

Internal wiring of electrical cabinets. (UL, CSA, BS, UNE)  
ACCORDING TO: EN 50525-2-31 / BS 6231 / UL 758 / CSA C22.2



## Eca

## APPLICATION

Topflex<sup>®</sup> MS Tri-rated H07V2-K cable has been designed for the internal wiring of electrical cabinets, switch boards and small electrical devices.

Due to its manufacturing characteristics, it can be used in conduit or in flexible motor ducts, transformers and other machinery in general.

- Industrial use.
- Electrical panel wiring.

## CONSTRUCTION

### Conductor

Electrolytic annealed copper, class 5 (flexible), according to EN 60228, IEC 60228 and BS 6360.

### Insulation

Flexible PVC, extra sliding, high service temperature type T13 according to EN 50363-3 and Class 43 UL 1581.

The special characteristics of the material ensure good easy-slide properties to the cable.

The standard identification of insulated conductors is the following:

Blue	RAL 5012
Brown	RAL 8003
Black	RAL 9005
Red	RAL 3000
Green/Yellow	RAL 6018/1021
Grey	RAL 7000
Dark Blue	RAL 5010
White	RAL 9010
Orange	RAL 2003
Violet	RAL 4005
Pink	RAL 3015

## CHARACTERISTICS

### ⚡ Electrical performance

Low voltage: According to EN (H05V2-K) 300/500 V  
According to EN (H07V2-K) 450/750 V  
According to BS (CK) 600/1000 V  
According to UL (AWM) 600 V  
According to CSA (TEW) 600 V

### 🔥 Thermal performance

Maximum conductor temperature: 90°C according to EN and BS,  
105°C according to UL and CSA.  
Maximum short-circuit temperature: 160°C (max 5 s).  
Minimum service temperature: -40°C (fixed and protected installations).

### 🔥 Fire performance

Flame non-propagation according to EN 60332-1 / IEC 60332-1 and VW-1, FT1 and FT2 according to UL 2556.  
Reaction to fire CPR: Eca according to EN 50575.

### 📏 Mechanical performance

Minimum bending radius: 5x cable diameter.

### 🌿 Environmental performance

Chemical & Oil resistance: Acceptable.  
Water resistance: AD3 Sprays.

### 🔧 Installation conditions

In conduit.

### 🔍 Other

Meter by meter marking (from 10 mm<sup>2</sup> onwards).

### 📦 Packaging

These cables are supplied in reels, barrels or bulk drums.

CROSS SECTION	PACKAGING
0,50-6 mm <sup>2</sup>	100 m reels (or barrels upon request)
10-16 mm <sup>2</sup>	100 m reels or bulk drums
25 mm <sup>2</sup> onwards	bulk drums

## STANDARDS / COMPLIANCE

📄 According to  
EN 50525-2-31 / UL 758 / CSA C22.2 / BS 6231

🌿 Standards and approvals  
HAR / AENOR / UL LISTED / RoHS / CE

🔍 CPR (Construction Products Regulation)  
Eca



### DIMENSIONS & ADMISSIBLE INTENSITIES



Equivalences and designation applicable for every size and standard

Section (mm <sup>2</sup> )	AWG	EN 50525-2-31	BS 6231	UL 758	UL 2556	CSA 22.2
0,50	22	H05V2-K	CK	Style 1015	FT1 - FT2	Type TEW
0,75	20	H05V2-K	CK	Style 1015	FT1 - FT2	Type TEW
1	18	H05V2-K	CK	Style 1015	FT1 - FT2	Type TEW
1,5	16	H07V2-K	CK	Style 1015	FT1 - FT2	Type TEW
2,5	14	H07V2-K	CK	Style 1015	FT1 - FT2	Type TEW
4	12	H07V2-K	CK	Style 1015	FT1 - FT2	Type TEW
6	10	H07V2-K	CK	Style 1015	FT1 - FT2	Type TEW
10	8	H07V2-K	CK	Style 1028	FT2 - VW-1	Type TEW
16	6	H07V2-K	CK	Style 1283	FT2 - VW-1	Type TEW
25	4	H07V2-K	CK	Style 1283	FT2 - VW-1	Type TEW
35	2	H07V2-K	CK	Style 1283	FT2 - VW-1	Type TEW
50	1	07V2-K	CK	Style 1284	FT2 - VW-1	Type TEW
70	2/0	07V2-K	CK	Style 1284	FT2 - VW-1	Type TEW
95	3/0	07V2-K	CK	Style 1284	FT2 - VW-1	Type TEW
120	4/0	07V2-K	CK	Style 1284	FT2 - VW-1	Type TEW
150	250 MCM	07V2-K	CK	Style 1284	FT2 - VW-1	---
185	350 MCM	07V2-K	CK	Style 1284	FT2 - VW-1	---
240	450 MCM	07V2-K	CK	Style 1284	FT2 - VW-1	---
300	550 MCM	07V2-K	---	Style 1284	FT2 - VW-1	---
400	750 MCM	07V2-K	---	Style 1284	FT2 - VW-1	---

Cross-Section (mm <sup>2</sup> )	Diameter (mm)	Weight (kg/km)	Current (A) 2 cond. <sup>1</sup>	Current (A) 3 cond. <sup>1</sup>	Voltage drop (V/A · km) <sup>2</sup>
1 x 0,50	2,5	10	12	10	99,5
1 x 0,75	2,7	13	15	13	66,6
1 x 1	2,8	15	18	16	49,9
1 x 1,5	3	20	23	20	34,0
1 x 2,5	3,5	30	31	28	20,4
1 x 4	4	45	42	37	12,7
1 x 6	4,6	65	54	48	8,45
1 x 10	6,4	115	75	66	4,89
1 x 16	8,1	180	100	88	3,10
1 x 25	9,5	265	133	117	2,00
1 x 35	10,6	355	164	144	1,42
1 x 50	13,1	505	198	175	0,99
1 x 70	14,8	685	253	222	0,696
1 x 95	16,6	890	306	269	0,527
1 x 120	17,8	1.115	354	312	0,412
1 x 150	20,2	1.400	393	342	0,330
1 x 185	21,9	1.675	449	384	0,270
1 x 240	24,3	2.180	528	450	0,205
1 x 300	27,7	2.790	603	514	0,164
1 x 400	31,6	3.650	725	620	0,124

<sup>1</sup> Reference method B1 for 90°C insulation cables according to IEC 60364-5-52 in open air at 30°C ambient temperature.

<sup>2</sup> At maximum conductor temperature, cosφ=1 and single-phase circuit.

The voltage drop figures quoted are for one cable only. For other circuit arrangements they should be adjusted as follows: Single phase 50 Hz AC or 2-wire DC x 2. Three phase AC x 1,732.

# TOPFLEX<sup>®</sup> MS

## TRI-RATED / H07V2-K

### SHORT-CIRCUIT CURRENT-CARRYING CAPACITIES

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<b>Time (s)</b>	0,1	0,2	0,3	0,5	1	1,5	2	2,5	3
<b>A/mm<sup>2</sup></b>	316	223	182	141	100	82	71	63	58

### CORRECTION FACTORS FOR AIR TEMPERATURE

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<b>Air T. (°C)</b>	20	25	30	35	40	45	50	55	60
<b>Factor</b>	1,08	1,04	1	0,96	0,91	0,87	0,82	0,76	0,71

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.