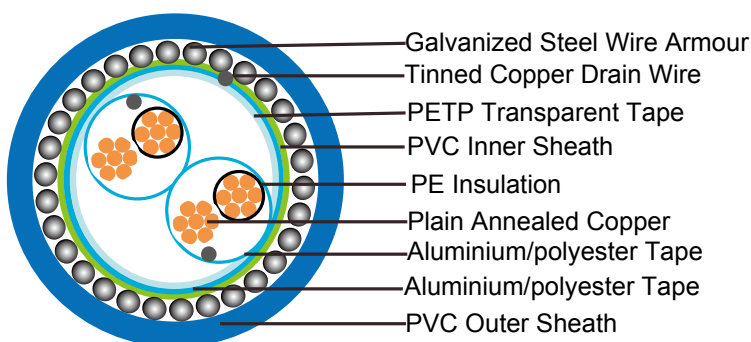




### PE Insulated, PVC Sheathed, Individual and Overall Screened & Armoured Instrumentation Cables (Multipair)

RE-2Y(St)YSWAY PiMF 90°C / 300V



#### APPLICATION

For transmission of analogue and digital signals in instrument and control systems; allowed for use in zone 1 and zone 2, group II, classified areas (IEC 79-14), not allowed for direct connection to low impedance sources, e.g. public mains electricity supply.

Recommended for indoor and outdoor installation, on racks, trays, in conduits, in dry and wet locations; suitable for direct burial.

Recommended for use as fire protection measure for people and important material assets.

#### STANDARDS

Basic design to EN 50288-7

#### FIRE PERFORMANCE

|                                                                             |                                                                                                                                                                          |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flame Retardance (Single Vertical Wire Test)                                | EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*            |
| Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)*** | EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4 |
| Halogen Free                                                                | IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*                                                                                              |
| No Corrosive Gas Emission                                                   | IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*                                                                                              |
| Minimum Smoke Emission                                                      | IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*                                                                        |
| No Toxic gases                                                              | NES 02-713; NF C 20-454                                                                                                                                                  |

Note: Asterisk \* denotes superseded standard, \*\*\* denotes optional.



## VOLTAGE RATING

300V

## CABLE CONSTRUCTION

**Conductor:** Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

**Insulation:** PE compound as per EN 50290. 2-23.

**Pairs:** Two insulated conductors uniformly twisted together with a specified length lay.

**Individual Screen:** Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm<sup>2</sup>

**Binder tape:** PETP transparent tape

**Overall Screen:** Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm<sup>2</sup>

**Inner Sheath:** PVC compound as per EN 50290-2-22.

**Armouring:** Galvanized steel wire armour

**Outer Sheath:** Thermoplastic PVC compound as per EN 50290-2-22. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

## COLOUR CODE

**Insulation:** Black / White, continuously numbered on white core(1, 2..)for multipair.

**Outer Sheath:** Black or blue for intrinsically safe systems

## PHYSICAL AND THERMAL PROPERTIES

**Temperature Range During Operation (Fixed State):** -30°C – +90°C

**Temperature Range During Installation (Mobile State):** -20°C – +50°C

**Minimum Bending Radius:** 10 X Overall Diameter

**Sunlight Resistance:** UL 1581 section 1200

**Oil Resistance:** ICEA S-73-532 (Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation)

## ELECTRICAL PROPERTIES

| Conductor Area Size            | mm <sup>2</sup> | 0.5  | 0.75 | 1.0  | 1.3  | 1.5  |
|--------------------------------|-----------------|------|------|------|------|------|
| Insulation thickness (nominal) | mm              | 0.35 | 0.38 | 0.4  | 0.45 | 0.45 |
| Conductor resistance (20°C)    | Ω/km            | 36.7 | 25   | 18.5 | 14.2 | 12.3 |
| Insulation resistance (20°C)   | MΩ.km(Min.)     | 5000 |      |      |      |      |
| Mutual Capacitance (1 kHz)     | pF/m(Max.)      | 115  |      |      |      |      |
| Inductance                     | mH/km (Max.)    | 1    |      |      |      |      |



|                        |                |      |      |    |    |    |    |
|------------------------|----------------|------|------|----|----|----|----|
| L / R (ratio) (max.)   |                | μH/Ω | 25   | 25 | 25 | 40 | 40 |
| Operating voltage Urms |                | V    | 300  |    |    |    |    |
| Test Voltage           | Core to Core   | V    | 1500 |    |    |    |    |
|                        | Core to Screen | V    | 1500 |    |    |    |    |

