

Q2 1- TO 6-POLE CONNECTORS

Normally used with a trailer where limited functionality (taillights, brake lights) is needed. Ideal for boat trailers, or RVs towing a car on a flatbed trailer. See also Section Q6 'RV & Automotive Connectors' for a different kind of connector. Diecast metal housings. Screw terminals accept up to 12AWG wire. Replaceable interiors.

Sockets

Brass split-pin contacts are aligned to assure proper contact and minimal voltage drop. Spring-loaded socket doors, plug locks securely into the opening. Wiring codes are identified on the insulator. Two mounting holes on the flange 17/64" (6.7mm) diameter, 2 15/16" (74.6mm) on centers. Mount through 1 3/8" (34.9mm) diameter hole.

1258 6-pole

Exposed terminal screws.



1268 6-pole, self-grounding

Same as 1258, but self-grounding and with recessed terminal screws.



1235 6-pole, protective housing ★

Same as 1258, but with special housing that protects terminals from road splash.



1232 4-pole, protective housing BP ★

With special housing that protects terminals from road splash.



1257 4-pole

Same as 1232, but with exposed terminal screws.

Plugs

Contacts float for best alignment and connection. Cable clamps hold all size cables firmly in place. Cable protectors (where present) are constructed from plated steel, and provide strain relief and protection against abrasion.

1236 6-pole ★



1254 6-pole, cable protector ★

Same as 1236, but with cable protector.



1233 4-pole BP ★



1253 4-pole, cable protector ★

Same as 1233, but with cable protector.



Cable

See Section Q6.

Interiors

See Section Q3.

CONTINUED **J2**

2-Pole Power Take-Off Connector

Provides a high-integrity two-circuit path for on- and off-road vehicles and in agricultural applications. Plug latches solidly with the socket cover. Suitable replacement for connectors in tarping applications. Vertically-aligned machined brass contacts, diecast zinc plug and socket housings, engineering-grade plastic. Terminations accept 6AWG wire. Polarized.

11041-06 socket



Gasket-sealed socket keeps out dirt and moisture when plug is not in use.

11042-05 plug



For use with 2-pole socket 11041-06. Durable, flexible spring coil protects the cable.

11250-01 plug and socket

Set of 11041-06 and 11042-05.

Photo: Roll-Rite LLC.



tarping apps

The two-pole power take-off is perfect for tarping applications... but it's also used in liftgate connections and to supply power to a broad range of auxiliary equipment that's part of the truck or utility vehicle. It also finds use in powering on-site equipment.

1-Pole Power Take-Off Connector

Provides power to auxiliary equipment. Accepts up to 0AWG cable. Diecast metal housings. Electrical conductors and connections are designed for maximum efficiency and long life.

11041 socket ★



Self-grounding. Solid brass 3/8" (9.5mm) diameter male contact, with insulated tip to prevent short circuits. Rubber boot protects the terminals and connections from moisture and dirt. Fits 2" (50.8mm) diameter hole. Two mounting holes on the flange 21/64" (8.6mm) diameter, 2 5/16" (74.6mm) on centers.

11042 plug ★



With ground return terminal. Brass female contact with spring grip tension provides solid engagement with the mating socket. Cable clamp holds cable firmly in place.

External Ground/Universal Line Connector

Provides an external ground where grounding cannot be obtained through the vehicle frame. Can be used in conjunction with 11041 and other primary electrical take-off units.

11157 socket



Brass contacts and terminals. Accepts up to 6AWG cable. Corrosion-resistant plated steel housing. Stainless steel spring on the cover locks the plug in place, closes securely to protect the contacts. Rubber boot protects terminals and cable connection. Integral mounting bracket has two .218" (5.6mm) diameter mounting holes, 1.25" (31.8mm) on centers.

11156 plug



Plated brass housing. Threaded cable grip prevents loosening of cable.

★ Rapid ship item. BP Available in retail clamshell pack. ★ Minimum order quantity may apply.

Wiring colors

Colors are not universal, so it's wise to check proprietary instructions, and to make an electrical test.

The following colors are very commonly used.

4-pole

- Green - Right turn and brake lights
- Yellow - Left turn and brake lights
- Brown - Taillights and clearance lights
- White - Ground

5-pole

In addition to the above.
Red - Backup lights

6-pole

Typical coding convention for 6-pole circuits

Wire Color	Conductor Number	Cole Hersee Terminal Marking	Function
White	1	GD	Ground return to towing vehicle
Brown	2	TM	Clearance, side marker, and identification lamps
Yellow	3	LT	Left turn signal and hazard lamps
Red	4	S	Stop lamps and antilock device
Green	5	RT	Right turn signal and hazard lamps
Black or Blue	6	A	Continuous ABS power/Auxiliary

Tail lamp load goes with marker circuit 2.

