



# (N)TSCGEWÖU - 3.6/6kV and 6/10kV Submersible Cable



Eland Product Group: A7HR

## APPLICATION

Flexible supply cable for use in permanent salty and brackish water immersion up to 300 metres under high mechanical stresses. For applications such as pumps, dredges, floating docks. It is suitable for trailing operations of opencast mining equipment. Suitable for indoor and outdoor applications.

## CHARACTERISTICS

### Voltage Rating U<sub>0</sub>/U

3.6/6kV  
6/10kV

### Test Voltage

3.6/6kV: 11kV  
6/10kV: 17kV

### Ambient Temperature

Fixed: -40°C to +80°C  
Flexed: -25°C to +60°C

### Minimum Bending Radius

Fixed: 6 x overall diameter  
Flexed: 10 x overall diameter

## CONSTRUCTION

### Phase Conductor

Class 5 tinned copper conductor

### Insulation

Rubber compound

### Semi-Conductive Layers

Semi-conductive tape over the conductor and inner and outer semi-conductive rubber layer on the insulation

### Earth Conductor

Class 5 tinned copper conductor

### Central Filler

Semi-conductive compound on a textile polyester support

### Inner Sheath

EPR rubber compound water proofing

### Outer Sheath

CM rubber compound water proofing

### Sheath Colour

● Black

## STANDARDS

VDE 0250 Part 813, HD 22.16, VDE 0295, EN 60228

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

## THE CABLE LAB<sup>®</sup>

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](http://www.elandcables.com/company/about-us/esg-sustainability)



## REGULATORY COMPLIANCE

This cable meets the requirements of the RoHS Directive 2015/65/EU and Reach Directive EC 1907/2006. RoHS compliance has been tested and confirmed by The Cable Lab<sup>®</sup>.





## DIMENSIONS

| ELAND PART NO. | VOLTAGE<br>kV | NO. OF CORES<br>(PHASE + EARTH) | NOMINAL CROSS SECTIONAL AREA<br>mm <sup>2</sup> |                 | CONDUCTOR<br>DIAMETER<br>mm | MINIMUM<br>OVERALL<br>DIAMETER<br>mm | MAXIMUM<br>OVERALL<br>DIAMETER<br>mm | MAXIMUM<br>TENSILE LOAD<br>N | NOMINAL<br>WEIGHT<br>kg/km |
|----------------|---------------|---------------------------------|---|-----------------|-----------------------------|--------------------------------------|--------------------------------------|------------------------------|----------------------------|
|                |               |                                 | Phase Conductor                                 | Earth Conductor |                             |                                      |                                      |                              |                            |
| A7HR06KV1025BK | 3.6/6         | 3+3                             | 25  | 25/3            | 6.8                         | 39.9                                 | 41.6                                 | 1500                         | 2580                       |
| A7HR06KV1035BK | 3.6/6         | 3+3                             | 35  | 25/3            | 7.8                         | 42.9                                 | 44.6                                 | 2100                         | 3080                       |
| A7HR06KV1050BK | 3.6/6         | 3+3                             | 50  | 25/3            | 9.4                         | 46                                   | 47.7                                 | 3000                         | 3710                       |
| A7HR06KV1070BK | 3.6/6         | 3+3                             | 70  | 35/3            | 11.2                        | 49.8                                 | 51.6                                 | 4200                         | 4670                       |
| A7HR06KV1095BK | 3.6/6         | 3+3                             | 95  | 50/3            | 12.7                        | 55.8                                 | 57.6                                 | 5700                         | 5880                       |
| A7HR06KV1120BK | 3.6/6         | 3+3                             | 120   | 70/3            | 14.4                        | 59.6                                 | 61.4                                 | 7200                         | 7140                       |
| A7HR06KV1150BK | 3.6/6         | 3+3                             | 150   | 70/3            | 16.3                        | 66                                   | 68.3                                 | 9000                         | 8690                       |
| A7HR06KV1185BK | 3.6/6         | 3+3                             | 185   | 95/3            | 17.6                        | 67.9                                 | 70.2                                 | 11100                        | 9890                       |
| A7HR10KV1025BK | 6/10          | 3+3                             | 25  | 25/3            | 6.8                         | 39.9                                 | 42.2                                 | 1500                         | 2620                       |
| A7HR10KV1035BK | 6/10          | 3+3                             | 35  | 25/3            | 7.8                         | 42.9                                 | 45.2                                 | 2100                         | 3120                       |
| A7HR10KV1050BK | 6/10          | 3+3                             | 50  | 25/3            | 9.4                         | 46                                   | 48.3                                 | 3000                         | 3750                       |
| A7HR10KV1070BK | 6/10          | 3+3                             | 70  | 35/3            | 11.2                        | 49.8                                 | 52.2                                 | 4200                         | 4710                       |
| A7HR10KV1095BK | 6/10          | 3+3                             | 95  | 50/3            | 12.7                        | 55.8                                 | 58.2                                 | 5700                         | 5920                       |
| A7HR10KV1120BK | 6/10          | 3+3                             | 120   | 70/3            | 14.4                        | 59.6                                 | 62.1                                 | 7200                         | 7180                       |
| A7HR10KV1150BK | 6/10          | 3+3                             | 150   | 70/3            | 16.3                        | 66                                   | 69                                   | 9000                         | 8730                       |
| A7HR10KV1185BK | 6/10          | 3+3                             | 185   | 95/3            | 17.6                        | 67.9                                 | 70.9                                 | 11100                        | 9930                       |

