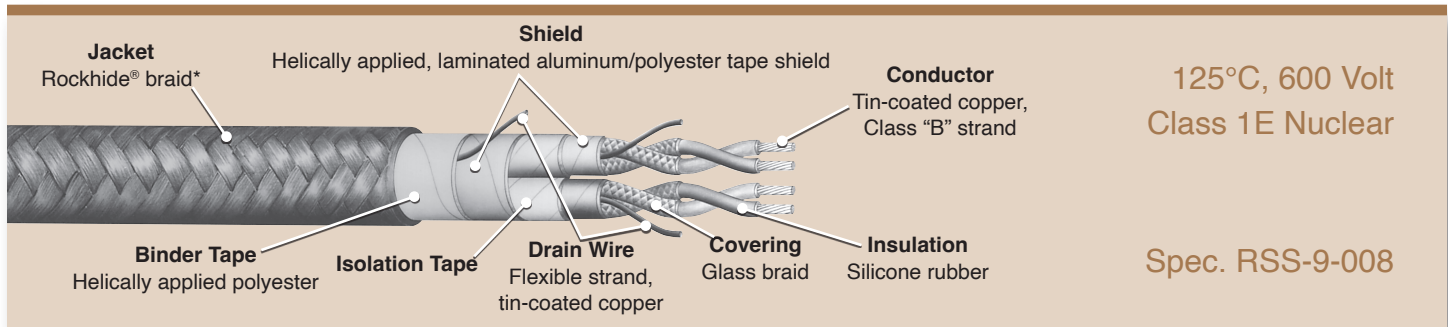


# Firewall® SR

## Instrumentation Cable

Multi-Shielded Pairs With Overall Shield (Silicone Rubber)



### Features

- Nuclear qualified with a minimum 40-year thermal life expectancy at 125°C
- Radiation resistant (up to 200 megarads)
- Extremely flame retardant
- Extremely flexible for installation ease
- Excellent circuit integrity during flame conditions
- Full traceability
- Easy strippability for termination ease
- Tin-coated copper conductors for improved terminations, corrosion resistance and temperature endurance
- All singles pass a wet dielectric (tank) test prior to braid covering to verify electrical integrity
- Shield to shield isolation system provided and verified by electrical testing
- All cables have printed sequential footage markers for improved inventory control

### Scope

Firewall® SR Instrumentation Cable is a silicone rubber insulated construction specifically designed for high temperature applications within nuclear generating facilities. It is intended for use in harsh and demanding environments where temperature extremes preclude the use of standard cables. It may be installed in trays, ducts, conduits or in confined spaces such as equipment housings. *Designed for use on circuits where complete isolation is required between pairs and from external interference.*

### Performance Standards

- Silicone rubber insulation in accordance with ICEA S-19-81
- Class 1E qualified in accordance with IEEE 383-1974 and IEEE 323-1974 (RSCC Report QR-8802)
- Cable passes IEEE 383-1974 70,000 BTU/hr vertical tray flame test as modified by NRC Reg. Guide 1.131
- Cable passes ICEA T-29-520 210,000 BTU/hr vertical tray flame test
- Single conductors pass the vertical flame test specified in IEEE 383-1974 para. 2.5.6 (ICEA S-19-81 Section 6.19.6)
- Quality Assurance program in accordance with 10 CFR 50 Appendix B

### Construction

**Conductor:** Annealed, tin-coated copper, Class "B" strand (ASTM B8 & B33)

**Insulation:** Proprietary heat, moisture and radiation resistant silicone rubber

**Covering:** Glass braid with high temperature finish

**Pair Assembly:** Two insulated and braided conductors twisted with a flexible strand, tin-coated copper drain wire, a helically applied aluminum/polyester laminated tape shield and an isolation tape

**Cabling:** Required number of pairs cabled together

**Circuit Identification:** One leg of each pair is white. Up to 5 pairs, second legs are black, red, green, orange, or blue. Over 5 pairs, legs are white and black with printed pair number on each leg of each pair.

**Shield System:** Helically applied aluminum/polyester laminated tape shield in continuous contact with a flexible strand, tin-coated copper drain wire

**Fillers:** As applicable

**Binder Tape:** Helically applied polyester

**Overall Covering:** Rockhide® braid\* with high temperature finish

\* Rockhide® is a proprietary blend of aramid and other high temperature synthetic fibers.



