Industrial Ethernet Cables

S/FTP CAT 7 – 4 Pair

A range of shielded copper cables for use in industrial Ethernet networks, designed to withstand the entire spectrum of environmental and mechanical hazards, from temperature extremes and sunlight, to solvents, oils, chemicals and moisture.

Ordering Information

Belden European Item Numbers

Jacket Material	Performance	Number of Pairs	Stationary Application	Flexible Application
PVC	CAT 7	4 Pairs	74004E	
Premium FRNC	CAT 7	4 Pairs	74004NH	
PUR (Halogen Free)	CAT 7	4 Pairs	74004PU	74005PU

Applications

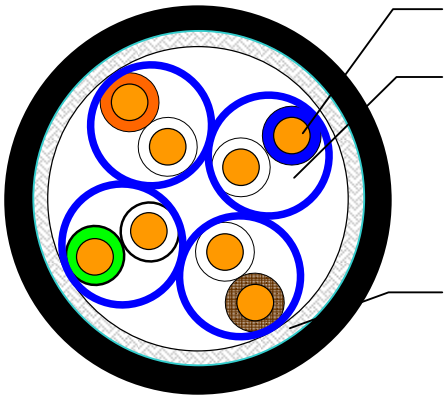
- Industrial environments where IP67 may be required
- Transmission of data in industrial applications via the ethernet protocol
- Stationary applications, where there is no movement after installation
- Flexible applications, subject to occasional movement or vibration after installation

Features & Benefits

- Choice of PVC, Premium FRNC or PUR cable jacket for specific application requirements in the harsh industrial environment
- High shield coverage to maintain signal integrity in the industrial ‘noisy’ environment
- Oil resistant
- Chemical & solvent resistant
- Temperature resistant
- Abrasion resistant
- Excellent mechanical resistance
- Weld-splatter resistant PUR cable jacket available on request
- IP67 rated
- UV resistant
- Black cable jacket

Construction & Dimensions

Mechanical Data – Stationary Application



Conductor (23AWG/1 – Solid Bare Copper)

Individually Foil Shielded Pairs, Foam-Skin PE Insulation

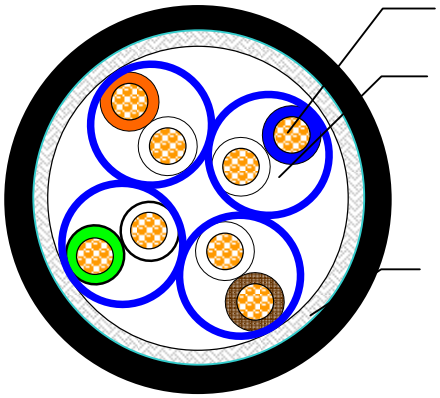
- Pair 1 = White / Blue
- Pair 2 = White / Orange
- Pair 3 = White / Green
- Pair 4 = White / Brown

Braid Shield – Tinned Copper

Part Number	Conductor	Insulation (Nom. Dia.)	Braid Coverage	Sheath Material	Sheath (Nom. Dia.)	Sheath Colour
74004E	23AWG/1	1.45mm	>65%	PVC	8.00mm	Black
74004NH	23AWG/1	1.45mm	>65%	FRNC	8.00mm	Black
74004PU	23AWG/1	1.45mm	>65%	PUR	8.00mm	Black

BELDEN
SENDING ALL THE RIGHT SIGNALS

Mechanical Data – Flexible Application



Conductor (26AWG/7 – 7x0.16mm Stranded Copper)

Individually Foil Shielded Pairs, Foam-Skin PE Insulation

- Pair 1 = White / Blue
- Pair 2 = White / Orange
- Pair 3 = White / Green
- Pair 4 = White / Brown

Braid Shield – Tinned Copper

Part Number	Conductor	Insulation (Nom. Dia.)	Braid Coverage	Sheath Material	Sheath (Nom. Dia.)	Sheath Colour
74005PU	26AWG/7	0.96mm	>65%	PUR	6.80mm	Black

Standards

- ISO/IEC 11801 Cat7
- EN 50173-1
- TIA/EIA-568-B.2

Electrical Properties

Max Operating Voltage UL	450V A.C. / 300V D.C.
Impedance @ 1 – 600 MHz	100 +/- 15 Ohm

Frequency (MHz)	Insertion Loss (Max) (dB/100m)	NEXT (dB)	PSNEXT (dB)	ELFEXT (dB/100m)	PSELFEXT (dB/100m)	RETURN LOSS (dB)
1	2.7	80.0	77.0			
4	5.5	80.0	77.0	80.0	77.0	23
10	8.5	80.0	77.0	74.0	71.0	25
16	10.8	80.0	77.0	69.9	66.9	25
20	12.1	80.0	77.0	68.0	65.0	25
31.25	15.2	80.0	77.0	64.1	61.1	23.6
62.5	27.8	75.1	72.1	58.1	55.1	21.5
100	27.8	72.1	69.4	54.0	54.0	20.1
200	40.1	67.9	64.9	48.0	45.0	18.0
300	50.0	65.3	62.3	44.5	41.5	17.3
600	73.3	60.8	57.8	38.4	35.4	17.3

Mechanical, Physical and/or Environmental Characteristics

Flame Resistance	IEC 60332-1
Oil Resistance	IEC 60811-2-1
Bending Radius / Setting Radius	10 x Diameter / 5x Diameter
Halogen Free	IEC 60754-1 / IEC 60754-2 (FRNC and PUR Cable Jacket)
Maximum Pulling Tension	80N
Temperature Range - Installation	-5 °C to +50 °C
Temperature Range - Operating	-25 °C to +80 °C

Version 01 (07/09)