

## Application

RE-2Y(St)Y PiMF is an instrumentation and process-control cable to EN 50288-7 (VDE 0819-7) for measuring, control, signal and alarm circuits with high requirements for interference immunity between individual signal circuits. The plain copper conductors are insulated with polyethylene (PE) and stranded into pairs (or triples); each pair is individually screened (PiMF) with an aluminium/polyester foil in contact with a tinned copper drain wire, and all screened elements are enclosed by an overall (collective) foil screen with a further tinned copper drain wire. A polyvinyl chloride (PVC) outer sheath protects the cable for fixed installation indoors and outdoors, in cable trays, ducts and trunking. The individual pair screens suppress crosstalk between circuits; the cable is not intended for power distribution.



## CONSTRUCTION

|                            |                                                                                                                                                                                                                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Conductor</b>           | Plain (bare) annealed copper, solid class 1 or stranded class 2 acc. to IEC 60228.                                                                                                                                                                                                       |
| <b>Insulation</b>          | Polyethylene (PE) acc. to EN 50290-2-23.                                                                                                                                                                                                                                                 |
| <b>Screen</b>              | Individual screen on every pair: aluminium/polyester foil in contact with a tinned copper drain wire (0.5 mm <sup>2</sup> ); the assembled pairs are enclosed by an overall (collective) aluminium/polyester foil screen with a further tinned copper drain wire (0.5 mm <sup>2</sup> ). |
| <b>Sheath</b>              | Polyvinyl chloride (PVC) acc. to EN 50290-2-22; black (UV-resistant) or blue for intrinsically safe circuits.                                                                                                                                                                            |
| <b>Core identification</b> | Pair: black / white; triple: black / white / red; elements progressively numbered.                                                                                                                                                                                                       |

## ELECTRICAL & THERMAL PROPERTIES

|                                                 |                                                                                               |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <b>Rated voltage U<sub>o</sub>/U</b>            | 300 V (500 V on request).                                                                     |
| <b>Test voltage</b>                             | 1.5 kV.                                                                                       |
| <b>Standard</b>                                 | EN 50288-7 (VDE 0819-7); conductor IEC 60228; insulation EN 50290-2-23; sheath EN 50290-2-22. |
| <b>Flame-retardant</b>                          | Acc. to IEC 60332-1-2 (and IEC 60332-3-24).                                                   |
| <b>Max. conductor temperature</b>               | +70 °C.                                                                                       |
| <b>Permitted outer cable temperature, fixed</b> | -30 °C to +70 °C.                                                                             |
| <b>Min. bending radius, fixed</b>               | 7.5 × overall diameter.                                                                       |
| <b>Reaction to fire (CPR)</b>                   | Eca acc. to EN 50575 / EN 13501-6; Cca-s3,d2,a3 on request.                                   |

## DIMENSIONS & TECHNICAL DATA

| Pairs × mm2 | Cond. R @20°C<br>(Ω/km) | Nominal O.D.<br>(mm) | Weight<br>(kg/km) |
|-------------|-------------------------|----------------------|-------------------|
| 2 × 0.5     | 36.7                    | 8.7                  | 84                |
| 4 × 0.5     | 36.7                    | 10.2                 | 120               |
| 5 × 0.5     | 36.7                    | 11.2                 | 145               |
| 6 × 0.5     | 36.7                    | 12.1                 | 171               |
| 8 × 0.5     | 36.7                    | 13.1                 | 212               |
| 10 × 0.5    | 36.7                    | 15.1                 | 266               |
| 12 × 0.5    | 36.7                    | 15.7                 | 287               |
| 16 × 0.5    | 36.7                    | 17.8                 | 387               |
| 20 × 0.5    | 36.7                    | 19.7                 | 463               |
| 24 × 0.5    | 36.7                    | 21.5                 | 554               |
| 2 × 0.75    | 25                      | 9.7                  | 101               |
| 4 × 0.75    | 25                      | 11.2                 | 152               |
| 5 × 0.75    | 25                      | 12.5                 | 177               |
| 6 × 0.75    | 25                      | 13.6                 | 224               |
| 8 × 0.75    | 25                      | 14.4                 | 269               |
| 10 × 0.75   | 25                      | 16.6                 | 335               |
| 12 × 0.75   | 25                      | 17.4                 | 376               |
| 16 × 0.75   | 25                      | 19.8                 | 485               |
| 20 × 0.75   | 25                      | 22                   | 589               |
| 24 × 0.75   | 25                      | 24                   | 713               |
| 2 × 1       | 18.5                    | 10.4                 | 117               |
| 4 × 1       | 18.5                    | 12.1                 | 174               |
| 5 × 1       | 18.5                    | 13.5                 | 220               |
| 6 × 1       | 18.5                    | 14.7                 | 257               |
| 8 × 1       | 18.5                    | 15.8                 | 324               |
| 10 × 1      | 18.5                    | 18                   | 403               |
| 12 × 1      | 18.5                    | 19                   | 456               |
| 16 × 1      | 18.5                    | 21.5                 | 603               |
| 20 × 1      | 18.5                    | 23.9                 | 721               |
| 24 × 1      | 18.5                    | 26.1                 | 866               |
| 2 × 1.5     | 12.3                    | 11.8                 | 158               |
| 4 × 1.5     | 12.3                    | 13.9                 | 243               |
| 5 × 1.5     | 12.3                    | 15.5                 | 290               |
| 6 × 1.5     | 12.3                    | 16.9                 | 358               |
| 8 × 1.5     | 12.3                    | 18.2                 | 447               |
| 10 × 1.5    | 12.3                    | 21                   | 550               |
| 12 × 1.5    | 12.3                    | 21.9                 | 625               |
| 16 × 1.5    | 12.3                    | 25.1                 | 831               |
| 20 × 1.5    | 12.3                    | 27.8                 | 1007              |
| 24 × 1.5    | 12.3                    | 30.4                 | 1223              |

