



Hook-up &amp; equipment wires

# SCP / SYP

## JIS Shipboard Equipment Wire

JIS C 3410 250 V EP-rubber (SCP) &amp; vinyl (SYP) marine switchboard hook-up wire

JIS C 3410 Marine

250 V · SCP (EPR) &amp; SYP (PVC)

0.75-5.5 mm<sup>2</sup>

### Application

Japanese marine 250 V single-core switchboard, console and control-panel hook-up wire built to JIS C 3410 in two insulation grades: `SCP` (+85/+90 °C cross-linked EP-rubber with chloroprene/protective skin) and `SYP` (+60/+75 °C flame-retardant vinyl PVC).

**Typical uses:** Marine main & emergency switchboards (MSB/ESB), Engine control room (ECR) consoles, Bridge navigation & helm control desks, Shipboard motor starter & alarm panels, NK, ABS, DNV, LR & CCS vessel retrofits

### Construction



Cross-section, not to scale

|   |                                        |                            |
|---|----------------------------------------|----------------------------|
| 1 | Stranded annealed copper conductor     | JIS C 3410 / JIS C 3102    |
| 2 | Primary EPR (SCP) or Vinyl (SYP) layer | JIS C 3410                 |
| 3 | Protective flame-retardant outer skin  | JIS C 3410 · IEC 60332-1-2 |

## Technical data

Typical values

|                                      |                                                                                                                                                                                     |                               |                                                                   |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------------------------------|
| Rated voltage                        | 250 V AC (150/250 V)                                                                                                                                                                | AC test voltage (50/60 Hz)    | 1500 V AC for 1–5 minutes                                         |
| Max. DC conductor resistance (20 °C) | 0.75 mm <sup>2</sup> : ≤ 25.3 Ω/km · 1.25 mm <sup>2</sup> : ≤ 15.0 Ω/km · 2.0 mm <sup>2</sup> : ≤ 9.42 Ω/km · 3.5 mm <sup>2</sup> : ≤ 5.30 Ω/km · 5.5 mm <sup>2</sup> : ≤ 3.40 Ω/km | Insulation resistance (20 °C) | ≥ 1000 MΩ·km (SCP) · ≥ 50 MΩ·km (SYP)                             |
| Max. conductor temperature           | +85 °C / +90 °C continuous (SCP EP-rubber) · +60 °C / +75 °C continuous (SYP vinyl)                                                                                                 | Short-circuit temperature     | +250 °C (SCP thermoset EPR) · +150 °C (SYP thermoplastic PVC)     |
| Ambient temperature range            | –25 °C to +80 °C (SCP) · –15 °C to +60 °C (SYP)                                                                                                                                     | Min. bending radius, fixed    | 4 × overall diameter                                              |
| Standard JIS cross-sections          | 0.75, 1.25, 2.0, 3.5 and 5.5 mm <sup>2</sup> (plus IEC 1.5, 2.5 and 4.0 mm <sup>2</sup> equivalents)                                                                                | Flame retardance              | JIS C 3005 / IEC 60332-1-2 self-extinguishing vertical flame test |
| Oil & humidity resistance            | Resistant to marine engine-room oil mist, condensation and salt-laden air                                                                                                           | Standards                     | JIS C 3410 (Japanese Industrial Standard for Shipboard Cables)    |
| Standard packing                     | Heat-treated ISPM-15 timber drums or spools with sealed ends                                                                                                                        |                               |                                                                   |

## Sizes

14 standard constructions

Tick the sizes you need and send this page to [info@tebaoflex.com](mailto:info@tebaoflex.com) or WhatsApp +86 185 9591 3361.

