tde®
trans data elektronik GmbH

net. work. solution. made in Germany
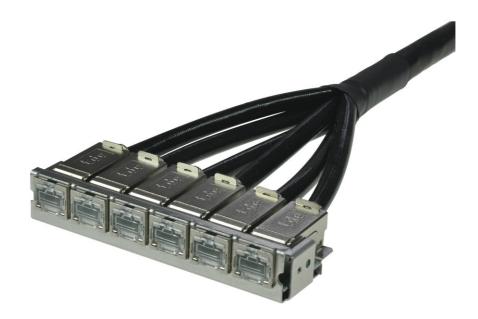
ISO 9001
TL 9000
ISO 14001

tSML - TP Trunk Cable Snap-In both ends 6x RJ45 DC LID f. Module 0.5U, length: xx in m

tSML - tde Semi Modular Link

tSML is a modular developed cabling system, which consists of two core components: module and trunk cable. The system components, preterminated with connectors and tested ex works, facilitate very fast installation of both twisted pair and fiber-optic cables. Ready-made trunk cables, providing a high number of pairs or fibers, can simply be plugged together using patch panels. Up to 96x LC duplex and/or 48 x RJ45 of haven can be accommodated in such a way on 1U. At the heart of the System are MPO/MTP® and Telco connectors, with which 12 optical fibers or 24 copper pairs can be connected simultaneously. Fiber-optic and twisted pair modules can be combined on 1U within a panel without difficulty.

The tSML - TP Trunk Cable is intended for the installation in the tSML module 0.5U (up to 4).

tde® trans data elektronik GmbH

Headquarter address:
Lingener Str. 2
D-49626 Bippen/Ohrte
Tel.: +49 5435 9511 0
Fax.: +49 5435 9511 32

Sales office address:
Prinz-Friedrich-Karl-Str. 46
D-44135 Dortmund
Tel.: +49 231 8805 61 13
Fax.: +49 231 8805 61 15

info@tde.de I www.tde.de

Technical Data

tSML - TP Trunk Cable is preterminated on both ends with modules 6x RJ45 10GbE. A full assembly results in 24x RJ45 ports on 0,5U.

Cable	S/FTP Round Cable 24x2xAWG 26/1, CAT 7, Pet-Al foil around each pair, 3 layers of screened pairs (2+8+14), LSHF-FR
	13.2 mm
	55 mm
	110 mm
Flame resistance	LSHF-FR IEC 60332-3-24; IEC 60754-2; IEC 61034
Standards	ISO/IEC 11801 2nd Edition; EN 50173-5; EN 50288-4-2
Tests	Link Performance Tests, electronic test on short-circuit and Visual Final Inspection; all measured values are electronically archived

xx - stands for the cable length in meters (max. length is 60m)

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

net. work. solution. made in Germany

tSML - TP Trunk Cable Snap-In both ends 6x RJ45 DC LID f. Module 0.5U, length: xx in m

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+

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 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

tSML - TP Trunk Cable Snap-In both ends 6x RJ45 DC LID f. Module 0.5U, length: xx in m

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}

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	Atten-uation	NEXT	PS-NEXT	ELFEXT	PS-ELFEXT	Return loss
MHZ	dB/10m	dB	dB	dB/100m	dB/100m	dB

tde®
trans data elektronik GmbH

net. work. solution. made in Germany

ISO 9001
TL 9000
ISO 14001

tSML - TP Trunk Cable Snap-In both ends 6x RJ45 DC LID f. Module 0.5U, length: xx in m

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

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
TSML-MS06RJ45-xx	tSML - TP Trunk Cable Snap-In both ends 6x RJ45 DC f. Module 0.5U, length: xx in m
TSML-MS06RJ45-xxL	tSML - TP Trunk Cable Snap-In both ends 6x RJ45 DC LID f. Module 0.5U, length: xx in m
TSML-MS06RJ45-xxLU	tSML - TP Trunk Cable Snap-In both ends 6xRJ45 DC LID (one enclosed) f. Module 0.5U, length: xx in m
TSML-MS06RJ45-xxU	tSML - TP Trunk Cable Snap-In both ends 6x RJ45 DC (one enclosed) f. Module 0.5U, length: xx in m