

APL Individual & Overall Screened Armoured Instrumentation



Eland Product Group: ...

APPLICATION

For interconnections between instruments, sensors and monitors. Individual and overall screened with specially selected lay schemes in order to counter static and cross talk noises. A “clean” and accurate signal can therefore be expected to be transferred. APL Armouring is provided for increased mechanical protection.

CHARACTERISTICS

Voltage Rating
300/500V

Maximum Operating Temperature
+105°C

Minimum Bending Radius
9x Overall Diameter

CONSTRUCTION

Conductor
Class 4 Plain annealed bunched copper

Insulation
XLPE (Cross-Linked Polyethylene)

Individual Screen
Al/PET (Aluminium/Polyester Tape)

Overall Screen
Al/PET (Aluminium/Polyester Tape)

Drain Wire (Individual and Collectively)
Tinned copper

Bedding
PVC (Polyvinyl Chloride)

Armouring
APL (Aluminium Polyethylene Laminated) with bunched tinned copper drain wire

Sheath
PE (Polyethylene)

Core Identification
Pairs: ○ White ● Black, numbered
Triples: ○ White ● Black ● Red, numbered

Outer Sheath Colour
● Black

STANDARDS

SANS 1411 Part 4, SANS 1411 Part 2 Type B1, SANS 1411 Part 7

Flame retardant to IEC 60332-1

ISO/IEC 17025 LABORATORY TESTED

This product is subject to the Quality Assurance protocols of The Cable Lab®, an ISO/IEC 17025 accredited cable testing laboratory. Testing includes vertical flame, conductor resistance, tensile & elongation, and dimensional consistency, verified to published standards and approved product drawings.



REGULATORY COMPLIANCE

This cable meets the requirements of the Low Voltage Directive 2014/35/EU and the RoHS Directive 2011/65/EU. RoHS compliance has been tested and confirmed by The Cable Lab® as meeting the requirements of the BSI RoHS Trusted Kitemark™.





DIMENSIONS

| ELAND PART NO. | NO. OF PAIRS/TRIPLE | NOMINAL CROSS SECTIONAL AREA mm ² | NOMINAL OVERALL DIAMETER mm | NOMINAL WEIGHT kg/km |
|----------------|---------------------|---|--------------------------------|-------------------------|
| ENA02P05IAPEBK | 2P | 0.5 | 13.4 | 177 |
| ENA02P10IAPEBK | 2P | 1 | 14.9 | 224 |
| ENA02P15IAPEBK | 2P | 1.5 | 16.5 | 267 |
| ENA04P05IAPEBK | 4P | 0.5 | 14.8 | 234 |
| ENA04P10IAPEBK | 4P | 1 | 16.5 | 297 |
| ENA04P15IAPEBK | 4P | 1.5 | 19.2 | 388 |
| ENA08P05IAPEBK | 8P | 0.5 | 18.5 | 378 |
| ENA08P10IAPEBK | 8P | 1 | 20.9 | 496 |
| ENA08P15IAPEBK | 8P | 1.5 | 23.9 | 627 |
| ENA12P05IAPEBK | 12P | 0.5 | 20.7 | 465 |
| ENA12P10IAPEBK | 12P | 1 | 24.4 | 682 |
| ENA12P15IAPEBK | 12P | 1.5 | 27.5 | 839 |
| ENA16P05IAPEBK | 16P | 0.5 | 23.6 | 591 |
| ENA16P10IAPEBK | 16P | 1 | 27 | 845 |
| ENA16P15IAPEBK | 16P | 1.5 | 31.4 | 1099 |
| ENA24P05IAPEBK | 24P | 0.5 | 27.1 | 781 |
| ENA24P10IAPEBK | 24P | 1 | 32 | 1196 |
| ENA24P15IAPEBK | 24P | 1.5 | 36.8 | 1534 |
| ENA04T05IAPEBK | 4T | 0.5 | 16 | 271 |
| ENA04T10IAPEBK | 4T | 1 | 18.8 | 393 |
| ENA04T15IAPEBK | 4T | 1.5 | 21 | 472 |
| ENA08T05IAPEBK | 8T | 0.5 | 20.4 | 444 |
| ENA08T10IAPEBK | 8T | 1 | 23.4 | 641 |
| ENA08T15IAPEBK | 8T | 1.5 | 26.5 | 787 |
| ENA12T05IAPEBK | 12T | 0.5 | 24 | 614 |
| ENA12T10IAPEBK | 12T | 1 | 27.5 | 868 |
| ENA12T15IAPEBK | 12T | 1.5 | 32 | 1126 |
| ENA16T05IAPEBK | 16T | 0.5 | 26.1 | 747 |
| ENA16T10IAPEBK | 16T | 1 | 30.7 | 1126 |
| ENA24T05IAPEBK | 24T | 0.5 | 32 | 1070 |

ELECTRICAL CHARACTERISTICS

| NOMINAL CROSS SECTIONAL AREA mm ² | MAXIMUM DC RESISTANCE OF CONDUCTOR AT 20°C ohms/km | | NOMINAL MUTUAL CAPACITANCE nF/km | NOMINAL GROUND CAPACITANCE nF/km | NOMINAL INDUCTANCE mH/km |
|---|---|------------------|-------------------------------------|-------------------------------------|-----------------------------|
| | Single Pair/Triad & Multicore | Multi-Pair Triad | | | |
| 0.5 | 39.0 | 39.6 | 100 | 200 | 0.707 |
| 1 | 19.5 | 19.8 | 120 | 240 | 0.629 |
| 1.5 | 13.3 | 13.5 | 120 | 240 | 0.645 |

CAPACITANCE

| NOMINAL CROSS SECTIONAL AREA mm ² | CAPACITANCE pF/m | |
|---|---------------------|---------|
| | Nominal | Maximum |
| Core / Core Screened | | |
| 0.5 | 84 | 90 |
| 1.0 | 104 | 112 |
| 1.5 | 101 | 121 |
| Core / Screen | | |
| 0.5 | 158 | 169 |
| 1.0 | 196 | 210 |
| 1.5 | 190 | 228 |
| Core / Core No Screen | | |
| 0.5 | 53 | 56 |
| 1.0 | 63 | 66 |
| 1.5 | 61 | 70 |
| Core / Screen OS only | | |
| 0.5 | 100 | 106 |
| 1.0 | 119 | 124 |
| 1.5 | 115 | 131 |

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.