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	--
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

LiD Function

supply voltage	12 V DC
lightdetection	≥200 m
light exits	≤20

TP Termination Block

Construction	plastic with insulation displacement connection
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

Type	UC FUTURE COMPACT AWG23/1 Cat.7 S/FTP 24P
Conductor	Bare copper wire, diamter 0.56 mm (AWG23)
Insulation	Foam-skin PP, diameter 1.4 mm
Twisting	2 insulated wires to the pair
Pair screening	Pet-Al foil around each pair
Stranding	3 layers of screened pairs (2+8+14)
Screen	Tinned copper braid, ≥ 65% coverage
Sheath	LSHF

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 (80 m instead of 90 m installation cable in standard permanent link).

Standards

IEC 61156-6 work area cable
ISO/IEC 11801
EN 50173-5;EN 50288-4-2
IEEE 802.3af

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Flame resistance

IEC 60332-1

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

Mechanical properties

Minimum bending radius	Without load	≥ 100 mm
	With load	≥ 200 mm
Temperature range	During operation	-20°C up to +60°C
	During installation	10°C up to +40°C

Electrical properties at 20°C ± 5°C

Loop resistance		≤ 176 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. 43 nF/km
Capacitance unbalance		≤ 1500 pF/km
Impedance	1-100 MHz	100 Ω± 5 Ω
Nominal velocity of propagation		ca. 79%
Propagation delay	Nominal	< 450 ns/100m
Delay skew	Nominal	< 15 ns/100m
Insulation resistance	500 V	≥ 2000 MΩkm
Transfer impedance	bei 1 MHz	≤ 5 mΩ /m
	bei 10 MHz	≤ 5 mΩ /m
	bei 30 MHz	≤ 10 mΩ /m
Coupling attenuation		≥ 85 dB

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

F in MHZ	Atten-uation dB/90m	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	100	97	98	95	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

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250.0	28.1	90	87	62	59	69	66	24
300.0	30.9	89	86	58	55	67	64	24
400.0	38.3	87	84	48	45	64	61	23
500.0	43.0	86	83	43	40	61	58	22
600.0	44.8	85	82	40	37	60	57	22

Technical Data

Designation	J-09YS(ST)CH
Outer diameter	18 mm
Fire load	3120 MJ/km
Fire load	0.87 kWh/m
Reaction to Fire	D_{ca}-s2, d2, a1
Weight	330 kg/km
Copper content	165 kg/km
Tensile force	840 N

Product variants & accessories

Art.-No.	Description
T-T6D/T6D-N23Cxxxx	tBL® - TP Trunk Cable both ends RJ45 DC 6fold Module Cat.6_A UC Future 24x2xAWG23 LSHF
T-T6D/T6D-N23CxxxxL	tBL® - TP Trunk Cable both ends RJ45 DC 6fold Module w. LID Cat.6_A UC Future 24x2xAWG23 LSHF
T-T6D/T6D-N23CxxxxLU	tBL® - TP Trunk Cable both ends RJ45 DC 6fold Module w. LID (one enclosed) Cat.6_A UC Future 24x2xAWG23 LSHF
T-T6D/T6D-N23CxxxxU	tBL® - TP Trunk Cable both ends RJ45 DC 6fold Module (one enclosed) Cat.6_A UC Future 24x2xAWG23 LSHF
T-TKT/TKT-N23Cxxxx	tBL® - TP Trunk Cable both ends preterminated 6x termination block Cat.6_A UC Future 24x2xAWG23 LSHF

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