

## 558AFS Composite - Lock Power, Card Reader, Door Contact, REX Applications



For more Information  
please call

1-800-Belden1



### General Description:

Access Control Cable, Riser-CMR, 3-22 AWG pairs, 4-18 AWG conductors, 4-22 AWG conductors, 2-22 AWG conductors, All conductors stranded bare copper with polyolefin insulation, Each cable has overall Beldfoil® shield and PVC jacket, Banana Peel® No overall jacket

### Usage (Overall)

Suitable Applications: Access Control

### Twisted Pair

#### Physical Characteristics

##### Conductor

###### AWG:

# Pairs	AWG	Stranding	Conductor Material
3	22	7x30	BC - Bare Copper

##### 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

## 558AFS Composite - Lock Power, Card Reader, Door Contact, REX Applications

### Applicable Specifications and Agency Compliance Applicable Standards & Environmental Programs

NEC/(UL) Specification: CMR

NEC Articles: 800

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 - UL:

Description

300 V RMS

#### Max. Recommended Current:

Description Current

Card Reader 2 amps @ 25C ambient

## Multi Conductor

### Physical Characteristics

#### Conductor

##### AWG:

# Conductors	AWG	Stranding	Conductor Material
2	22	7x30	BC - Bare Copper
4	22	7x30	BC - Bare Copper
4	18	7x26	BC - Bare Copper

### Insulation

#### Insulation Material:

Insulation Material	Wall Thickness (mm)	AWG
PP - Polypropylene	0.203	22
PP - Polypropylene	0.203	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

## 558AFS Composite - Lock Power, Card Reader, Door Contact, REX Applications

### 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	3.353
Rex/Spare	3.835
Lock/Power	4.928

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

NEC Articles: 800

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	203.422
Rex/Spare	1.000	131.240
Lock Power	1.000	159.129

#### Nom. Capacitance Conductor to Conductor:

Description	Freq. (MHz)	Capacitance (pF/m)
Door Contact	1.000	113.195
Rex/Spare	1.000	73.823
Lock Power	1.000	88.587

#### 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

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Lock Power	23.623
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### Max. Operating Voltage - UL:

Description
300 V RMS

### Max. Recommended Current:

Description	Current
Door Contact	2.2 Amps @ 25C ambient
Rex/Spare	2.2 Amps @ 25C ambient
Lock Power	4 Amps @ 25C ambient

## 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: 144.355 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 2011/65/EU (ROHS II): Yes

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

#### Applicable Patents:

Country
www.belden.com/p

### 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.

## Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
558AFS 0001000	1,000 FT	106.000 LB	NONE	C	3P22+2C22+4C22+4C18 IFS CMR BP

## METRIC MEASUREMENT VERSION

### 558AFS Composite - Lock Power, Card Reader, Door Contact, REX Applications

558AFS 000500	500 FT	53.500 LB	NONE	C	3P22+2C22+4C22+4C18 IFS CMR BP
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**Notes:**

C = CRATE REEL PUT-UP.

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