

Towbar electrics

Tow bar electrical sockets.

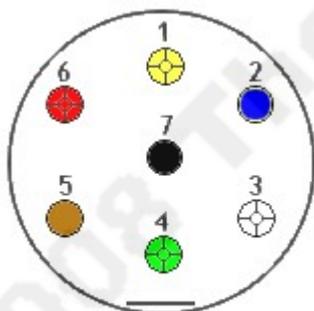
Cars which are fitted for towing caravans will also be fitted with at least one, if not two electrical connection sockets attached to or adjacent to the tow ball. Commonly known as 12N and 12S sockets. Power from the vehicles indicators, fog lights and sidelights is transferred to the caravan lights of the same type through the 12N socket, whereas the supplemental power required by the caravans reversing lights, battery charger and fridge are sourced through the 12S socket. If you are fitting your own 12S socket you need to remember to fit a split charge relay to your car as well, this ensures that power to these high drain devices on your caravan only flows when the ignition is turned on. Should you not fit a relay of this type to your car and take a break during a long tow, you are likely to find that your car battery will not have enough power to start the engine when you resume your journey.

There are some important differences in the 12N and 12 S socket wiring in caravans manufactured up to 1998 and after 1999. The 12N connection has larger cables to help reduce voltage drop, however the pin allocation is identical to that of 1998. The 12S cable sizes for 1999 models have been increased to reduce voltage drop and improve load capacity. The car charge line (blue cable) is now left unused, the caravan battery is now charged via the green cable whilst the car engine is running, when the car is not running the green cable reverts to providing a power supply from the car battery, this action is produced from a relay fitted in the caravan. Also the fridge negative has been separated to reduce the loading on the system which unfortunately may cause compatibility issues with some older cars.

The 12N socket.

The socket is coloured black and houses 7 pins which are are numbered 1 to 7 and need to be connected using the correct grade wiring as follows (1998 Pin Allocation):

1998 Pin Allocation

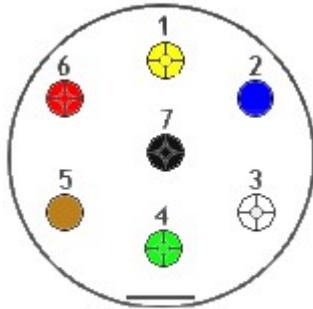


Pin	Cable Colour	Function
1.	Yellow	Left turn signal
2.	Blue	Fog light's
3.	White	Earth
4.	Green	Right turn signal
5.	Brown	Right hand side light
6.	Red	Brake lights
7.	Black	Left hand side light

The 12S socket

The socket is coloured grey and houses 7 pins which are are numbered 1 to 7 and need to be connected connected using the correct grade wiring as follows :

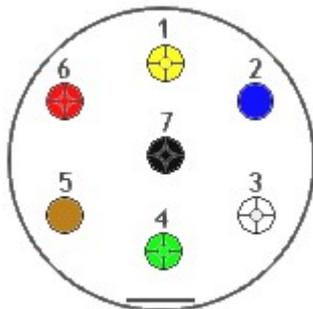
1998 Pin Allocation



1998 12S colour code

Pin	Cable Colour	Function
1.	Yellow	Reversing light
2.	Blue	Caravan Battery or charger
3.	White	Earth
4.	Green	Constant 12v feed
5.	Brown	Sensing device
6.	Red	Refrigerator
7.	Black	Spare

1999 Pin Allocation



1999 12S colour code

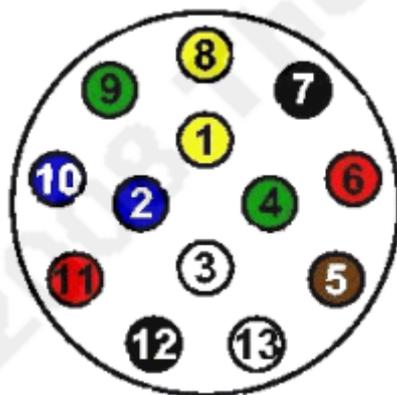
Pin	Cable Colour	Function
1.	Yellow	Reversing light
2.	Blue	Spare
3.	White	Negative for Lights & Charge
4.	Green	Interior Light & Charge
5.	Brown	Spare
6.	Red	Refrigerator
7.	Black	Negative for Fridge

Please note.

Make sure that when you wire the 12S socket you independently earth pins 3 & 7 to the car. (if you don't it could well cause a bit of overheating).

13 pin Euro-plug

Looking at rear of socket,
front of plug



13 pin Euro-Plug

Pin	Cable Colour	Function
1	Yellow	Left Indicator
2	Blue	Fog light
3	White	Earth (35amp)
4	Green	Right Indicator
5	Brown	Right Side Light
6	Red	Brake Lights
7	Black	Left Side Light
8	Yellow	Reversing Light
9	Green	Permanent live
10	Blue	Ignition live
11	Red	Earth (35amp)
12	Black	Coupled Trailers
13	White	Earth (35 amp)