PVC flat cable

Compact design by minimised wall thicknesses

Small & favourable sizes of festoon trolleys resulting from minimised wall thicknesses & weights

Large range of possible applications thanks to broadband PVC with ductile additives for core insulation and sheathing

Simple insulation by means of coaxial extrusion used for conductor insulation

Durability due to the additives designed to prevent deterioration of the outer sheath

All requirements can be met with a broad range of standard sizes between 0.5 and 95 mm²

Complete series including screened cables and special types

Particularly suitable, if...

- used for standard, indoor applications
- small to medium dynamic loads are applied to the system on a single plane
- the priority is a very cost-effective system
- festoon trolleys / festoon systems need to be kept to the smallest possible size due to space limitations
- the operating temperatures do not exceed 60°C

Characteristics

Resilient PVC flat cable
main application: festoon trolley
secondary application: energy guiding profile Mamba

Typical applications
- indoor crane trolleys
- indoor crane main power supply
- process cranes
- transfer cars
- storage and retrieval systems
- hoists

Electrical parameters
rated voltage
Uo/U = 450/750 V
power/ control cables with a diameter from 1.5 mm² and special cables

Uo/U = 300/500 V
screened cables & control cables with a diameter up to 1 mm²

Mechanical load-bearing capacity
travel speed: up to 180 m/min
minimum bending radii:
d < 8 mm : 3 x d
d = 8 up to 12 mm: 4 x d
d > 12 mm : 5 x d

Thermal / Chemical specifications
ambient temperature
- flexing: - 20 °C... + 60 °C
- fixed: - 30 °C... + 60 °C

resistance to atmospheric corrosion to ozone and water, UV stable

Important features
- self-extinguishing and flame retardant
- resistant to humidity
- resistant to oils and grease
- LBS-free / silicone-free

Design features
conductor: flexible (cat. 5) according to DIN VDE 0295
sheath: ductile PVC compound
core insulation: coaxial PVC extrusion

Type
H05VVH6-F / H07VVH6-F
YCFLY / YFLY / YFLCY

Wampfler Cable F-1

Technical data

			H05VVH6-F/YCFLY	H07VVH6-F	YFLY / YFLCY
Electrical parameters	rated voltage		Uo/U = 300/500 V	Uo/U = 450/750 V	Uo/U = 450/750 V
	maximum permitted AC operating voltage		Uo/U = 318/550 V	Uo/U = 476/825 V	Uo/U = 476/825 V
	maximum permitted DC operating voltage		Uo/U = 413/825 V	Uo/U = 619/1238 V	Uo/U = 619/1238 V
	ampacity		accord. to table data, otherwise accord. to DIN VDE 0298 part 4		
	AC test voltage		2 kV	2.5 kV	2.5 kV
Thermal parameters	ambient temperature	flexing	-20 °C to + 60 °C	-20 °C to + 60 °C	-25 °C to + 70 °C
		fixed	-30 °C to + 60 °C	-30 °C to + 60 °C	-30 °C to + 70 °C
	maximum permitted operating temperature of the conductor		70 °C		
	short-circuit temperature of the conductor		150 °C		
Mechanical parameters	minimum bending radii allowing for free movement		d < 8 mm : 3 x d d = 8 to 12 mm : 4 x d d > 12 mm : 5 x d		
	tensile load-bearing capacity		15 N/mm² conductor cross section during operation for moving cables according to DIN VDE 0298 part 3		
Chemical parameters	LBS-free / silicone-free		yes		
	combustion behaviour		flame retardant and self-extinguishing according to DIN VDE 0482 part 265-2-1, IEC 60332-1		
	resistant to ozone		yes		
	resistant to humidity		yes (waterproof)		
	UV-resistant		yes		
	oil-resistant		yes		
	halogen free		no		
Materials	insulation		base material polyvinylchloride (PVC)		
	outer sheath		base material polyvinylchloride (PVC), colour black RAL9005		
Design features	conductor		bare electrolytic copper, flexible, cat. 5 accord. to DIN VDE 0295		
	shield		copper yarn, coverage of approx. 75 %		tin-plated braided copper wires or copper covering
	stranding		conductors or bundles		
	conductor coding		accord. to DIN VDE 0293, part 308 up to 5 conductors coloured, 6 or more conductors black with white numbers with or without green/yellow		

Standards	**H05VVH6-F**	DIN VDE 0281 part 403
	YCFLY	adapted to DIN VDE 0250
	H07VVH6-F	DIN VDE 0281 part 404
	YFLY / YFLCY	adapted to DIN VDE 0250

Design codes

harmonised cable
H05VVH6-F / H07VVH6-F

H harmonised standard
05 rated voltage 300 / 500 V
07 rated voltage 450 / 750 V
V polyvinylchloride (PVC)
H6 flat cable according to HD 359 with 3 or more conductors
-F flexible cable, category 5

not harmonised cable
YCFLY / YFLY / YFLCY

Y PVC material FL flat cable
C conducting metallic covering surrounding the stranded core (shield), in form of foil or braid
J with a green/yellow identification of the earth/ground conductor O without a green/yellow identification of the earth/ground conductor

Type of cable	Number of conductors and cross section [mm²]	Order No.	Geometry d - B[2] [mm]	Cu-Number approx. [kg/km]	Weight approx. [kg/km]	Ampacity I_B [A][3]	Permitted tensile load [N]
Power cables, 1-core **H07VVH6-F**	4 G 4	0325- 4 G 4#	7.0 - 21.0	154	300	35.7	240
	4 G 6	0325- 4 G 6#	7.5 - 23.0	230	385	46.2	360
	4 G 10	0325- 4 G 10#	9.5 - 29.0	384	620	64.1	600
	4 G 16	0325- 4 G 16#	11.0 - 37.0	614	990	86.1	960
	4 G 25	0326- 4 G 25#	13.3 - 42.0	960	1550	113.4	1.500
	4 G 35	0334- 4 G 35#	15.0 - 50.5	1.344	2030	141.8	2.100
	4 G 50	0334- 4 G 50#	16.5 - 55.5	1.920	2650	176.4	3.000
	4 G 70	0334- 4 G 70#	18.5 - 63.5	2.688	3650	217.4	4.200

[1] The ampacity I_B is based on an ambient temperature of 30°C, individual free cabling in the air at 100% duty. Varying environmental conditions, method of operation and cabling arrangement can result in considerably different ampacities (s. technical exhibit).