CONTENTS

INTRODUCTION 3

CABLE TYPES 3

APPROVALS AND STANDARDS 4

TECHNICAL REFERENCES 5

WORKING ENVIRONMENTS 10

EQUIPMENT WIRES 11

CONTROL CABLES 12

POWER CABLES 13

COMMUNICATION CABLES 14

CABLE ASSEMBLIES 15
RS PRO offer you an extensive selection of cables, connectors and accessories for every wiring and connectivity application and environment. High quality, professionally approved products, and a wide choice make the RS PRO range the perfect solution for your every need.

**Cores**

*Single*, designed for the internal cabling of electrical and electronic equipment. Used also for wiring within machines and control panels.

*Multi*, designed for a variety of power and control applications including household appliances, tools and fixed installations.

**Conductors**

*Solid*, suited to permanent and semi-permanent wiring due to resistance to flexing when compared with stranded wire.

*Stranded*, best suited where frequent flexing or vibration is more likely to occur.

**Sheaths**

Several options to meet all applications requirements.

**PVC**
- Excellent insulating properties
- Stable, robust, very durable
- Cost effective choice

**Rubber**
- Ideal for outdoor and wet environments
- Withstands rough treatment
- Abrasion proof

**PTFE**
- Used in high temperature applications
- Unaffected by most oils or fuels
- Certain types suitable for temperatures to 400°C

**PE (HDPE/LDPE)**
- Used extensively in communication cabling
- Excellent UV resistance

**LSZH Low Smoke Zero Halogen**
- Preferred type for populated or enclosed areas
- Used in trains, aircraft and shipping applications
- Suitable in areas of poor ventilation

**EPR**
- Offers good weathering stability
- Heat resistant to 160°C
- Durable and long lasting

**PET**
- Moisture resistant and tough
- Good chemical resistance
- Excellent mechanical, electrical and thermal properties

**FEP**
- Good weather resistance
- Low flammability
- Good temperature stability
RS PRO cables offering is manufactured according to relevant national, international, and industry standards that a cable must meet, and complies with a number of legislative and regulatory requirements.

**APPROVALS AND STANDARDS**

- **BASEC:** The British Approvals Service for Cables in an independent testing and approvals body for cable and wire. BASEC certification ensures a product meets its claimed national and international standards.

- **UL:** A UL Listed cable or wire indicates that product samples have passed safety requirements set by the safety and certification company, Underwriters Laboratories. UL is an internationally recognised standard.

- **DEF STAN:** A cable marked as meeting a Defence Standard (DEF STAN) will be of a high grade and high specification for us by the MoD, specifically for aircraft and military applications.

- **Mil Spec:** A cable or wire which complies with Mil Spec (Military Specification) means it is approved for United States military use. Mil Spec can also apply to products other than cables, such as connectors.

- **RoHS:** The Restriction of Hazardous Substances Directive specifies maximum limits of certain hazardous substances in electrical and electronic products. Cable and wire is included in this.

- **REACH:** REACH is an acronym of Registration, Evaluation, Authorisation and Restriction of Chemicals. As a European regulation designed to protect human health from the risks posed by chemicals, REACH is applicable to cables and wires by the production and use of chemicals in the sheath and other parts.

**EUROCLASS - AN EXPLANATION**

- **CPR – The construction Products Regulation**

  What is CPR?

  The Construction Products Regulation (CPR) European legislation affecting products used in fixed installations in buildings and construction.

  - Is an assessment on how cables react in the event of fire. Provides a common language across Europe to aid purchasing decisions.
  - In effect for electrical cables since 1st July 2017.
  - Will continue to apply to the UK after 1st January 2021.
  - Importantly, CPR doesn’t override any other national or international standards or attempt to harmonise building codes. Each European country sets its own requirements over and above compliance.

  Since 1st July 2017 the CPR covers all construction cables to be used in fixed installations, sold in the EU.

  Effected products are tested, given a Euroclass rating in accordance with its ‘Reaction to fire’, a declaration of performance is issued (DOP) and a new CE mark is given on the packaging.

