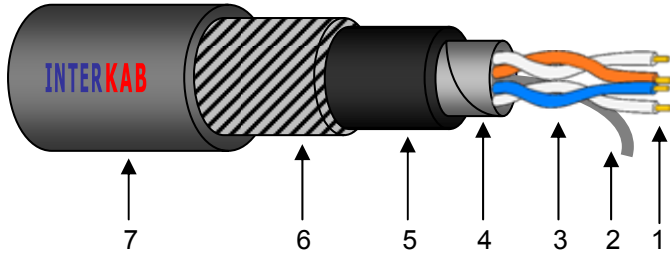


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## Onshore Instrumentation Cables to BS5308 Specification

Multi Pair Armoured Cables – Collectively Screened – To BS5308 Part 1 Type 2



### Applicable Standards:

BS 5308

BS 6234

BS 7655

Solid class 1, Stranded class 2 or flexible class 5 copper conductors to BS6360

IEC 60332 Part 3 (Category A,B & C)

|                                  |   |
|----------------------------------|---|
| <b>Application:</b>              | Ideal for the petrochemical industry, these cables are designed to connect electrical instrument circuits and provide communication services in and around process plants and are also suitable for direct burial applications. |
| <b>(1) Conductor:</b>            | Solid (class 1), Stranded (class 2) or Flexible (class 5) Copper Conductors to BS6360   |
| <b>Fire Protection:</b>          | None  |
| <b>(2) Drain Wire:</b>           | Tinned Copper drain wire  |
| <b>(3) Insulation:</b>           | Polyethylene Insulation type 03 Complying with BS6234   |
| <b>(4) Collective Screen:</b>    | Aluminium Mylar Tape Screen   |
| <b>Binder Tape:</b>              | PETP Tape 50% Overlap   |
| <b>(5) Bedding:</b>              | Polyethylene Bedding Type 2C or 03 to BS6234  |
| <b>(6) Armour:</b>               | Mild Galvanised Steel Wires to BS EN 10257-1  |
| <b>(7) Outer Sheath:</b>         | PVC outer sheath type TM.1 to BS7655. In addition the outer sheath displays the following Characteristics:<br>-Minimum Oxygen Index: 30%<br>-Maximum HCL Emission at 800°C : 15%  |
| <b>Conductor Identification:</b> | See Page 5  |

The legend will include the manufacturers name, voltage, BS5308, the number of pairs/triples and cross sectional area, cable sheath class (e.g. Polyethylene) and IEC60332 where applicable. The standard sheath colours are Black and Blue, and other colours are available on request.

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### Onshore Instrumentation Cables to BS5308 Specification

Multi Pair Armoured Cables – Collectively Screened – To BS5308 Part 1 Type 2

| Cable                                   | 1x2x0.5    | 2x2x0.5    | 5x2x0.5    | 10x2x0.5   | 20x2x0.5   | 30x2x0.5   | 50x2x0.5   | 1x3x0.5    | 1x2x0.75   | 2x2x0.75   | 5x2x0.75   |
|---|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Stranding mm                            | 16/0.20    | 16/0.20    | 16/0.20    | 16/0.20    | 16/0.20    | 16/0.20    | 16/0.20    | 16/0.20    | 24/0.20    | 24/0.20    | 24/0.20    |
| Insulation Thickness mm                 | 0.6        | 0.6        | 0.6        | 0.6        | 0.6        | 0.6        | 0.6        | 0.6        | 0.6        | 0.6        | 0.6        |
| Diameter over Inner Sheath (min/max) mm | 6.0/8.0    | 6.9/8.9    | 12.1/14.1  | 16.2/18.2  | 21.3/23.3  | 25.9/27.9  | 32.9/34.9  | 6.3/8.3    | 6.3/8.3    | 7.3/9.3    | 13.3/15.3  |
| Diameter of Armour/Braid mm             | 0.90       | 0.90       | 0.90       | 1.25       | 1.60       |            |            | 0.90       | 0.90       | 0.90       | 1.25       |
| Overall Diameter (min/max) mm           | 10.4/12.4  | 11.3/13.3  | 16.9/18.9  | 21.9/23.9  | 28.1/30.1  | 32.9/34.9  | 41.1/43.1  | 10.7/12.7  | 10.7/12.7  | 11.9/13.9  | 18.8/20.8  |
| Gland Size                              | O          | O          | A          | B          | C          | C2         | D          | O          | O          | O          | B          |
| Weight kg/km                            | 250        | 300        | 560        | 970        | 1640       | 1775       | 2770       | 270        | 280        | 330        | 750        |
| Bend Radius - xOD                       | 6          | 6          | 6          | 6          | 6          | 6          | 6          | 6          | 6          | 6          | 6          |
| Conductor Temperature – (min/max)°C     | 20/65      | 20/65      | 20/65      | 20/65      | 20/65      | 20/65      | 20/65      | 20/65      | 20/65      | 20/65      | 20/65      |
| Capacitance – pF/m                      | 115        | 115        | 75         | 75         | 75         | 75         | 75         | 115        | 115        | 115        | 75         |
| DC Resistance @ 20°C –Ω /km             | 39.7       | 39.7       | 39.7       | 39.7       | 39.7       | 39.7       | 39.7       | 39.7       | 26.5       | 26.5       | 26.5       |
| Maximum L/R Ratio                       | 25         | 25         | 25         | 25         | 25         | 25         | 25         | 25         | 25         | 25         | 25         |
| Sheath Colour                           | Black/Blue | Black/Blue | Black/Blue | Black/Blue | Black/Blue | Black/Blue | Black/Blue | Black/Blue | Black/Blue | Black/Blue | Black/Blue |

