General information

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Pictograms

Application

indoor cable

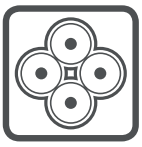
outdoor cable

aerial cable

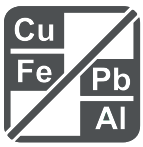
Cable elements

single core

pair


quad

Construction



metal-free

rodent protection

longitudinally watertight

radially watertight

flame retardant

Filling

unfilled

petrol jelly

Füllnidz

dry filling swellable materials

Overall screening, armouring

unshielded

foil

copper braid or tape

foil and copper braid

copper wires

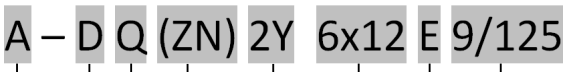
composite layer (L)

steel tape

corrugated steeltape

round steel wires

Letter symbols - Fiber optic cables



Area of application	
Indoor cable	I
Universal cable	A/I
Outdoor cable	A
Dividable cables, Breakout cables	AT

Core type	
Tight buffered fiber	V
Jelly-filled loose tube	D

Construction	
Swellable filling material for dry cable core	Q
Jelly-filled cable core (petrol jelly)	F
Metal elements in the cable core	S
Aramid yarns as strength member	(ZN)
Glass-rovings as strength member	(BN)
Metallic element as strength member	(ZS)

Sheath variants	
Polyvinylchloride (PVC)	Y
Polyethylene (PE)	2Y
Polyamide (PA)	4Y
Hytrel®	13Y
FRNC (flame retardant non corrosive) bzw. LS0H (low smoke - zero halogens)	H
Corrugated steel tape – Polyethylene (PE)	(SR)2Y
Polyethylene (PE) – steel wire armouring – Polyethylene (PE)	2YR2Y
Aluminium – Polyethylene (PE) composite layer sheath	(L)2Y

Number of fibers or fiber bundle	
Number of fibers	n
Number of fiber bundle x number of fibers per tube	nxm

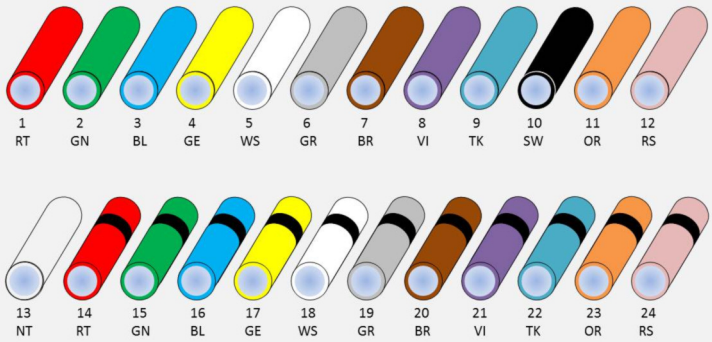
Fiber type	
Singlemode fiber	E
Multimode-gradient index fiber	G