### CONSTRUCTION PARAMETERS

| Caledonian Cable Code           | RE-2Y(St)YSWAY PiMF                 |                                         |                                              |                                                           |                                       |                                              |
|---------------------------------|-------------------------------------|-----------------------------------------|----------------------------------------------|-----------------------------------------------------------|---------------------------------------|----------------------------------------------|
|                                 | No. of Pairsx2<br>xCross<br>Section | Nominal<br>Insulation<br>Thick-<br>ness | Nominal<br>Inner<br>Sheath<br>Thick-<br>ness | Nominal<br>Overall<br>Diameter<br>Over<br>Inner<br>Sheath | Nominal<br>Armour<br>Wire<br>Diameter | Nominal<br>Outer<br>Sheath<br>Thick-<br>ness |
|                                 | No.x2xmm <sup>2</sup>               | mm <sup>2</sup>                         | mm                                           | mm                                                        | mm                                    | mm                                           |
| 0.5mm <sup>2</sup> , Multipair  |                                     |                                         |                                              |                                                           |                                       |                                              |
| RE-2Y(St)YSWAY PiMF 2P0.5       | 2x2x0.5                             | 0.35                                    | 0.9                                          | 8.7                                                       | 0.9                                   | 1.4                                          |
| RE-2Y(St)YSWAY PiMF 4P0.5       | 4x2x0.5                             | 0.35                                    | 1.0                                          | 10.2                                                      | 0.9                                   | 1.4                                          |
| RE-2Y(St)YSWAY PiMF 5P0.5       | 5x2x0.5                             | 0.35                                    | 1.0                                          | 11.2                                                      | 0.9                                   | 1.4                                          |
| RE-2Y(St)YSWAY PiMF 6P0.5       | 6x2x0.5                             | 0.35                                    | 1.0                                          | 12.1                                                      | 0.9                                   | 1.6                                          |
| RE-2Y(St)YSWAY PiMF 8P0.5       | 8x2x0.5                             | 0.35                                    | 1.1                                          | 13.1                                                      | 0.9                                   | 1.6                                          |
| RE-2Y(St)YSWAY PiMF 10P0.5      | 10x2x0.5                            | 0.35                                    | 1.2                                          | 15.1                                                      | 0.9                                   | 1.5                                          |
| RE-2Y(St)YSWAY PiMF 12P0.5      | 12x2x0.5                            | 0.35                                    | 1.2                                          | 15.7                                                      | 0.9                                   | 1.5                                          |
| RE-2Y(St)YSWAY PiMF 16P0.5      | 16x2x0.5                            | 0.35                                    | 1.2                                          | 17.8                                                      | 1.25                                  | 1.6                                          |
| RE-2Y(St)YSWAY PiMF 20P0.5      | 20x2x0.5                            | 0.35                                    | 1.3                                          | 19.7                                                      | 1.25                                  | 1.7                                          |
| RE-2Y(St)YSWAY PiMF 24P0.5      | 24x2x0.5                            | 0.35                                    | 1.4                                          | 21.5                                                      | 1.25                                  | 1.7                                          |
| 0.75mm <sup>2</sup> , Multipair |                                     |                                         |                                              |                                                           |                                       |                                              |
| RE-2Y(St)YSWAY PiMF 2P0.75      | 2x2x0.75                            | 0.38                                    | 1.0                                          | 9.7                                                       | 0.9                                   | 1.4                                          |
| RE-2Y(St)YSWAY PiMF 4P0.75      | 4x2x0.75                            | 0.38                                    | 1.0                                          | 11.2                                                      | 0.9                                   | 1.4                                          |
| RE-2Y(St)YSWAY PiMF 5P0.75      | 5x2x0.75                            | 0.38                                    | 1.1                                          | 12.5                                                      | 0.9                                   | 1.5                                          |
| RE-2Y(St)YSWAY PiMF 6P0.75      | 6x2x0.75                            | 0.38                                    | 1.1                                          | 13.6                                                      | 0.9                                   | 1.5                                          |
| RE-2Y(St)YSWAY PiMF 8P0.75      | 8x2x0.75                            | 0.38                                    | 1.1                                          | 14.4                                                      | 0.9                                   | 1.5                                          |
| RE-2Y(St)YSWAY PiMF 10P0.75     | 10x2x0.75                           | 0.38                                    | 1.2                                          | 16.6                                                      | 1.25                                  | 1.6                                          |
| RE-2Y(St)YSWAY PiMF 12P0.75     | 12x2x0.75                           | 0.38                                    | 1.2                                          | 17.4                                                      | 1.25                                  | 1.6                                          |
| RE-2Y(St)YSWAY PiMF 16P0.75     | 16x2x0.75                           | 0.38                                    | 1.3                                          | 19.8                                                      | 1.25                                  | 1.7                                          |

