



Belden P/N 50106F
Industrial CAT 6 F/UTP

Applications

Industrial Ethernet cables used in interconnecting Industrial Ethernet Switches, IP controllers, media convertors, distributed control system, programmable logic controller and transmitting industrial protocol data signals. These cables are suitable for transmitting 1000BASE-TX Gigabit Ethernet, 100BASE-T Fast Ethernet, 100BaseVG ANYLAN, 155ATM, 622ATM, RS-422, 250MHz Category 6, EtherCAT. These are highly durable & ruggedized cables for both indoor and outdoor use meeting IEC 60332-3-25 Category D flame rating.

General Reference Standards

- 11801 Category 6, TIA/EIA 568C.2 Cat 6
- IEC 60332-3-25, UL 1685, UL 1581, ICEA S 73-532, IEC 60332-1
- EU RoHS

Physical Characteristics	
Conductor Size	23 AWG
Conductor Material	Solid Bare Copper
Insulation Material	PO - Polyolefin
Number of Pairs	4 Pairs
Shielding	Aluminium Foil – Polyester Tape with TC drain wire
Jacket Material	PVC -Polyvinylchloride
Suitability	Indoor and Outdoor
UV/Sun Light Resistance	Yes
Oil Resistance	Yes
Flame Retardant	IEC 60332-3-25 Category D UL 1685 UL Loading
UL Specification	CM
Other Specifications	ISO/IEC 11801 Class E TIA/EIA 568-C.2 Category 6
Nom. Diameter	7.5 mm

Electrical Characteristics	
Max. Conductor DCR @ 20°C	9.38 Ω/100m
Characteristic Impedance	100 ± 15 Ω
Nom. Mutual Capacitance @ 1KHz	5.6 nF/100m
Max. Capacitance Unbalance	330 pF/100m
Nom. Velocity of Propagation	70%
Max. Intended Operating Voltage Rating - UL	300 V
Max. Delay @ 100MHz	538 ns/100m
Max. Delay Skew	45 ns/100m
DCR Unbalance @ 20°C	Max. 5%
Mechanical Characteristics	
Operating Temperature Range	-20°C To +75°C
Bulk Cable Weight	62 kg/km
Max. Recommended Pulling Tension	110 N
Min. Bending Radius (Install)	60 mm

Technical Data Sheet

Industrial Category 6 Shielded Cable

Electrical Characteristic:

Frequency (MHz)	Max. Attenuation (dB/100m)	Min. NEXT (dB)	Min. PSNEXT (dB)	Min. Return Loss (dB)	Min. ACRF (dB)	Min. PSACRF (dB)
1	2.0	74.3	72.3	20.0	67.8	64.8
4	3.8	65.3	63.3	23.0	55.8	52.8
8	5.3	60.8	58.8	24.5	49.7	46.7
10	6.0	59.3	57.3	25.0	47.8	44.8
16	7.6	56.2	54.2	25.0	43.7	40.7
20	8.5	54.8	52.8	25.0	41.8	38.8
25	9.5	53.3	51.3	24.3	39.8	36.8
31.25	10.7	51.9	49.9	23.6	37.9	34.9
62.5	15.4	47.4	45.4	21.5	31.9	28.9
100	19.8	44.3	42.3	20.1	27.8	24.8
155	25.2	41.4	39.4	18.8	24.0	21.0
200	29.0	39.8	37.8	18.0	21.8	18.8
250	32.8	38.3	36.3	17.3	19.8	16.8

Put Ups & Colours:

Stock Code	Cable Description	Put Up (MT)	Jacket Colour	Ship Weight (KG)
50106F 010305M	4P X 23 AWG PO PVC FTP CAT6	305M	PVC Black	21 kg/reel
50106F 006305M	4P X 23 AWG PO PVC FTP CAT6	305M	PVC Blue	21 kg/reel
50106F 008305M	4P X 23 AWG PO PVC FTP CAT6	305M	PVC Grey	21 kg/reel