Fiber dimension	
Ø fiber core / Ø fiber cladding	x/y

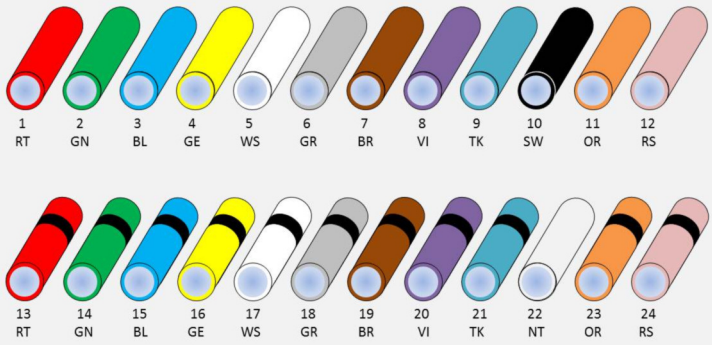
Colour codes - Fiber optic cables

Color specifications of the fibers

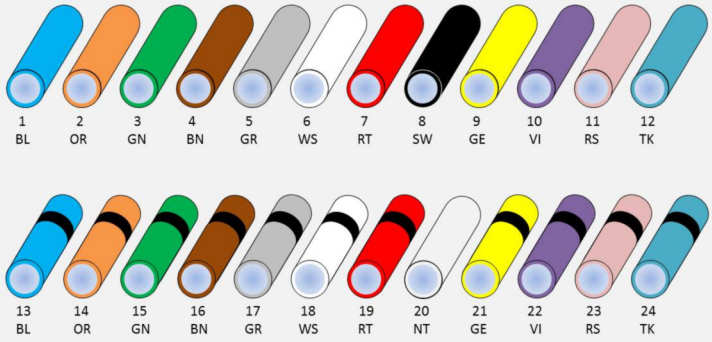
PENGG KABEL Standard



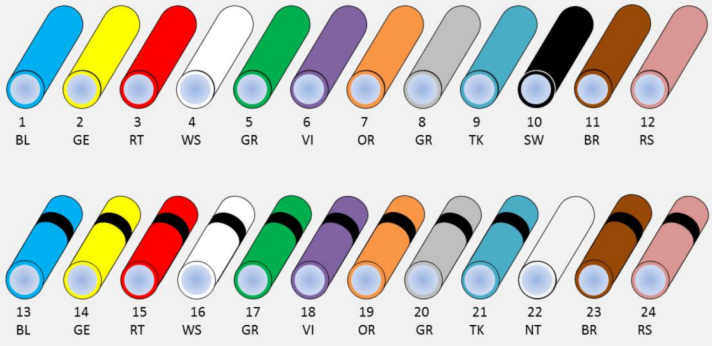
DIN



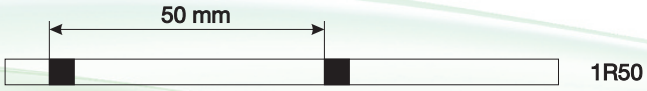
TIA/EIA-598 (MPO)



IEC



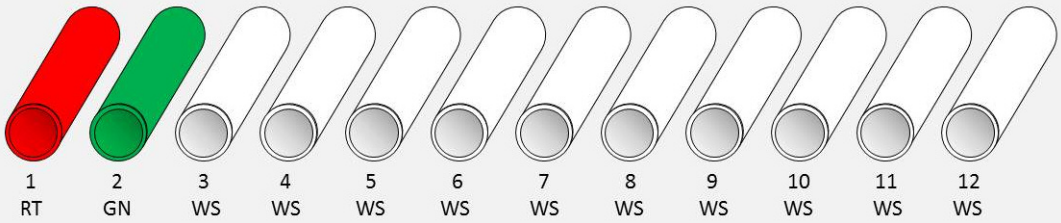
Ring marking:



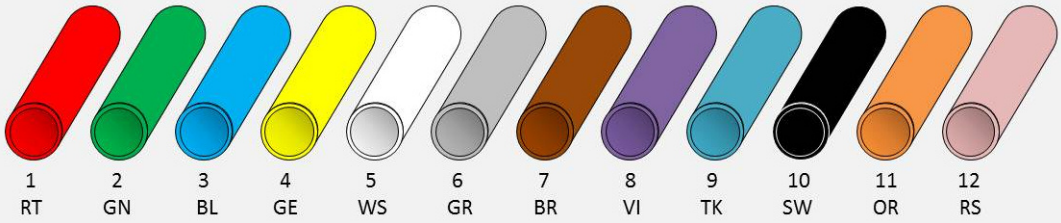
Colour codes - Fiber optic cables

Color specifications of the loose tubes

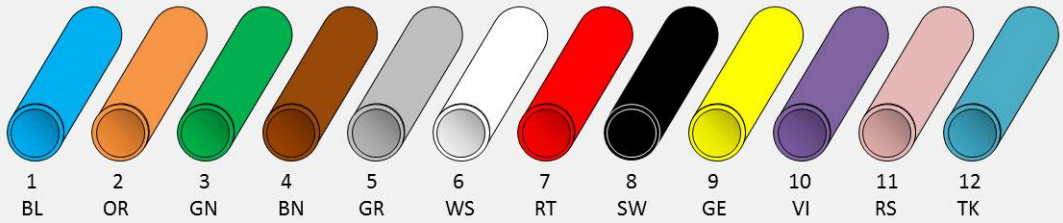
PENGG KABEL Standard



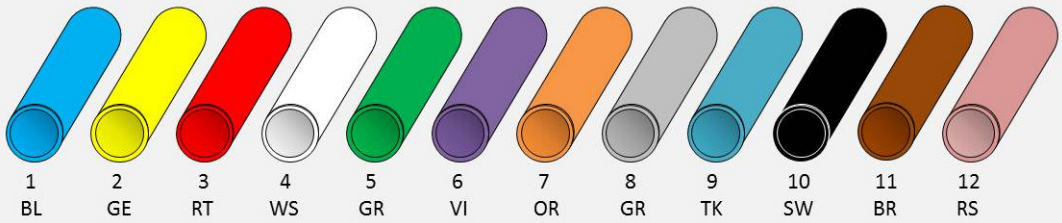
DIN



TIA/EIA-598 (MPO)



IEC



Planning- and installation advices

Laying-guideline

Cables are not allowed to be unwinded from the drum against their original running direction (fig. 3).

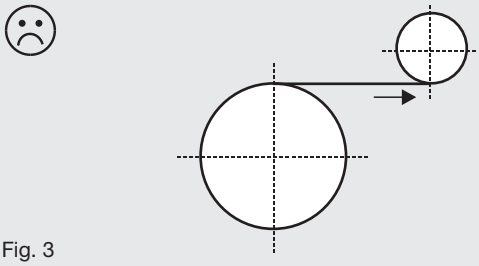


Fig. 3

As well twisting of the cable (fig.4) is not allowed.