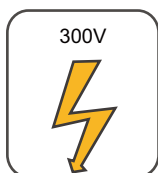


| Caledonian Cable Code          | RE-2Y(St)YSWAY PiMF                 |                                         |                                              |                                                           |                                       |                                              |
|--------------------------------|-------------------------------------|-----------------------------------------|----------------------------------------------|-----------------------------------------------------------|---------------------------------------|----------------------------------------------|
|                                | No. of Pairsx2<br>xCross<br>Section | Nominal<br>Insulation<br>Thick-<br>ness | Nominal<br>Inner<br>Sheath<br>Thick-<br>ness | Nominal<br>Overall<br>Diameter<br>Over<br>Inner<br>Sheath | Nominal<br>Armour<br>Wire<br>Diameter | Nominal<br>Outer<br>Sheath<br>Thick-<br>ness |
|                                | No.x2xmm <sup>2</sup>               | mm <sup>2</sup>                         | mm                                           | mm                                                        | mm                                    | mm                                           |
| RE-2Y(St)YSWAY PiMF 20P0.75    | 20x2x0.75                           | 0.38                                    | 1.4                                          | 22.0                                                      | 1.25                                  | 1.7                                          |
| RE-2Y(St)YSWAY PiMF 24P0.75    | 24x2x0.75                           | 0.38                                    | 1.5                                          | 24.0                                                      | 1.25                                  | 1.8                                          |
| 1.0mm <sup>2</sup> , Multipair |                                     |                                         |                                              |                                                           |                                       |                                              |
| RE-2Y(St)YSWAY PiMF 2P1.0      | 2x2x1.0                             | 0.4                                     | 1.0                                          | 10.4                                                      | 0.9                                   | 1.4                                          |
| RE-2Y(St)YSWAY PiMF 4P1.0      | 4x2x1.0                             | 0.4                                     | 1.0                                          | 12.1                                                      | 0.9                                   | 1.4                                          |
| RE-2Y(St)YSWAY PiMF 5P1.0      | 5x2x1.0                             | 0.4                                     | 1.1                                          | 13.5                                                      | 0.9                                   | 1.5                                          |
| RE-2Y(St)YSWAY PiMF 6P1.0      | 6x2x1.0                             | 0.4                                     | 1.1                                          | 14.7                                                      | 0.9                                   | 1.5                                          |
| RE-2Y(St)YSWAY PiMF 8P1.0      | 8x2x1.0                             | 0.4                                     | 1.2                                          | 15.8                                                      | 0.9                                   | 1.5                                          |
| RE-2Y(St)YSWAY PiMF 10P1.0     | 10x2x1.0                            | 0.4                                     | 1.2                                          | 18.0                                                      | 1.25                                  | 1.6                                          |
| RE-2Y(St)YSWAY PiMF 12P1.0     | 12x2x1.0                            | 0.4                                     | 1.3                                          | 19.0                                                      | 1.25                                  | 1.7                                          |
| RE-2Y(St)YSWAY PiMF 16P1.0     | 16x2x1.0                            | 0.4                                     | 1.3                                          | 21.5                                                      | 1.25                                  | 1.7                                          |
| RE-2Y(St)YSWAY PiMF 20P1.0     | 20x2x1.0                            | 0.4                                     | 1.4                                          | 23.9                                                      | 1.25                                  | 1.7                                          |
| RE-2Y(St)YSWAY PiMF 24P1.0     | 24x2x1.0                            | 0.4                                     | 1.5                                          | 26.1                                                      | 1.25                                  | 1.8                                          |
| 1.3mm <sup>2</sup> , Multipair |                                     |                                         |                                              |                                                           |                                       |                                              |
| RE-2Y(St)YSWAY PiMF 2P1.3      | 2x2x1.3                             | 0.45                                    | 1.0                                          | 11.4                                                      | 0.9                                   | 1.4                                          |
| RE-2Y(St)YSWAY PiMF 4P1.3      | 4x2x1.3                             | 0.45                                    | 1.1                                          | 13.4                                                      | 0.9                                   | 1.5                                          |
| RE-2Y(St)YSWAY PiMF 5P1.3      | 5x2x1.3                             | 0.45                                    | 1.1                                          | 14.8                                                      | 0.9                                   | 1.5                                          |
| RE-2Y(St)YSWAY PiMF 6P1.3      | 6x2x1.3                             | 0.45                                    | 1.2                                          | 16.3                                                      | 0.9                                   | 1.6                                          |
| RE-2Y(St)YSWAY PiMF 8P1.3      | 8x2x1.3                             | 0.45                                    | 1.3                                          | 17.6                                                      | 1.25                                  | 1.6                                          |
| RE-2Y(St)YSWAY PiMF 10P1.3     | 10x2x1.3                            | 0.45                                    | 1.3                                          | 20.0                                                      | 1.25                                  | 1.7                                          |
| RE-2Y(St)YSWAY PiMF 12P1.3     | 12x2x1.3                            | 0.45                                    | 1.4                                          | 21.1                                                      | 1.25                                  | 1.7                                          |
| RE-2Y(St)YSWAY PiMF 16P1.3     | 16x2x1.3                            | 0.45                                    | 1.5                                          | 24.1                                                      | 1.25                                  | 1.8                                          |
| RE-2Y(St)YSWAY PiMF 20P1.3     | 20x2x1.3                            | 0.45                                    | 1.6                                          | 26.8                                                      | 1.25                                  | 1.9                                          |
| RE-2Y(St)YSWAY PiMF 24P1.3     | 24x2x1.3                            | 0.45                                    | 1.7                                          | 29.2                                                      | 1.25                                  | 2.0                                          |
| 1.5mm <sup>2</sup> , Multipair |                                     |                                         |                                              |                                                           |                                       |                                              |
| RE-2Y(St)YSWAY PiMF 2P1.5      | 2x2x1.5                             | 0.45                                    | 1.0                                          | 11.8                                                      | 0.9                                   | 1.5                                          |
| RE-2Y(St)YSWAY PiMF 4P1.5      | 4x2x1.5                             | 0.45                                    | 1.1                                          | 13.9                                                      | 0.9                                   | 1.5                                          |



