DATASHEET

TRI-RATED SINGLE CORE CABLE

POWER & CONTROL CABLES

Telenco



A **heat resistant, flame retardant** single core panel wire, tri-rated to **BS 6231 Type CK**, **UL1015** and **CSA C22.2 No. 210**, and to **H05V2-K / H07V2-K** (BS EN 50525-2-31). Its **Class 5 flexible copper conductor** and PVC insulation make it easy to route and terminate in tight spaces, while ratings up to **0.6/1 kV** and **105 °C** (UL/CSA) suit switch control, relay and instrumentation panels in power switchgear. It is also used for internal connections in rectifier equipment, motor starters and controllers. Tri-rated cable is also known as BS 6231 cable, H07V2-K or panel wire. Available from **0.5 mm² to 240 mm²** in **14 insulation colours**, it is flame retardant to IEC/EN 60332-1-2.

Conductor size: 0.5 – 240 mm² (AWG 21 – 450 MCM)

Dimensions: Ø 2.7 – 24.4 mm

Voltage rating: Up to 0.6/1 kV (UL, CSA, BS 6231)

FEATURES & BENEFITS

- Tri-rated to BS 6231, UL1015 and CSA C22.2 No. 210
- Harmonised H05V2-K / H07V2-K to BS EN 50525-2-31
- Class 5 flexible copper conductor for easy routing
- Heat resistant PVC insulation, up to +105 °C (UL/CSA)
- Flame retardant to IEC/EN 60332-1-2
- Tight 6 x OD minimum bending radius
- 14 insulation colours, including green/yellow earth

APPLICATIONS & COMPLIANCE

- Switch control, relay and instrumentation panels
- Power switchgear and control panel wiring
- Internal connections in rectifiers, motor starters and controllers
- Conductors to IEC/EN 60228 Class 5
- Low Voltage Directive 2014/35/EU, RoHS and REACH compliant
- Compliant with the Construction Products Regulation (EN 50575)

TECHNICAL SPECIFICATION

Properties		Value
Conductor		Class 5 flexible copper
Insulation		PVC (polyvinyl chloride)
UL style		1015
Voltage rating (Uo/U)	UL, CSA, BS 6231	0.6/1 kV
	0.5 – 1 mm²	300/500 V (H05V2-K)
	1.5 mm² +	450/750 V (H07V2-K)
Temperature rating	UL, CSA	-15 °C to +105 °C
	BS 6231	-15 °C to +90 °C
	Fixed installation	Down to -40 °C
Min. bending radius		6 x overall diameter
Flame retardance		IEC/EN 60332-1-2

TECHNICAL DRAWING



- Class 5 flexible copper conductor
- PVC insulation

Single core cross-section. Not to scale.

Non-contractual pictures. Specifications subject to change without notice. FT-EN-TRI-RATED_2026-11 © Telenco

DIMENSIONS & ELECTRICAL DATA

CSA (mm²)	APPROX. AWG	INSULATION THICKNESS (mm)	OVERALL Ø (mm)	NOMINAL WEIGHT (kg/km)	MAX. WIRE Ø (mm)	MAX. RESISTANCE AT 20 °C (Ω/km)	CURRENT RATING (A)	VOLTAGE DROP (mV/A/m)
0.5	21	0.8	2.7	11	0.21	39	11	46
0.75	19	0.8	2.85	15	0.21	26	14	31
1	18	0.8	3.0	18	0.21	19.5	17	22
1.5	16	0.8	3.3	23	0.26	13.3	21	15
2.5	14	0.8	3.75	35	0.26	7.98	30	9.1
4	12	0.8	4.35	48	0.31	4.95	41	5.7
6	10	0.8	4.85	69	0.31	3.3	53	3.8
10	8	1.0	6.3	117	0.41	1.91	75	2.2
16	6	1.0	8.1	191	0.41	1.21	100	1.4
25	4	1.2	9.4	281	0.41	0.78	136	0.89
35	2	1.2	10.9	389	0.41	0.554	167	0.64
50	1	1.4	13.1	560	0.41	0.386	204	0.45
70	2/0	1.4	15.1	774	0.51	0.272	259	0.32
95	3/0	1.6	16.1	991	0.51	0.206	321	0.24
120	4/0	1.6	17.9	1231	0.51	0.161	374	0.19
150	250 MCM	1.8	20.2	1534	0.51	0.129	429	0.16
185	350 MCM	2.0	22.85	1878	0.51	0.106	496	0.13
240	450 MCM	2.2	24.4	2381	0.51	0.0801	595	0.10

