

## MULTICORE CABLE

These standard, miniature sub-miniature cables are manufactured to Ministry of Defence, Defence standard 61-12 Part 4 (for miniature and sub-miniature sizes), and Part 5 (for standard sizes).

The cores have tinned conductors of high conductivity annealed copper insulated with PVC compound to BS6746 type 2. Collectively screened types C and R, and individually screened types D have a screen of braid construction conductivity tinned annealed copper wire. The fill factor of density of braid as defined in Def 61-12 parts 4 and 5 is not less than 0.70 for C and R types and 0.45 for D types. All types are overall sheathed with Black or Grey PVC to BS6746 type 6.

These multicore flexible cables are designed for high density wiring between components and within instruments and electronic equipment. They are extensively used in aircraft, avionic control systems, computers, data processors, process control systems, military vehicles and ancillary military equipment. Because of the mechanical design of these cables they should not be used for direct connection of equipment's to mains power supplies. Cables suitable for such purposes are listed in our cable section titled "Flexible Mains Cord" which are manufactured to BS6500.

16-2-8C, 16-2-50C, 16-2-36A, 16-2-8A, 7-2-8A, 7-2-20A, 7-2-8C, 7-2-10C, 7-2-15C, 7-2-20C, 7-1-9C, 7-1-15C, 7-1-9A, 7-1-15A and grey sheathed types, are core number and sheath colours not specifically listed in Defence Standard 61-12 Parts 4 or 5. Because of their suitability for applications in the electronics industry, We are manufacturing these configurations in conformance with specifications for similar cables included in the defence standard.

### Colour Rotation of Cores

The sequence of colours used for core identifications as follows:

Red: Blue: Green: Yellow: White: Black: Brown: Violet: Orange: Pink: Turquoise: Grey: Red/Blue: Green/Red: Yellow/Red: White/Red: Red/Black: Red/Brown: Yellow/Blue: White/Blue: Blue/Black: Orange/Blue: Green/Blue: Grey/Blue: Yellow/Green: White/Green: Green/Black: Orange/Green: Grey/Green: Yellow/Brown: White/Brown: Brown/Black: Grey/Brown: Yellow/Violet: Violet/Black: White/Violet.

For bicolours, first colour ground, second colour tracer.

Core colours for 25 core cable are as above, excluding Green/Blue, Grey/Blue and Green/Black.

Core colours for 16-2-10C are as follows: White cores each paired with Blue, Orange, Green, Brown and Grey.

Core colours for 50 core cables are as follows: Centre cores Red, Blue and White, first layer Red, Blue and 7 seven white cores, second layer Red, Blue and White cores, third layer Red, Blue and 20 White cores.

Core colours for 16-2-60C are as follows: Centre core dummy first layer Red, Blue and 4 White cores. Second layer Red, Blue and 10 White cores. Third layer Red, Blue and 16 White cores.

111-342 to 470

# Type No Explanation

| 7                         | 2                                                                        | 4           | C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------|--------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NO OF WIRES PER CONDUCTOR | NOMINAL DIAMETER OF EACH WIRE<br>1 = 0.10MM<br>2 = 0.20MM<br>3 = 0.315MM | NO OF CORES | TYPE OF CONSTRUCTION<br>A - TINNED CONDUCTORS<br>INSULATED WITH PVC TO BS6746<br>TYPE 2, OVERALL SHEATHED WITH PVC TO BS6746 TYPE 6.<br>R&C - TINNED CONDUCTORS<br>INSULATED WITH PVC TO BS6746 TYPE 2.<br>COLLECTIVELY SCREENED<br>BRAID CONSTRUCTION USING<br>TINNED, ANNEALED COPPER<br>WIRE. FILL FACTOR OF DENSITY<br>OF BRAID NOT TO BE LESS THAN<br>0.70. OVERALL SHEATHED WITH<br>PVC TO BS6746 TYPE 6.<br>D - TINNED CONDUCTORS<br>INSULATED WITH PVC BS6746<br>TYPE 2, INDIVIDUALLY<br>SCREENED BRAID<br>CONSTRUCTION USING TINNED<br>ANNEALED COPPER WIRE. FILL<br>FACTOR OF DENSITY OF BRAID<br>NOT TO BE LESS THAN 0.45.<br>OVERALL SHEATHED WITH PVC<br>TO BS6746 TYPE 6. |

| TYPE No                                                         | CORES | MIN                               | MAX | TYPE No                                           | CORES | MIN                                    | MAX | TYPE No                                | CORES | MIN                                  | MAX |
|-----------------------------------------------------------------|-------|-----------------------------------|-----|---------------------------------------------------|-------|----------------------------------------|-----|----------------------------------------|-------|--------------------------------------|-----|
| 7-1-2C                                                          | 2     | 2.5                               | 3.0 | 7-1-9C                                            | 9     | 4.0                                    | 4.4 | 7-1-25C                                | 25    | 6.0                                  | 6.6 |
| 7-1-3C                                                          | 3     | 2.7                               | 3.2 | 7-1-12C                                           | 12    | 4.1                                    | 4.6 | 7-1-36C                                | 36    | 6.6                                  | 7.2 |
| 7-1-6C                                                          | 4     | 2.9                               | 3.4 | 7-1-15C                                           | 15    | 5.0                                    | 5.4 | 7-1-50C                                | 50    | 7.7                                  | 8.3 |
| 7-2-6C                                                          | 6     | 3.3                               | 3.8 | 7-1-18C                                           | 18    | 5.2                                    | 5.8 |                                        |       |                                      |     |
| 7/0.1MM PVC INSULATED<br>OVERALL BRAID<br>SCREENED PVC SHEATHED |       | DIAMETER OF WIRES IN<br>EACH CORE |     | RATED                                             |       | DEF 61-12 CURRENT RATING<br>PER CORE   |     | EQUIVALENT IMPERIAL<br>CONDUCTOR SIZES |       | 7 WIRES PER CORE                     |     |
| FILL FACTOR OF BRAID<br>SCREEN 0.7.                             |       | 0.1 MM                            |     | 250VOLTS ac r.m.s. at 1600hz                      |       | 0.25 AMP                               |     | 7/0.004                                |       |                                      |     |
| NOMINAL CONDUCTOR<br>AREA<br>(PER CORE)                         |       | MAX OPERATING<br>TEMPERATURE      |     | NOMINAL INSULATION<br>RADIAL THICKNESS ON<br>CORE |       | NOMINAL CONDUCTOR<br>DIAMETER PER CORE |     | NOMINAL CORE<br>RESISTANCE             |       | NOMINAL OVERALL<br>DIAMETER PER CORE |     |
| 0.055 MM²                                                       |       | 70 °C                             |     | 0.2MM                                             |       | 0.3 MM                                 |     | 20 °C 348 Ω/KM                         |       | 0.7 MM                               |     |