



# TCu/MGT/EPR/CS/ZH/GSWB/ZH

150/250 V

BS 7917

Halogen-free, fire resistant, low smoke, instrumentation cables with elastomeric insulation and sheath, with steel wire braid

## CONSTRUCTION

|                        |                                                                                                                                                                              |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conductors             | Tinned annealed circular stranded copper according to BS EN 60228 class 2 or class 5                                                                                         |
| Insulation             | Mica glass tape<br>Halogen-free elastomer compound EPR type GP4 acc. to BS 7655-1.2                                                                                          |
| Pairs identification   | Black and white with printed number of pairs in contrasting color on the insulation                                                                                          |
| Screen                 | Collective screen<br>Aluminium/polyester tape with the metallic side in contact with tinned copper drain wire                                                                |
| Inner sheath           | Halogen-free elastomer compound EPR type SB 1 acc. to BS 7917                                                                                                                |
| Braid armour           | Galvanized steel wire braid                                                                                                                                                  |
| Separator              | Separator, suitable tape between the braid and outer sheath                                                                                                                  |
| Outer sheath           | Halogen-free, heat-resistant, oil-resisting and flame-retardant elastomer compound type SW4 acc. to BS 7655-2.6                                                              |
| Colour of outer sheath | Grey or blue or other colors can be provided.                                                                                                                                |
| Cable marking e.g.     | ELECTRIC CABLE "Type SW4 F1" "number of pairs" "x" "conductor size" "(C)" "150/250 V" "TFK3" "BS 7917" "UK00A code" "IEC60331-21" "IEC60332-3-22 cat. A" "year" "metre mark" |



## CHARACTERISTIC

|                                                     |                                      |
|-----------------------------------------------------|--------------------------------------|
| Maximum conductor operating temperature:            | +90°C                                |
| Maximum conductor temperature during short circuit: | +250°C                               |
| Lowest ambient temperature for fixed installation:  | -40°C                                |
| Lowest installation temperature:                    | -15°C                                |
| Minimum bending radius:                             | 6 D<br>D – overall diameter of cable |

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## Fire performance

|                                  |                                                              |
|----------------------------------|--------------------------------------------------------------|
| Flame retardant:                 | IEC 60332-3-22 Category A                                    |
| Fire resistant:                  | IEC 60331-21                                                 |
| Smoke emission:                  | BS EN 61034-2, IEC 61034-2                                   |
| Gases evolved during combustion: | BS EN 50267-2-1, IEC 60754-1,<br>type SW4 cables: ≤ 0.5% HCl |

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## Applications

Elastomer insulated, fire resistant (limited circuit integrity) cables for fixed wiring in ships and on mobile and fixed offshore units.

## Approvals

LR

Details related to particular Approvals are informative only. Please contact manufacturer to confirm whether the required cross-sections are covered by the Certificate.

|                                |                                                                                  |
|--------------------------------|----------------------------------------------------------------------------------|
| Standard length cable packing: | 1,000 m on drums<br>Other forms of packing and delivery are available on request |
|--------------------------------|----------------------------------------------------------------------------------|

