



CONTROL CABINET WIRING SELECTION GUIDE



Electrical control panel wiring should be organized well or it can be unsafe or even hazardous. It is important that wiring be held together neatly using cable ties to ensure that everything is in an organized and neat order. It is advisable for everything to be tightly connected and there should be a logical order for the wire connections.

This guide will give you an overview of the most popular RS PRO parts for professional wiring of a control cabinet. Starting from bootlace ferrules to the right stripping and crimping tools, to cable markers, ties, heatshrinks and insulation tapes. RS PRO offers the full range of professional parts which are all rigorously tested and certified in compliance with demanding international standards. If there's one thing we've learned at RS PRO in the last 80 years, it's that every part matters.

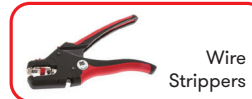
Overview of the most popular RS PRO product ranges for wiring of control cabinets.

Click on the boxes to see the full RS PRO offer online

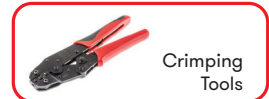
Tools



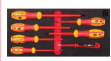
Cutters



Wire Strippers



Crimping Tools



Screwdrivers

Wallboxes & Accessories

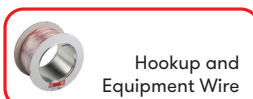


Wallboxes

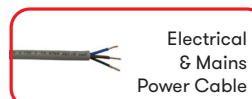


DIN Rails

Cables & Accessories



Hookup and Equipment Wire



Electrical & Mains Power Cable



Cable Ties



Cable Markers



Heat Shrinks



Cable Spiral Wrapping



Cable Glands



Electrical Tapes

Connectors



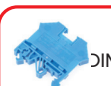
Heavy Duty Power Connectors



Bootlace Ferrules



Crimp Ring Terminals



DIN Rail Terminal Blocks



Crimp Tab Terminals

Test & Measurement



Clampmeters



Digital Multimeters

Please have a look at our most popular products for control cabinet wiring on the following pages.

These simple terminals are a great device for bare-end wire, eliminating the need to solder and enabling the user to insert the cable into terminal blocks and other similar terminations. The entry of the ferrule is tapered to funnel the wire strands into the pin and to protect cable from adjacent conductors. The strands of a wire are kept together in the ferrule and connecting screws of the terminal will not damage them. Long lasting contact forces are easier to achieve.

In most cases insulated bootlace ferrules are used. The insulation for these ferrules is typically made from coloured plastic. The RS PRO range is available according to the three most popular colour codes, German, French and DIN 46228.

When deciding what colour to use, the answer is determined by the wire gauge, for example : a 1mm² cable will use either a Red (French and DIN) or Yellow (German) colour.

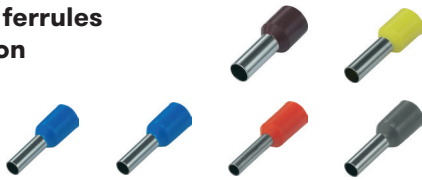
Which colour code to use is depending on the customer. Whoever controls the design can decide. If for instance the end country of use is France or Germany it's recommended to use the corresponding colours, otherwise customers are free to choose.

The below table show the most popular variants of RS PRO bootlace ferrules. You can find the full offer with many more size and packsize variants at RS Online.

Cross Section Area	DIN 46228	GERMAN	FRENCH
0,14 mm ²	grey	grey	brown
0,25 mm ²	yellow	light blue	violet
0,34 mm ²	turquoise	turquoise	pink
0,50 mm ²	white	red-orange	white
0,75 mm ²	grey	white	blue
1 mm ²	red	yellow	red
1,5 mm ²	black	red	black
2,5 mm ²	blue	blue	grey
4 mm ²	grey	grey	orange
6 mm ²	yellow	black	green
10 mm ²	red	ivory	brown
16 mm ²	blue	green	ivory
25 mm ²	yellow	brown	black
35 mm ²	red	beige	red
50 mm ²	blue	oliv green	blue
70 mm ²	yellow	yellow	yellow
95 mm ²	red	red	red
120 mm ²	blue	blue	blue
150 mm ²	yellow	yellow	yellow