Conductor data to EN 60228. Current ratings based on a conductor operating temperature of 90 °C, ambient air temperature of 45 °C, single cable isolated in free air.

DE-RATING FACTORS

Ambient air temperature

Air temperature	45 °C	50 °C	55 °C	60 °C	65 °C	70 °C	75 °C
De-rating factor	1.00	0.97	0.90	0.82	0.73	0.63	0.52

Grouped cables

No. of cables in group	2	3	4	5	6	7	8
De-rating factor	0.80	0.70	0.65	0.60	0.56	0.53	0.50

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COLOUR OPTIONS



Black	Brown	Red	Orange	Yellow	Green	Green/Yellow
BK	**BR**	**RD**	**OR**	**YW**	**GN**	**GY**

Blue	Light Blue	Dark Blue	Violet	Grey	White	Pink
BL	**LTBL**	**DKBL**	**VI**	**GR**	**WH**	**PK**

ORDERING INFORMATION

CODE	MODEL	DESCRIPTION	OVERALL Ø	NOMINAL WEIGHT	VOLTAGE (H05V2-K / H07V2-K)
TBC	A2T**0005	Tri-rated 0.5 mm² single core	2.7 mm	11 kg/km	300/500 V
TBC	A2T**00075	Tri-rated 0.75 mm² single core	2.85 mm	15 kg/km	300/500 V
TBC	A2T**0010	Tri-rated 1 mm² single core	3.0 mm	18 kg/km	300/500 V
TBC	A2T**0015	Tri-rated 1.5 mm² single core	3.3 mm	23 kg/km	450/750 V
TBC	A2T**0025	Tri-rated 2.5 mm² single core	3.75 mm	35 kg/km	450/750 V
TBC	A2T**0040	Tri-rated 4 mm² single core	4.35 mm	48 kg/km	450/750 V
TBC	A2T**0060	Tri-rated 6 mm² single core	4.85 mm	69 kg/km	450/750 V
TBC	A2T**010	Tri-rated 10 mm² single core	6.3 mm	117 kg/km	450/750 V
TBC	A2T**016	Tri-rated 16 mm² single core	8.1 mm	191 kg/km	450/750 V
TBC	A2T**025	Tri-rated 25 mm² single core	9.4 mm	281 kg/km	450/750 V
TBC	A2T**035	Tri-rated 35 mm² single core	10.9 mm	389 kg/km	450/750 V
TBC	A2T**050	Tri-rated 50 mm² single core	13.1 mm	560 kg/km	450/750 V
TBC	A2T**070	Tri-rated 70 mm² single core	15.1 mm	774 kg/km	450/750 V
TBC	A2T**095	Tri-rated 95 mm² single core	16.1 mm	991 kg/km	450/750 V
TBC	A2T**120	Tri-rated 120 mm² single core	17.9 mm	1231 kg/km	450/750 V
TBC	A2T**150	Tri-rated 150 mm² single core	20.2 mm	1534 kg/km	450/750 V
TBC	A2T**185	Tri-rated 185 mm² single core	22.85 mm	1878 kg/km	450/750 V
TBC	A2T**240	Tri-rated 240 mm² single core	24.4 mm	2381 kg/km	450/750 V

*** = colour code from the colour options table, e.g. A2TWH00075 = 0.75 mm² White. Before connecting to equipment or accessories, confirm they can withstand the cable's operating temperature.*

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