  Note: Fire resistant cables are excluded from CPR until the product standard for ‘Resistance to Fire’ is issued.

**UKCA**

Conformity Assessed (UKCA) marking is a certification mark that indicates conformity with the applicable requirements for products sold within Great Britain.

UKCA marking will only apply to products placed on the market in Great Britain. In Northern Ireland, CE marking will continue to be recognised.

**HARMONISED REFERENCES**

The Harmonised reference system, commonly known as HAR, indicates products which conform to a European Harmonisation Standard as set out by CENELEC, the leading European standardisation organisation. CENELEC is technologically neutral and aims to improve standards and quality across Europe, allowing the trade of common standard product.

HAR cables have a designation code system conforming to the norms set out in harmonisation documents HD 361 and DIN VDE 0292.

**TRIRATED**

The triple rating of

- BS6231 (UK)
- CSA TEW (Canada)
- UL style 1015, 1028 or 1283 (America)

makes it compatible across many markets, for applications including high voltage wiring within electrical cabinets, switchgear wiring, rectifier equipment and motor starter circuitry.
## AWG vs mm²

<table>
<thead>
<tr>
<th>AWG NUMBER</th>
<th>CABLE CROSS SECTION IN MM²</th>
<th>OUTER DIAMETER Ø MM</th>
<th>CONDUCTOR RESISTANCE IN OHM/KM</th>
<th>MAX CURRENT AMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 MCM</td>
<td>507</td>
<td>29.3</td>
<td>0.036</td>
<td>-</td>
</tr>
<tr>
<td>900</td>
<td>456</td>
<td>27.8</td>
<td>0.04</td>
<td>-</td>
</tr>
<tr>
<td>750</td>
<td>380</td>
<td>25.4</td>
<td>0.068</td>
<td>-</td>
</tr>
<tr>
<td>600</td>
<td>304</td>
<td>22.7</td>
<td>0.086</td>
<td>-</td>
</tr>
<tr>
<td>550</td>
<td>279</td>
<td>21.7</td>
<td>0.096</td>
<td>-</td>
</tr>
<tr>
<td>500</td>
<td>253</td>
<td>20.7</td>
<td>0.1</td>
<td>-</td>
</tr>
<tr>
<td>4/0</td>
<td>228</td>
<td>19.6</td>
<td>0.18</td>
<td>-</td>
</tr>
<tr>
<td>4/00</td>
<td>203</td>
<td>18.5</td>
<td>0.29</td>
<td>-</td>
</tr>
<tr>
<td>350</td>
<td>177</td>
<td>17.3</td>
<td>0.31</td>
<td>-</td>
</tr>
<tr>
<td>300</td>
<td>152</td>
<td>16</td>
<td>0.39</td>
<td>-</td>
</tr>
<tr>
<td>250</td>
<td>127</td>
<td>14.6</td>
<td>0.43</td>
<td>-</td>
</tr>
<tr>
<td>4/0</td>
<td>107.2</td>
<td>11.68</td>
<td>0.52</td>
<td>-</td>
</tr>
<tr>
<td>3/0</td>
<td>85</td>
<td>10.4</td>
<td>0.64</td>
<td>-</td>
</tr>
<tr>
<td>2/0</td>
<td>67.4</td>
<td>9.27</td>
<td>0.81</td>
<td>-</td>
</tr>
<tr>
<td>0</td>
<td>53.4</td>
<td>8.25</td>
<td>0.93</td>
<td>150</td>
</tr>
<tr>
<td>1</td>
<td>42.4</td>
<td>7.35</td>
<td>1.06</td>
<td>119</td>
</tr>
<tr>
<td>2</td>
<td>33.6</td>
<td>6.54</td>
<td>1.21</td>
<td>94</td>
</tr>
<tr>
<td>3</td>
<td>26.7</td>
<td>5.83</td>
<td>1.35</td>
<td>75</td>
</tr>
<tr>
<td>4</td>
<td>21.2</td>
<td>5.19</td>
<td>1.5</td>
<td>60</td>
</tr>
<tr>
<td>5</td>
<td>16.8</td>
<td>4.62</td>
<td>1.7</td>
<td>47</td>
</tr>
<tr>
<td>6</td>
<td>13.3</td>
<td>4.11</td>
<td>1.9</td>
<td>37</td>
</tr>
<tr>
<td>7</td>
<td>10.6</td>
<td>3.67</td>
<td>2.2</td>
<td>30</td>
</tr>
<tr>
<td>8</td>
<td>8.34</td>
<td>3.26</td>
<td>2.6</td>
<td>24</td>
</tr>
<tr>
<td>9</td>
<td>6.62</td>
<td>2.91</td>
<td>2.8</td>
<td>19</td>
</tr>
<tr>
<td>10</td>
<td>5.26</td>
<td>2.59</td>
<td>3.1</td>
<td>15</td>
</tr>
<tr>
<td>11</td>
<td>4.18</td>
<td>2.3</td>
<td>3.4</td>
<td>12</td>
</tr>
<tr>
<td>12</td>
<td>3.31</td>
<td>2.05</td>
<td>3.7</td>
<td>9.3</td>
</tr>
</tbody>
</table>

