

Part Number: 538AFS

Access Control, 16c (#18-3pr, #16-4c, #18-6c), Shielded, CMR, Banana Peel®



Product Description

Access Control Cable, Riser-CMR, 3-18 AWG pairs, 4-16 AWG conductors, 4-18 AWG conductors, 2-18 AWG conductors, All conductors stranded bare copper with polyolefin insulation, Each cable has overall Beldfoil® shield and PVC jacket, Banana Peel® No overall jacket

Technical Specifications

Product Overview

| | |
|------------------------|----------------|
| Suitable Applications: | Access Control |
|------------------------|----------------|

Physical Characteristics (Overall)

Conductor

| Element | AWG | Stranding | Material | Nominal Diameter | No. of Conductors | No. of Pairs |
|--------------|-----|-----------|------------------|------------------|-------------------|--------------|
| Card Reader | 18 | 7x26 | BC - Bare Copper | 0.047 in | | 3 |
| Door Contact | 18 | 7x26 | BC - Bare Copper | 0.047 in | 2 | |
| Rex/Spare | 18 | 7x26 | BC - Bare Copper | 0.047 in | 4 | |
| Lock Power | 16 | 19x30 | BC - Bare Copper | 0.057 in | 4 | |

| | |
|------------------------|--------|
| Conductor Count: | 10 |
| Total Number of Pairs: | 3 |
| Conductor Size: | 18 AWG |

Insulation

| Element | Material | Nominal Diameter | Nominal Wall Thickness |
|---------|--------------------|------------------|------------------------|
| 18 | PP - Polypropylene | 0.059 in | 0.007 in |
| 16 | PP - Polypropylene | 0.059 in | 0.007 in |
| | PP - Polypropylene | 0.071 in | 0.007 in |

Color Chart

| Number | Color |
|----------------|------------------|
| Card Reader 1 | Black and Red |
| Card Reader 2 | White and Green |
| Card Reader 3 | Orange and Brown |
| Door Contact 1 | Black |
| Door Contact 2 | Red |
| Rex/Spare 1 | Black |
| Rex/Spare 2 | Red |
| Rex/Spare 3 | White |
| Rex/Spare 4 | Green |
| Lock/Power 1 | Black |
| Lock/Power 2 | Red |
| Lock/Power 3 | White |
| Lock/Power 4 | Green |

Color Chart 4

| Number | Color |
|--------------|--------|
| Card Reader | Orange |
| Door Contact | White |
| Rex/Spare | Blue |

| | |
|------------|------|
| Lock/Power | Gray |
|------------|------|

Inner Jacket Material

| Element | Material | Nominal Diameter | Nominal Wall Thickness |
|--------------|----------|------------------|------------------------|
| Door Contact | PVC | 0.272 in | 0.020 in |
| Rex/Spare | PVC | 0.162 in | 0.020 in |
| Lock/Power | PVC | 0.194 in | 0.020 in |
| Door Contact | PVC | 0.220 in | 0.020 in |
| Rex/Spare | | | |
| Lock/Power | | | |

Outer Shield Material

| Type | Description | Layer | Material | Material Trade Name | Coverage [%] | Drainwire Material | Drainwire AWG | Drainwire Construction n x D |
|------|--------------|------------------------|--------------------|---------------------|--------------|--------------------|---------------|------------------------------|
| Tape | Door Contact | Card Reader (3 Pr #18) | Aluminum/Polyester | Beldfoil® | 100 % | TC - Tinned Copper | 24 | (7x32) |
| Tape | Rex/Spare | Door Contact (2C #18) | Aluminum/Polyester | Beldfoil® | 100 % | TC - Tinned Copper | 24 | (7x32) |
| Tape | Lock/Power | Rex/Spare (4C #18) | Aluminum/Polyester | Beldfoil® | 100 % | TC - Tinned Copper | 24 | (7x32) |
| Tape | | Lock/Power (4C #16) | Aluminum/Polyester | Beldfoil® | 100 % | TC - Tinned Copper | 24 | (7x32) |