| Number of pairs and nominal area of conductor | Class of conductor | Nominal thickness of insulation | Nominal thickness of inner sheath | Diameter of steel wires in braid | Nominal thickness of outer sheath | Approximate overall diameter of cable | Approximate net weight of cables | UKOOA Code (Grey/Blue) |
|-----------------------------------------------|--------------------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------------|---------------------------------------|----------------------------------|------------------------|
| <b>n × 2 × mm<sup>2</sup></b>                 |                    | <b>mm</b>                       | <b>mm</b>                         | <b>mm</b>                        | <b>mm</b>                         | <b>mm</b>                             | <b>kg/km</b>                     |                        |
| 7 × 2 × 1.5*                                  | 5                  | 0.8                             | 1.6                               | 0.3                              | 1.8                               | 27.9                                  | 908                              | GNJ02/GLJ02            |
| <b>n × 2 × mm<sup>2</sup></b>                 |                    | <b>mm</b>                       | <b>mm</b>                         | <b>mm</b>                        | <b>mm</b>                         | <b>mm</b>                             | <b>kg/km</b>                     |                        |
| 12 × 2 × 0.75                                 | 5                  | 0.8                             | 1.6                               | 0.3                              | 1.7                               | 31.3                                  | 1,075                            | GNK00/GLK00            |
| 12 × 2 × 1.0                                  | 5                  | 0.8                             | 1.6                               | 0.3                              | 1.8                               | 32.1                                  | 1,104                            | GNK01/GLK01            |
| 12 × 2 × 1.5*                                 | 5                  | 0.8                             | 1.8                               | 0.45                             | 2.1                               | 35.8                                  | 1,496                            | GNK02/GLK02            |
| 20 × 2 × 0.75                                 | 2                  | 0.8                             | 1.8                               | 0.45                             | 2                                 | 39.6                                  | 1,665                            | GNL00/GLL00            |
| 20 × 2 × 1.0                                  | 5                  | 0.8                             | 1.8                               | 0.45                             | 2.1                               | 40.6                                  | 1,792                            | GNL01/GLL01            |
| 20 × 2 × 1.5*                                 | 5                  | 0.8                             | 2                                 | 0.45                             | 2.2                               | 43.9                                  | 2,157                            | GNL02/GLL02            |
| 20 × 2 × 1.5*                                 | 2                  | 0.8                             | 2                                 | 0.45                             | 2.2                               | 44.6                                  | 2,274                            | –                      |

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| Number of pairs and nominal area of conductor | Class of conductor | Nominal thickness of insulation | Nominal thickness of inner sheath | Diameter of steel wires in braid | Nominal thickness of outer sheath | Approximate overall diameter of cable | Approximate net weight of cables | UKOOA Code (Grey/Blue) |
|-----------------------------------------------|--------------------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------------|---------------------------------------|----------------------------------|------------------------|
| 2 × 2 × 0.75 *                                | 5                  | 0.8                             | 1.2                               | 0.3                              | 1.4                               | 15.1                                  | 307                              | –                      |
| 2 × 2 × 1.0 *                                 | 5                  | 0.8                             | 1.2                               | 0.3                              | 1.4                               | 15.7                                  | 334                              | –                      |
| 2 × 2 × 1.0 *                                 | 2                  | 0.8                             | 1.2                               | 0.3                              | 1.4                               | 15.9                                  | 341                              | –                      |