## AWG vs mm² Continued

<table>
<thead>
<tr>
<th>AWG NUMBER</th>
<th>CABLE CROSS SECTION IN MM²</th>
<th>OUTER DIAMETER Ø MM</th>
<th>CONDUCTOR RESISTANCE IN OHM/KM</th>
<th>MAX CURRENT AMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>2.63</td>
<td>1.63</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>14</td>
<td>2.08</td>
<td>1.63</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>15</td>
<td>1.65</td>
<td>1.45</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>16</td>
<td>1.31</td>
<td>1.29</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>17</td>
<td>1.04</td>
<td>1.15</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>18</td>
<td>0.823</td>
<td>1.024</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>19</td>
<td>0.653</td>
<td>0.912</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>20</td>
<td>0.519</td>
<td>0.812</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>21</td>
<td>0.412</td>
<td>0.723</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>22</td>
<td>0.324</td>
<td>0.644</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>23</td>
<td>0.259</td>
<td>0.573</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>24</td>
<td>0.205</td>
<td>0.511</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>25</td>
<td>0.163</td>
<td>0.455</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>26</td>
<td>0.128</td>
<td>0.405</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>27</td>
<td>0.102</td>
<td>0.361</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>28</td>
<td>0.0804</td>
<td>0.321</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>29</td>
<td>0.0646</td>
<td>0.286</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>30</td>
<td>0.0503</td>
<td>0.255</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>31</td>
<td>0.04</td>
<td>0.227</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>32</td>
<td>0.032</td>
<td>0.202</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>33</td>
<td>0.0262</td>
<td>0.18</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>34</td>
<td>0.02</td>
<td>0.16</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>35</td>
<td>0.0161</td>
<td>0.143</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>36</td>
<td>0.0123</td>
<td>0.127</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>37</td>
<td>0.01</td>
<td>0.113</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>38</td>
<td>0.00795</td>
<td>0.101</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>39</td>
<td>0.00632</td>
<td>0.0897</td>
<td>1.72</td>
<td>702</td>
</tr>
<tr>
<td>40</td>
<td>-</td>
<td>-</td>
<td>1.72</td>
<td>-</td>
</tr>
</tbody>
</table>
### EU & UK
IEC Color Code for most of the European Union (UK from 2004).