## CURRENT CARRYING CAPACITY

| NOMINAL CROSS<br>SECTIONAL AREA<br>mm <sup>2</sup> | LAYING ON<br>THE FLOOR<br>Amps | FREE<br>IN AIR<br>Amps | REELED<br>Amps |         |         |         |         |         |         |
|--|--------------------------------|------------------------|----------------|---------|---------|---------|---------|---------|---------|
|  |                                |                        | 1 Layer        | 2 Layer | 3 Layer | 4 Layer | 5 Layer | 6 Layer | 7 Layer |
| 25   | 131                            | 138                    | 105            | 80      | 64      | 55      | 50      | 35      | 29      |
| 35   | 162                            | 170                    | 130            | 99      | 79      | 68      | 62      | 44      | 36      |
| 50   | 202                            | 212                    | 162            | 123     | 99      | 85      | 77      | 55      | 44      |
| 70   | 250                            | 263                    | 200            | 153     | 123     | 105     | 95      | 68      | 55      |
| 95   | 301                            | 316                    | 241            | 184     | 147     | 126     | 114     | 81      | 66      |
| 120  | 352                            | 370                    | 282            | 215     | 172     | 148     | 134     | 95      | 77      |
| 150  | 404                            | 424                    | 323            | 246     | 198     | 170     | 154     | 109     | 89      |
| 185  | 461                            | 484                    | 369            | 281     | 226     | 194     | 175     | 124     | 101     |

Ambient temperature of 30°C



## VOLTAGE DROP

| NOMINAL GROSS SECTIONAL AREA<br>mm <sup>2</sup> | POWER FACTOR |      |      |      |
|---|--------------|------|------|------|
|   | 0.7          | 0.8  | 0.9  | 1    |
| 25  | 1.29         | 1.45 | 1.6  | 1.71 |
| 35  | 0.95         | 1.06 | 1.16 | 1.23 |
| 50  | 0.69         | 0.77 | 0.83 | 0.87 |
| 70  | 0.51         | 0.56 | 0.6  | 0.61 |
| 95  | 0.41         | 0.45 | 0.47 | 0.47 |
| 120   | 0.34         | 0.36 | 0.38 | 0.36 |
| 150   | 0.29         | 0.31 | 0.32 | 0.29 |
| 185   | 0.25         | 0.27 | 0.27 | 0.24 |

## DE-RATING FACTORS

| AMBIENT TEMPERATURE | 10°C | 15°C | 20°C | 25°C | 30°C | 35°C | 40°C | 45°C | 50°C | 55°C | 60°C | 65°C | 70°C | 75°C | 80°C |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| DE-RATING FACTOR    | 1.15 | 1.12 | 1.08 | 1.04 | 1.00 | 0.96 | 0.91 | 0.87 | 0.82 | 0.76 | 0.71 | 0.65 | 0.58 | 0.50 | 0.41 |

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.