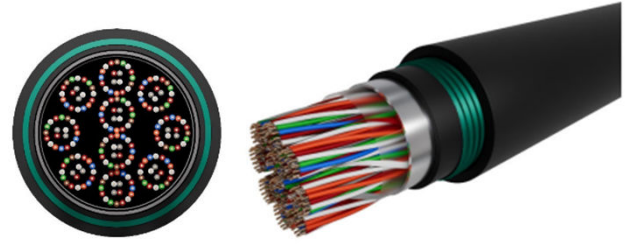


Telecom Cable

Technical Specification

- Cable Type: Copper pairs, Cellular insulation, Petroleum jelly filled, Moisture barrier + inner HFFR Jacket, CSA + Outer PE jacket For outdoor underground use in ducts and direct burial
- Western Wire Part Number: HF2-xxxxHx
- Revision: 01/25
- Date: 14-Sep-25



The cables consist of twisted pairs of insulated copper conductors in units of 10 or 25 pairs, in layers. The sheath includes a moisture barrier made of aluminum foil bonded to a black HFFR Inner jacket, followed by an armor made of a corrugated steel tape bonded to a black polyethylene outer jacket. The cable core is fully filled with petroleum jelly rendering the cable suitable for underground installation in ducts or direct burial.

Physical Description

Conductors	Solid annealed bare copper
Conductors OD.	0.63 ± 0.01 mm
Insulation type	Cellular (Foam-skin) polyethylene
Insulation OD.	1.15 ± 0.02 mm
Pairs color code	See color code in table 2 below
Twining	The pairs are S/Z stranded with a pair lay of 150 mm max.
Unit structure	In units containing 10 or 25 pairs
Sub-unit structure	A unit containing 25 pairs will be assembled out of two sub-units made of 12 & 13 pairs. First sub-unit pairs 1-12, second sub-unit pairs 13- 25
Unit Identification	See in table 2 below
Core structure	The units shall be laid concentrically into one dense and round unit according to Table 1. Separation tapes will wrap each layer of units in accordance with table 3
Core filling	Petroleum jelly between the cable elements
Core warp	Nonhygroscopic dielectric polyester tape , providing 100% coverage
Rip cords	Two rip cords with a minimum breaking strength of 150 newton are laid in opposite at 180° orientation under the aluminum tape
Moisture barrier	Aluminum tape , 150 µm nom. thickness. Bonded to the inner jacket
Inner Jacket	Black, UV-resistant FR-LSOH compound
Rip cords	Two rip cords with a minimum breaking strength of 150 newton are laid in opposite at 180° orientation under the aluminum tape
Armor	Corrugated steel tape, 150µm thickness, bonded to the outer jacket
Outer Jacket	Black, UV-resistant PE compound
Surface Marking	WESTERN WIRE HF2-xxxxHx [Month, Year] Nx2x0.63 PJMB CSA UNDERGROUND TELECOM CABLE CE 2011/65/EU (RoHS-2) [Batch Number] [Sequential Meter Mark] METER

This cable fully conforms to EU Directive 2011/65/EU (RoHS-2)

Telecom Cable

Technical Specification

- Cable Type: Copper pairs, Cellular insulation, Petroleum jelly filled, Moisture barrier + inner HFFR Jacket, CSA + Outer PE jacket For outdoor underground use in ducts and direct burial
- Western Wire Part Number: HF2-xxxxHx
- Revision: 01/25
- Date: 14-Sep-25

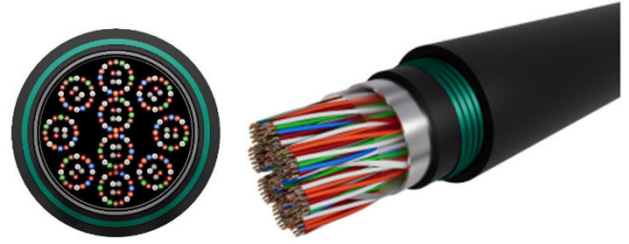


Table 1
Insulation color code – 10P units
(in cables up to 100 pairs)

Pair number	Insulation color	
	Wire A	Wire B
1	White	Blue
2		Orange
3		Green
4		Brown
5		Grey
6	Red	Blue
7		Orange
8		Green
9		Brown
10		Grey