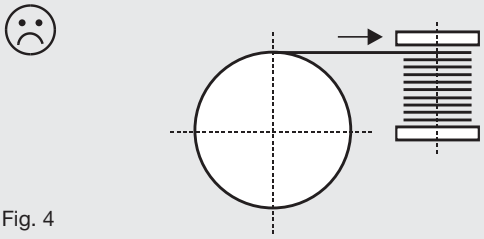


Fig. 4

During an installation the cable drum shall always be situated horizontally (fig.5), preferred on an unroll stand. When this is considered, the cable will not be demaged due to mechanical stress during installation or laying out on the floor.

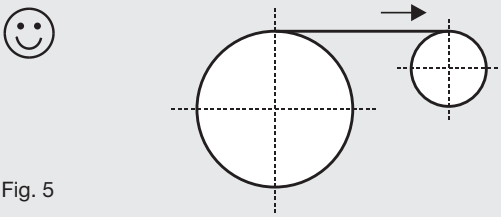


Fig. 5

To prevent a torsions effect, a cable coil has to be situated vertically (fig.6) and unreeled or layed out on the floor.

If there is not enough space to unreel the cable coil in the necessary length, a sufficiently big bend must be considered by laying back the cable.

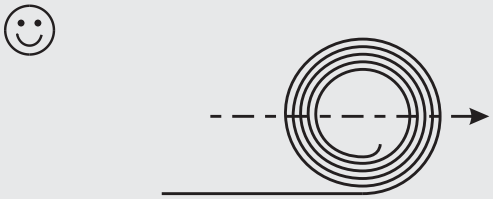


Fig. 6

A cable bundle always shall be layed straight, to prevent a possible blocking during the installation. If e.g. several cables are layed parallely in cable trays, it is recommended to bundle them with cable straps or insulating tapes (fig.7).

Fig. 7

During bundling up the cables, a sqeezing has to be prevented (fig. 8).

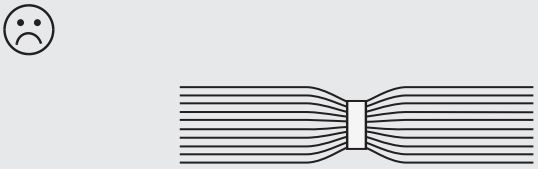
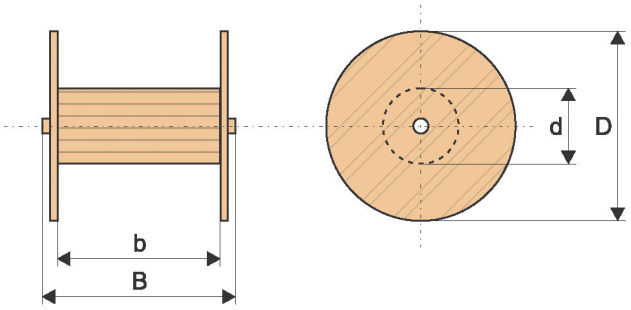


Fig. 8

Nominal data of wooden drums

Drums according to DIN 46391 (dimensions, weights)



identification number	drum dimension	flange-diameter D [mm]	barrel-diameter d [mm]	width B [mm]	traverse width b [mm]	carrying capacity aprrox. [kg]	drum-weight aprrox. [kg]
051	05	500	150	470	400	–	8
E6	06	600	300	450	–	–	20
061	06	630	315	415	315	250	13
071	07	710	355	500	400	400	25
E8	08	800	400	560	–	–	40
081	08	800	400	500	400	600	31
091	09	900	450	670	560	800	47
E10	10	1000	550	700	–	–	70
101	10	1000	500	690	560	900	71
E12	12	1200	700	790	–	–	130
121	12	1250	630	860	666	1700	144
E14	14	1400	850	870	–	–	180
141	14	1400	710	870	660	2000	175
E16	16	1600	1000	970	–	–	320
161	16/8	1600	800	1060	844	3000	280
162	16/10	1600	1000	1100	835	3000	271
E18	18	1800	1150	1110	–	–	480
181	18/10	1800	1000	1060	835	4000	380
182	18/12	1800	1250	1100	825	4000	352
E20	20	2000	1300	1190	–	–	580
201	20/12	2000	1250	1310	1035	5000	550
202	20/14	2000	1400	1345	1030	5000	544
E22	22	2200	1450	1330	–	–	700
221	22/14	2240	1400	1410	1140	6000	710
222	22/16	2240	1600	1475	1130	6000	738
E24	24	2400	1600	1380	–	–	900
250	25/14	2500	1400	1450	1140	7500	875
251	25/16	2500	1600	1450	1130	7500	900
252	25/18	2500	1800	1475	1120	7500	909
E26	26	2600	1700	1450	–	–	1100
E28	28	2800	1800	1650	–	–	1400
281	28/18	2800	1800	1590	1280	10000	1175
E30	30	3000	1900	–	1270	10000	1600

up to drum dimension 10 with cable bushing