

## 658AFS Composite - Lock Power, Card Reader, Door Contract, REX Applications

For more Information  
please call

1-800-Belden1

**Description:**

18 AWG stranded bare copper conductors, Flamarrest® insulation and 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	22	7x30	BC - Bare Copper	0.030

**Insulation****Insulation Material:**

Insulation Trade Name	Insulation Material	Dia. (in.)
Flamarrest®	LS PVC - Low Smoke Polyvinyl Chloride	0.047

**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

**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 Trade Name	Outer Jacket Material
Flamarrest®	LS PVC - Low Smoke Polyvinyl Chloride

**Outer Jacket Diameter:**

Nom. Dia. (in.)
0.218

**Outer Jacket Color Code Chart:**

Number	Color	Description
1	Orange	Card Reader

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

NEC/(UL) Specification: CMP

CEC/C(UL) Specification: CMP

## 658AFS Composite - Lock Power, Card Reader, Door Contract, REX Applications

## Flame Test

UL Flame Test: NFPA 262

## Suitability

Suitability - Indoor: Yes

## Electrical Characteristics

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)

60.000

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)

33.000

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

16.300

Ind. Pair Nominal Shield DC Resistance @ 20  
Deg. C: 13.900 Ohm/1000 ft

Max. Operating Voltage - Non-UL:

Voltage

300 V RMS

Max. Recommended Current:

Description Current

Card Reader 2

## Multi Conductor

## Physical Characteristics

## Conductor

AWG:

# Conductors	AWG	Stranding	Conductor Material	Dia. (in.)
2	22	7x30	BC - Bare Copper	0.030
4	22	7x30	BC - Bare Copper	0.030
4	18	7x26	BC - Bare Copper	0.046

## Insulation

Insulation Material:

Insulation Trade Name	Insulation Material	Dia. (in.)	AWG
Flamarrest®	LS PVC - Low Smoke Polyvinyl Chloride	0.047	22
Flamarrest®	LS PVC - Low Smoke Polyvinyl Chloride	0.066	18

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	Red/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
22	Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100.000	Door Contact
22	Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100.000	Rex/Spare

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18	Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100.000	Lock/Power
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**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 Material:**

Outer Jacket Trade Name	Outer Jacket Material
Flamarrest®	LS PVC - Low Smoke Polyvinyl Chloride

**Outer Jacket Diameter:**

Component #	Nom. Dia. (in.)
Door Contact	0.131
Rex/Spare	0.150
Lock/Power	0.193

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: CMP

CEC/C(UL) Specification: CMP

**Flame Test**

UL Flame Test: NFPA 262

**Suitability**

Suitability - Indoor: Yes

**Electrical Characteristics****Nom. Capacitance Conductor to Shield:**

Description	Freq. (MHz)	Capacitance (pF/ft)
Door Contact	1.000	99.000
Rex/Spare	1.000	59.000
Lock Power	1.000	76.000

**Nom. Capacitance Conductor to Conductor:**

Description	Freq. (MHz)	Capacitance (pF/ft)
Door Contact	1.000	55.000
Rex/Spare	1.000	33.000
Lock Power	1.000	40.000

**Nom. Conductor DC Resistance:**

Description	DCR @ 20°C (Ohm/1000 ft)
Door Contact	16.400
Rex/Spare	16.400
Lock Power	6.500

**Nom. Inner Shield DC Resistance:**

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

**Max. Operating Voltage - UL:**

Voltage
300 V RMS

## 658AFS Composite - Lock Power, Card Reader, Door Contract, REX Applications

## Max. Recommended Current:

Description	Current
Door Contact	2.2 Amps
Rex/Spare	2.2 Amps
Lock Power	4.0 Amps

## Physical Characteristics (Overall)

## Conductor

## Outer Jacket

## Outer Jacket Material:

Outer Jacket Material
Unjacketed

## Overall Cable

Overall Nominal Diameter: 0.420 in.

## Mechanical Characteristics (Overall)

Bulk Cable Weight: 100 lbs/1000 ft.

Max. Recommended Pulling Tension: 200 lbs.

Min. Bend Radius (Install)/Minor Axis: 4.200 in.

## Applicable Specifications and Agency Compliance (Overall)

## Applicable Standards &amp; 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): Yes

Non-Plenum Number: 558AFS

## 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
658AFS 0001000	1,000 FT	108.000 LB	NONE	C	4C18 + 4C22 + 3P22 + 2C22 SHLD
658AFS 000500	500 FT	55.000 LB	NONE	C	4C18 + 4C22 + 3P22 + 2C22 SHLD

## Notes:

C = CRATE REEL PUT-UP.

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