

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

For more Information  
please call

1-800-Belden1



### Description:

3 pr. - 22 stranded (7x30) BC cond., Flamarrest® insul., Beldfoil® shield, drain wire, Flamarrest® jacket;  
10 cond. - 22 AWG stranded (7x30) & 18 AWG (7x26) BC cond., Flamarrest® insul., Beldfoil® shield ,  
drain wire, Flamarrest® jacket with ripcord; overall Solef® jacket.

### Usage (Overall)

Suitable Applications: Access Control

### Coax

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

EU CE Mark: Yes

### 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	Black and Green	Card Reader 2
3	Black and White	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.)
0.216

Outer Jacket Color Code Chart:

Number	Color	Description
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1	Orange	Card Reader
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### 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. 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	0.047

### 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	0.064	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	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

### 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	20	7x28	TC - Tinned Copper

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### 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	0.128
Rex/Spare	0.147
Lock/Power	0.188

Outer Jacket Ripcord: Yes

#### Outer Jacket Color Code Chart:

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

### 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	42.000

#### 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	15.300
Rex/Spare	15.300
Lock Power	7.300

#### Max. Operating Voltage - UL:

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 Trade Name
Solef®

#### Overall Cabling

Overall Nominal Diameter: 0.463 in.

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### Mechanical Characteristics (Overall)

Operating Temperature Range:	0°C To +75°C
Bulk Cable Weight:	118 lbs/1000 ft.
Max. Recommended Pulling Tension:	200 lbs.
Min. Bend Radius (Install)/Minor Axis:	4.750 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMP
CEC/C(UL) Specification:	CMP
EU CE Mark:	Yes
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	05/09/2007
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

#### Flame Test

UL Flame Test:	NFPA 262 Plenum Flame Test (UL910)(FT6)
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#### Suitability

Suitability - Indoor:	Yes
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#### Plenum/Non-Plenum

Plenum (Y/N):	Yes
Non-Plenum Number:	558AFJ

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
658AFJ 0041000	1,000 FT	153.000 LB	YELLOW		FS COMPOSITE CABLE SLF
658AFJ 004500	500 FT	78.000 LB	YELLOW		FS COMPOSITE CABLE SLF

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