ADS Electronics
Electronics design and consultancy
Specialising in sub-system design, Micropower systems,
Lithium Battery control and general services to the electronics industry.

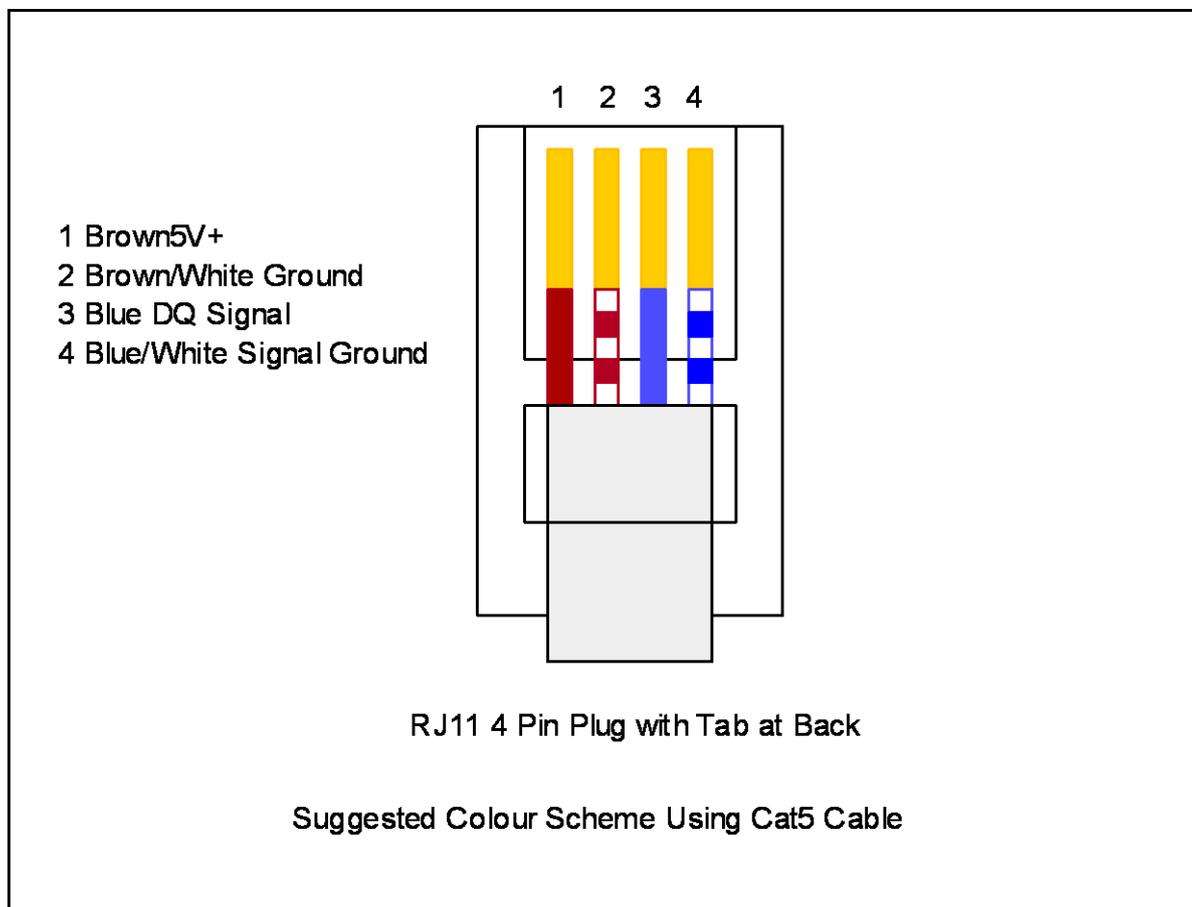## GET/Schneider Single Button style Switch-plates with Temperature Sensors

