



Part Number: 538AFS

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

Product Description

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

Technical Specifications

Product Overview

Suitable Applications:	Access Control
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Physical Characteristics (Overall)

Conductor

Element	AWG	Stranding	Material	Nominal Diameter	No. of Conductors	No. of Pairs
Card Reader	18	7x26	BC - Bare Copper	0.047 in		3
Door Contact	18	7x26	BC - Bare Copper	0.047 in	2	
Rex/Spare	18	7x26	BC - Bare Copper	0.047 in	4	
Lock Power	16	19x30	BC - Bare Copper	0.057 in	4	

Conductor Count:	10
Total Number of Pairs:	3

Insulation

Element	Material	Nominal Diameter	Nominal Wall Thickness
18	PP - Polypropylene	0.059 in	0.007 in
16	PP - Polypropylene	0.059 in	0.007 in
	PP - Polypropylene	0.071 in	0.007 in

Color Chart

Number	Color
Card Reader 1	Black and Red
Card Reader 2	White and Green
Card Reader 3	Orange and Brown
Door Contact 1	Black
Door Contact 2	Red
Rex/Spare 1	Black
Rex/Spare 2	Red
Rex/Spare 3	White
Rex/Spare 4	Green
Lock/Power 1	Black
Lock/Power 2	Red
Lock/Power 3	White
Lock/Power 4	Green

Color Chart 4

Number	Color
Card Reader	Orange
Door Contact	White

Rex/Spare	Blue
Lock/Power	Gray

Inner Jacket Material

Element	Material	Nominal Diameter	Nominal Wall Thickness
Door Contact	PVC	0.272 in	0.020 in
Rex/Spare	PVC	0.162 in	0.020 in
Lock/Power	PVC	0.194 in	0.020 in
Door Contact	PVC	0.220 in	0.020 in
Rex/Spare			
Lock/Power			

Outer Shield Material

Type	Description	Layer	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG	Drainwire Construction n x D
Tape	Door Contact	Card Reader (3 Pr #18)	Aluminum/Polyester	Beldfoil®	100 %	TC - Tinned Copper	24	(7x32)
Tape	Rex/Spare	Door Contact (2C #18)	Aluminum/Polyester	Beldfoil®	100 %	TC - Tinned Copper	24	(7x32)
Tape	Lock/Power	Rex/Spare (4C #18)	Aluminum/Polyester	Beldfoil®	100 %	TC - Tinned Copper	24	(7x32)
Tape		Lock/Power (4C #16)	Aluminum/Polyester	Beldfoil®	100 %	TC - Tinned Copper	24	(7x32)

Outer Jacket Material

Material	Nominal Diameter	Ripcord
		Yes
Unjacketed	0.162 in	Yes
	0.186 in	
	0.215 in	
	0.516 in	

Electrical Characteristics

Conductor DCR

Element	Nominal Conductor DCR	Nominal Conductor DCR Conductor Resistance	Nominal Inner Shield DCR	Nominal Outer Shield DCR
Card Reader	6.6 Ohm/1000ft	6.6 Ohm/1000ft	13.1 Ohm/1000ft	
Door Contact	6.6 Ohm/1000ft	6.6 Ohm/1000ft	16.7 Ohm/1000ft	16.7 Ohm/1000ft
Rex/Spare	6.6 Ohm/1000ft	6.6 Ohm/1000ft	15.9 Ohm/1000ft	15.9 Ohm/1000ft
Lock Power	4 Ohm/1000ft	4 Ohm/1000ft	15.9 Ohm/1000ft	14.4 Ohm/1000ft

Capacitance

Element	Max. Capacitance Conductor to Conductor	Nom. Capacitance Conductor to Conductor	Nom. Capacitance Conductor to Shield
Pair	30 pF/ft	29 pF/ft	52.25 pF/ft
Door Contact		52.5 pF/ft	94.5 pF/ft
Rex/Spare		29 pF/ft	52.25 pF/ft
Lock Power		30.5 pF/ft	55 pF/ft

Current

Element	Max. Recommended Current [A]
Card Reader	Per conductor @ 25°C: 4 A
Door Contact	Per conductor @ 25°C: 4 A
Rex/Spare	Per conductor @ 25°C: 4 A
Lock Power	5 Amps

Voltage

UL Voltage Rating
300 V RMS

Temperature Range

Operating Temp Range:	0°C To +75°C
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Mechanical Characteristics

Bulk Cable Weight:	175 lbs/1000ft
Max Recommended Pulling Tension:	428 lbs
Min Bend Radius/Minor Axis:	5 in

Standards

NEC Articles:	800
NEC/(UL) Specification:	CMR
CEC/C(UL) Specification:	CMR
CPR Euroclass:	Eca

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/11/EC (BFR):	Yes
EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU:	Yes
EU Directive Compliance:	Yes
EU CE Mark:	Yes
EU RoHS Compliance Date (yyyy-mm-dd):	2005-04-01
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Indoor:	Yes
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Flammability, LS0H, Toxicity Testing

UL Flammability:	UL1666 Vertical Shaft
ISO/IEC Flammability:	IEC 60332-1-2
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
Plenum Number:	638AFS

Part Number

Variants

Item #	Color	UPC	Footnote
538AFS 0001000	Orange, White, Blue, Gray	612825161806	C

Footnote:	C - CRATE REEL PUT-UP.
Patent:	https://www.belden.com/resources/patents

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.
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History

Update and Revision:	Revision Number: 0.261 Revision Date: 08-22-2019
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