



TP/.. Twisted Pair Cable

Description

Screened twisted pair cables recommended for general purpose Trend system installations. All cables are manufactured with a violet, halogen-free outer sheath with twisted pairs wrapped in an aluminium polyester tape with a tinned copper drain wire.

Features

- Violet sheath for ease of identification
- Flame retardant halogen-free sheath
- 600 V rating

Physical

TP/1/1/22/HF/200-600V. Screened single twisted pair, 22 AWG, 200 m (*Belden equivalent 8761NH).

Recommended Trend system use: Trend current loop Lan, Input/output wiring (Analogue voltage, Analogue current, Thermistor, Digital inputs and Analogue voltage outputs)



diam 4.6 mm

TP/2/2/22/HF/200-600V. Screened twin twisted pair, 22 AWG, 200m (*Belden equivalent 8723NH).

Recommended Trend system use: Trend current loop Lan



diam 5.7 mm

TP/1/1/24/HF/305-600V. Screened twin twisted pair, 24 AWG, 305 m (*enhancement of Belden equivalent 9841NH).

Recommended Trend system use: This is the cable recommended for wiring Trend networks using BACnet over MS/TP (e.g. IQeco controllers). It is important that the installation requirements detailed in the IQeco data sheet and installation instructions are followed.



diam 5.9 mm

Note: The maximum recommended length of an MS/TP segment is 1200 m (4000 feet) with AWG 18 (0.82 mm²) cross section area cable. The Trend BACnet cable is 24 AWG to simplify installation and as a result the maximum distance will be lower, the actual distance will be impacted by installation environment and network speed.

*The TP cables are of a similar construction and specification to the Belden equivalents given. However, the Trend TP cables are of a higher voltage rating (600 V) and have a halogen free sheath.

ORDER CODES

TP/1/1/22/HF/200-600V	200 m reel of screened single twisted pair 22 AWG
TP/2/2/22/HF/200-600V	200 m reel of screened twin twisted pair 22 AWG
TP/1/1/24/HF/305-600V	305 m reel of screened single twisted pair 24 AWG

SPECIFICATIONS

TP/1/1/22/HF/200-600V AND TP/2/2/22/HF/200-600V

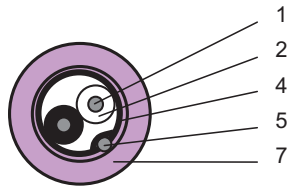
	TP/1/1/22/HF/200-600V	TP/2/2/22/HF/200-600V
Description	Single shielded twisted pair. 22 AWG (7x30 AWG) stranded tinned copper, polyethylene insulated twisted pair - over aluminium - polyester shield with 22 AWG (7x30 AWG) stranded tinned copper drain wire, flame retardant halogen-free sheath	Two twisted pairs individually shielded. 22 AWG (7x30 AWG) stranded tinned copper, polyethylene insulation, twisted aluminium-polyester shielded pair. Cabled on common axis with a common 24 AWG (7x32 AWG) stranded tinned copper drain wire, flame retardant halogen-free sheath.
Belden equivalent	8761NH	8723NH
Trend system use	Trend current loop Lan, Trend input/output wiring (Analogue voltage, Analogue current, Thermistor, Digital inputs, and Analogue voltage outputs)	Trend Lan
Electrical Characteristics		
Maximum operating voltage	600 V RMS	600 V RMS
Velocity of propagation		65% nominal
Maximum continuous current per conductor at 25 °C	2.9 A	2.3 A
Test voltage conductor - screen	2.5 kV 3 s	2.5 kV 3 s
Test voltage conductor - conductors	2.5 kV 3 s	2.5 kV 3 s
Nominal capacitance between conductors	78.7 pF/m	
Nominal capacitance between conductor and shield (one conductor to other conductor and shield)	-	-
Nominal resistance shield	-	-
Nominal conductor DC resistance at 20 °C	52.5 ohms/km	49.2 ohms/km
Nominal impedance	-	-
Physical Characteristics		
Temperature range Installing	-15 to +70 °C	-15 to +70 °C
Temperature range Operating (Moving installation)	-15 to +70 °C	-15 to +70 °C
Temperature range Operating (Fixed installation)	-30 to +70 °C	-30 to +70 °C
Temperature range Storage	-30 to +70 °C	-30 to +70 °C
Insulation Material	Polyethylene	Polyethylene
Screen type	Aluminium/polyester 9/12 µm	Aluminium/polyester 9/12 µm
Braid	-	-
Sheath Material (colour)	Flame retardant, halogen-free (violet)	Flame retardant, halogen-free (violet)
Sheath radial thickness	0.7 mm	0.7 mm
Overall nominal diameter	4.6 mm	5.7 mm
Colour Code	black/clear	black/red, green/white
Pulling tension	158 N	187 N
Minimum bending radius	10x cable diameter	10x cable diameter
UV stability	Compliant with resistance to UV-cycle test, 1000 h, according to ASTM D 2565-99	Compliant with resistance to UV-cycle test, 1000 h, according to ASTM D 2565-99

