Belden



Product: 638AFS

Access Control, 16c (#18-3pr, #16-4c, #18-6c), Shielded, Banana Peel®, CMP

Product Description

Access Control Cable, Plenum-CMP, 3-18 AWG pairs, 4-16 AWG conductors, 4-18 AWG conductors, 2-18 AWG conductors, All conductors stranded bare copper with Flamarrest® insulation, Each cable has overall Beldfoil® shield and Flamarrest® jacket, Banana Peel® No overall jacket

Technical Specifications

Product Overview

Suitable Applications:	Access Control, Security System, Power Limited Controls
Patent:	This product has one or more applicable patents. More information on patents can be found at https://www.belden.com/patents.

Construction Details

Conductor

Element Description	Element	No. of Elements	Size	Stranding	Material
Card Reader	Pair(s)	3	18 AWG	7x26	BC - Bare Copper
Door Contact	Conductor(s)	2	18 AWG	7x26	BC - Bare Copper
REX/Spare	Conductor(s)	4	18 AWG	7x26	BC - Bare Copper
Lock Power	Conductor(s)	4	16 AWG	19x29	BC - Bare Copper

Insulation

Element Description	Element	Material	Nom. Thickness	Nom. Insulation Diameter	Color Code
Card Reader	Pair(s)	PVC - Polyvinyl Chloride	0.009 in (0.23 mm)	0.063 in (1.6 mm)	Black & Red, White & Green, Brown & Orange
Door Contact	Conductor(s)	PVC - Polyvinyl Chloride	0.009 in (0.23 mm)	0.063 in (1.6 mm)	Black, Red
REX/Spare	Conductor(s)	PVC - Polyvinyl Chloride	0.009 in (0.23 mm)	0.063 in (1.6 mm)	Black, Red, White, Green
Lock Power	Conductor(s)	PVC - Polyvinyl Chloride	0.009 in (0.23 mm)	0.075 in (1.9 mm)	

Inner Shield

Element Description	Element	Shield Type	Material	Coverage	Drainwire Type
Card Reader	Pair(s)	Tape	Bi-Laminate (Alum+Poly)	100%	24 AWG (7x32) TC
Door Contact	Conductor(s)	Tape	Bi-Laminate (Alum+Poly)	100%	24 AWG (7x32) TC
REX/Spare	Conductor(s)	Tape	Bi-Laminate (Alum+Poly)	100%	24 AWG (7x32) TC
Lock Power	Conductor(s)	Tape	Bi-Laminate (Alum+Poly)	100%	24 AWG (7x32) TC

Inner Jacket

Element Description	Element	Material	Nom. Thickness	Nom. Diameter	Ripcord	Color
Card Reader	Pair(s)	PVC - Polyvinyl Chloride	0.017 in (0.43 mm)	0.288 in (7.32 mm)	Yes	Orange
Door Contact	Conductor(s)	PVC - Polyvinyl Chloride	0.017 in (0.43 mm)	0.166 in (4.22 mm)	Yes	White
REX/Spare	Conductor(s)	PVC - Polyvinyl Chloride	0.017 in (0.43 mm)	0.222 in (5.64 mm)	Yes	Blue
Lock Power	Conductor(s)	PVC - Polyvinyl Chloride	0.017 in (0.43 mm)	0.222 in (5.64 mm)	Yes	Gray

Outer Jacket

Material
No Jacket

Outer Jacket1 Table Notes:	Banana Peel®
Overall Cable Diameter (Nominal):	0.542 in (13.8 mm)

Electrical Characteristics

Electricals

Element Description	Element	Nom. Conductor DCR	Nom. Inner Shield DCR	Nom. Capacitance Cond-to-Cond	Nom. Capacitance Cond-to-Shield	Max. Current
Card Reader	Pair(s)	6.6 Ohm/1000ft	13.1 Ohm/1000ft (43.0 Ohm/km)	40 pF/ft (130 pF/m)	72 pF/ft (240 pF/m)	9.8 Amps per conductor @ 25°C
Door Contact	Conductor(s)	6.6 Ohm/1000ft (22 Ohm/km)	16.7 Ohm/1000ft (54.8 Ohm/km)	70 pF/ft (230 pF/m)	126 pF/ft (413 pF/m)	14 Amps per Conductor at 25ºC
REX/Spare	Conductor(s)	6.6 Ohm/1000ft (22 Ohm/km)	15.9 Ohm/1000ft (52.2 Ohm/km)	42 pF/ft (140 pF/m)	76 pF/ft (250 pF/m)	11.2 Amps per Conductor at 25ºC
Lock Power	Conductor(s)	4 Ohm/1000ft (13 Ohm/km)	15.9 Ohm/1000ft (52.2 Ohm/km)	45 pF/ft (150 pF/m)	81 pF/ft (270 pF/m)	14.4 Amps per Conductor at 25ºC

Voltage

UL Voltage Rating
300 V

Mechanical Characteristics

Temperature

UL Temperature	Operating
75°C	0°C to +75°C

Bend Radius

Stationary Min.	Installation Min.
5.42 in (138 mm)	5.42 in (138 mm)

Max. Pull Tension:	428 lbs (194 kg)
Bulk Cable Weight:	157 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Indoor - Plenum, Indoor
Sustainability:	Product Lens™, Environmental Product Declaration (EPD) Available
Flammability / Reaction to Fire:	NFPA 262, UL 910 (Plenum), IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Eca
NEC / UL Compliance:	Article 800, CMP
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE)
UK Regulation Compliance:	UKCA Mark
APAC Compliance:	China RoHS II (GB/T 26572-2011)
Non-Plenum Number:	538AFS

Product Notes

Notes:	Cold environment installation: When installing cables that have been stored at ambient temperatures of 32 degrees Fahrenheit (0 degrees Centigrade) or lower, Belden recommends conditioning of the cable for 12 hours at room temperature prior to individual cable leg separation.

History

Update and Revision:	Revision Number: 0.497 Revision Date: 09-07-2025

Part Numbers

Variants

Item #	Color	Putup Type	Length	UPC	Footnote
638AFS 0001000	Orange, White, Blue, Gray	Reel	1,000 ft	612825176534	C

Footnote:	C - CRATE REEL PUT-UP.

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