Insulated bootlace ferrules with Nylon insulation

- In bags of 100



Insulation	No. of Entries	Colour	Maximum Wire Size	Pin Length	Pin Diameter	Country Colour Code	RS stock number
y	1	Light Blue	0.25mm ²	6mm	1.1mm	DE	178-7279
y	1	Violet	0.25mm ²	6mm	1.1mm	FR	178-7280
y	1	Yellow	0.25mm ²	6mm	1.1mm	DIN	178-7282
y	1	Pink	0.34mm ²	8mm	1.1mm	FR	157-1238
y	1	Turquoise	0.34mm ²	8mm	1.1mm	DE / DIN	157-1222
y	1	Orange	0.5mm ²	8mm	1.3mm	FR / DIN	458-746
y	1	White	0.5mm ²	8mm	1.3mm	DE	458-689
y	1	Blue	0.75mm ²	8mm	1.5mm	FR	178-7293
y	1	White	0.75mm ²	8mm	1.5mm	DE	458-752
y	1	Grey	0.75mm ²	10mm	1.5mm	DIN	178-7295
y	1	Red	1.0mm ²	8mm	1.7mm	FR / DIN	458-702
y	1	Yellow	1.0mm ²	8mm	1.7mm	DE	458-768
y	1	Black	1.5mm ²	10mm	2.0mm	FR / DIN	178-7309
y	1	Red	1.5mm ²	10mm	2.0mm	DE	178-7311
y	1	Blue	2.5mm ²	12mm	2.5mm	DE / DIN	178-7317
y	1	Grey	2.5mm ²	12mm	2.5mm	FR	178-7318
y	1	Grey	4.0mm ²	12mm	2.8mm	DE / DIN	157-1250
y	1	Orange	4.0mm ²	12mm	2.8mm	FR	458-730
y	1	Black	6.0mm ²	12mm	3.9mm	DE	157-1266
y	1	Green	6.0mm ²	12mm	3.9mm	FR	458-897
y	1	Yellow	6.0mm ²	12mm	3.9mm	DIN	513-2641
y	1	Brown	10mm ²	12mm	4.9mm	FR	157-1244
y	1	Ivory	10mm ²	12mm	4.9mm	DE	157-3931
y	1	Red	10mm ²	12mm	4.9mm	DIN	513-2657

Non-insulated bootlace ferrules

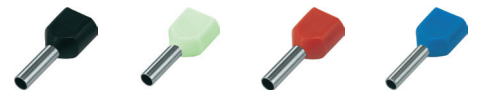
- In bags of 100



Insulation	No. of Entries	Colour	Maximum Wire Size	Pin Length	Pin Diameter	Country Colour Code	RS stock number
n	1	-	0.5 mm ²	8 mm	1.3 mm	-	211-4252
n	1	-	0.75 mm ²	8 mm	1.5 mm	-	211-4268
n	1	-	1 mm ²	8 mm	1.7 mm	-	211-4274
n	1	-	1.5 mm ²	10 mm	2 mm	-	211-4280
n	1	-	2.5 mm ²	10 mm	2.6 mm	-	211-4296
n	1	-	4 mm ²	12 mm	3.2 mm	-	211-4319
n	1	-	6 mm ²	12 mm	3.9 mm	-	211-4325

Double entry insulated bootlace ferrules with Nylon insulation

- In bags of 100



Insulation	No. of Entries	Colour	Maximum Wire Size 2x	Pin Length	Pin Diameter	Country Colour Code	RS stock number
y	2	White	0.5 mm ²	8 mm	1.5 mm	FR / DIN	311-7971
y	2	Grey	0.75 mm ²	8 mm	1.8 mm	DIN	184-9654
y	2	Red	1 mm ²	8 mm	2.4 mm	FR / DIN	184-9660
y	2	Black	1.5 mm ²	8 mm	2.3 mm	FR / DIN	184-9676
y	2	Blue	2.5 mm ²	8 mm	2.9 mm	DE / DIN	184-9682
y	2	Grey	4 mm ²	12 mm	3.1 mm	DE / DIN	311-7993
y	2	Yellow	6 mm ²	14 mm	4.9 mm	DIN	311-8003
y	2	Red	10 mm ²	14 mm	6.5 mm	DIN	311-8019*
y	2	Blue	16 mm ²	14 mm	8.7 mm	DIN	311-8025*

* in bags 50

Bootlace Ferrule Kits

A selection of our most popular kits with insulated bootlace ferrules.

