



SAMCON SKD04-T.flex
 Sectional view

SAMCON® SKD04-T.flex

The cable **SKD04-T.flex** is a system cable for connecting digital camera systems and was particularly developed to be used in **hazardous areas**. It meets the requirements for cables and wires according to DIN EN 60079-14. When using the applicable cable gland, it is possible to insert the cable directly into flameproof enclosures. It is **high-flexible** and **drag-chain-suitable**.

The **SKD04-T.flex** is a high speed cable for industrial Ethernet for fixed installations in dry, wet, or damp rooms. The cable meets the transmission characteristics for **Category 6** of IEC 61156-5 Ed. 2 even at -60°C. Gigabit Ethernet applications can be transmitted securely at a length of up to **100 metres**. It has an excellent resistance against mechanical stress, oils as well as greases and is halogenfree.

Data.

Application areas:

IEEE 802.3 : Ethernet 10Base-T ; Fast Ethernet 100Base-T ; Gigabit Ethernet 1000Base-T
 IEEE 802.5 : 16 MB; ISDN ; FDDI ; ATM ; Cable sharing
 IEEE 802.3at : PoE suitable



Standards:

EN 60079-14:2014 „Electrical installations design, selection and erection“ (q.v. declaration of conformity)
 IEC 60079-14:2013 „Electrical installations design, selection and erection“ (q.v. declaration of conformity)
 EN 50288-10-1; IEC 61156-5 ; EN 50173 ; ISO/IEC 11801 2. edition
 EN 60332-1-2 ; IEC 60754-2



Environmental characteristics:

The cable is suitable for drag chain use: 1 million bending cycles, bending radius 20 x D, at a speed of 4 m/s, acceleration 4 m/s², max. travel distance 10 m at 20°C.



Chemical characteristics:

RoHS 2011/65/EU ; IEC 60811-2-1 (IRM 902, 4h at 70°C) ;
 The cable is sunlight resistant in accordance with UL 2556 Sec. 4.2.8.5 (720h).
 The cable is flame retardant in accordance with IEC 60332-1-2.
 The cable is oil resistant in accordance with IEC 60811-404 (7x24h at 90°C).
 The cable is mud resistant in accordance with NEK 606.



Labeling:

WWW.SAMCON.EU SKD04-T.flex / Cat.6 / 4x2xAWG24/7 - <charge number> - <xxxx> m

Design:

Outer jacket:	PUR FHF
Color:	yellow green, RAL 6018
Diameter:	8.7 ± 0.3 mm
Wall thickness:	0.85 ± 0.3 mm



Conductor design:

Conductor:	AWG 24/7, blank
Insulation:	PE
Diameter:	1.05 ± 0.02 mm
Color code:	IEC 708-1
Shielding:	Copper, tinned wire 0.10, optical cov. app. 80%



Mechanical characteristics:

Temperature range:	
Fixed installed:	-60°C bis +80°C
During installation:	-25°C bis +80°C
Bending radius:	8 x diameter during installation 4 x diameter after installation
Maximum tractive force:	100 N
Pressure resistance at 20°C:	18 bar



Electrical characteristics:

Loop resistance:	Max. 180 Ohm / km according to VDE 0812
Insulation resistance:	Min. 500 MOhm x km at +20°C
Operating capacity:	Nom. 45 nF / km
Characteristic impedance at 100MHz:	100 Ohm ± 5 Ohm

Test voltage:	700 V / AC
Velocity of propagation:	Ca. 0.78 c
Signal term:	≤ 5.13 ns/m
Running time difference:	< 8 ns/100m
NVP:	66%
Screening attenuation to 1000 MHz:	> 85 dB
Coupling attenuation:	> 80 dB
Transfer impedance:	< 5 mOhm/m at 10MHz

Schillerstrasse 17
D-35102 Lohra-Altenvers

Typical transmission performance:

f in MHz	Attenuation (dB/100m) nom.	NEXT (dB) nom.	ELFEXT (dB/10m) nom.	RL (dB) nom.
1	3.1	75.4	66.0	
4	5.8	66.3	58.0	23.1
10	9.0	60.3	50.0	25.0
16	11.4	57.2	45.9	25.0
20	12.8	55.8	44.0	25.0
31,25	16.1	52.9	40.1	23.6
62,5	23.2	48.4	34.1	21.5
100	29.9	45.3	30.0	20.1
155	38.0	42.4	26.2	18.8
200	43.7	40.8	24.0	18.0
250	49.5	39.3	22.0	17.3

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Sample measurement report 107 meter EN50173 PL2 Ea:

