



Circuit Diagram Glossary Scrambler 1200 X

This document is protected by copyright and may not, in whole or part be stored in a retrieval system, or transmitted in any form or by any means, copied, photocopied, translated or reduced to any machine-readable form without prior consent in writing from Triumph Motorcycles Limited.

No liability can be accepted for any inaccuracies or omissions in this publication, although every possible care has been taken to make it as complete and accurate as possible.

Triumph Motorcycles Limited reserves the right to make changes and alter specifications without prior notice and without incurring an obligation to make such changes to products manufactured previously. See your authorised Triumph dealer for the latest information on product improvements incorporated after this publication.

All information contained in this publication is based on the latest product information available at the time of publication. Illustrations in this publication are intended for reference use only and may not depict actual model component parts.

© Triumph Motorcycles Ltd. 12.2023 Issue 1

This page intentionally left blank

TABLE OF CONTENTS

Glossary of Circuit Diagram Symbols	1
Main Wiring Harness Electrical Connectors	2

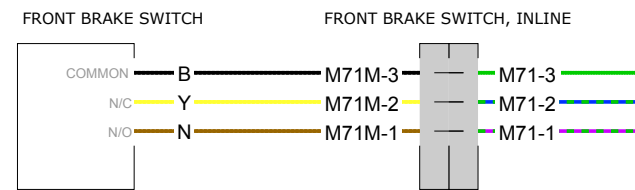
GLOSSARY OF CIRCUIT DIAGRAM SYMBOLS

The following is a description of the symbols and information found in the circuit diagrams for this model.

Note:

- Wire colours and connector pin references shown in the illustrations below are examples and may differ from those contained in circuit diagrams for this model.

Components with a Fly lead and an In-line Connector



The illustration shows an example of a component with a fly lead and an in-line connector.

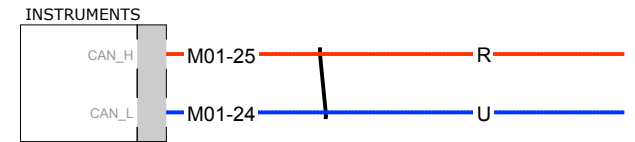
The component is represented by a white box, with fly lead wires leading to an in-line connector (shaded grey). Information provided with the component includes:

- The component name - located above the component.
- A function reference for each terminal - located inside the component, adjacent to the connecting wire (provided in English only).
- Wire colour references - located on each wire.
- An in-line connector name - located above the in-line connector.
- A component and pin number reference - located on each wire entering the in-line connector.

In the above example, the component and pin number references can be interpreted as follows:

M71	Component reference for the front brake switch
M	Identifies the mating connector (component side only)
-	Separator
1, 2, 3	Connector pin number reference

Components with an Integral Connector



The illustration shows an example of a component with an integral connector.

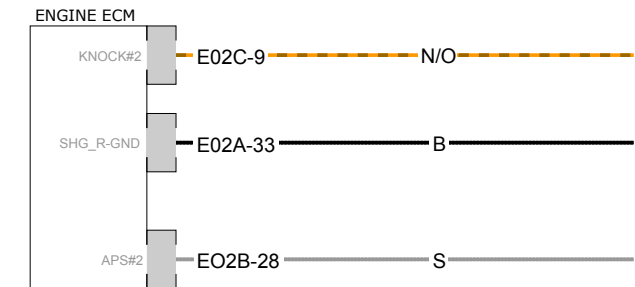
The component is identified by a white box, with a grey shaded area representing the integral connector. Information provided with the component includes:

- The component name - located above the component.
- A function reference for each terminal - located inside the component, adjacent to the connecting wire (provided in English only).
- Wire colour references - located on each wire.
- A component and pin number reference - located on each wire entering the integral connector.

In the above example, the component and pin number references can be interpreted as follows:

M01	Component reference for the instruments
-	Separator
24, 25	Connector pin number reference

Components with Multiple Integral Connectors



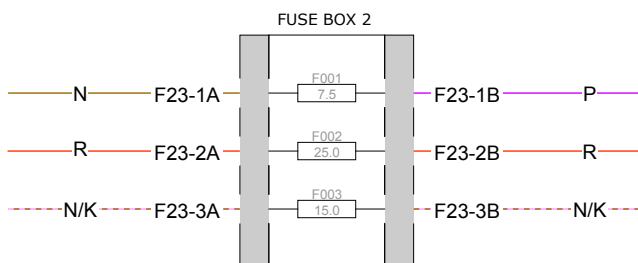
The illustration shows an example of a component with multiple integral connectors.

The multiple integral connectors can be identified by separated grey shaded areas (as shown), or by a grey shaded area that is divided into multiple sections by black line(s).

The above example shows an engine ECM with three integral connectors, connectors A, B and C. The component, connector and pin number references can be interpreted as follows:

E02	Component reference for the engine ECM
A, B, C	Connector reference
-	Separator
9, 28, 33	Connector pin number reference

Fuse Boxes



The illustration shows an example of a fuse box.

A fuse is a device which protects a circuit in the event of a fault. The fuse will 'blow' should a short circuit occur, protecting that circuit from further damage.

Information provided with the fuse box includes:

- The fuse box name - located above the fuse box.
- A fuse number/location reference for each fuse - located above the fuse.
- A fuse rating (in Amps) for each fuse - located inside the fuse.
- A fuse box, terminal number and terminal block reference - located on each wire entering the fuse box.

In the above example, the fuse box, terminal number and terminal block references can be interpreted as follows:

F	Reference code for a fuse box
2	Denotes the type of fuse box: 1 = Fuse box 1 (Main fuse) 2 = Fuse box 2 (Individual circuit protection)

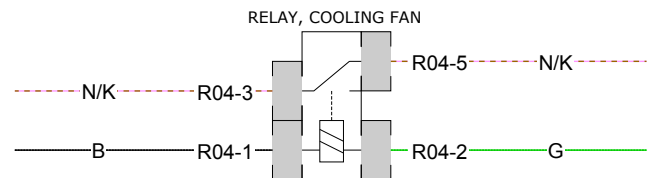
3	Indicates the number of fuses contained in the fuse box
-	Separator
1, 2, 3	Connector terminal number reference
A or B	Terminal block reference A (power in) or B (power out)

Relays

A relay is effectively an electromagnetic switch. To close the relay contacts and complete the circuit, an electromagnet in the relay is energised which causes the relay contacts to close, making the circuit complete.

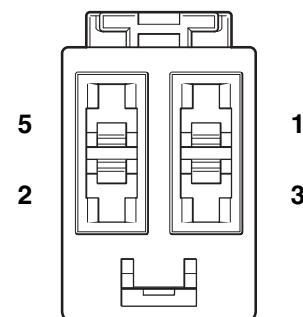
Relays are used when the electrical current is too great for a mechanical switch, usually when the switching must be done quickly to prevent arcing across the switch contacts. If a mechanical switch were used, the mechanical switch contacts would quickly burn away.

Relays Connected with a Single Socket Connector



The illustration above shows an example of a relay connected to the wiring harness with a single socket relay connector.

A pin diagram of a typical single socket relay connector is shown below.



Glossary Of Circuit Diagram Symbols

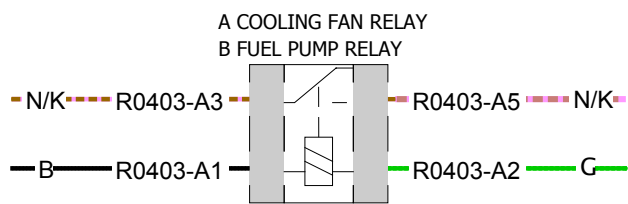
Information provided on the circuit diagram for relays with a single socket harness connector includes:

- The relay name - located above the relay.
- A relay and terminal number reference - located on each wire entering the relay connector terminals.

In the above example, the relay and terminal number reference can be interpreted as follows:

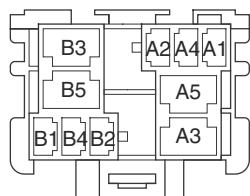
R	Indicates the component is a relay
04	Reference number for the relay (cooling fan relay in the example shown)
-	Separator
1, 2, 3, 5	Connector terminal number reference

Relays connected with a Dual Socket Connector



The illustration above shows an example of a relay connected to the wiring harness with a dual socket relay connector.

A dual socket relay connector provides sockets for two individual relays, socket A and socket B. A pin diagram of a typical dual socket relay connector is shown below.



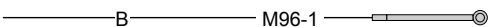
Information provided on the circuit diagram for relays with a dual socket harness connector includes:

- The names of the relays connected to sockets A and B - located above the relay.
- A dual relay and terminal number reference - located on each wire entering the relay connector terminals.