<table>
<thead>
<tr>
<th>Function</th>
<th>IEC Code for most of European Union</th>
<th>UK (New Code as per IEC)</th>
<th>UK (Old Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three Phase Line (L1)</td>
<td><img src="#" alt="Brown" /></td>
<td><img src="#" alt="Red" /></td>
<td></td>
</tr>
<tr>
<td>Three Phase Line (L2)</td>
<td><img src="#" alt="Black" /></td>
<td><img src="#" alt="Yellow" /></td>
<td></td>
</tr>
<tr>
<td>Three Phase Line (L3)</td>
<td><img src="#" alt="Grey" /></td>
<td><img src="#" alt="Blue" /></td>
<td></td>
</tr>
<tr>
<td>Neutral (N)</td>
<td><img src="#" alt="Blue" /></td>
<td><img src="#" alt="Black" /></td>
<td></td>
</tr>
<tr>
<td>Protective Earth or Ground (PE)</td>
<td><img src="#" alt="Green and Yellow" /></td>
<td><img src="#" alt="Green" /></td>
<td></td>
</tr>
<tr>
<td>Single Phase Line</td>
<td><img src="#" alt="Brown" /></td>
<td><img src="#" alt="Red" /></td>
<td></td>
</tr>
</tbody>
</table>

### US NEC
United States National Electrical Code.

<table>
<thead>
<tr>
<th>Function</th>
<th>Colour Code (for 120/208/240V)</th>
<th>Colour Code (for 277/480V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three Phase Line (L1)</td>
<td><img src="#" alt="Black" /></td>
<td><img src="#" alt="Brown" /></td>
</tr>
<tr>
<td>Three Phase Line (L2)</td>
<td><img src="#" alt="Red" /></td>
<td><img src="#" alt="Yellow" /></td>
</tr>
<tr>
<td>Three Phase Line (L3)</td>
<td><img src="#" alt="Blue" /></td>
<td><img src="#" alt="Grey" /></td>
</tr>
<tr>
<td>Neutral (N)</td>
<td><img src="#" alt="White" /></td>
<td><img src="#" alt="Grey" /></td>
</tr>
<tr>
<td>Protective Earth or Ground (PE)</td>
<td><img src="#" alt="Green" /></td>
<td><img src="#" alt="Green" /></td>
</tr>
<tr>
<td>Single Phase Line</td>
<td><img src="#" alt="Brown" /></td>
<td><img src="#" alt="Red" /></td>
</tr>
</tbody>
</table>
### Designation code cables according to VDE 0281/0282

<table>
<thead>
<tr>
<th>H</th>
<th>V</th>
<th>V</th>
<th>C4</th>
<th>F</th>
<th>4</th>
<th>G</th>
<th>0.75</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>-</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

#### 1. Relationship to Standards
- **H** Harmonised Type (HAR)
- **A** Authorised National Standards

#### 2. Nominal Voltage
- **01** 100V
- **03** 300/300V
- **06** 300/500V
- **07** 450/750V

#### 3. Insulating Materials
- **V** PVC
- **V2** PVC (90°C)
- **V3** PVC cold-resistant
- **V4** PVC cross-linked
- **V5** PVC oil-resistant
- **B** EPR-rubber (90°C)
- **G** EVA
- **E** PE
- **R** Natural or synthetic rubber
- **S** Silicon rubber
- **X** XLPE
- **Z** LSZH-compound

#### 4. Sheathing Materials
- **V** PVC
- **V2** PVC (90°C)
- **V3** PVC cold-resistant
- **V4** PVC cross-linked
- **V5** PVC oil-resistant
- **R** Natural or synthetic rubber
- **G** chloroprene rubber
- **N2** chloroprene rubber for welding cables
- **N4** chloroprene rubber heat-resistant
- **N8** chloroprene rubber (water-resistant)
- **J** glass fibre braid
- **T** textile braid
- **T6** textile over each core
- **Q** polyurethane (PUR)
- **Q4** polyamide
- **Z** LSZH-compound

#### 5. Special Constructions
- **C** concentric copper conductor
- **C4** copper braided screen
- **H** flat, divisible cords
- **H2** flat, non divisible cords
- **H6** flat, non divisible cords for elevators
- **H7** two-layer insulating jacket
- **H8** helical cord

#### 6. Conductor Form
- **U** round, solid
- **R** round, stranded
- **K** fine stranded
- **F** fine stranded (flexible cords)
- **H** fine stranded (highly flexible)
- **Y** tensile conductor
- **D** fine stranded for welding cables
- **E** fine stranded for welding cables (highly flexible)