Table 2
Insulation color code – 25P units
(in cables of 150 pairs and above)

Pair number	Insulation color	
	Wire A	Wire B
1-10	See table 1	
11	Black	Blue
12		Orange
13		Green
14		Brown
15		Grey
16	Yellow	Blue
17		Orange
18		Green
19		Brown
20		Grey
21	Violet	Blue
22		Orange
23		Green
24		Brown
25		Grey

Table 3
Binders color code – 10P units
(in cables up to 100 pairs)

Binder number	Binder color
Bundle 1	Blue
Bundle 2	Orange
Bundle 3	Green
Bundle 4	Brown
Bundle 5	Grey
Bundle 6	White
Bundle 7	Red
Bundle 8	Black
Bundle 9	Yellow
Bundle 10	Violet

Table 3.1
Binders color code – 25P sub-units

Binder number	Binder color
Bundle 1 (P. 1-12)	Blue
Bundle 2 (P. 13-25)	Blue
Bundle 1 (P.26-37)	Orange
Bundle 2 (P. 38-50)	Orange

Table 3.2
Binders color code for central bundles and layers

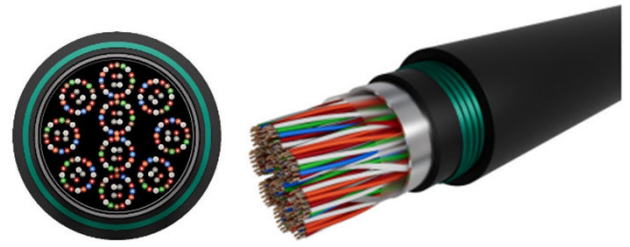
Bundle location	Binder color
First	Red
Second	White
Third	Green

This cable fully conforms to EU Directive 2011/65/EU (RoHS-2)

Telecom Cable

Technical Specification

- Cable Type: Copper pairs, Cellular insulation, Petroleum jelly filled, Moisture barrier + inner HFFR Jacket, CSA + Outer PE jacket For outdoor underground use in ducts and direct burial
- Western Wire Part Number: HF2-xxxxHx
- Revision: 01/25
- Date: 14-Sep-25



Mechanical Properties

Minimum Bend Radius	20 x D
Conductor elongation	20% min.
Insulation tensile strength	3.0 N min.
Rip cords breaking force	150N min.
Sheath peeling strength- before aging	20N/25mm min.
Sheath peeling strength- after aging	18N/25mm min.
Water penetration - core	1 m water head, under 85 cm progress in 14 days
Water penetration - jacket	0.1D grams of water per 100m per week (D = Jacket ID., mm)
Storage temperature	-20 to +80°C
Operating temperature	-40 to +70°C

Electrical Properties @ 20°C

DC Resistance of conductors	60 Ohm/km max.
Insulation resistance	1.5 Gohm*km min. – Between conductors (dry cable)
Line-to-line capacitance unbalance	60 pF/500m nom.. 275 pF/500m max.
Line-to-line capacitance unbalance	325 pF/500m nom.. 1300 pF/500m max.
Working capacitance	56 nF/km nom.. 64 nF/km max.
Spark test voltage	12 kV
Dielectric strength	2000 VDC/2s
Voltage rating	75 VDC max.

Ordering information

G. Beres P/N	WW P/N	No. of Pairs	Core build-up		Jacket nom. Thickness		Cable O.D. (mm)
			Central bundle	First layer	Inner	Outer	
51735600466	HF2-0004H6	4x2x0.63	4P	N/A	1.0 mm	1.4 mm	11.0±1.0
51735601166	HF2-0010H6	10x2x0.63	1x10P	N/A	1.0 mm	1.4 mm	16.0±1.0
51735601366	HF2-0020H6	20x2x0.63	2x10P	N/A	1.2 mm	1.5 mm	20.0±1.0
51735601566	HF2-0030H6	30x2x0.63	3x10P	N/A	1.2 mm	1.5 mm	22.0±1.0
51735601766	HF2-0050H6	50x2x0.63	1x10P	4x10P	1.2 mm	1.6 mm	25.0±1.0
51735601966	HF2-0100H6	100x2x0.63	2x10P	8x10P	1.4 mm	1.6 mm	32.0±1.0