

## INSTRUMENTATION CABLES AS PER BS EN 50288-7 (CU/PVC/OS/PVC)

### APPLICATION

Suitable for Industrial & Commercial settings for process controls, transmission of analogue / digital signals in instrument & control systems. Ideal for use in conduits, trunking, and in locations protected from physical damage.

### CONSTRUCTION

|                                           |                                                                                                                                                                                                                              |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Conductor:</b>                         | Stranded (Class 2) Annealed Plain Copper Conductor to BS EN 60228                                                                                                                                                            |
| <b>Insulation:</b>                        | Polyvinyl Chloride (PVC) rated 90°C                                                                                                                                                                                          |
| <b>Insulation Color:</b>                  | Single Pair: Black & White<br>Multi Pair: Black & White with number printed on each cores.<br>Other colors are available upon request or as per BS EN 50288-7.                                                               |
| <b>Pair / Triad:</b>                      | Uniformly twisted insulated conductors with suitable twists per meter.                                                                                                                                                       |
| <b>Assembly:</b>                          | The required number of unscreened pairs / triads are assembled together with non-hygroscopic fillers (if required) and wrapped with a binder tape.                                                                           |
| <b>Overall Screen &amp; Drain Wire:</b>   | Aluminum backed Mylar tape (25µm) (AL-PET-Foil) is applied over assembly with 100% coverage and an overlap of 25% with metal side in contact with a stranded tinned copper drain wire of size 0.5 mm <sup>2</sup> (class 2). |
| <b>Outer Sheath:</b>                      | Extruded Polyvinyl Chloride (PVC) in Black colour.<br>Other colors are available upon request.                                                                                                                               |
| <b>Printing Text on the Outer Sheath:</b> | INSTRUMENTATION CABLE CU/PVC/OS/PVC NO OF PAIRS / TRIADS X 2 / 3 X...MM2 500 V BS EN 50288-7 TEKAB YEAR<br>MADE IN UAE LENGTH METER MARKING                                                                                  |



### TECHNICAL DATA

|                                                          |                                                                                              |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <b>Operating Temperature:</b>                            | During Normal Operation - 90°C<br>During Short Circuit Condition - 160°C                     |
| <b>Voltage Rating:</b>                                   | 500V                                                                                         |
| <b>Voltage Withstand:</b>                                | 2000 V a.c. r.m.s. for 1 minutes                                                             |
| <b>Insulation Resistance<br/>MΩ/km:</b>                  | ≥ 10                                                                                         |
| <b>Mutual Capacitance<br/>nf/km:</b>                     | < 250                                                                                        |
| <b>Inductance to<br/>resistance ratio (L/R)<br/>µH/Ω</b> | < 25 (up to 1mm <sup>2</sup> )<br>< 40 (1.5 mm <sup>2</sup> )<br>< 60 (2.5 mm <sup>2</sup> ) |

\* Solid (Class-1) / Flexible (Class-5), Tinned / Thermocouple conductor can be provided upon request.

\*\* PVC 70°C & PVC 105°C rated cables can be provided upon request.

\*\*\* Screening: - Copper Tape / CU-PET tape / Braiding & any other drain wire size can be provided upon request.

\*\*\*\* Other special sheath materials are also available with Flame Retardant :- IEC 60332-1-2, IEC 60332-3-22 (CAT A), IEC 60332-3-24 (CAT C), Low Smoke, UV / Sunlight Resistant, Oil Resistant, Anti-Termite, Anti-Rodent.

- Construction in core formation also can be provided upon request.
- 300V or any customized voltage grade rated cables up to 600/1000V can be provided upon request.