| Triples × mm2 | Cond. R @20°C<br>(Ω/km) | Nominal O.D.<br>(mm) | Weight<br>(kg/km) |
|---------------|-------------------------|----------------------|-------------------|
| 2 × 0.5       | 36.7                    | 9.7                  | 104               |
| 4 × 0.5       | 36.7                    | 11.1                 | 156               |
| 5 × 0.5       | 36.7                    | 12.4                 | 183               |

| Triples × mm <sup>2</sup> | Cond. R @20°C<br>(Ω/km) | Nominal O.D.<br>(mm) | Weight<br>(kg/km) |
|---------------------------|-------------------------|----------------------|-------------------|
| 6 × 0.5                   | 36.7                    | 14                   | 236               |
| 8 × 0.5                   | 36.7                    | 14.9                 | 288               |
| 10 × 0.5                  | 36.7                    | 17                   | 350               |
| 12 × 0.5                  | 36.7                    | 17.6                 | 386               |
| 16 × 0.5                  | 36.7                    | 20.1                 | 506               |
| 20 × 0.5                  | 36.7                    | 22.3                 | 619               |
| 24 × 0.5                  | 36.7                    | 24.4                 | 752               |
| 2 × 0.75                  | 25                      | 10.6                 | 125               |
| 4 × 0.75                  | 25                      | 12.4                 | 187               |
| 5 × 0.75                  | 25                      | 13.7                 | 238               |
| 6 × 0.75                  | 25                      | 15.4                 | 281               |
| 8 × 0.75                  | 25                      | 16.7                 | 364               |
| 10 × 0.75                 | 25                      | 19                   | 448               |
| 12 × 0.75                 | 25                      | 19.7                 | 497               |
| 16 × 0.75                 | 25                      | 22.5                 | 655               |
| 20 × 0.75                 | 25                      | 24.9                 | 802               |
| 24 × 0.75                 | 25                      | 27.2                 | 970               |
| 2 × 1                     | 18.5                    | 11.5                 | 154               |
| 4 × 1                     | 18.5                    | 13.4                 | 228               |
| 5 × 1                     | 18.5                    | 14.8                 | 287               |
| 6 × 1                     | 18.5                    | 16.9                 | 350               |
| 8 × 1                     | 18.5                    | 18.1                 | 445               |
| 10 × 1                    | 18.5                    | 20.7                 | 547               |
| 12 × 1                    | 18.5                    | 21.4                 | 624               |
| 16 × 1                    | 18.5                    | 24.4                 | 822               |
| 20 × 1                    | 18.5                    | 27.1                 | 1005              |
| 24 × 1                    | 18.5                    | 29.6                 | 1212              |
| 2 × 1.5                   | 12.3                    | 13.2                 | 199               |
| 4 × 1.5                   | 12.3                    | 15.4                 | 322               |
| 5 × 1.5                   | 12.3                    | 17.1                 | 397               |
| 6 × 1.5                   | 12.3                    | 19.5                 | 484               |
| 8 × 1.5                   | 12.3                    | 21.1                 | 616               |
| 10 × 1.5                  | 12.3                    | 24.1                 | 768               |
| 12 × 1.5                  | 12.3                    | 24.9                 | 870               |
| 16 × 1.5                  | 12.3                    | 28.4                 | 1144              |
| 20 × 1.5                  | 12.3                    | 31.6                 | 1404              |
| 24 × 1.5                  | 12.3                    | 34.4                 | 1698              |

Outer diameters, weights and conductor resistances are nominal manufacturer values for the individually-screened pair ( $n \times 2 \times \text{mm}^2$ ) and triple ( $n \times 3 \times \text{mm}^2$ ) constructions; all values are indicative and non-binding.