

FLEXTEL® 140 H05VV5-F

Flexible oil resistant control cable, for mobile use.

ACCORDING TO: EN 50525-2-51 / IEC 60227



E_{ca}

APPLICATION

Flexitel® H05VV5-F is a cable for signalling and control systems. It is especially suitable for connecting industrial equipment and machine tools. Due to its properties, it is recommended for robotics and light mobile services. Its special vinylic outer sheath compound is particularly resistant to mineral oils and other chemical agents. It can be installed in either dry or humid environments.

- Industrial use.
- Mobile use.
- Robotics.

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 EN 50334 and HD 308 is the following:

- 2 x Black numbered
- 3 or more Black numbered + Green/Yellow

Outer sheath

Flexible and oil resistant PVC, type TM5 according to EN 50363-4-1. Grey colour.

CHARACTERISTICS



Electrical performance

Low voltage: 300/500 V.



Thermal performance

Maximum conductor temperature: 70°C.
Maximum short-circuit temperature: 160°C (max. 5 s).
Minimum service temperature: 5°C



Fire performance

Flame non-propagation according to EN 60332-1 / IEC 60332-1.
Reaction to fire CPR: E_{ca} according to EN 50575.



Mechanical performance

Minimum bending radius:
3x cable diameter < 12 mm.
4x cable diameter ≥ 12 mm.
Impact resistance: AG2 Medium severity.



Environmental performance

Chemical & Oil resistance: Excellent.
Grease & mineral oils resistance: Excellent.
Water resistance: AD5 Jets.



Installation conditions

Open Air.
In conduit.

STANDARDS / COMPLIANCE



According to
EN 50525-2-51 / IEC 60227



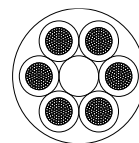
Standards and approvals
HAR / AENOR / RoHS / CE



CPR (Construction Products Regulation)
E_{ca}



DIMENSIONS & ADMISSIBLE INTENSITIES



Cross-section (mm ²)	Diameter (mm)	Weight (kg/km)	Open air (A) ¹	Voltage drop (V/A · km) ²
2 x 0,75	6,2	50	6	62,2
3 G 0,75	6,5	60	6	62,2
4 G 0,75	7,0	75	6	62,2
5 G 0,75	8,0	95	6	62,2
7 G 0,75	9,6	125	6	62,2
8 G 0,75	9,6	135	6	62,2
12 G 0,75	11,3	190	6	62,2
18 G 0,75	13,8	280	6	62,2
27 G 0,75	16,5	395	6	62,2
36 G 0,75	19,3	510	6	62,2
2 x 1	6,3	55	10	46,6
3 G 1	6,8	70	10	46,6
4 G 1	7,6	90	10	46,6
5 G 1	8,3	105	10	46,6
6 G 1	9,0	125	10	46,6
7 G 1	10,1	145	10	46,6
8 G 1	10,1	160	10	46,6
10 G 1	11,2	195	10	46,6
12 G 1	12,1	225	10	46,6
14 G 1	12,6	265	10	46,6
16 G 1	14	305	10	46,6
18 G 1	14,8	335	10	46,6
24 G 1	16,2	420	10	46,6
27 G 1	17,6	470	10	46,6
30 G 1	17,9	510	10	46,6
33 G 1	18,8	565	10	46,6
36 G 1	19,9	605	10	46,6
44 G 1	22,6	740	10	46,6
52 G 1	23,6	870	10	46,6
60 G 1	25,5	995	10	46,6
2 x 1,5	7,1	75	16	31,8
3 G 1,5	8,0	100	16	31,8
4 G 1,5	8,9	125	16	31,8
5 G 1,5	10,0	155	16	31,8
6 G 1,5	10,7	180	16	31,8
7 G 1,5	11,9	205	16	31,8
8 G 1,5	11,9	225	16	31,8
10 G 1,5	13,1	275	16	31,8
12 G 1,5	13,8	315	16	31,8
14 G 1,5	15,1	365	16	31,8
16 G 1,5	16,3	425	16	31,8
18 G 1,5	17	465	16	31,8
24 G 1,5	19,6	610	16	31,8
27 G 1,5	20,8	670	16	31,8
30 G 1,5	21,7	730	16	31,8
33 G 1,5	22,7	800	16	31,8
36 G 1,5	23,3	875	16	31,8
44 G 1,5	26	1.060	16	31,8
52 G 1,5	28,1	1.240	16	31,8

Cross-section (mm ²)	Diameter (mm)	Weight (kg/km)	Open air (A) ¹	Voltage drop (V/A · km) ²
60 G 1,5	29,7	1.420	16	31,8
2 x 2,5	9,1	120	25	19,1
3 G 2,5	9,6	145	25	19,1
4 G 2,5	10,8	185	25	19,1
5 G 2,5	12	230	25	19,1
6 G 2,5	12,8	265	25	19,1
7 G 2,5	13,9	305	25	19,1
8 G 2,5	14,3	345	25	19,1
10 G 2,5	15,7	415	25	19,1
12 G 2,5	16,8	480	25	19,1
14 G 2,5	18,5	560	25	19,1
16 G 2,5	19,7	650	25	19,1
18 G 2,5	20,9	720	25	19,1
24 G 2,5	23,5	925	25	19,1
27 G 2,5	25	1.025	25	19,1
30 G 2,5	26,3	1.120	25	19,1
33 G 2,5	27,4	1.235	25	19,1
36 G 2,5	28,7	1.340	25	19,1
44 G 2,5	33,2	1.630	25	19,1
52 G 2,5	34,6	1.900	25	19,1
60 G 2,5	37,1	2.215	25	19,1

¹ Reference for one cable with adequate ventilation according to EN 50565-1 in open air at 30°C ambient temperature.

In all cases are supposed a single-phase circuit where not all conductors are fully charged.

² At 70°C conductor temperature and cos φ= 1.

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 TEMPERATURE

Air T. (°C)	20	25	30	35	40	45	50	55
Factor	1,15	1,08	1	0,91	0,82	0,71	0,58	0,41