| 2 × 2 × 1.5 *                                 | 5                  | 0.8                             | 1.2                               | 0.3                              | 1.4                               | 16.0                                  | 358                              | –                      |
| 2 × 2 × 1.5 *                                 | 2                  | 0.8                             | 1.2                               | 0.3                              | 1.4                               | 16.3                                  | 370                              | –                      |
| 3 × 2 × 0.75                                  | 5                  | 0.8                             | 1.2                               | 0.3                              | 1.4                               | 19.3                                  | 434                              | GNH00/GLH00            |
| 3 × 2 × 1.0                                   | 5                  | 0.8                             | 1.2                               | 0.3                              | 1.4                               | 19.6                                  | 437                              | GNH01/GLH01            |
| 3 × 2 × 1.5 *                                 | 5                  | 0.8                             | 1.4                               | 0.3                              | 1.6                               | 21.5                                  | 533                              | GNH02/GLH02            |
| 3 × 2 × 2.5 *                                 | 5                  | 0.8                             | 1.6                               | 0.3                              | 1.8                               | 24.1                                  | 735                              | GNH03/GLH03            |
| 7 × 2 × 0.75                                  | 5                  | 0.8                             | 1.4                               | 0.3                              | 1.5                               | 24.8                                  | 707                              | GNJ00/GLJ00            |
| 7 × 2 × 1.0                                   | 5                  | 0.8                             | 1.4                               | 0.3                              | 1.6                               | 25.5                                  | 737                              | GNJ01/GLJ01            |
| 7 × 2 × 1.5 *                                 | 5                  | 0.8                             | 1.6                               | 0.3                              | 1.8                               | 27.9                                  | 908                              | GNJ02/GLJ02            |
| <b>n × 2 × mm<sup>2</sup></b>                 |                    | <b>mm</b>                       | <b>mm</b>                         | <b>mm</b>                        | <b>mm</b>                         | <b>mm</b>                             | <b>kg/km</b>                     |                        |
| 12 × 2 × 0.75                                 | 5                  | 0.8                             | 1.6                               | 0.3                              | 1.7                               | 31.3                                  | 1,075                            | GNK00/GLK00            |
| 12 × 2 × 1.0                                  | 5                  | 0.8                             | 1.6                               | 0.3                              | 1.8                               | 32.1                                  | 1,104                            | GNK01/GLK01            |
| 12 × 2 × 1.5 *                                | 5                  | 0.8                             | 1.8                               | 0.45                             | 2.1                               | 35.8                                  | 1,496                            | GNK02/GLK02            |
| 20 × 2 × 0.75                                 | 2                  | 0.8                             | 1.8                               | 0.45                             | 2                                 | 39.6                                  | 1,665                            | GNL00/GLL00            |
| 20 × 2 × 1.0                                  | 5                  | 0.8                             | 1.8                               | 0.45                             | 2.1                               | 40.6                                  | 1,792                            | GNL01/GLL01            |
| 20 × 2 × 1.5 *                                | 5                  | 0.8                             | 2                                 | 0.45                             | 2.2                               | 43.9                                  | 2,157                            | GNL02/GLL02            |
| 20 × 2 × 1.5 *                                | 2                  | 0.8                             | 2                                 | 0.45                             | 2.2                               | 44.6                                  | 2,274                            | –                      |