#### 7. Number of Cores

#### 8. Protective Conductor
- **X** without green/yellow core
- **G** with green/yellow core

#### 9. Cross-sectional Size
### Designation code cables according to VDE 0250

<table>
<thead>
<tr>
<th>N</th>
<th>Y</th>
<th>MH</th>
<th>C</th>
<th>Y</th>
<th>J</th>
<th>4</th>
<th>0.75</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

#### 1. Relationship to Standards
- **N**: according to VDE
- **(N)/X**: with reference to VDE

#### 2. Insulating Materials
- **Y**: PVC
- **4Y**: polyamide
- **5Y**: PTFE (teflon)
- **6Y**: FEP (teflon)
- **9Y**: polypropylene
- **11Y**: polyurethane (PUR)
- **2X**: XLPE
- **G**: elastomer
- **2G**: silicon
- **3G**: EPR-rubber
- **4G**: EVA
- **5G**: polychloroprene
- **HX**: LSOH

#### 3. Cable Description
- **A**: single-core
- **D**: solid wire
- **AF**: single-core, fine stranded
- **F**: flexible wire for fittings
- **L**: fluorescent tube cable
- **LH**: connecting cable for light mechanical load
- **MH**: connecting cable for middle mechanical load
- **SH**: connecting cable for heavy mechanical load
- **SSH**: connecting cable for special mechanical load
- **SL**: control/welding cable
- **S**: control cable
- **LS**: light control cable
- **FL**: flat cable
- **SI**: silicon cable
- **Z**: twin cable
- **GL**: glass fibre
- **Li**: stranded wires acc. to VDE B12
- **LIF**: fine stranded wires acc. to VDE B12

#### 4. Special Constructions
- **T**: strength member
- **ö**: oil-resistant
- **u**: flame resistant
- **w**: heat/weather resistant
- **FE**: fire resistant
- **C**: screen
- **S**: steel wire armouring

#### 5. Sheathing Materials
- **P**: Polyurethan

#### 6. Protective Conductor
- **-J**: with green/yellow core
- **-O**: without green/yellow core

#### 7. Number of Cores

#### 8. Cross-sectional Size

---

**RS PRO Wiring and Connectivity Selection Guide**
Designation code cables according to VDE 0815-0816

1. Relationship to Standards
   - A: outdoor cable
   - G: mining cable
   - J: installation cable
   - L: equipment wire
   - S: switch cable
   - Li: equipment wire with fine stranded conductor

2. Additional specifications
   - B: lightning protection
   - J: Induction protection
   - E: Industry-electronics

3. Insulating Materials
   - Y: PVC
   - 5Y: PTFE (teflon)
   - 2Y: PE
   - 6Y: FEP (teflon)
   - 02Y: cell-PE
   - 02YS: foam-Skin
   - P: paper

4. Special Construction
   - F: petrol jelly filler
   - L: aluminium sheath
   - LD: corrugated Al.-sheath
   - (L): laminated aluminium sheath
   - (St): screen of plastic coated Al-foil
   - (K): copper tape screen
   - (Z): steel wire amouring
   - W: corrugated steel sheath
   - M: lead sheath
   - Ms: special lead sheath
   - b: amouring
   - e: jute jacket+ bituminous compound
   - E: compound with embedded tape

5. Sheathing Materials
   - see 3 Insulation materials

6. Number of Elements
   - 1: single core
   - 2: pair
   - 4: quart

7. Stranding Elements
   - F: star quad (railway)
   - St: star quad with phantom circuit (long distance)
   - St I: star quad (long distance)
   - St III: star quad (subscriber line)
   - TF: star quad for carrier frequency
   - PiMF: pair in metal foil
   - DIMF: triple in metal foil
   - ViMF: quad in metal foil

8. Cross-sectional Size
   - 1: single core
   - 2: pair
   - 4: quart

9. Type of Stranding
   - Lg: stranding in layer
   - Bd: stranding in unit

10. Stranding Layout
    - Lg: stranding in layer
    - Bd: stranding in unit
# What are they?

Hookup and equipment wires are insulated and flexible wiring with the sheathed cover of the wires generally made from PVC which ensure protection and insulation.

