

## PAS/BS 5308 CAM PART 1 TYPE 2 INSTRUMENTATION CABLE



Instrumentation cables, manufactured to PAS5308 standards, ensure safety and reliability for communication and instrumentation applications in process industries, transmitting analogue or digital signals from various sensors and transducers. These cables, featuring steel wire armour (SWA), provide exceptional protection in aggressive environments.

Designed for indoor and outdoor installations in industrial process plants and for data and voice transmission services, they are also used to interconnect electrical equipment and instruments, particularly in process plants. These cables are widely utilized throughout the petroleum industry.

Type 2 armoured cables are suitable for direct burial installations.

|                              |                            |
|------------------------------|----------------------------|
| <b>CONDUCTOR</b>             | Plain Copper               |
| <b>STRANDING</b>             | See Spec. Table            |
| <b>INSULATION</b>            | PE                         |
| <b>COLLECTIVE SCREEN</b>     | Collective Aluminium Mylar |
| <b>BEDDING</b>               | PE                         |
| <b>ARMOUR</b>                | Steel Wire Armour          |
| <b>OUTERSHEATH</b>           | PVC                        |
| <b>OUTERSHEATH COLOUR</b>    | Black, Blue                |
| <b>RATED VOLTAGE</b>         | 500V                       |
| <b>CORE IDENTIFICATION</b>   | According to BS5308 part 1 |
| <b>OPERATING TEMPERATURE</b> | 70Â°C                      |
| <b>STANDARDS</b>             | BS/PAS 5308, EN 60228      |

# SPECIFICATION DATA

## Dimensions

| No. of Pairs/Triples | Nominal cross sectional area of conductor (mm) | Approx overall diameter (mm) |
|----------------------|--|------------------------------|
| 1P                   | 0.5  | 11.4                         |
| 1P                   | 0.75   | 11.8                         |
| 1P                   | 1  | 11.8                         |
| 1P                   | 1.5  | 12.9                         |
| 1P                   | 2.5  | 13.7                         |
| 1T                   | 0.5  | 11.7                         |
| 1T                   | 0.75   | 12.1                         |
| 1T                   | 1  | 12.3                         |
| 1T                   | 1.5  | 13.5                         |
| 1T                   | 2.5  | 14.3                         |
| 2P(Q)                | 0.5  | 12.3                         |
| 2P(Q)                | 0.75   | 13.0                         |
| 2P(Q)                | 1  | 13.0                         |
| 2P(Q)                | 1.5  | 14.3                         |
| 2P(Q)                | 2.5  | 15.3                         |
| 5P                   | 0.5  | 17.9                         |
| 5P                   | 0.75   | 19.3                         |
| 5P                   | 1  | 19.7                         |
| 5P                   | 1.5  | 22.1                         |
| 5P                   | 2.5  | 24.1                         |
| 10P                  | 0.5  | 22.9                         |
| 10P                  | 0.75   | 25.5                         |
| 10P                  | 1  | 24.3                         |
| 10P                  | 1.5  | 28.4                         |
| 10P                  | 2.5  | 32.1                         |
| 15P                  | 0.5  | 26.4                         |
| 15P                  | 0.75   | 28.7                         |
| 15P                  | 1  | 28.1                         |
| 15P                  | 1.5  | 32.2                         |
| 15P                  | 2.5  | 36.4                         |
| 20P                  | 0.5  | 29.1                         |
| 20P                  | 0.75   | 31.6                         |
| 20P                  | 1  | 31.2                         |
| 20P                  | 1.5  | 35.7                         |
| 20P                  | 2.5  | 41                           |

## Conductors

| Nominal cross sectional area (mm <sup>2</sup> ) | Conductor class | Maximum DC resistance of conductor at 20° (ohms/km) |
|---|-----------------|---|
| 0.5   | 5               | 39  |
| 0.75  | 5               | 26  |
| 1   | 1               | 18.1  |
| 1.5   | 2               | 12.1  |
| 2.5   | 2               | 7.41  |

## Electrical Characteristics

| Nominal cross sectional area | Maximum mutual capacitance (pF/m)   |  |   | Minimum insulation resistance at 20°C | Maximum L/R ratio (μH/ohms) |
|------------------------------|-------------------------------------|--|---|---------------------------------------|-----------------------------|
|                              | Cables with collective screens only | 1 pair, 2 pairs, 1 triple, collectively screened | Cables with individually screened pairs |                                       |                             |
| 0.5                          | 75                                  | 115  | 115                                     | <5                                    | 25                          |
| 0.75                         | 75                                  | 115  | 115                                     | <5                                    | 25                          |
| 1                            | 75                                  | 115  | 115                                     | <5                                    | 25                          |
| 1.5                          | 85                                  | 120  | 120                                     | <5                                    | 40                          |
| 2.5                          | 85                                  | 120  | 120                                     | <                                     | 65                          |

### Core Identification

| Pair No | A Wire | B Wire |
|---------|--------|--------|
| 1       | Black  | Blue   |
| 2       | Black  | Green  |
| 3       | Blue   | Green  |
| 4       | Black  | Brown  |
| 5       | Blue   | Brown  |
| 6       | Green  | Brown  |
| 7       | Black  | White  |
| 8       | Blue   | White  |
| 9       | Green  | White  |
| 10      | Brown  | White  |
| 11      | Black  | Red    |
| 12      | Blue   | Red    |
| 13      | Green  | Red    |
| 14      | Brown  | Red    |
| 15      | White  | Red    |
| 16      | Black  | Orange |
| 17      | Blue   | Orange |
| 18      | Green  | Orange |
| 19      | Brown  | Orange |
| 20      | White  | Orange |
| 21      | Red    | Orange |
| 22      | Black  | Yellow |
| 23      | Blue   | Yellow |
| 24      | Green  | Yellow |
| 25      | Brown  | Yellow |
| 26      | White  | Yellow |
| 27      | Red    | Yellow |
| 28      | Orange | Yellow |
| 29      | Black  | Grey   |
| 30      | Blue   | Grey   |
| 31      | Green  | Grey   |
| 32      | Brown  | Grey   |
| 33      | White  | Grey   |
| 34      | Red    | Grey   |
| 35      | Orange | Grey   |
| 36      | Yellow | Grey   |
| 37      | Black  | Violet |
| 38      | Blue   | Violet |
| 39      | Green  | Violet |
| 40      | Brown  | Violet |

|    |        |           |
|----|--------|-----------|
| 41 | White  | Violet    |
| 42 | Red    | Violet    |
| 43 | Orange | Violet    |
| 44 | Yellow | Violet    |
| 45 | Grey   | Violet    |
| 46 | Black  | Turquoise |
| 47 | Blue   | Turquoise |
| 48 | Green  | Turquoise |
| 49 | Brown  | Turquoise |
| 50 | White  | Turquoise |

The information in this datasheet is for guidance only and subject to change without liability. Images provided are representations; actual cable dimensions may vary due to manufacturing tolerances.

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