\* Based on standard

## Without approvals

| Number of pairs and nominal area of conductor | Class of conductor | Nominal thickness of insulation | Nominal thickness of inner sheath | Diameter of steel wires in braid | Nominal thickness of outer sheath | Approximate overall diameter of cable | Approximate net weight of cables | UKOOA Code |
|-----------------------------------------------|--------------------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------------|---------------------------------------|----------------------------------|------------|
|                                               |                    | <b>mm</b>                       | <b>mm</b>                         | <b>mm</b>                        | <b>mm</b>                         | <b>mm</b>                             | <b>kg/km</b>                     |            |
| 1 × 2 × 1.5 *                                 | 2                  | 0.8                             | 1.2                               | 0.3                              | 1.4                               | 14.8                                  | 282                              | –          |
| 2 × 2 × 2.5 *                                 | 2                  | 0.8                             | 1.2                               | 0.3                              | 1.4                               | 17.4                                  | 425                              | –          |
| 7 × 4 × 1.5 *                                 | 5                  | 0.8                             | 1.7                               | 0.45                             | 1.9                               | 35.7                                  | 1,601                            | –          |

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|-----------------------------------------------|--------------------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------------|---------------------------------------|----------------------------------|------------|
| 5 × 2 × 0.75                                  | 2                  | 0.8                             | 1.4                               | 0.3                              | 1.5                               | 23.1                                  | 598                              | –          |
| 5 × 2 × 1.0*                                  | 2                  | 0.8                             | 1.4                               | 0.3                              | 1.6                               | 24.1                                  | 631                              | –          |
| 5 × 2 × 1.5*                                  | 2                  | 0.8                             | 1.4                               | 0.3                              | 1.6                               | 25.6                                  | 731                              | –          |
| 5 × 2 × 2.5*                                  | 2                  | 0.8                             | 1.4                               | 0.6                              | 1.6                               | 28.2                                  | 921                              | –          |
| 10 × 2 × 0.75*                                | 2                  | 0.8                             | 1.6                               | 0.3                              | 1.7                               | 30.0                                  | 973                              | –          |
| 10 × 2 × 1.5*                                 | 2                  | 0.8                             | 1.6                               | 0.3                              | 1.8                               | 33.4                                  | 1,204                            | –          |
| 10 × 2 × 2.5*                                 | 2                  | 0.8                             | 1.6                               | 0.3                              | 1.8                               | 36.2                                  | 1,484                            | –          |
| 20 × 2 × 2.5*                                 | 2                  | 0.8                             | 1.8                               | 0.45                             | 2.1                               | 47.8                                  | 2,725                            | –          |
| 27 × 2 × 0.75                                 | 5                  | 0.8                             | 1.9                               | 0.45                             | 2.2                               | 45.0                                  | 2,178                            | –          |
| 27 × 2 × 1                                    | 5                  | 0.8                             | 2.0                               | 0.45                             | 2.2                               | 46.2                                  | 2,363                            | –          |
| 27 × 2 × 1.5*                                 | 5                  | 0.8                             | 2.1                               | 0.45                             | 2.3                               | 49.7                                  | 2,802                            | –          |
| 3 × 3 × 0.75                                  | 5                  | 0.8                             | 1.3                               | 0.3                              | 1.4                               | 21.0                                  | 518                              | –          |
| 3 × 3 × 1                                     | 5                  | 0.8                             | 1.3                               | 0.3                              | 1.5                               | 21.6                                  | 558                              | –          |
| 3 × 3 × 1.5*                                  | 5                  | 0.8                             | 1.4                               | 0.3                              | 1.6                               | 23.3                                  | 655                              | –          |
| 7 × 3 × 0.75                                  | 5                  | 0.8                             | 1.4                               | 0.3                              | 1.6                               | 28.1                                  | 911                              | –          |
| 7 × 3 × 1                                     | 5                  | 0.8                             | 1.5                               | 0.3                              | 1.7                               | 29.1                                  | 1,002                            | –          |
| 7 × 3 × 1.5*                                  | 5                  | 0.8                             | 1.7                               | 0.3                              | 1.9                               | 31.7                                  | 1,215                            | –          |
| 8 × 3 × 1.5*                                  | 2                  | 0.8                             | 1.8                               | 0.45                             | 2.1                               | 35.2                                  | 1,540                            | –          |
| 12 × 3 × 0.75                                 | 5                  | 0.8                             | 1.7                               | 0.45                             | 1.9                               | 36.0                                  | 1,525                            | –          |
| 12 × 3 × 1                                    | 5                  | 0.8                             | 1.7                               | 0.45                             | 2.0                               | 36.9                                  | 1,654                            | –          |
| 12 × 3 × 1.5*                                 | 5                  | 0.8                             | 1.8                               | 0.45                             | 2.1                               | 39.8                                  | 1,966                            | –          |
| 12 × 3 × 1.5*                                 | 2                  | 0.8                             | 1.8                               | 0.45                             | 2.1                               | 40.2                                  | 2,022                            | –          |
| 3 × 4 × 0.75*                                 | 5                  | 0.8                             | 1.4                               | 0.3                              | 1.5                               | 24.1                                  | 656                              | –          |
| 3 × 4 × 1*                                    | 5                  | 0.8                             | 1.4                               | 0.3                              | 1.6                               | 24.8                                  | 703                              | –          |
| 3 × 4 × 1.5*                                  | 5                  | 0.8                             | 1.6                               | 0.3                              | 1.7                               | 26.9                                  | 844                              | –          |
| 7 × 4 × 0.75*                                 | 5                  | 0.8                             | 1.6                               | 0.3                              | 1.7                               | 31.8                                  | 1,143                            | –          |
| 7 × 4 × 1*                                    | 5                  | 0.8                             | 1.6                               | 0.45                             | 1.8                               | 33.2                                  | 1,383                            | –          |
| 7 × 4 × 1.5*                                  | 5                  | 0.8                             | 1.7                               | 0.45                             | 1.9                               | 35.7                                  | 1,601                            | –          |

\* Based on standard