Set Contains	Country Colour Code	Packsize	RS Stocknumber	Recommended Tool	
50 x 0.5mm ² (orange) 100 x 0.75mm ² (white) 100 x 1mm ² (yellow) 100x1.5mm ² (red) 50 x 2.5mm ² (blue)	DE Colour Coded	400	513-2562	399-2031	
50 x 0.5mm ² (white) 100 x 0.75mm ² (grey) 100 x 1mm ² (red) 100 x 1.5mm ² (black) 50 x 2.5mm ² (blue)	Mixed Colour Code	400	513-2540	399-2031	
50 x 4mm ² (grey) 10 x 6mm ² (yellow) 20 x 10mm ² (red) 10 x 16mm ² (blue)	Mixed Colour Code	90	513-2556	399-2031	
200 x 0.5mm ² (white) 200 x 0.75mm ² (blue) 200 x 1mm ² (red) 200 x 1.5mm ² (black) 100 x 2.5mm ² (grey) 50 x 4mm ² (orange) 30 x 6mm ² (green) 20 x 10mm ² (brown)	FR Colour Coded	1000	228-0321	399-2031	
50 x 4mm ² (grey) 10 x 6mm ² (black) 20 x 10mm ² (ivory) 10 x 16mm ² (green)	DE Colour Coded	90	513-2578	399-2031	
200 x 0.5mm ² (white) 200 x 0.75mm ² (blue) 200 x 1mm ² (red) 200 x 1.5mm ² (black) 100 x 2.5mm ² (grey) 50 x 4mm ² (orange) 30 x 6mm ² (green) 20 x 10mm ² (brown)	FR Colour Coded	1000	266-0288	includes plier crimp tool	

Crimping Pliers

A full range of professional crimping pliers to ensure a high quality connection - both electrically and mechanically - between the ferrule and the wire.

For wire size mm ²	Ratchet	Notes	RS stocknumber	
0.5 - 16 mm ²	no	square crimping profile	779-554	
0.25 - 16 mm ²	no	square crimping profile	136-6974	
0.5 - 16 mm ²	no	square crimping profile	464-482	
0.5 - 16mm ²	yes	square crimping profile	399-2031	
0.5 - 6 mm ²	yes	square crimping profile	683-1605	
10 - 25 mm ²	yes	square crimping profile	683-1614	
35 - 50 mm ²	yes	square crimping profile	683-1617	
0.14 - 10 mm ²	yes	square crimping profile	122-1790	
0.14 - 10 mm ²	yes	hexagon crimping profile	122-1791	

Harmonised

Compliant to European Harmonised Standards H05V-K and H07V-K, harmonised cables are colour-coded PVC sheathed cables with a single stranded untinned copper core.

Harmonised cable is widely used in lighting, wiring installation work within control and distribution panels, in conduits, channels, and buried in walls and plaster. First introduced in 2004, the harmonised colour code clearly differentiates between conductors in single and three phase circuits.



- Temperature Range: -15°C to 70°C
- Voltages: up to 500V AC (H05V-K) or 750V AC (H07V-K)
- Reels with 100m

Colour	H05V-K 0.5 mm ²	H05V-K 0.75 mm ²	H05V-K 1 mm ²	H07V-K 1.5 mm ²	H07V-K 2.5 mm ²
BROWN	361-591	361-664	361-737	361-800	544-1771
BLACK	361-579	361-642	361-715	361-787	361-850
BLUE	361-585	361-658	361-721	361-793	361-866
RED	361-614	361-686	361-759	361-822	544-1800
GREEN/YELLOW	361-608	361-670	361-743	361-816	544-1793

Tri-Rated

Tri-Rated cable is sought-after globally as the certification allows its use around the world. The triple rating of BS6231 (UK), CSA TEW (Canada) and UL style 1015, 1028 or 1283 (America) makes it acceptable across many markets, for applications including high voltage wiring within electrical cabinets, switchgear wiring, rectifier equipment and motor starter circuitry.



Tri-Rated is a flexible, single stranded cable with a high temperature rating and flame retardant PVC sheath. Various colours are available as recognised under the European Harmonised designation codes H05V2-K and H07V2-K.

