

TOPFLAT® H05VVH6-F & H07VVH6-F

Flat cables for lifts, cranes, hoists and conveyor systems.

ACCORDING TO: EN 50214



APPLICATION

The Topflat® H05VVH6-F & H07VVH6-F is a flat cable specially designed for cranes, lifts, hoists, drum reeling and conveyor systems.

The hanging length of the cable can reach up to 35 m and its pull out speed can reach up to 1,6 m/s (overlying cables is not recommended when installing).

- Industrial use.
- Mobile services.
- Bridge cranes.
- Lifts, elevators.
- Conveyors.

CONSTRUCTION

Conductor

Electrolytic annealed copper, class 5 (flexible) according to EN 60228 and IEC 60228.

Insulation

Flexible PVC, type T12, according to EN 50363-3.

The standard identification of insulated conductors according to HD 308 and EN 50334, is the following:

4 G	Brown + Black + Grey + Green/yellow
6 or more	Black numbered + Green/yellow

Lay-up

Insulated conductors are placed side by side in parallel arrangement forming a flat cable.

Outer sheath

Flexible PVC, type TM2 according to EN 50363-4-1.

Black colour.

The ripcord allows you to gently tear the outer sheath.

CHARACTERISTICS



Electrical performance

Low voltage: 300/500 V - 450/750 V

Nominal voltage:

H05VVH6-F (up to 1 mm²): 300/500 V.

H07VVH6-F (from 1,5 mm²): 450/750 V.



Thermal performance

Maximum conductor temperature: 70°C.

Maximum short circuit temperature: 160°C (maximum 5 s).

Minimum operating temperature: 0°C (mobile service).



Fire performance

Flame non-propagation according to EN 60332-1 / IEC 60332-1.

Low halogen emission. Chlorine < 15%.



Mechanical performance

Minimum bending radius on pulleys (to 20 ± 10°C):

Festooned as in gantry cranes: 10x smaller dimension

Deflected by pulleys: 10x smaller dimension

Free movement: 5x smaller dimension

Impact resistance: AG2 Medium severity.



Environmental performance

Chemical & Oil resistance: Acceptable.

Water resistance: AD5 Jets.

STANDARDS / COMPLIANCE



According to:
EN 50214

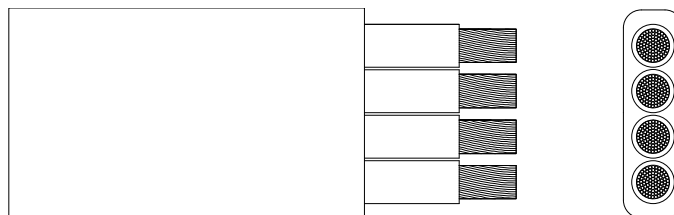


Standards and approvals
HAR / AENOR / CE / RoHS



TOPFLAT[®] H05VVH6-F & H07VVH6-F

DIMENSIONS & ADMISSIBLE INTENSITIES



TOPFLAT[®] H05VVH6-F

Cross-section (mm ²)	Diameter (mm)	Weight (kg/km)	Open air (A) ¹	Voltage drop (V/A · km) ²
6 G 0,75	17 x 3,9	115	14	62,4
8 G 0,75	22 x 3,9	175	14	62,4
10 G 0,75	26 x 3,9	195	14	62,4
12 G 0,75	31 x 3,9	230	14	62,4
16 G 0,75	40 x 3,9	305	14	62,4
18 G 0,75	45 x 3,9	345	14	62,4
20 G 0,75	50 x 3,9	380	14	62,4
24 G 0,75	60 x 3,9	450	14	62,4
6 G 0,75	17 x 3,9	115	14	62,4
8 G 0,75	22 x 3,9	175	14	62,4
10 G 0,75	26 x 3,9	195	14	62,4
12 G 0,75	31 x 3,9	230	14	62,4
*16 G 0,75	40 x 3,9	305	14	62,4
18 G 0,75	45 x 3,9	345	14	62,4
20 G 0,75	50 x 3,9	380	14	62,4
24 G 0,75	60 x 3,9	450	14	62,4
4 G 1	12 x 4,1	100	14	40,5
6 G 1	18 x 4,1	140	17	46,8
8 G 1	23 x 4,1	185	17	46,8
12 G 1	33 x 4,1	270	17	46,8
16 G 1	44 x 4,1	355	17	46,8
20 G 1	55 x 4,1	440	17	46,8
24 G 1	65 x 4,1	525	17	46,8

* These cables are not covered by the reference standard, so that their marks do not carry the letter H of the Harmonized.

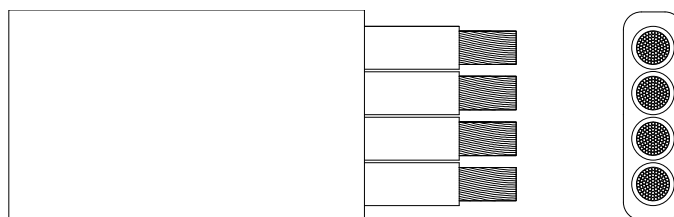
¹Reference method E for multicore cables according to IEC 60364-5-52. One vertical cable with adequate ventilation in open air at 30°C ambient temperature.

² At maximum service temperature and cosφ=1.

For cables having 4 conductors are supposed a three-phase circuits.

For cables having 6 or more conductors are supposed a single-phase circuit where not all conductors are fully charged.

DIMENSIONS & ADMISSIBLE INTENSITIES



TOPFLAT[®] H07VVH6-F

Cross-section (mm ²)	Diameter (mm)	Weight (kg/km)	Open air (A) ¹	Voltage drop (V/A · km) ²
4 G 1,5	17 x 4,9	150	18,5	27,6
6 G 1,5	22 x 4,9	215	22	31,9
8 G 1,5	27 x 4,9	270	22	31,9
10 G 1,5	34 x 4,9	335	22	31,9
12 G 1,5	39 x 4,9	395	22	31,9
*14 G 1,5	47 x 5,2	475	22	31,9
*16 G 1,5	53 x 5,2	530	22	31,9
4 G 2,5	21 x 5,9	220	25	16,6
6 G 2,5	27 x 5,9	310	30	19,2
8 G 2,5	34 x 5,9	395	30	19,2
12 G 2,5	50 x 5,9	590	30	19,2
4 G 4	23 x 7,0	305	34	10,3
12 G 4	56 x 7,0	830	40	11,9
4 G 6	25 x 7,2	390	43	6,86
8 G 6	43 x 7,2	735	51	7,9
4 G 10	30 x 9,3	640	60	3,97
4 G 16	35 x 10,5	930	80	2,51
4 G 25	44 x 13,1	1.435	101	1,62
*4 G 35	48 x 14,4	1.880	126	1,15
*4 G 50	57 x 16,2	2.580	153	0,802
*4 G 70	61 x 17,5	3.375	196	0,565
*4 G 95	69 x 19,5	4.375	238	0,427

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² At maximum conductor temperature and cosφ=1.

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SHORT-CIRCUIT CURRENT-CARRYING CAPACITIES

Time (s)	0,1	0,2	0,3	0,5	1	1,5	2	2,5	3
A/mm ²	364	257	210	163	115	94	81	73	66

CORRECTION FACTORS FOR AIR TEMPERATURE

Air T. (°C)	20	25	30	35	40	45	50	55	60
Factor	1,12	1,06	1	0,94	0,87	0,79	0,71	0,61	0,50

Other correction factors (for grouping cables, for harmonic currents), that are not in this specification, can be applied. Further information can be found in IEC 60364-5-52.