| Caledonian Cable Code      | RE-2Y(St)YSWAY PiMF                 |                                         |                                              |                                                           |                                       |                                              |
|----------------------------|-------------------------------------|-----------------------------------------|----------------------------------------------|-----------------------------------------------------------|---------------------------------------|----------------------------------------------|
|                            | No. of Pairsx2<br>xCross<br>Section | Nominal<br>Insulation<br>Thick-<br>ness | Nominal<br>Inner<br>Sheath<br>Thick-<br>ness | Nominal<br>Overall<br>Diameter<br>Over<br>Inner<br>Sheath | Nominal<br>Armour<br>Wire<br>Diameter | Nominal<br>Outer<br>Sheath<br>Thick-<br>ness |
|                            | No.x2xmm <sup>2</sup>               | mm <sup>2</sup>                         | mm                                           | mm                                                        | mm                                    | mm                                           |
| RE-2Y(St)YSWAY PiMF 5P1.5  | 5x2x1.5                             | 0.45                                    | 1.2                                          | 15.5                                                      | 0.9                                   | 1.5                                          |
| RE-2Y(St)YSWAY PiMF 6P1.5  | 6x2x1.5                             | 0.45                                    | 1.2                                          | 16.9                                                      | 1.25                                  | 1.6                                          |
| RE-2Y(St)YSWAY PiMF 8P1.5  | 8x2x1.5                             | 0.45                                    | 1.3                                          | 18.2                                                      | 1.25                                  | 1.7                                          |
| RE-2Y(St)YSWAY PiMF 10P1.5 | 10x2x1.5                            | 0.45                                    | 1.4                                          | 21.0                                                      | 1.25                                  | 1.7                                          |
| RE-2Y(St)YSWAY PiMF 12P1.5 | 12x2x1.5                            | 0.45                                    | 1.4                                          | 21.9                                                      | 1.25                                  | 1.7                                          |
| RE-2Y(St)YSWAY PiMF 16P1.5 | 16x2x1.5                            | 0.45                                    | 1.5                                          | 25.1                                                      | 1.25                                  | 1.8                                          |
| RE-2Y(St)YSWAY PiMF 20P1.5 | 20x2x1.5                            | 0.45                                    | 1.6                                          | 27.8                                                      | 1.25                                  | 1.9                                          |
| RE-2Y(St)YSWAY PiMF 24P1.5 | 24x2x1.5                            | 0.45                                    | 1.7                                          | 30.4                                                      | 1.25                                  | 2.0                                          |

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



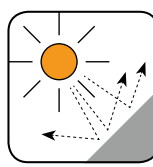
Standard



Flame Retardancy  
NF C32-070-2.1(C2)  
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation  
NF C32-070-2.2(C1)  
IEC60332-3-24  
EN50266-2-4



Sunlight  
Resistance  
UL 1581  
section 1200



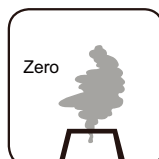
Low Toxicity  
NES 02-713/NF C 20-454



Low Corrosivity  
IEC60754-2  
EN50267-2-2/3  
NF C 32-074

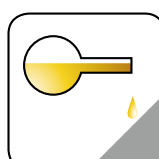


Low Smoke Emission  
IEC 61034-1&2  
EN 50268-1&2/NF C32-073



Zero

Halogen Free  
IEC60754-1  
EN50267-2-1



Oil Resistance  
ICEA S-73-532