| SERIAL NO. | TEKAB CODE | NO. OF PAIRS (P) / TRIADS (T) X CONDUCTOR SIZE (No. x sq.mm) | NO. OF STRANDS | MINIMUM INSULATION THICKNESS (mm) | APPROX. OVERALL DIAMETER (mm) | APPROX. WEIGHT (kg/km) |
|------------|------------|--------------------------------------------------------------|----------------|-----------------------------------|-------------------------------|------------------------|
| 1          | V2A7V      | 1P X 0.5                                                     | 7              | 0.44                              | 6.0                           | 55                     |
| 2          | V2A7V      | 2P X 0.5                                                     | 7              | 0.44                              | 9.0                           | 90                     |
| 3          | V2A7V      | 5P X 0.5                                                     | 7              | 0.44                              | 11.5                          | 155                    |
| 4          | V2A7V      | 10P X 0.5                                                    | 7              | 0.44                              | 15.0                          | 275                    |
| 5          | V2A7V      | 12P X 0.5                                                    | 7              | 0.44                              | 16.0                          | 315                    |
| 6          | V2A7V      | 16P X 0.5                                                    | 7              | 0.44                              | 18.0                          | 385                    |
| 7          | V2A7V      | 20P X 0.5                                                    | 7              | 0.44                              | 20.0                          | 495                    |
| 8          | V2A7V      | 1P X 0.75                                                    | 7              | 0.44                              | 6.5                           | 65                     |
| 9          | V2A7V      | 2P X 0.75                                                    | 7              | 0.44                              | 10.0                          | 120                    |
| 10         | V2A7V      | 5P X 0.75                                                    | 7              | 0.44                              | 12.5                          | 220                    |
| 11         | V2A7V      | 10P X 0.75                                                   | 7              | 0.44                              | 16.5                          | 355                    |
| 12         | V2A7V      | 12P X 0.75                                                   | 7              | 0.44                              | 17.5                          | 425                    |
| 13         | V2A7V      | 16P X 0.75                                                   | 7              | 0.44                              | 20.0                          | 550                    |
| 14         | V2A7V      | 20P X 0.75                                                   | 7              | 0.44                              | 22.5                          | 685                    |
| 15         | V2A7V      | 1P X 1.0                                                     | 7              | 0.44                              | 7.0                           | 70                     |
| 16         | V2A7V      | 2P X 1.0                                                     | 7              | 0.44                              | 10.5                          | 135                    |
| 17         | V2A7V      | 5P X 1.0                                                     | 7              | 0.44                              | 13.5                          | 250                    |
| 18         | V2A7V      | 10P X 1.0                                                    | 7              | 0.44                              | 17.5                          | 440                    |
| 19         | V2A7V      | 12P X 1.0                                                    | 7              | 0.44                              | 19.0                          | 525                    |
| 20         | V2A7V      | 16P X 1.0                                                    | 7              | 0.44                              | 21.5                          | 660                    |
| 21         | V2A7V      | 20P X 1.0                                                    | 7              | 0.44                              | 24.0                          | 825                    |
| 22         | V2A7V      | 1P X 1.5                                                     | 7              | 0.44                              | 7.5                           | 85                     |
| 23         | V2A7V      | 2P X 1.5                                                     | 7              | 0.44                              | 11.5                          | 165                    |
| 24         | V2A7V      | 5P X 1.5                                                     | 7              | 0.44                              | 14.5                          | 300                    |
| 25         | V2A7V      | 10P X 1.5                                                    | 7              | 0.44                              | 19.0                          | 550                    |
| 26         | V2A7V      | 12P X 1.5                                                    | 7              | 0.44                              | 20.5                          | 660                    |
| 27         | V2A7V      | 16P X 1.5                                                    | 7              | 0.44                              | 23.5                          | 850                    |
| 28         | V2A7V      | 20P X 1.5                                                    | 7              | 0.44                              | 26.5                          | 1045                   |