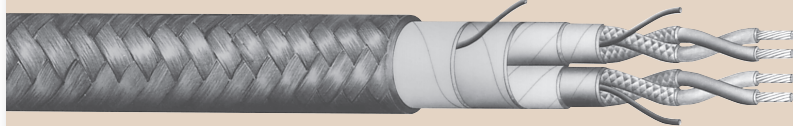
Made in the USA



Marmon Electrical  
A Berkshire Hathaway Company

# Firewall® SR Instrumentation Cable

Multi-Shielded Pairs With Overall Shield (Silicone Rubber)



125°C, 600 Volt  
Class 1E Nuclear

Spec. RSS-9-008

## 16 AWG, 7 Strand

| Product Code | Number of Pairs | Insulation Thickness |      | Individual Braid Thickness | Single Conductor Diameter | Drain Wire Size/Stranding | Overall Braid Thickness | Nominal Overall Diameter |       | Approximate Net Weight |
|--------------|-----------------|----------------------|------|----------------------------|---------------------------|---------------------------|-------------------------|--------------------------|-------|------------------------|
|              |                 | (inch)               | (mm) | (Mils)                     | (inch)                    |                           | (Mils)                  | (inch)                   | (mm)  | (Lbs/M')               |
| I48-3266     | 2               | .030                 | .76  | 7                          | .14                       | 18 AWG (16/s)             | 40                      | .61                      | 15.49 | 125                    |
| I48-3267     | 3               | .030                 | .76  | 7                          | .14                       | 18 AWG (16/s)             | 40                      | .65                      | 16.51 | 165                    |
| I48-3268     | 4               | .030                 | .76  | 7                          | .14                       | 18 AWG (16/s)             | 40                      | .74                      | 18.80 | 215                    |
| I48-3269     | 5               | .030                 | .76  | 7                          | .14                       | 18 AWG (16/s)             | 40                      | .82                      | 20.83 | 270                    |
| I48-3270     | 7               | .030                 | .76  | 7                          | .14                       | 18 AWG (16/s)             | 40                      | .89                      | 22.61 | 350                    |
| I48-3271     | 9               | .030                 | .76  | 7                          | .14                       | 18 AWG (16/s)             | 40                      | 1.06                     | 26.92 | 465                    |
| I48-3272     | 12              | .030                 | .76  | 7                          | .14                       | 18 AWG (16/s)             | 40                      | 1.20                     | 30.48 | 555                    |
| I48-3273     | 15              | .030                 | .76  | 7                          | .14                       | 18 AWG (16/s)             | 40                      | 1.34                     | 34.04 | 700                    |
| I48-3274     | 19              | .030                 | .76  | 7                          | .14                       | 18 AWG (16/s)             | 40                      | 1.41                     | 35.81 | 860                    |
| I48-3276     | 37              | .030                 | .76  | 7                          | .14                       | 18 AWG (16/s)             | 40                      | 2.03                     | 51.56 | 1670                   |

## 18 AWG, 7 Strand

| Product Code | Number of Pairs | Insulation Thickness |      | Individual Braid Thickness | Single Conductor Diameter | Drain Wire Size/Stranding | Overall Braid Thickness | Nominal Overall Diameter |       | Approximate Net Weight |
|--------------|-----------------|----------------------|------|----------------------------|---------------------------|---------------------------|-------------------------|--------------------------|-------|------------------------|
|              |                 | (inch)               | (mm) | (Mils)                     | (inch)                    |                           | (Mils)                  | (inch)                   | (mm)  | (Lbs/M')               |
| I48-3277     | 2               | .030                 | .76  | 7                          | .13                       | 20 AWG (10/s)             | 40                      | .57                      | 14.48 | 100                    |
| I48-3278     | 3               | .030                 | .76  | 7                          | .13                       | 20 AWG (10/s)             | 40                      | .61                      | 15.49 | 130                    |
| I48-3279     | 4               | .030                 | .76  | 7                          | .13                       | 20 AWG (10/s)             | 40                      | .69                      | 17.53 | 170                    |
| I48-3280     | 5               | .030                 | .76  | 7                          | .13                       | 20 AWG (10/s)             | 40                      | .76                      | 19.30 | 210                    |
| I48-3281     | 7               | .030                 | .76  | 7                          | .13                       | 20 AWG (10/s)             | 40                      | .83                      | 21.08 | 270                    |
| I48-3282     | 9               | .030                 | .76  | 7                          | .13                       | 20 AWG (10/s)             | 40                      | .98                      | 24.89 | 350                    |
| I48-3283     | 12              | .030                 | .76  | 7                          | .13                       | 20 AWG (10/s)             | 40                      | 1.10                     | 27.94 | 425                    |
| I48-3284     | 15              | .030                 | .76  | 7                          | .13                       | 20 AWG (10/s)             | 40                      | 1.23                     | 31.24 | 535                    |
| I48-3285     | 19              | .030                 | .76  | 7                          | .13                       | 20 AWG (10/s)             | 40                      | 1.31                     | 33.27 | 655                    |
| I48-3287     | 37              | .030                 | .76  | 7                          | .13                       | 20 AWG (10/s)             | 40                      | 1.90                     | 48.26 | 1300                   |



Made in the USA



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