Outer Jacket Material

| Material | Nominal Diameter | Ripcord |
|------------|------------------|---------|
| | | Yes |
| Unjacketed | 0.162 in | Yes |
| | 0.186 in | |
| | 0.215 in | |
| | 0.516 in | |

Electrical Characteristics

Conductor DCR

| Element | Nominal Conductor DCR | Nominal Conductor DCR Conductor Resistance | Nominal Inner Shield DCR | Nominal Outer Shield DCR |
|--------------|-----------------------|--|--------------------------|--------------------------|
| Card Reader | 6.6 Ohm/1000ft | 6.6 Ohm/1000ft | 13.1 Ohm/1000ft | |
| Door Contact | 6.6 Ohm/1000ft | 6.6 Ohm/1000ft | 16.7 Ohm/1000ft | 16.7 Ohm/1000ft |
| Rex/Spare | 6.6 Ohm/1000ft | 6.6 Ohm/1000ft | 15.9 Ohm/1000ft | 15.9 Ohm/1000ft |
| Lock Power | 4 Ohm/1000ft | 4 Ohm/1000ft | 15.9 Ohm/1000ft | 14.4 Ohm/1000ft |

Capacitance

| Element | Max. Capacitance Conductor to Conductor | Nom. Capacitance Conductor to Conductor | Nom. Capacitance Conductor to Shield |
|--------------|---|---|--------------------------------------|
| Pair | 30 pF/ft | 29 pF/ft | 52.25 pF/ft |
| Door Contact | | 52.5 pF/ft | 94.5 pF/ft |
| Rex/Spare | | 29 pF/ft | 52.25 pF/ft |
| Lock Power | | 30.5 pF/ft | 55 pF/ft |

| | |
|------------|---------------------------|
| Shielding: | Foil(s) or Copper Tape(s) |
|------------|---------------------------|

Current

| Element | Max. Recommended Current [A] |
|--------------|------------------------------|
| Card Reader | Per conductor @ 25°C: 4 A |
| Door Contact | Per conductor @ 25°C: 4 A |
| Rex/Spare | Per conductor @ 25°C: 4 A |
| Lock Power | 5 Amps |

Voltage

| UL Voltage Rating |
|-------------------|
| 300 V RMS |

Temperature Range

| | |
|-----------------------|--------------|
| Operating Temp Range: | 0°C To +75°C |
|-----------------------|--------------|

Mechanical Characteristics

| | |
|----------------------------------|----------------|
| Bulk Cable Weight: | 175 lbs/1000ft |
| Max Recommended Pulling Tension: | 428 lbs |
| Min Bend Radius/Minor Axis: | 5 in |

Standards

| | |
|--------------------------|-----|
| NEC Articles: | 800 |
| NEC/(UL) Specification: | CMR |
| CEC/C(UL) Specification: | CMR |
| CPR Euroclass: | Eca |

Applicable Environmental and Other Programs

| | |
|---------------------------------------|------------|
| EU Directive 2000/53/EC (ELV): | Yes |
| EU Directive 2003/11/EC (BFR): | Yes |
| EU Directive 2011/65/EU (ROHS II): | Yes |
| EU Directive 2012/19/EU (WEEE): | Yes |
| EU Directive 2015/863/EU: | Yes |
| EU Directive Compliance: | Yes |
| EU CE Mark: | Yes |
| EU RoHS Compliance Date (yyyy-mm-dd): | 2005-04-01 |
| CA Prop 65 (CJ for Wire & Cable): | Yes |
| MII Order #39 (China RoHS): | Yes |

Suitability

| | |
|-----------------------|-----|
| Suitability - Indoor: | Yes |
|-----------------------|-----|

Flammability, LS0H, Toxicity Testing

| | |
|--------------------|-----------------------|
| UL Flammability: | UL1666 Vertical Shaft |
| UL voltage rating: | 300 V RMS |

Plenum/Non-Plenum

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

Part Number

Variants

| Item # | Color | Footnote |
|----------------|---------------------------|----------|
| 538AFS 0001000 | Orange, White, Blue, Gray | C |

| | |
|-----------|---|
| Footnote: | C - CRATE REEL PUT-UP. |
| Patent: | https://www.belden.com/resources/patents |

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