# What are they used for?

Hook up wires are primarily used for low voltage applications as for example in control panel wiring, plugs, socket, computers, meters, auto-motives, and other electronics.

<table>
<thead>
<tr>
<th>RANGE</th>
<th>SHEATH</th>
<th>AWG</th>
<th>OUTER DIAMETER</th>
<th>VOLTAGE RATING</th>
<th>COLOUR</th>
<th>REEL LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Standard</td>
<td>PVC</td>
<td>17 → 24</td>
<td>1.2 → 2.65mm</td>
<td>300 → 1000V</td>
<td>Black, Blue, Brown, Green, Grey, Orange, Pink, Red, Violet, White, Yellow, Green/Yellow, Yellow/Green</td>
<td>100m → 500m</td>
</tr>
<tr>
<td>Tinned Copper Wire</td>
<td>PVC</td>
<td>18 → 24</td>
<td>1.58 → 2.79mm</td>
<td>300 → 600V</td>
<td>Black, Blue, Green, Red, White</td>
<td>100m</td>
</tr>
<tr>
<td>DEF STAN</td>
<td>ETFE</td>
<td>12 → 24</td>
<td>1.15 → 2.99mm</td>
<td>600V</td>
<td>Black, White</td>
<td>100m</td>
</tr>
<tr>
<td>Harmonised</td>
<td>PVC</td>
<td>13 → 20</td>
<td>2.4 → 4.1mm</td>
<td>300 → 750V</td>
<td>Black, Blue, Brown, Grey, Red, White, Yellow, Green/Yellow</td>
<td>100m</td>
</tr>
<tr>
<td>UL Standard</td>
<td>PVC, PTFE, MPPE</td>
<td>12 → 28</td>
<td>0.9 → 4.2mm</td>
<td>150 → 600V</td>
<td>Black, Blue, Brown, Green, Grey, Orange, Purple, Red, White, Yellow</td>
<td>100m</td>
</tr>
<tr>
<td>Tri-Rated</td>
<td>PVC</td>
<td>4 → 22</td>
<td>2.6 → 10.6mm</td>
<td>600 → 1000V</td>
<td>Black, Blue, Brown, Dark Blue, Green, Green/Yellow, Grey, Light Blue, Mid-blue, Orange, Pink, Purple, Red, White, Yellow</td>
<td>100m</td>
</tr>
</tbody>
</table>

Go online for the full offer

### Related Products

- **CABLE MARKING**
- **CABLE TIES**
- **CIRCULAR CONNECTORS**
- **HEAT-SHRINK & COLD-SHRINK SLEEVES**
- **TERMINAL BLOCKS**
- **WIRE TERMINAL & SPLICES**
WIRING & CONNECTIVITY  CONTROL CABLES

What are they?
Control cables feature a multicore flex and tinned copper wire, with screened and shield version. Available in a wide range of core configurations and cross-sectional area sizes, with Harmonised colour code.

What are they used for?
**CY**: screened flexible control cables typically used in applications reliant on interference free transmission