| SERIAL NO. | TEKAB CODE | NO. OF PAIRS (P) / TRIADS (T) X CONDUCTOR SIZE (No. x sq.mm) | NO. OF STRANDS | MINIMUM INSULATION THICKNESS (mm) | APPROX. OVERALL DIAMETER (mm) | APPROX. WEIGHT (kg/km) |
|------------|------------|--------------------------------------------------------------|----------------|-----------------------------------|-------------------------------|------------------------|
| 29         | V2A7V      | 1P X 2.5                                                     | 7              | 0.53                              | 8.5                           | 120                    |
| 30         | V2A7V      | 2P X 2.5                                                     | 7              | 0.53                              | 13.5                          | 220                    |
| 31         | V2A7V      | 5P X 2.5                                                     | 7              | 0.53                              | 18.0                          | 465                    |
| 32         | V2A7V      | 10P X 2.5                                                    | 7              | 0.53                              | 23.5                          | 850                    |
| 33         | V2A7V      | 12P X 2.5                                                    | 7              | 0.53                              | 25.5                          | 990                    |
| 34         | V2A7V      | 16P X 2.5                                                    | 7              | 0.53                              | 29.0                          | 1290                   |
| 35         | V2A7V      | 20P X 2.5                                                    | 7              | 0.53                              | 32.5                          | 1620                   |
| 36         | V2A7V      | 1T X 0.5                                                     | 7              | 0.44                              | 6.5                           | 65                     |
| 37         | V2A7V      | 2T X 0.5                                                     | 7              | 0.44                              | 9.5                           | 110                    |
| 38         | V2A7V      | 5T X 0.5                                                     | 7              | 0.44                              | 12.0                          | 205                    |
| 39         | V2A7V      | 10T X 0.5                                                    | 7              | 0.44                              | 15.5                          | 360                    |
| 40         | V2A7V      | 12T X 0.5                                                    | 7              | 0.44                              | 17.0                          | 410                    |
| 41         | V2A7V      | 16T X 0.5                                                    | 7              | 0.44                              | 19.5                          | 550                    |
| 42         | V2A7V      | 20T X 0.5                                                    | 7              | 0.44                              | 21.5                          | 660                    |
| 43         | V2A7V      | 1T X 0.75                                                    | 7              | 0.44                              | 7.0                           | 80                     |
| 44         | V2A7V      | 2T X 0.75                                                    | 7              | 0.44                              | 10.5                          | 140                    |
| 45         | V2A7V      | 5T X 0.75                                                    | 7              | 0.44                              | 13.5                          | 275                    |
| 46         | V2A7V      | 10T X 0.75                                                   | 7              | 0.44                              | 17.5                          | 495                    |
| 47         | V2A7V      | 12T X 0.75                                                   | 7              | 0.44                              | 19.0                          | 580                    |
| 48         | V2A7V      | 16T X 0.75                                                   | 7              | 0.44                              | 22.0                          | 770                    |
| 49         | V2A7V      | 20T X 0.75                                                   | 7              | 0.44                              | 24.0                          | 935                    |
| 50         | V2A7V      | 1T X 1.0                                                     | 7              | 0.44                              | 7.0                           | 95                     |
| 51         | V2A7V      | 2T X 1.0                                                     | 7              | 0.44                              | 11.0                          | 165                    |
| 52         | V2A7V      | 5T X 1.0                                                     | 7              | 0.44                              | 14.5                          | 330                    |
| 53         | V2A7V      | 10T X 1.0                                                    | 7              | 0.44                              | 19.0                          | 605                    |
| 54         | V2A7V      | 12T X 1.0                                                    | 7              | 0.44                              | 20.5                          | 715                    |
| 55         | V2A7V      | 16T X 1.0                                                    | 7              | 0.44                              | 23.0                          | 935                    |
| 56         | V2A7V      | 20T X 1.0                                                    | 7              | 0.44                              | 26.0                          | 1155                   |
| 57         | V2A7V      | 1T X 1.5                                                     | 7              | 0.44                              | 8.0                           | 110                    |
| 58         | V2A7V      | 2T X 1.5                                                     | 7              | 0.44                              | 12.0                          | 210                    |
| 59         | V2A7V      | 5T X 1.5                                                     | 7              | 0.44                              | 16.0                          | 425                    |
| 60         | V2A7V      | 10T X 1.5                                                    | 7              | 0.44                              | 20.5                          | 770                    |
| 61         | V2A7V      | 12T X 1.5                                                    | 7              | 0.44                              | 22.5                          | 935                    |
| 62         | V2A7V      | 16T X 1.5                                                    | 7              | 0.44                              | 25.5                          | 1210                   |

| SERIAL NO. | TEKAB CODE | NO. OF PAIRS (P) / TRIADS (T) X CONDUCTOR SIZE (No. x sq.mm) | NO. OF STRANDS | MINIMUM INSULATION THICKNESS (mm) | APPROX. OVERALL DIAMETER (mm) | APPROX. WEIGHT (kg/km) |
|------------|------------|--------------------------------------------------------------|----------------|-----------------------------------|-------------------------------|------------------------|
| 63         | V2A7V      | 20T X 1.5                                                    | 7              | 0.44                              | 28.5                          | 1485                   |
| 64         | V2A7V      | 1T X 2.5                                                     | 7              | 0.53                              | 9.5                           | 165                    |
| 65         | V2A7V      | 2T X 2.5                                                     | 7              | 0.53                              | 14.5                          | 300                    |
| 66         | V2A7V      | 5T X 2.5                                                     | 7              | 0.53                              | 19.0                          | 630                    |
| 67         | V2A7V      | 10T X 2.5                                                    | 7              | 0.53                              | 25.5                          | 1210                   |
| 68         | V2A7V      | 12T X 2.5                                                    | 7              | 0.53                              | 27.5                          | 1430                   |
| 69         | V2A7V      | 16T X 2.5                                                    | 7              | 0.53                              | 31.5                          | 1870                   |
| 70         | V2A7V      | 20T X 2.5                                                    | 7              | 0.53                              | 35.0                          | 2310                   |

