

# Traffic Signal Cable BS 6346 SWA PVC



Eland Product Group: A6T

## APPLICATION

For the interconnection of traffic signal equipment or other applications requiring high core configurations with mechanical robustness.

## CHARACTERISTICS

**Voltage Rating** U<sub>o</sub>/U  
0.6/1kV

**Temperature Rating**  
Fixed: -15°C to +70°C

**Short Circuit Temperature**  
+160°C

**Minimum Bending Radius**  
6 x overall diameter

## CONSTRUCTION

**Conductor**  
Class 1 annealed copper conductor

**Insulation**  
PVC (Polyvinyl Chloride)

**Bedding**  
Polymeric compound with a tensile strength of not less than 4N/mm<sup>2</sup> and an elongation break of not less than 50%

**Armour**  
Single layer of galvanized wires laid in a right direction

**Sheath**  
PVC (Polyvinyl Chloride)

**Sheath Colour**  
● Orange

## STANDARDS

BS 6346, BS 50363

Flame Retardant according to IEC/EN 60332-1-2

## THE CABLE LAB®

AN ISO/IEC 17025 AND IECEE CBTL ACCREDITED FACILITY

Our world-class testing facility assures the quality and compliance of this cable through a continuous and rigorous testing regime.



## SUSTAINABILITY COMMITMENT

We are on a journey to Net Zero.

We've committed to near-term emissions reductions and a net-zero target with the Science Based Targets initiative and we're a signatory to the United Nations Global Compact Sustainable Development Goals.

Learn more about embodied carbon and our carbon emissions reduction actions, our comprehensive recycling services, and wider ESG activities for sustainable operations at: [www.elandcables.com/company/about-us/esg-sustainability](https://www.elandcables.com/company/about-us/esg-sustainability)



## REGULATORY COMPLIANCE

This cable meets the requirements of the Low Voltage Directive 2014/35/EU, the RoHS Directive 2015/65/EU and Reach Directive EC 1907/2006. RoHS compliance has been tested and confirmed by The Cable Lab®.





## Core Identification

### 8 cores:

Centre Lay (Right Hand Lay): ● Brown  
 Second Layer (Left Hand Lay): ● Yellow ● Green/Blue ● Red  
 ○ White ● Blue ● Black ● Orange

### 12 cores:

Centre Lay (Right Hand Lay): ● Brown ● Yellow ● Green/Blue  
 Second Layer (Left Hand Lay): ● Red ○ White ● Blue  
 ● Black ● Orange ● Red/White  
 ● Grey ● Red/Blue ● Violet

### 16 cores:

Centre Lay (Right Hand Lay): ● Brown ● Yellow  
 ● Green/Blue ● Red ○ White  
 Second Layer (Left Hand Lay): ● Blue ● Black ● Orange  
 ● Grey ● Red/Blue ● Violet  
 ● Brown/Red ● Yellow/Red  
 ● Red/White

### 20 cores:

Centre Lay (Right Hand Lay): ● Brown ● Yellow  
 ● Green/Blue ● Red ○ White  
 ● Blue ● Black  
 Second Layer (Left Hand Lay): ● Orange ● Red/White  
 ● Grey ● Red/Blue ● Violet  
 ● Brown/Red ● Yellow/Red  
 ● Grey/Red ● Black/Red  
 ● Red/Blue ● Violet  
 ● Violet/Red ● Orange/Red  
 ● Green/Red ● Blue/White

## DIMENSIONS

| ELAND PART NO. | NO. OF CORES | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | NOMINAL THICKNESS OF INSULATION<br>mm | NOMINAL THICKNESS OF BEDDING<br>mm | DIAMETER OF STEEL WIRE<br>mm | NOMINAL THICKNESS OF SHEATH<br>mm | NOMINAL OVERALL DIAMETER<br>mm | NOMINAL WEIGHT<br>kg/km |
|----------------|--------------|-------------------------------------------------|---------------------------------------|------------------------------------|------------------------------|-----------------------------------|--------------------------------|-------------------------|
| A6T08010SWA    | 8            | 1                                               | 0.6                                   | 0.8                                | 0.9                          | 1.4                               | 13.2                           | 388                     |
| A6T08015SWA    | 8            | 1.5                                             | 0.6                                   | 0.8                                | 0.9                          | 1.4                               | 13.4                           | 451                     |
| A6T12010SWA    | 12           | 1                                               | 0.6                                   | 0.8                                | 1.25                         | 1.4                               | 16.2                           | 615                     |
| A6T12015SWA    | 12           | 1.5                                             | 0.6                                   | 0.8                                | 1.25                         | 1.5                               | 17.4                           | 729                     |
| A6T16010SWA    | 16           | 1                                               | 0.6                                   | 0.8                                | 0.9                          | 1.5                               | 17.6                           | 725                     |
| A6T16015SWA    | 16           | 1.5                                             | 0.6                                   | 0.8                                | 1.25                         | 1.6                               | 18.9                           | 864                     |
| A6T20010SWA    | 20           | 1                                               | 0.6                                   | 0.8                                | 1.25                         | 1.6                               | 19                             | 841                     |
| A6T20015SWA    | 20           | 1.5                                             | 0.6                                   | 0.8                                | 1.25                         | 1.6                               | 20.2                           | 997                     |

## CONDUCTORS

### Class 1 Solid Conductors for Single Core and Multi-Core Cables

| NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> | MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C<br>ohms/km |  |
|-------------------------------------------------|----------------------------------------------------|--|
|                                                 | Annealed Copper Conductor                          |  |
|                                                 | Plain Wires                                        |  |
| 1                                               | 18.1                                               |  |
| 1.5                                             | 12.1                                               |  |



## ELECTRICAL CHARACTERISTICS

### Current Carrying Capacity and Resistance Values

| NO. OF<br>CORES | NOMINAL CROSS<br>SECTIONAL AREA<br>mm <sup>2</sup> | MAXIMUM CONDUCTOR<br>RESISTANCE AT 20°C<br>ohms/km | CURRENT CARRYING CAPACITY<br>Amps |               | VOLTAGE<br>DROP<br>mV/A/m |
|-----------------|----------------------------------------------------|----------------------------------------------------|-----------------------------------|---------------|---------------------------|
|                 |                                                    |                                                    | In Air                            | Direct Burial |                           |
| 8               | 1                                                  | 18.1                                               | 12                                | 10.5          | 25                        |
| 12              | 1                                                  | 18.1                                               | 10                                | 8.7           | 25                        |
| 16              | 1                                                  | 18.1                                               | 9                                 | 8             | 25                        |
| 20              | 1                                                  | 18.1                                               | 8                                 | 7.1           | 25                        |
| 8               | 1.5                                                | 12.1                                               | 15                                | 13.5          | 38                        |
| 12              | 1.5                                                | 12.1                                               | 13                                | 11.7          | 38                        |
| 16              | 1.5                                                | 12.1                                               | 11                                | 10            | 38                        |
| 20              | 1.5                                                | 12.1                                               | 10                                | 9.1           | 38                        |

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.