The switches and LED indicators if fitted are connected in the standard way using an RJ45 connector wired to the 568B standard.
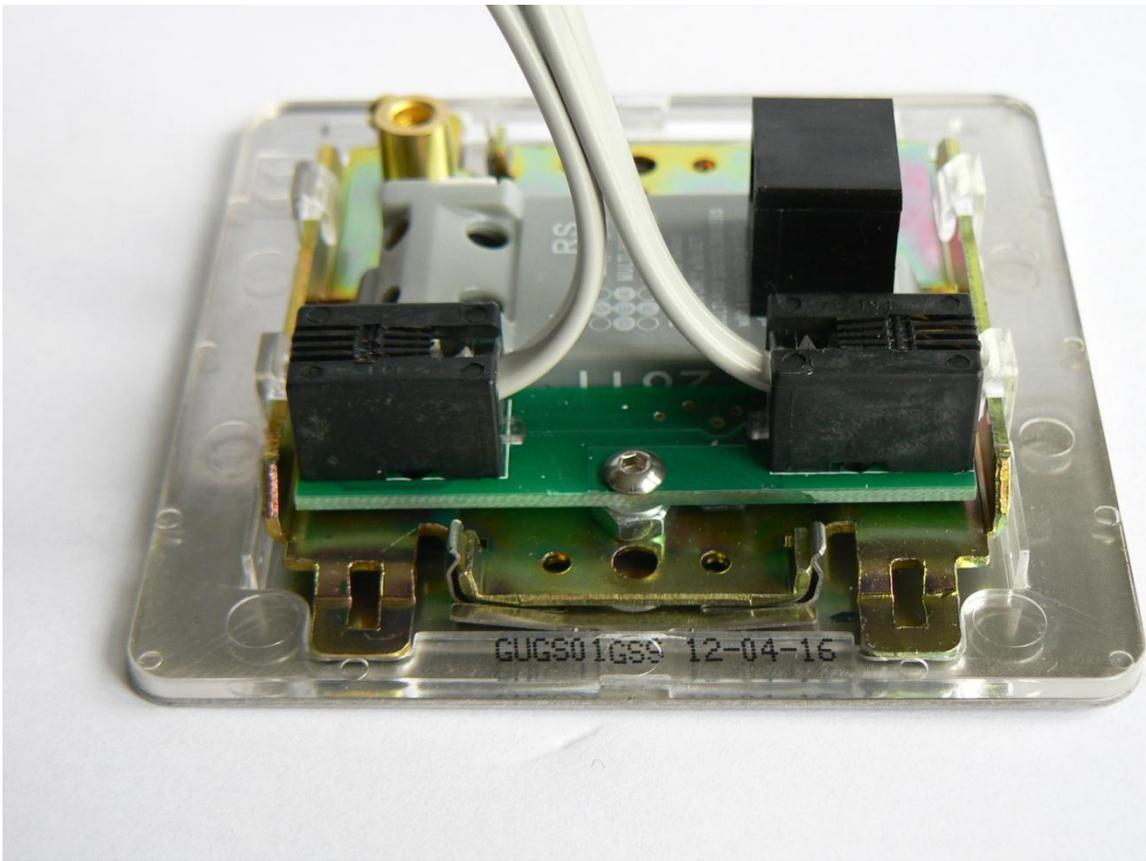
Due to constraints of space and the need to incorporate 2 sockets for ease of bussing the temperature sensor connections fitted are 2 off 4 pin RJ11 sockets for which a special crimp tool is required, this is available from Farnell and the part number is 134-6964. The mating plug required is 171-2384. The cable required for the temperature sensor is 2 twisted pairs of a Cat5 this can be successfully crimped into the above plug type. The other pairs can be cut short, see the illustration below. Since the cable grip in the plug only just contacts the insulation of the cores it is advisable to put some sleeving over the crimped cores to get a better grip