**SY**: armoured flexible control cable designed for measuring control under tough mechanical stresses.

**YY**: highly flexible unshielded multicore power and control cables.

<table>
<thead>
<tr>
<th>RANGE</th>
<th>SHEATH</th>
<th>NO OF CORES</th>
<th>AWG</th>
<th>OUTER DIAMETER</th>
<th>VOLTAGE RATING</th>
<th>SCREEN/SHIELD</th>
<th>COLOUR</th>
<th>REEL LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>CY</td>
<td>PVC</td>
<td>2 → 18</td>
<td>13 → 26</td>
<td>4.1 → 15.6mm</td>
<td>300 → 500V</td>
<td>Braid, Tinned Copper Braid</td>
<td>Grey</td>
<td>50 → 100m</td>
</tr>
<tr>
<td>SY</td>
<td>PVC</td>
<td>2 → 25</td>
<td>9 → 18</td>
<td>7.3 → 19.7mm</td>
<td>300 → 500V</td>
<td>Braid, Galvanised Steel</td>
<td>Grey</td>
<td>50m</td>
</tr>
<tr>
<td>YY</td>
<td>PVC</td>
<td>2 → 15</td>
<td>9 → 24</td>
<td>3.7 → 20.8mm</td>
<td>300 → 500V</td>
<td>Galvanised Steel</td>
<td>Grey</td>
<td>25 → 100m</td>
</tr>
</tbody>
</table>

Go online for the full offer

Related Products
- CABLE GLANDS, STRAIN RELIEF & GROMMETS
- CABLE TIES
- CIRCULAR CONNECTORS
- HEAT-SHRINK & COLD-SHRINK SLEEVES
- TERMINAL BLOCKS
- WIRE TERMINAL & SPLICES
- ENCLOSURES
- CABLE, CONNECTOR & CRIMPING TOOLS
- TOOL KITS
- ELECTRICAL TEST EQUIPMENT
- DIGITAL MULTIMETERS
- WIRE STRIPPERS
WIRING & CONNECTIVITY  POWER CABLES

What are they?
Electrical and mains power cables are available with solid or stranded conductors with a varying number of cores, voltage and current ratings as well as various sheathing materials.

What are they used for?
Electrical and mains power cables are present in almost all applications. Used to connect mains sockets, lighting, switches and more, electrical cords are essential to build an electrical infrastructure in any building.

<table>
<thead>
<tr>
<th>RANGE</th>
<th>SHEATH</th>
<th>NO OF CORES</th>
<th>AWG</th>
<th>OUTER DIAMETER</th>
<th>VOLTAGE RATING</th>
<th>COLOUR</th>
<th>STANDARDS AVAILABLE</th>
<th>REEL LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mains Power</td>
<td>PVC, Rubber Silicone, TPE</td>
<td>1 → 7</td>
<td>9 → 20</td>
<td>3.2 → 19.1mm</td>
<td>300 → 1000V</td>
<td>Black, Blue, Brown, Green/Yellow, Grey, Orange, Red, Red/Brown, White, Yellow</td>
<td>EN 50525-2-11, EN 50525-2-21, H03VV-F, H03VVH2-F, H05RR-F, H05VV-F, H05Z1Z1-F, H07BN4-F, H07RN-F, H07V-K, H07ZZ-F</td>
<td>25 → 100m</td>
</tr>
<tr>
<td>Armoured Cables (SWA)</td>
<td>PVC+SWA (Steel Wire Armoured)</td>
<td>2 → 5</td>
<td>5 → 15</td>
<td>12.6 → 26.3mm</td>
<td>600 → 1000V</td>
<td>Black</td>
<td>BASEC</td>
<td>50m</td>
</tr>
<tr>
<td>Conduit &amp; Trunking Cables</td>
<td>LSZH, PVC</td>
<td>1</td>
<td>2 → 15</td>
<td>2.7 → 11.3mm</td>
<td>460 → 750V</td>
<td>Black, Blue, Brown, Green/Yellow, Grey, Orange, Purple, Red, White</td>
<td>H07V-R, H07V-U, H07Z-R, H07V-R, H07V-U, H07Z-R</td>
<td>50 → 100m</td>
</tr>
<tr>
<td>Multicore Industrial Cables</td>
<td>PE, PVC, XLPE</td>
<td>2 → 36</td>
<td>9 → 30</td>
<td>2.4 → 22.8mm</td>
<td>250 → 1000V</td>
<td>Black, Green Grey White</td>
<td>BASEC, Defence Standard 61-12 Part 4, Defence Standard 61-12 Part 5, Euroclass Eca</td>
<td>25 → 500m</td>
</tr>
</tbody>
</table>

Related Products

Go online for the full offer
WIRING & CONNECTIVITY COMMUNICATION CABLES

What are they?