- Operating Temperature: up to 90°C for continuous use
- Voltage up to: 600V AC
- Reels with 100m

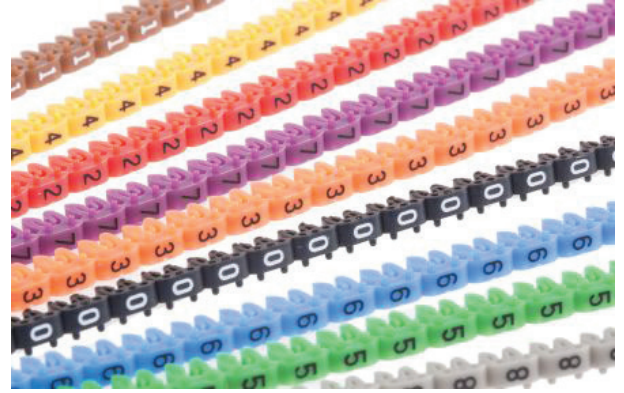
Colour	0.5 mm ²	0.75 mm ²	1 mm ²	1.5 mm ²	2.5 mm ²
BROWN	180-5909	180-5923	180-5933	180-5949	180-5962
BLACK	180-5910	180-5921	180-5936	180-5946	180-5956
BLUE	180-5911	180-5922	180-5941	180-5947	180-5959
RED	180-5914	180-5926	180-5938	180-5950	180-5960
GREEN/YELLOW	180-5919	180-5930	180-5934	180-5955	180-5965

Cable Markers

Material: UL approved Nylon 66, 94V-2

Colour: Yellow for letter markers. Black, Brown, Green, Grey, Orange, Red, Violet, White and Yellow for the number markers.

Packsizes differ per variant. Please visit RS Online to see full details



Length	Numbers 0-9	Letters A-M	Letters N-Z	Dimensions
Cable Markers for 0.5mm ²	812-1231	812-1240	812-1243	
Cable Markers for 0.5 to 1.5mm ²	812-1203	812-1212	812-1215	
Cable Markers for 1.5 to 2.5mm ²	812-1219	812-1221	812-1228	
Cable Markers for 4 to 6mm ²	812-1225	812-1234	812-1237	

Cable Ties

Colour: Black
 Material: Nylon 66 - UV resistant
 Type: Non-Releasable
 Packsize: 100



Length	Width	RS Stocknumber
100 mm	2.5 mm	811-1482
140 mm	3.2 mm	811-1486
190 mm	4.8 mm	811-1495
200 mm	4.6 mm	811-1498
240 mm	7.6 mm	811-1518
300 mm	7.6 mm	811-1511
380 mm	4.8 mm	811-1492
380 mm	7.6 mm	811-1509
450 mm	4.8 mm	811-1502
450 mm	8.0 mm	811-1515
610 mm	9.0 mm	811-1524
750 mm	7.5 mm	811-1527

PVC Insulation Tapes

- All colour variants have a width of 12mm and come on reels of 20m
- UV resistant
- Water resistant
- Flame retardant
- Self-extinguishing
- Breakdown Voltage: 8000V
- Compliant to EN 60454-3-1 Type 2



Colour	RS Stocknumber
Black	134-7321
Blue	134-7330
Green	134-7334
Green/Yellow	134-7325
Red	134-7327
White	134-7333
Yellow	134-7332

Mixed Heat-Shrink Kits

300 piece heat shrink tubing kit

- Mixed with different types of heat shrink tubing including harmonised colours.
- Contains 2:1 and 3:1 variants
- Sizes from 3 to 12.7mm
- Box can be stackable or wall mounted
- Refill packs available on RS Online

RS PRO recommends heat gun **124-5159**



RS Stocknumber: 487-3852

170 piece heat shrink tubing kit

- Mixed with different types of heat shrink tubing including harmonised colours.
- Contains 2:1 and 3:1 variants
- Sizes from 2.4 to 12.7mm
- Supplied in a useful compartmented storage box
- Refill packs available on RS Online

RS PRO recommends heat gun **124-5159**



RS Stocknumber: 397-679

Wire Strippers

Self-adjusting wire strippers



Stripping Range: 0.08 - 2.5mm²
RS Stocknumber: 382-2847



Stripping Range: 0.25 - 6.0mm²
RS Stocknumber: 763-9804

Insulated wire strippers



Stripping Range: 0.01 - 10mm²
RS Stocknumber: 125-3075

VDE Tool Kit

7 Piece Electricians Tool Kit

7 piece electrician's tool kit is designed for mobile and on-site technicians, to ensure there is always the right tool at hand to complete a variety of jobs.