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## Onshore Instrumentation Cables to BS5308 Specification

Multi Pair Armoured Cables – Collectively Screened – To BS5308 Part 1 Type 2

| Cable                                   | 10x2x0.75   | 20x2x0.75   | 30x2x0.75  | 50x2x0.75  | 1x3x0.75    | 1x2x1.0    | 2x2x1.0    | 5x2x1.0    | 10x2x1.0   | 20x2x1.0   | 30x2x1.0   |
|---|-------------|-------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|
| Stranding mm                            | 24/0.20     | 24/0.20     | 24/0.20    | 24/0.20    | 24/0.20     | 1/1.13     | 1/1.13     | 1/1.13     | 1/1.13     | 1/1.13     | 1/1.13     |
| Insulation Thickness mm                 | 0.6         | 0.6         | 0.6        | 0.6        | 0.6         | 0.6        | 0.6        | 0.6        | 0.6        | 0.6        | 0.6        |
| Diameter over Inner Sheath (min/max) mm | 17.7/19.7   | 23.5/25.5   | 28.2/30.2  | 36.4/38.4  | 6.7/8.7     | 6.4/8.4    | 7.4/9.4    | 13.2/15.2  | 17.4/19.4  | 23.4/25.4  | 28.0/30.0  |
| Diameter of Armour/Braid mm             | 1.60        | 1.60        |            |            | 0.90        | 0.90       | 0.90       | 1.25       | 1.25       | 1.60       |            |
| Overall Diameter (min/max) mm           | 24.3/26.3   | 30.3/32.3   | 36.5/38.5  | 44.8/46.8  | 11.1/13.1   | 10.8/12.8  | 12.0/14.0  | 18.7/20.7  | 23.3/25.3  | 30.2/32.2  | 35.2/37.2  |
| Gland Size                              | C           | C           | C2         | D          | O           | O          | O          | B          | B          | C          | C2         |
| Weight kg/km                            | 1260        | 1890        | 2290       | 3620       | 300         | 290        | 345        | 790        | 1310       | 2040       | 2190       |
| Bend Radius - xOD                       | 6           | 6           | 6          | 6          | 6           | 6          | 6          | 6          | 6          | 6          | 6          |
| Conductor Temperature – (min/max)°C     | 20/65       | 20/65       | 20/65      | 20/65      | 20/65       | 20/65      | 20/65      | 20/65      | 20/65      | 20/65      | 20/65      |
| Capacitance – pF/m                      | 75          | 75          | 75         | 75         | 115         | 115        | 115        | 75         | 75         | 75         | 75         |
| DC Resistance @ 20°C –Ω /km             | 26.5        | 26.5        | 26.5       | 26.5       | 26.5        | 18.4       | 18.4       | 18.4       | 18.4       | 18.4       | 18.4       |
| Maximum L/R Ratio                       | 25          | 25          | 25         | 25         | 25          | 25         | 25         | 25         | 25         | 25         | 25         |
| Sheath Colour                           | Black/ Blue | Black/ Blue | Black/Blue | Black/Blue | Black/ Blue | Black/Blue | Black/Blue | Black/Blue | Black/Blue | Black/Blue | Black/Blue |

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### Onshore Instrumentation Cables to BS5308 Specification