Network cables are used to connect and transfer data and information between computers, routers, switches and storage area networks. From Cat5 to Cat8, from fibre optic to coaxial, these cables are essentially the carrier or media through which data flows.

What are they used for?

Network cables are used to connect various network hardware via Ethernet connection. Ethernet cables can be used either as patches for simply connecting a computer sharing a printer, or fixed industrial installation.

Twisted & Multipair Industrial Cable

<table>
<thead>
<tr>
<th>RANGE</th>
<th>SHEATH</th>
<th>NO OF CORES</th>
<th>AWG</th>
<th>OUTER DIAMETER</th>
<th>VOLTAGE RATING</th>
<th>COLOUR</th>
<th>STANDARDS AVAILABLE</th>
<th>REEL LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVC, LSZH (Shield: Foil, Tinned Copper Braid)</td>
<td>1 → 19 (pairs)</td>
<td>18 → 24</td>
<td>2.4 → 11.5mm</td>
<td>300 → 600V</td>
<td>Blue, Grey, White</td>
<td>CE, CSA Certified, CSA FT4, EN 2235, EN 2714-013, EU Low Voltage Directive 2006/95/EC, Euroclass Eca, FAR 25-869, RS 232, UL, UL 2919</td>
<td>50 → 500m</td>
<td></td>
</tr>
</tbody>
</table>

LAN Cables

<table>
<thead>
<tr>
<th>RANGE</th>
<th>SHEATH</th>
<th>CATEGORY</th>
<th>MAX BANDWIDTH</th>
<th>MAX TRANSMISSION SPEED AT 100M</th>
<th>SHIELD TYPE</th>
<th>COLOUR</th>
<th>CONNECTOR TYPE</th>
<th>REEL LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVC, LSZH, PE</td>
<td>Cat5, Cat5e, Cat6, Cat6a, Cat7, Cat7a, Cat8</td>
<td>250 → 2000MHz</td>
<td>10/100Mbps/100MHz (Cat5) 1Gbps/100MHz (Cat5a) 1Gbps/250MHz (Cat6) 10Gbps/500MHz (Cat6a) 10Gbps/600MHz (Cat7) 40Gbps/2000MHz (Cat8)</td>
<td>F/UTP, FTP, S/FTP, U/UTP, UTP</td>
<td>Black, Blue, Green, Grey, Orange, Purple, Red, White, Yellow</td>
<td>Unterminated, RJ45</td>
<td>1 → 500m</td>
<td></td>
</tr>
</tbody>
</table>

Coaxial Cables

<table>
<thead>
<tr>
<th>RANGE</th>
<th>CONDUCTOR TYPE</th>
<th>TERMINATION</th>
<th>COAX TYPE</th>
<th>OUTER DIAMETER</th>
<th>VOLTAGE RATING</th>
<th>COLOUR</th>
<th>IMPEDANCE</th>
<th>REEL LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid, Stranded</td>
<td>Terminated, Unterminated, BNC, SMA, SMB, NCX, N</td>
<td>CT, KX, RF, RG, RGW, Twin RG, URM</td>
<td>1.1 → 10.8mm</td>
<td>170 → 1000V</td>
<td>Black, Brown, Green, Grey, White</td>
<td>50 → 93Ω</td>
<td>1 → 500m</td>
<td></td>
</tr>
</tbody>
</table>

Related Products

Go online for the full offer
What are they?
Cable assemblies are cables that are terminated with connectors at either both ends or single end depending upon the application and they are ready to be installed simply plugging them in.

What are they used for?
Cable assemblies are widely used from building maintenance to industrial environment, from office to home. Cable assemblies deliver a fast and easy solution for electrical, power and communication applications.
RS PRO products are audited against demanding international standards, inspected for durability and consistency and tested by leading engineers.

Only when products have been through this process are they awarded our seal of approval, quality that can be trusted. Confidence in this process is reflected in our long product warranties, proof that our products will consistently deliver the quality you expect for a long time to come.