TP/1/1/24/HF/305-600V

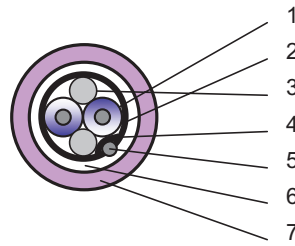
TP/1/1/24/HF/305-600V	
Description	Single shielded twisted pair. 24 AWG (7x32 AWG) stranded tinned copper, polyethylene insulated twisted pair . Over aluminium - polyester shield with 24 AWG (7x32 AWG) stranded tinned copper drain wire, 0.122 mm tinned copper braid and flame retardant halogen-free sheath
Belden equivalent	Enhanced version of Belden 9841NH
Trend system use	BACnet MS/TP network
Electrical Characteristics	
Maximum operating voltage	600 V RMS
Velocity of propagation	66%
Maximum continuous current per conductor at 25 °C	2.1 A
Test voltage conductor - screen	2.5 kV, 3 s
Test voltage conductor - conductors	2.5 kV, 3 s
Nominal capacitance between conductors	42.0 pF/m
Nominal capacitance between conductor and shield (one conductor to other conductor and shield)	75.5 pF/m
Nominal resistance shield	11.0 ohms/km
Nominal conductor DC resistance at 20 °C	78.7 ohms/km
Nominal impedance	120 ohms
Physical Characteristics	
Temperature range Installing	-15 to +70 °C
Temperature range Operating (Moving installation)	-15 to +70 °C
Temperature range Operating (Fixed installation)	-30 to +70 °C
Temperature range Storage	-30 to +70 °C
Insulation Material	
Screen type	Aluminium/polyester 9/23 µ
Braid	0.122 tinned copper, 90% coverage
Sheath Material (colour)	Flame retardant, halogen-free (violet)
Sheath radial thickness	0.9 mm
Overall nominal diameter	5.9 mm
Colour Code	white/blue, blue/white
Pulling tension	328 N
Minimum bending radius	10x cable diameter
UV stability	Compliant with resistance to UV-cycle test, 1000 h, according to ASTM D 2565-99

CABLE CONSTRUCTION

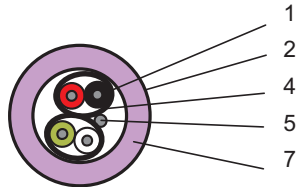
TP/1/1/22/HF/200-600V



TP/1/1/24/HF/305-600V



TP/2/2/22/HF/200-600V




- Key:
- 1 Conductor
 - 2 Insulation
 - 3 Filler
 - 4 Foil
 - 5 Drainwire
 - 6 Braiding
 - 7 Sheath

DISPOSAL

COSHH (Control of Substances Hazardous to Health - UK Government Regulations 2002) ASSESSMENT FOR DISPOSAL O No parts affected.

RECYCLING All plastic and metal parts are recyclable.



WEEE Directive:
At the end of their useful life the packaging, and product, and battery (if fitted) should be disposed of by a suitable recycling centre.

Do not dispose of with normal household waste.
Do not burn.

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