7-pole

- Brown - Right turn and brake lights
- Red - Left turn and brake lights
- Green - Taillights and clearance lights
- Yellow - Auxiliary
- White - Ground
- Blue - Electric trailer brakes
- Black - Auxiliary Power/Battery Charge

SAE coding convention for 7-pole connectors

Wire Color	Conductor Number	Cole Hersee Terminal Marking	Function
White	1	W	Ground return to towing vehicle
Black	2	BK	Clearance, side marker, and identification lamps
Yellow	3	Y	Left turn signal and hazard lamps
Red	4	R	Stop lamps and ABS device
Green	5	G	Right turn signal and hazard lamps
Brown	6	BR	Tail and license plate lamps
Blue	7	BL	Continuous ABS power/Auxiliary

AWG conversion

American Wire Gauge (AWG) is a US standard set of non-ferrous wire conductor sizes. Non-ferrous usually implies copper, but it includes aluminum and other metals and alloys.

The "gauge" refers to the diameter. Typical household wiring is AWG number 12 or 14. Telephone wire is much thinner at 22, 24, or 26. The higher the gauge number, the smaller the diameter and the thinner the wire and the less current it will safely carry. Thicker wire carries more current because it has less electrical resistance over a given length. Thus larger wire is used with high currents and when the voltage drop along its length must be minimized. For example: High output alternator wiring might be 2 AWG and the starter cable for a mid-sized engine 1 or 0 AWG.

The metric equivalent is simply the diameter expressed in millimeters, and thus can be easily measured with calipers.

AWG	mm	AWG	mm	AWG	mm
26	0.128	16	1.308	6	13.292
25	0.162	15	1.652	5	16.755
24	0.205	14	2.088	4	21.137
23	0.255	13	2.629	3	26.653
22	0.322	12	3.302	2	33.606
21	0.411	11	4.156	1	42.384
20	0.516	10	6.271	0	53.454
19	0.653	9	6.626	00	67.399
18	0.823	8	8.350	000	84.004
17	1.039	7	10.544	0000	104.091



trailer tail light converter

Electronic unit permits a towing vehicle with two lighting circuits for each side to operate lights on a trailer with a single circuit each side. Eliminates the need to rewire the trailer or to add additional lights. US laws require stoplights, turn signals and tail lights on trailers. See Section K4.

Inline trailer connectors

12400, 12401, 12500, 12501

Not supplied with wire, but the terminals are identified by numbers.

7-pole connectors

Accept wire up to 14AWG

1. Left turn signal
2. Accessory
3. Ground
4. Right turn signal
5. Accessory
6. Brake lights
7. Rear, clearance and side marker lights

12-pole connectors

Pins 1-7 accept wire up to 14AWG, pins 8-12 up to 8AWG.

1. Left turn signal
2. Accessory
3. Ground
4. Right turn signal
5. Accessory
6. Brake lights
7. Rear, clearance and side marker lights
8. Accessory
9. Accessory
10. Ground
11. Accessory
12. Accessory

13-pole connectors

Pins 1-7 accept wire up to 14AWG, pins 8-13 up to 8AWG.

Pins 1-7 as for 7-pole connector, pins 8-13 auxiliary.

Best practice for assembly of plugs and sockets

Properly installed tractor-trailer connectors are critical to the safe performance of a rig, which are routinely subjected to vibration, extreme weather conditions, as well as mechanical forces.

We highly recommend that a trained technician performs the installation. It is the responsibility of the end-user to take into account the mounting location and environment, conductor type, size, flexibility and other installation parameters.

Review the assembly procedure before assembly. A common error is to not slide a clamp, boot or housing onto the cable before connecting the wires. Recommended tools: screwdriver (preferably with torque limiter); soldering iron (preferably a solder pot), solder and flux; wire stripper and cutter; and ruler.

Cut the cable, and strip the jacket to the recommended length.

Strip the wires to the recommended length, and tin them. Maintain a tight strand bundle before tinning, so that there are no loose strands. Re-tin if necessary. This makes it easier to insert the wires into the terminal, and helps to properly position the tinned strands at the right depth.

Slide the housing, spring coil or boot over the cable.

Properly insert and position the tinned conductor into each terminal. Locate the tinned portion under the terminal screw before tightening the screw. Tighten the termination screws to the appropriate torques.

Inspect the terminated connection for cut or loose strands, fragments of wire insulation between the terminal/conductor connection, bent terminals, loose or stripped terminal screws and other visible problems.

Check that the correct connections have been made, by re-checking that the conductor jacket color matches the insulator coding.

Carefully slide the insulator into the connector housing, making sure that the insulator is fully seated. Don't twist or lever the terminated conductor after it has been inserted and locked into the insulator. This may damage the terminal and put stress on the terminated connection.

Finally tighten the housing screw or cable clamp.

In order to keep a plug clean when not inserted in a socket, we recommend the use of the 11750 Stor-A-Way Plug Holder – see Section Q6.