Multi Pair Armoured Cables – Collectively Screened- To BS5308 Part 1 Type 2

| Cable                                   | 50x2x1.0   | 1x3x1.0    | 1x2x1.5    | 2x2x1.5    | 5x2x1.5    | 10x2x1.5   | 20x2x1.5   | 30x2x1.5   | 50x2x1.5   | 1x3x1.5    |
|---|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Stranding mm                            | 1/1.13     | 1/1.13     | 7/0.53     | 7/0.53     | 7/0.53     | 7/0.53     | 7/0.53     | 7/0.53     | 7/0.53     | 7/0.53     |
| Insulation Thickness mm                 | 0.6        | 0.6        | 0.6        | 0.6        | 0.6        | 0.6        | 0.6        | 0.6        | 0.6        | 0.6        |
| Diameter over Inner Sheath (min/max) mm | 36.3/38.3  | 6.7/8.7    | 7.3/9.3    | 8.7/10.7   | 15.4/17.4  | 20.6/22.6  | 27.5/29.5  | 33.3/35.3  | 42.6/44.6  | 7.9/9.9    |
| Diameter of Armour/Braid mm             |            | 0.90       | 0.90       | 0.90       | 1.25       | 1.60       | 1.60       |            |            | 0.90       |
| Overall Diameter (min/max) mm           | 44.7/46.7  | 11.3/13.3  | 11.9/13.9  | 13.3/15.3  | 21.1/23.1  | 27.4/29.4  | 34.7/36.7  | 41.5/43.5  | 52.4/54.4  | 12.5/14.5  |
| Gland Size                              | D          | 0          | 0          | 0          | B          | C          | C2         | D          | E          | 0          |
| Weight kg/km                            | 3470       | 310        | 330        | 420        | 940        | 1500       | 2400       | 3175       | 5000       | 350        |
| Bend Radius - xOD                       | 6          | 6          | 6          | 6          | 6          | 6          | 6          | 6          | 6          | 6          |
| Conductor Temperature – (min-max)°C     | 20-65      | 20-65      | 20-65      | 20-65      | 20-65      | 20-65      | 20-65      | 20-65      | 20-65      | 20-65      |
| Capacitance – pF/m                      | 75         | 115        | 120        | 120        | 85         | 85         | 85         | 85         | 85         | 120        |
| DC Resistance @ 20°C –Ω /km             | 18.4       | 18.4       | 12.3       | 12.3       | 12.3       | 12.3       | 12.3       | 12.3       | 12.3       | 12.3       |
| Maximum L/R Ratio                       | 25         | 25         | 40         | 40         | 40         | 40         | 40         | 40         | 40         | 40         |
| Sheath Colour                           | Black/Blue | Black/Blue | Black/Blue | Black/Blue | Black/Blue | Black/Blue | Black/Blue | Black/Blue | Black/Blue | Black/Blue |

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## Onshore Instrumentation Cables to BS5308 Specification

### BS5308 Part 1 Core Identification

| Pair Number | Element A | Element B | Pair Number | Element A | Element B |
|-------------|-----------|-----------|-------------|-----------|-----------|
| 1           | Black     | Blue      | 26          | White     | Yellow    |
| 2           | Black     | Green     | 27          | Red       | Yellow    |
| 3           | Blue      | Green     | 28          | Orange    | Yellow    |
| 4           | Black     | Brown     | 29          | Black     | Grey      |
| 5           | Blue      | Brown     | 30          | Blue      | Grey      |
| 6           | Green     | Brown     | 31          | Green     | Grey      |
| 7           | Black     | White     | 32          | Brown     | Grey      |
| 8           | Blue      | White     | 33          | White     | Grey      |
| 9           | Green     | White     | 34          | Red       | Grey      |
| 10          | Brown     | White     | 35          | Orange    | Grey      |
| 11          | Black     | Red       | 36          | Yellow    | Grey      |
| 12          | Blue      | Red       | 37          | Black     | Violet    |
| 13          | Green     | Red       | 38          | Blue      | Violet    |
| 14          | Brown     | Red       | 39          | Green     | Violet    |
| 15          | White     | Red       | 40          | Brown     | Violet    |
| 16          | Black     | Orange    | 41          | White     | Violet    |
| 17          | Blue      | Orange    | 42          | Red       | Violet    |
| 18          | Green     | Orange    | 43          | Orange    | Violet    |
| 19          | Brown     | Orange    | 44          | Yellow    | Violet    |
| 20          | White     | Orange    | 45          | Grey      | Violet    |
| 21          | Red       | Orange    | 46          | Black     | Turquoise |
| 22          | Black     | Yellow    | 47          | Blue      | Turquoise |
| 23          | Blue      | Yellow    | 48          | Green     | Turquoise |
| 24          | Green     | Yellow    | 49          | Brown     | Turquoise |
| 25          | Brown     | Yellow    | 50          | White     | Turquoise |