- VDE 1000V Approved

Contents

- 2x Slotted Screwdrivers: 0.8 x 4 x 100 mm and 1 x 5.5 x 125 mm
- 1x Phillips Screwdriver: PH2 x 100 mm
- 1x Voltage Tester
- 200 mm Long Nose Pliers
- 160 mm Combination Pliers
- 160 mm Diagonal Cutters



RS Stocknumber: 473-350

36 Piece Electricians Tool Kit

RS PRO 36 piece electricians tool kit, offering a variety of hand tools to make a comprehensive kit ideal for professional users.

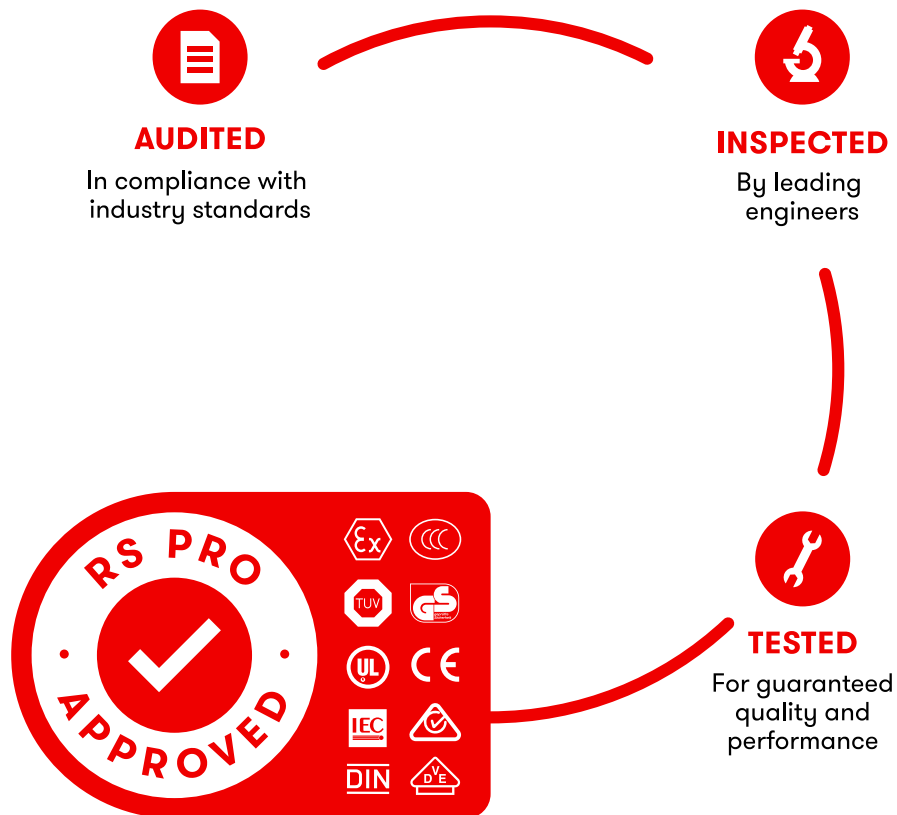
- VDE 1000V Approved

Contents

- Claw Hammer; 16 oz.
- Mini Hacksaw
- Compact Tape Measure; 3 x 16mm
- Torpedo Level
- Ratchet Bit Driver Set
- Rethreading Tool; M3.5
- Single-Pole Voltage Tester (Short)
- Non-Contact
- Insulated Pozidriv Screwdriver (VDE); PZ1 x 80mm, PZ2 x 100mm and
- Flat-Pozi 2 x 100mm
- Insulated Phillips Screwdriver (VDE); PH1 x 80 and PH2 x 100mm
- Insulated Slotted Screwdriver (VDE); 3.0 x 100mm, 4.0 x 100mm, 5.5 x 125mm and 6.5 x 150mm
- Automatic Wire Stripper
- Cable Stripper
- Insulated Combination Pliers (VDE); 180mm
- Insulated Diagonal Cutter (VDE); 160mm
- Insulated Long Nose Pliers (VDE); 200mm
- RZR Series Insulated Cable Shears (VDE); 170mm
- Electrician Knife (1000V)
- Insulated Water Pump Pliers (VDE); 250mm



RS Stocknumber: 136-3417



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.



rspro.com