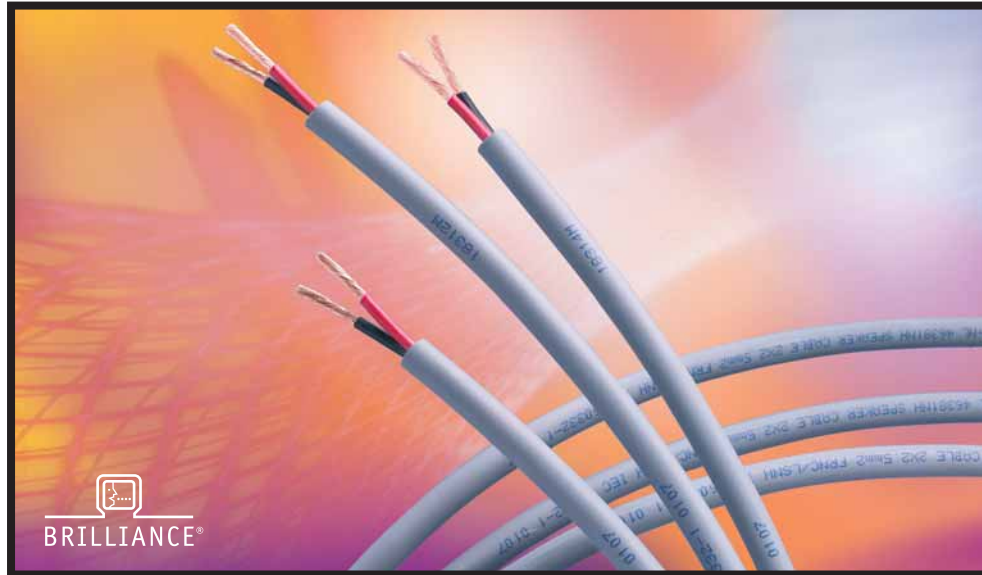


NP 109E

Belden has introduced a new line of Brilliance® FRNC speaker cables, designed for audio professionals who require exceptionally clear and very precise sound for PA installations.



Belden Brilliance® Speaker Cables

Belden has introduced a new range of Brilliance® unshielded speaker cables. These are specifically designed for applications where clear and enhanced sound is a key requirement. From PA systems to performers' on-stage monitoring systems – sound quality determines the effectiveness of the system, and it is here that Belden Brilliance® speaker cables make the difference.

Construction details

These are unshielded cables based on 1.5 mm², 2.5 mm² and 4.0 mm² constructions, using stranded conductors with PE insulation and flexible black or grey halogen-free jackets. All cables are available with 100, 500 and 1000 m put-ups.

- **Single pair types**
 - 46382NH: 1.5 mm² (16 AWG), 30 strand, 2 conductor
 - 46381NH: 2.5 mm² (13 AWG), 50 strand, 2 conductor
 - 46380NH: 4.0 mm² (11 AWG), 56 strand, 2 conductor
- **Speaker snake types**
 - 46379NH: 2.5 mm² (13 AWG), 50 strand, 4 conductor – can be used as bi-amp cable or can be doubled up with two sets of conductors for increased power handling with the added benefit of a 'star' configuration.
 - 43907NH: 2.5 mm² (13 AWG), 300 strand, 8 conductor – ideal for quad-amp or stereo bi-amp.

Conductors are colored for easy identification. Red denotes an active or positive terminal (hot); black indicates an inactive (reference or return) or negative terminal (cold); green indicates an earth (ground) terminal.

A wide choice of different connectors is available for use with the speaker cables (details on application).

Flexible halogen-free design

PVC normally gives cable flexibility, Belden has designed the speaker cables to provide greater than normal flexibility compared with other halogen-free products.

Below are the values for the flexibility of PVC compared with halogen-free materials.

Flexible Test acc. ASTM D747	Mpa
Standard PVC material	23
Halogen-free speaker cable	56
Flexible (expensive) halogen-free material	70
Standard halogen-free material	110

Benefits and features

Belden Brilliance® FRNC speaker cables have many advantages over competitive products:

- Clear and precise sound transmission
- Cold flexible up to -40°C
- For inside or outdoor use
- Twisted conductors are better for RF, better for sonic quality and deliver improved EMC
- Conductors are color coded
- The Brilliance® FRNC speaker cables are designed to be as flexible as possible and yet are still halogen-free
- Cables use halogen-free plastics (IEC:60332-I) with the added advantage of no toxic gases and low smoke density
- High stranded copper conductors make installation easier
- Matte black or grey flexible FRNC jackets protect the cable; black versions are UV resistant
- Cable jackets are meter-marked
- The smallest outer diameter design reduces the cable space required.

Professional markets

Belden Brilliance® FRNC speaker cables are suitable for use wherever clear, crisp sound is required – and transmitted via speakers – often to large audiences. Pre-recorded and live music in concert halls, theatres, at live events and outdoor concerts or sporting venues (such as racetracks, stadium and other leisure/event facilities; in buildings (such as conference rooms, airports, hospitals and schools); and on cruise ships – all will benefit from this new range of speaker cables.

