Detailed Specifications & Technical Data

METRIC MEASUREMENT VERSION

558AFS 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. (mm)
3	22	7x30	BC - Bare Copper	0.762

Insulation

Insulation Material:

Insulation Material	Wall Thickness (mm)
PP - Polypropylene	0.178

Inner Jacket

Inner Jacket Color Code Chart:

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

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. (mm)
5.359

Outer Jacket Ripcord: Yes

Outer Jacket Color Code Chart:

Number	Color
Card Reader	Orange

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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:

Capacitance (pF/m)
147.645

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/m)
82.025

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km)
53.480

Ind. Pair Nominal Shield DC Resistance @ 20 Deg. C:	45.606 Ohm/km

Max. Operating Voltage - Other:

Voltage	Description
null	300 V RMS

Max. Recommended Current:

Description	Current
Card Reader	2

Multi Conductor

Physical Characteristics

Conductor

AWG:

# Conductors	AWG	Stranding	Conductor Material	Dia. (mm)
2	22	7x30	BC - Bare Copper	0.762
4	22	7x30	BC - Bare Copper	0.762
4	18	7x26	BC - Bare Copper	1.194

Insulation

Insulation Material:

Insulation Material	Wall Thickness (mm)	AWG
PP - Polypropylene	0.178	22
PP - Polypropylene	0.178	18

Insulation Color Code Chart:

Color	Description
Black	Door Contact 1
Red	Door Contact 2
Black	Rex/Spare 1
Red	Rex/Spare 2
White	Rex/Spare 3
Green	Rex/Spare 4
Black	Lock/Power 1
Red	Lock/Power 2
White	Lock/Power 3
Green	Lock/Power 4

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Individual Shield

Outer Shield

Outer Shield Material:

AWG	Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)	Description
22	Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100.000	Door Contact
22	Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100.000	Rex/Spare
18	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. (mm)
Door Contact	3.226
Rex/Spare	3.683
Lock/Power	4.724

Outer Jacket Ripcord: Yes

Outer Jacket Color Code Chart:

Number	Color
Door Contact	White
Rex/Spare	Blue
Lock/Power	Gray

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/m)
Door Contact	1.000	226.389
Rex/Spare	1.000	141.903
Lock Power	1.000	168.151

Nom. Capacitance Conductor to Conductor:

Description	Freq. (MHz)	Capacitance (pF/m)
Door Contact	1.000	125.498
Rex/Spare	1.000	78.744
Lock Power	1.000	93.509

Nom. Conductor DC Resistance:

Description	DCR @ 20°C (Ohm/km)
Door Contact	53.808
Rex/Spare	53.808
Lock Power	21.327

Nom. Inner Shield DC Resistance:

Description	DCR @ 20°C (Ohm/km)
Door Contact	52.824
Rex/Spare	52.824
Lock Power	23.623

Max. Operating Voltage - Other:

Voltage
300 V RMS

Max. Recommended Current:

Description	Current
Door Contact	2.2 Amps
Rex/Spare	2.2 Amps
Lock Power	4 Amps

Physical Characteristics (Overall)

Conductor

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
Unjacketed

Overall Cable

Overall Nominal Diameter:	11.379 mm

Mechanical Characteristics (Overall)

Operating Temperature Range:	0°C To +75°C
Bulk Cable Weight:	141.379 Kg/Km
Max. Recommended Pulling Tension:	889.640 N
Min. Bend Radius/Minor Axis:	111.760 mm

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:	658AFS

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.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
558AFS 0001000	305 MT	48.081 KG	NONE	C	4C18 + 4C22 + 3P22 + 2C22 SHLD
558AFS 000500	152 MT	24.267 KG	NONE	C	4C18 + 4C22 + 3P22 + 2C22 SHLD

Notes:
C = CRATE REEL PUT-UP.

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Revision Number: 1 Revision Date: 06-05-2008

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