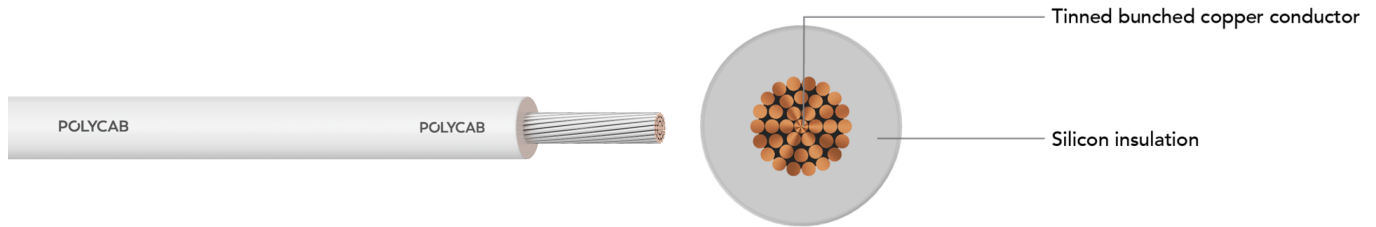


# POLYCAB SiR, IS 9968-1

## Rubber power and control Cable, 1100 V AC



Images not to scale. Follow table for dimensions

### APPLICATION

POLYCAB SiR IS 9968-1, silicon rubber insulated unsheathed generally conforming to IS 9968-1 is designed to use in heat resistant area single phase or three phase (earthed or unearthed) system for rated voltage up to and including 1100 V. These cables may be used on DC system for rated voltage grade 1500V to earth.

### CHARACTERISTICS

**Voltage Rating**  
1100 V

**Operation Temperature**  
Fixed: -50°C to 180°C  
Maximum short circuit temperature 350°C

**Bending Radii**  
Fixed installation 12 x Overall Diameter  
Occasional 10 x Overall Diameter

**Test Voltage**  
3000 V AC

### STANDARD FOLLOWS

IS 8130:2013  
IS 6380:1984\*  
IS 9968:1988

### COMPLIANCE

Conductor resistance test IS 8130  
Insulation resistance IS 6380:1984\*  
Flammability IEC 60332-1-2

### OUR ACCREDITATIONS



### CONSTRUCTION

- Annealed tinned bunched electrolytic grade copper conductor to IS 8130, class 5
- Insulated by silicon rubber compound to IS 6380

**Core Identification**  
White/Red/Yellow/Blue/Black

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### WEIGHT & DIMENSION DATA :

| No. of core | Nominal cross sectional area | Insulation thickness | Overall diameter | Weight (Approx.) |
|-------------|------------------------------|----------------------|------------------|------------------|
|             | mm <sup>2</sup>              | mm                   | mm               | kg/km            |
| 1           | 0.5                          | 1                    | 2.91             | 12               |
| 1           | 0.75                         | 1                    | 3.12             | 15               |
| 1           | 1                            | 1                    | 3.29             | 18               |
| 1           | 1.5                          | 1                    | 3.56             | 23               |
| 1           | 2.5                          | 1                    | 4.02             | 34               |
| 1           | 4                            | 1                    | 4.56             | 50               |
| 1           | 6                            | 1                    | 5.13             | 70               |
| 1           | 10                           | 1.2                  | 6.48             | 116              |
| 1           | 16                           | 1.2                  | 7.52             | 174              |
| 1           | 25                           | 1.4                  | 9.18             | 266              |
| 1           | 35                           | 1.4                  | 10.38            | 364              |
| 1           | 50                           | 1.6                  | 12.27            | 519              |
| 1           | 70                           | 1.6                  | 13.95            | 712              |
| 1           | 95                           | 1.8                  | 16.14            | 964              |
| 1           | 120                          | 1.8                  | 17.68            | 1199             |
| 1           | 150                          | 2                    | 19.61            | 1475             |

### Electrical characteristics

#### Current carrying capacity and maximum DC conductor resistance.

| Nominal cross sectional area<br>mm <sup>2</sup> | Current rating in air<br>Amp. |      |      |       |       |       | Maximum DC<br>conductor resistance<br>20°C |
|---|-------------------------------|------|------|-------|-------|-------|--|
|   | 30°C                          | 60°C | 90°C | 120°C | 150°C | 170°C | Ω/km                                       |
| 0.5   | 23                            | 20   | 17   | 13    | 9     | 5     | 40.1                                       |
| 0.75  | 30                            | 26   | 22   | 17    | 11    | 6     | 26.7                                       |
| 1   | 35                            | 31   | 26   | 20    | 13    | 7     | 20   |
| 1.5   | 44                            | 38   | 52   | 25    | 17    | 8     | 13.7                                       |
| 2.5   | 61                            | 53   | 45   | 35    | 23    | 12    | 8.21                                       |
| 4   | 82                            | 71   | 60   | 47    | 31    | 16    | 5.09                                       |
| 6   | 104                           | 91   | 77   | 60    | 39    | 20    | 3.39                                       |
| 10  | 148                           | 129  | 108  | 85    | 56    | 28    | 1.95                                       |
| 16  | 197                           | 173  | 145  | 114   | 75    | 58    | 1.24                                       |
| 25  | 263                           | 230  | 193  | 151   | 99    | 51    | 0.795                                      |
| 35  | 327                           | 286  | 240  | 188   | 124   | 63    | 0.565                                      |

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| Nominal cross sectional area<br>mm <sup>2</sup> | Current rating in air<br>Amp. |      |      |       |       |       | Maximum DC conductor resistance<br>20°C<br>Ω/km |
|---|-------------------------------|------|------|-------|-------|-------|---|
|   | 30°C                          | 60°C | 90°C | 120°C | 150°C | 170°C |   |
| 50  | 413                           | 362  | 304  | 238   | 157   | 80    | 0.393   |
| 70  | 531                           | 465  | 391  | 306   | 201   | 103   | 0.277   |
| 95  | 623                           | 545  | 458  | 359   | 236   | 121   | 0.21  |
| 120   | 738                           | 645  | 543  | 425   | 280   | 143   | 0.164   |
| 150   | 850                           | 744  | 626  | 491   | 323   | 166   | 0.132   |

Conductor maximum operating temperature 180°C

De-rating factor

De-rating factor for 180°C insulated cable

| Air Temperature  | 150°C | 155°C | 160°C | 170°C | 180°C |
|------------------|-------|-------|-------|-------|-------|
| De-Rating Factor | 1     | 0.91  | 0.82  | 0.58  | 0.41  |