| Order designation                                                      | Cores × mm <sup>2</sup> / AWG | AWG ≈ | Outer Ø min<br>mm | Outer Ø max<br>mm | Copper<br>kg/km | Weight ≈<br>kg/km | Min. bend R<br>mm |
|------------------------------------------------------------------------|-------------------------------|-------|-------------------|-------------------|-----------------|-------------------|-------------------|
| SCP 250 V EP-Rubber Switchboard Wires (+85/+90 °C, JIS C 3410) 7 sizes |                               |       |                   |                   |                 |                   |                   |
| <input type="checkbox"/> SCP 250V 1×0.75                               | 1×0.75                        | 18    | 2.9               | 3.2               | 7               | 17                | 13                |
| <input type="checkbox"/> SCP 250V 1×1.25                               | 1×1.25                        | 16    | 3.3               | 3.6               | 12              | 23                | 14                |
| <input type="checkbox"/> SCP 250V 1×1.5                                | 1×1.5                         | 16    | 3.5               | 3.8               | 14              | 27                | 15                |
| <input type="checkbox"/> SCP 250V 1×2.0                                | 1×2.0                         | 14    | 3.8               | 4.1               | 19              | 33                | 16                |
| <input type="checkbox"/> SCP 250V 1×2.5                                | 1×2.5                         | 14    | 4.0               | 4.4               | 24              | 39                | 18                |
| <input type="checkbox"/> SCP 250V 1×3.5                                | 1×3.5                         | 12    | 4.5               | 4.9               | 33              | 52                | 20                |
| <input type="checkbox"/> SCP 250V 1×5.5                                | 1×5.5                         | 10    | 5.2               | 5.7               | 52              | 76                | 23                |
| SYP 250 V Flame-Retardant Vinyl Switchboard Wires (JIS C 3410) 7 sizes |                               |       |                   |                   |                 |                   |                   |
| <input type="checkbox"/> SYP 250V 1×0.75                               | 1×0.75                        | 18    | 2.5               | 2.7               | 7               | 13                | 11                |
| <input type="checkbox"/> SYP 250V 1×1.25                               | 1×1.25                        | 16    | 2.9               | 3.1               | 12              | 19                | 12                |
| <input type="checkbox"/> SYP 250V 1×1.5                                | 1×1.5                         | 16    | 3.0               | 3.3               | 14              | 22                | 13                |
| <input type="checkbox"/> SYP 250V 1×2.0                                | 1×2.0                         | 14    | 3.3               | 3.6               | 19              | 28                | 14                |
| <input type="checkbox"/> SYP 250V 1×2.5                                | 1×2.5                         | 14    | 3.6               | 3.9               | 24              | 34                | 16                |
| <input type="checkbox"/> SYP 250V 1×3.5                                | 1×3.5                         | 12    | 4.0               | 4.4               | 33              | 46                | 18                |
| <input type="checkbox"/> SYP 250V 1×5.5                                | 1×5.5                         | 10    | 4.8               | 5.2               | 52              | 69                | 21                |

– Dimensions and weights are typical values per JIS C 3410 (250 V Marine Switchboard Wire). Minimum fixed bending radius shown is 4 × OD.

## Electrical & current ratings

7 sizes

| Cross-section<br>mm <sup>2</sup> | AWG ≈ | Max. DC resistance<br>20 °C, Ω/km | Single wire in air<br>30 °C, A | Multi-core bundle<br>30 °C, A |
|----------------------------------|-------|-----------------------------------|--------------------------------|-------------------------------|
| 0.75                             | 18    | 26.7                              | 13                             | 10                            |
| 1.25                             | 16    | 16                                | 19                             | 14                            |
| 1.5                              | 16    | 13.7                              | 21                             | 16                            |
| 2                                | 14    | 10.2                              | 26                             | 20                            |

| Cross-section<br>mm <sup>2</sup> | AWG ≈ | Max. DC resistance<br>20 °C, Ω/km | Single wire in air<br>30 °C, A | Multi-core bundle<br>30 °C, A |
|----------------------------------|-------|-----------------------------------|--------------------------------|-------------------------------|
| 2.5                              | 14    | 8.21                              | 30                             | 22                            |
| 3.5                              | 12    | 5.3                               | 32                             | 25                            |
| 5.26                             | 10    | 3.88                              | 50                             | 36                            |

– Current ratings at 30 °C ambient in free air. Apply temperature and bundle grouping factors per applicable equipment standard.

## Standards and approvals

✓ JIS C 3410 (250 V Marine Switchboard Wire)

✓ CE · RoHS 2 (2011/65/EU) · REACH

## Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

## Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/jis-shipboard-equipment-wire



Typical values for this cable type, based on JIS C 3410 (250 V Marine Switchboard Wire). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.