Applications

Belden Brilliance® FRNC Speaker Cables are ideal for use in:

- Intercom/PA systems
- Sound/audio systems
- Security systems
- Speaker systems
- Home theatre and entertainment systems
- Stadium and arena speaker systems

Belden Brilliance® FRNC speaker cables can be connected with all the common connectors, i.e. binding post, DIY screw-on speaker connectors, Banana connectors, Two-pin connectors (DIN 41529), Fork connectors, Lockable loudspeaker connector – called Speakon® from Neutrik, XLR, Phone plugs and finally as bare wire inserted through the same hole and clamped or wrapped around the metal post and clamped.

Belden at your service

Belden offers a complete line of Brilliance® audio cables all available from a single source – such as microphone, musical instrument, multi-pair, active speaker, DMX512 and audio/video combination cables. All cables are featured in the new EMEA Master Catalog (section 19).

Speaker Cables – Halogen-Free

De- scription	Part No.	UL NEC/ C(UL)CEC Type IEC	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD		Shielding Material Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Color Code
			ft.	m	lbs.	kg		inch	mm		inch	mm			pF/ft.	pF/m	

16 AWG • 2 Conductor • Stranded (30x0.25) 1.5 mm Bare Copper

PE Insulation • Overall Matte FRNC/LSNH Jacket (Grey or Black)

300V RMS 60°C	46382NH 2 CDR	IEC 332-1	328 1640 3280	100 500 1000	15.7 78.3 156.5	7.1 35.5 71.0	1.5 mm 16 AWG (30x0.25) BC	0.098	2.50	Unshielded	0.276	7.00	12.0	–	CDR/CDR	20	65	Red, Black
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2x1.5 mm²

Twisted conductors. Cold flexibel up to -40 C and for in- and outdoor use.

Pulling Tension: 200 N
Black jacket is UV resistant.

13 AWG • 2 Conductor • Stranded (50x0.25) 2.1 mm Bare Copper

PE Insulation • Overall Matte FRNC/LSNH Jacket (Grey or Black)

300V RMS 60°C	46381NH 2 CDR	IEC 332-1	328 1640 3280	100 500 1000	21.6 108.1 216.1	9.8 49.0 98.0	2.05 mm 13 AWG (50x0.25) BC	0.114	2.90	Unshielded	0.317	8.05	7.4	–	CDR/CDR	23	76	Red, Black
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2x2.5 mm²

Twisted conductors. Cold flexibel up to -40 C and for in- and outdoor use.

Pulling Tension: 350 N
Black jacket is UV resistant.

13 AWG • 4 Conductor • Stranded (50x0.25) 2.1 mm Bare Copper • Conductors Cabled with Fillers • Paper Wrap

PE Insulation • Overall Matte FRNC/LSNH Jacket (Grey or Black)

300V RMS 60°C	46379NH 4 CDR	IEC 332-1	328 1640 3280	100 500 1000	38.7 193.6 387.1	17.6 87.8 175.6	2.05 mm 13 AWG (50x0.25) BC	0.114	2.90	Unshielded	0.394	10.00	7.4	–	CDR/CDR	23	76	Red, Black, Green, White
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4x2.5 mm²

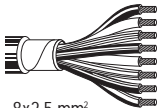
Twisted conductors. Cold flexibel up to -40 C and for in- and outdoor use.

Pulling Tension: 700 N
Black jacket is UV resistant.

13 AWG • 8 Conductor • Stranded (300x0.1) 2.1 mm Bare Copper • Conductors Cabled with Fillers • Paper Wrap

PE Insulation • Overall Matte FRNC/LSNH Jacket (Grey or Black)

300V RMS 60°C	43907NH 8 CDR	IEC 332-1	328 820 1640 3280	100 250 500 1000	62.2 155.5 311.1 622.1	28.2 70.6 141.1 282.2	2.05 mm 13 AWG (300x0.1) BC	0.114	2.90	Unshielded	0.488	12.40	7.4	–	CDR/CDR	23	76	Red, Black, Green, White, Orange, Blue, Yellow, Brown
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8x2.5 mm²

Pulling Tension: 1500 N
Black jacket is UV resistant.

11 AWG • 2 Conductor • Stranded (56x0.3) 2.6 mm Bare Copper

PE Insulation • Overall Matte FRNC/LSNH Jacket (Grey or Black)

300V RMS 60°C	46380NH 2 CDR	IEC 332-1	328 1640 3280	100 500 1000	30.3 151.6 303.1	13.8 68.8 137.5	2.6 mm 11 AWG (56x0.3) BC	0.138	3.50	Unshielded	0.354	9.00	4.5	–	CDR/CDR	35	116	Red, Black
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2x4.0 mm²

Twisted conductors. Cold flexibel up to -40 C and for in- and outdoor use.

Pulling Tension: 550 N
Black jacket is UV resistant.

BC = Bare Copper • DCR = DC resistance • CDR = Capacitance between conductors