

Hybrid Cable
Halogen-free, Flame retardant

SC-(02YSCH / U-DQ(ZN)BH)H

60 °C / 125 V

Application

For data transmission and controlling.
 Recommended for fixed installation indoor and outdoor, in dry and wet locations.

Construction

Copper data pairs

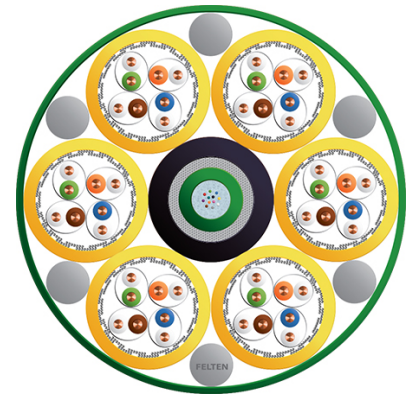
Conductor solid plain copper, size: AWG 23/1
 Insulation foamed polyethylene PE with skin layer of PE (Ø 1.45 mm approx..)
 Colour code white / blue, white / orange, white / green, white / brown
 Pair screen..... Plastic coated aluminium tape, metallic surface outside in contact with tinned copper wire braid (overall screen)
 Sheath Halogen-free flame retardant polymer, yellow; continuously numbered

Fibre Optic Cable U-DQ(ZN)BH

Fibre quality G50/125 OM4
 Colour code in acc. to IEC 60304
 Strain relief (over all)..... Multifunctional E-glass yarns as strain relief and non-metallic rodent protection above the central loose tube
 Sheath Halogen-free flame retardant polymer, black

Cable core

Laying up elements twisted to cable core (with filling elements if necessary)
 Wrapping at least one layer of plastic tape
 Outer sheath Halogen-free flame retardant polymer, green
 Cable marking..... to be agreed



Technical data

Flame retardant IEC 60332-1-2
 Flame propagation IEC 60332-3-22

Temperature range:
 -30°C up to +60°C (during operation)
 -5°C up to +50°C (during installation)
 Min. bending radius
 10 x cable diameter

Abbreviations

SK- Hybrid Cable – indoor & outdoor
 02YS Foam skin PE
 C Tinned copper wire braid
 H Halogen-free compound
 PIMF Pair in metal foil

Electrical Properties at 20 °C (copper data pairs – Cat. 7)

	character	unit	value
Conductor		AWG	23
Conductor resistance (loop)	max.	Ω/km	75
Impedance (f = 100 MHz)		Ω	100 ± 5
Insulation resistance	min.	G Ω*km	5
Mutual capacitance	approx.	nF/km	42
Transfer capacitance	approx.	nF/km	1500
Signal velocity (c)	approx..		0.8
Propagation delay	approx..	ns/100m	420
Test voltage U _{rms} (core : core)		V	1000
Operating voltage		V	125

Hybrid Cable

Halogen-free, Flame retardant

SC-(02YSCH / U-DQ(ZN)BH)H

60 °C / 125 V

Electromagnetic behaviour (copper data pairs – Cat. 7)

	character	unit	value
Transfer impedance at 10 MHz	Nom.	m Ω/m	5
Screen attenuation up to 1000 MHz	nom.	dB	70
Coupling attenuation up to 1000 MHz	nom.	dB	85
Segregation class	in acc. to EN 50174-2		d

Electrical characteristics (copper data pairs - Cat. 7)

Frequency MHz	Attenuation dB/100m		NEXT dB		PS-NEXT dB		ACR dB@100m		PS-ACR dB@100m		ACR-F dB@100m		PSACR-F dB@100m		RL dB	
	typ.	Cat. 7 max.*	typ.	Cat. 7 min.*	typ.	Cat. 7 min.*	typ.	Cat. 7 min.*	typ.	Cat. 7 min.*	typ.	Cat. 7 min.*	typ.	Cat. 7 min.*	typ.	Cat. 7 min.*
1	1.9	2	105	80	102	77	104	78	101	75	98	80	95	77	26.6	23
10	4.8	5.7	105	80	102	77	101	74	98	71	103	74	100	71	35.3	25
100	16.3	18.5	105	72	102	69	89	54	86	51	89	54	86	51	39.6	20.1
200	24.3	26.8	105	68	102	65	81	41	78	38	82	48	79	45	36	18
250	27.5	30.2	105	66	102	63	78	36	75	33	79	46	76	43	34	17.3
500	37.9	44.1	100	62	97	59	62	18	59	15	67	40	64	37	29	17.3
600	42.4	48.9	95	61	92	58	53	12	50	9	60	38	57	35	25.4	17.3
700	47.2		95		92		48		45		57		54		24.6	
800	50.3		93		90		43		40		53		50		23.5	
900	54.6		90		87		35		32		49		46		22.6	
1000	58		88		85		30		27		44		41		21.5	
1150	61.9		86		83		25		22		39		36		20.6	

*EN 50288-4-1 / IEC 61156-5: The effect of overall twisting of single elements can lead to an additional attenuation of 3% or frequency selective reflection at multicables.

Optical data

Cladding diameter		µm	125 ± 1
Coating diameter		µm	245 ± 0.5
Coating non-circularity	max.	%	1
Optical attenuation at 850 nm	max.	dB/km	2.5
Optical attenuation at 1300 nm	max.	dB/km	0.7
Bandwidth at 850 nm	min.	MHz*km	3500
Bandwidth at 1300 nm	min.	MHz*km	500
Laser bandwidth at 850 nm	min.	MHz*km	4700

Hybrid Cable

Halogen-free, Flame retardant

SC-(02YSCH / U-DQ(ZN)BH)H

60 °C / 125 V

Geometrical cable data			
No. of elements	Outer dia. approx. (mm)	Weight approx. (kg/km)	Part No.
size			
6xCat.7 (4x2xAWG23/1 PIMF) + 12G50/125 OM	25.4	580	

RT = Radial Thickness