Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION

538AFS Composite - Lock Power, Card Reader, Door Contact, REX Applications

For more Information
please call

1-800-Belden1

Description:

18 AWG stranded bare copper conductors, PP insulation, PVC jackets, no overall jacket, all cables are Beldfoil® shielded, cable jackets are color coded by application, individual jacket is sequentially marked at two foot intervals.

Usage (Overall)

Suitable Applications: Access Control

Twisted Pair

Physical Characteristics

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material	Dia. (in.)
3	18	7x26	BC - Bare Copper	0.047

Insulation

Insulation Material:

Insulation Material	Wall Thickness (in.)	Dia. (in.)
PP - Polypropylene	0.007	0.059

Twisted Pair Color Code Chart:

Number	Color	Description
1	Black and Red	Card Reader 1
2	White and Green	Card Reader 2
3	Orange and Brown	Card Reader 3

Individual Shield

Outer Shield

Outer Shield Material:

Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100.000

Outer Shield Drain Wire AWG:

AWG	Stranding	Drain Wire Conductor Material
24	7x32	TC - Tinned Copper

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
F-R PVC - Flame Retardant Polyvinyl Chloride

Outer Jacket Diameter:

Nom. Dia. (in.)
0.272

Outer Jacket Ripcord: Yes

Outer Jacket Color Code Chart:

Number	Color	Description
1	Orange	Card Reader

Applicable Specifications and Agency Compliance

Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMR
CEC/C(UL) Specification:	CMR

Flame Test

UL Flame Test:	UL1666 Vertical Shaft

Suitability

Suitability - Indoor:	Yes

Electrical Characteristics

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)
52.250

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)
29.000

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
6.600

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
13.100

Max. Operating Voltage - UL:

Voltage
300 V RMS

Max. Recommended Current:

Description	Current
Card Reader	4 Amps

Multi Conductor

Physical Characteristics

Conductor

AWG:

# Conductors	AWG	Stranding	Conductor Material	Dia. (in.)
2	18	7x26	BC - Bare Copper	0.047
4	18	7x26	BC - Bare Copper	0.047
4	16	19x30	BC - Bare Copper	0.057

Insulation

Insulation Material:

Insulation Material	Wall Thickness (in.)	Dia. (in.)	AWG
PP - Polypropylene	0.007	0.059	18
PP - Polyproylene	0.007	0.071	16

Insulation Color Code Chart:

Number	Color	Description
1	Black	Door Contact 1
2	Red	Door Contact 2
3	Black	Rex/Spare 1
4	Red	Rex/Spare 2
5	White	Rex/Spare 3
6	Green	Rex/Spare 4
7	Black	Lock/Power 1
8	Red	Lock/Power 2
9	White	Lock/Power 3
10	Green	Lock/Power 4

Individual Shield

Outer Shield

Outer Shield Material:

AWG	Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)	Description
18	Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100.000	Door Contact
18	Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100.000	Rex/Spare
16	Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100.000	Lock/Power

Outer Shield Drain Wire AWG:

Component	AWG	Stranding	Drain Wire Conductor Material
Door Contact	24	7x32	TC - Tinned Copper
Rex/Spare	24	7x32	TC - Tinned Copper
Lock/Power	24	7x32	TC - Tinned Copper

Outer Jacket

Outer Jacket Diameter:

Component #	Nom. Dia. (in.)
Door Contact	0.162
Rex/Spare	0.186
Lock/Power	0.215

Outer Jacket Ripcord: Yes

Outer Jacket Color Code Chart:

Number	Color	Description
1	White	Door Contact
2	Blue	Rex/Spare
3	Gray	Lock/Power

Applicable Specifications and Agency Compliance

Applicable Standards & Environmental Programs

NEC/(UL) Specification: CMR

CEC/C(UL) Specification: CMG

Flame Test

UL Flame Test: UL1666 Vertical Shaft

Suitability

Suitability - Indoor: Yes

Electrical Characteristics

Nom. Capacitance Conductor to Shield:

Description	Freq. (MHz)	Capacitance (pF/ft)
Door Contact	1.000	94.500
Rex/Spare	1.000	52.250
Lock Power	1.000	55.000

Nom. Capacitance Conductor to Conductor:

Description	Freq. (MHz)	Capacitance (pF/ft)
Door Contact	1.000	52.500
Rex/Spare	1.000	29.000
Lock Power	1.000	30.500

Nom. Conductor DC Resistance:

Description	DCR @ 20°C (Ohm/1000 ft)
Door Contact	6.600
Rex/Spare	6.600
Lock Power	4.000

Nominal Outer Shield DC Resistance:

Description	DCR @ 20°C (Ohm/1000 ft)
Door Contact	16.700
Rex/Spare	15.900
Lock Power	14.400

Max. Operating Voltage - UL:

Voltage
300 V RMS

Max. Recommended Current:

Description	Current
Door Contact	4 Amps
Rex/Spare	4 Amps
Lock Power	5 Amps

Physical Characteristics (Overall)

Conductor

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
Unjacketed

Overall Cable

Overall Nominal Diameter:	0.516 in.

Mechanical Characteristics (Overall)

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

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	04/01/2005
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes

Plenum/Non-Plenum

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

Notes (Overall)

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. Banana Peel® US Patent 7049523.

Related Documents:

No related documents are available for this product

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
538AFS 0001000	1,000 FT	154.000 LB	NONE	C	4C16 + 4C18 + 3P18 + 2C18 SHLD

Notes:
C = CRATE REEL PUT-UP.

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