It is suggested that the wiring to the switch point on the wall is made so the temperature sensor cable is looped out far enough so that it can be cut and the two plugs crimped on to the two ends easily. There is no standard crimping order for RJ11 connectors in this application but providing they 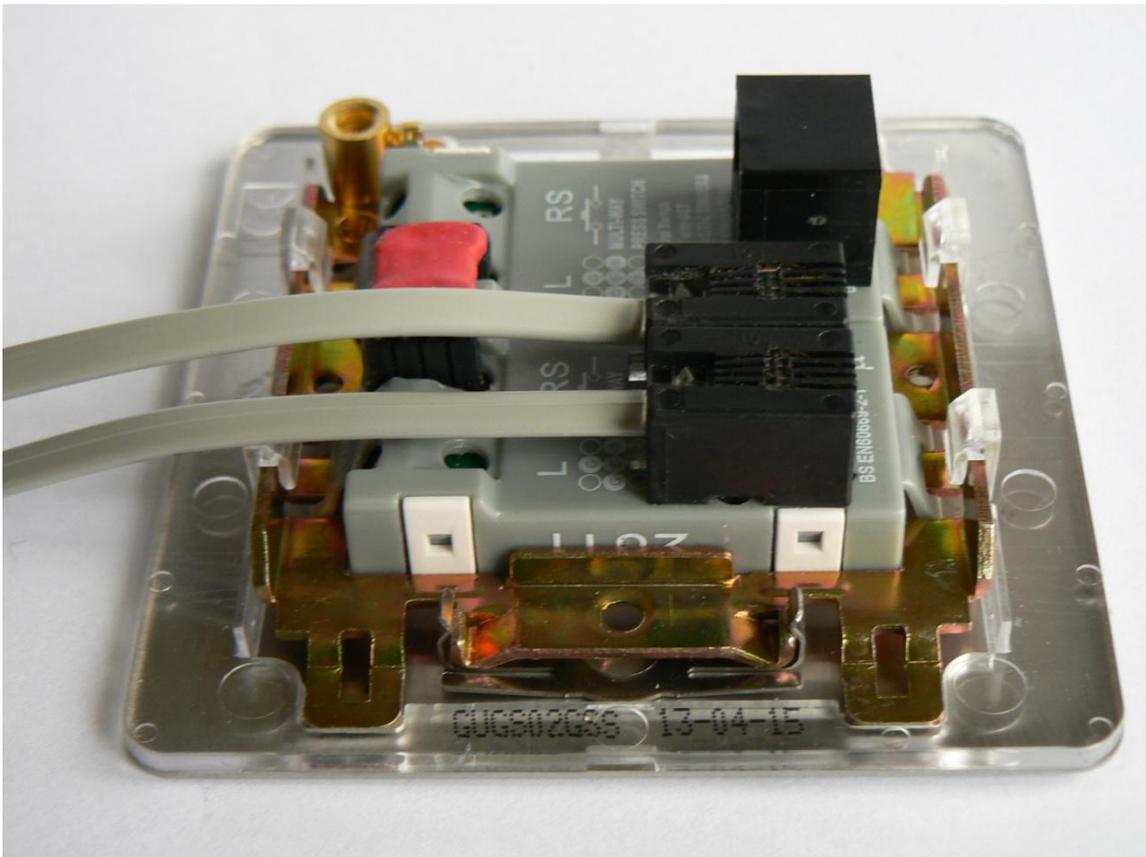are all identical the system will connect correctly. When reaching the end of the bus (the part furthest away from the miniserver), it is necessary to connect only one cable to a sensor socket on the switchplate, this should successfully terminate the bus. If however, problems occur with signal reflections it may be necessary to wire a 100Ω resistor between the signal connection and its ground by adding this to a connector in the second socket. The above mostly applies to sensors that are bussed (all connected along one cable). Star connection is also possible where each sensor has a separate connection back to the Loxone Miniserver.

Sensors fitted are the 12 bit version, DS18B20Z+ unless otherwise stated.

1 2 3 4

1 Brown 5V+
2 Brown/White Ground
3 Blue DQ Signal
4 Blue/White Signal Ground

RJ11 4 Pin Plug with Tab at Back

Suggested Colour Scheme Using Cat5 Cable

Single way switch plate showing temperature sensor connections made.

Two way switch plate showing temperature sensor connections made.