In the above example, the relay and terminal number reference can be interpreted as follows:

R	Indicates the component is a relay
04	Reference number for the relay connected to socket A (cooling fan relay in the example shown)
03	Reference number for the relay connected to socket B (fuel pump relay in the example shown)
-	Separator
A or B	Socket reference (socket A or socket B) In the example above, all references show socket A. This indicates that the component shown is the cooling fan relay.
1, 2, 3, 5	Connector terminal number reference for the socket/relay identified

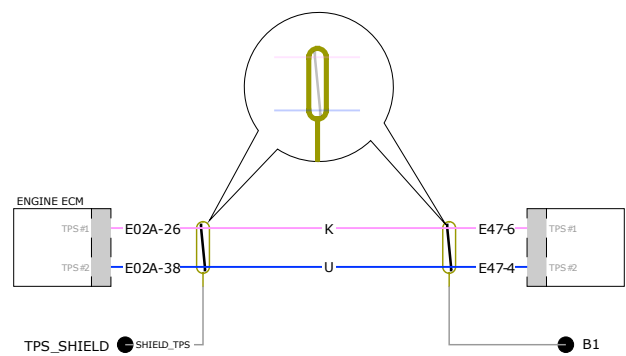
Ring Terminals



The illustration shows the symbol used to identify a ring terminal (commonly used as ground points).

A ring terminal reference is provided on the wire entering the terminal.

Shielded Wires



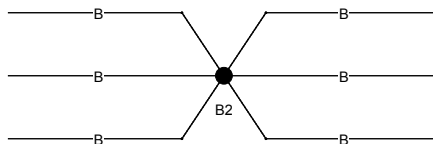
The illustration shows the symbol used to identify wires that are shielded against electromagnetic interference.

Examples of components that have shielded wires include:

- ABS wheel speed sensors
- Immobiliser antenna
- Throttle position sensor
- USB socket

The wire shielding is typically connected to ground.

Splices

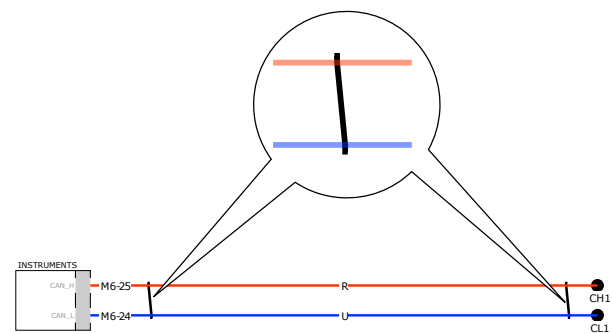


The illustration shows an example of a splice.

A splice is a hard cable joint where two or more cables are joined in the wiring harness. A splice is a potential source of both open and short circuits.

A splice reference code is provided at the nearest convenient location to the splice symbol.

Twisted Wires



The illustration shows the symbol used to indicate a pair of wires that are twisted together, such as CAN circuit wires.

Starter Motor Grounding

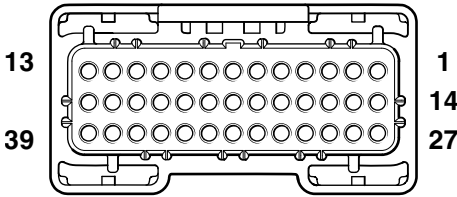
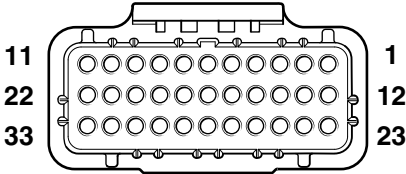
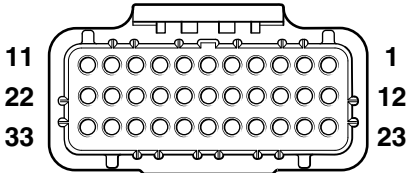
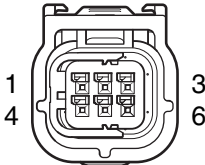
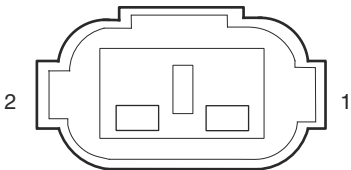
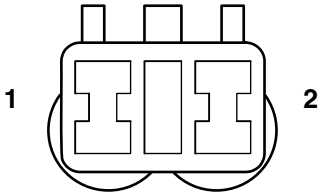
Starter motors fitted to Triumph motorcycles are connected to ground through the mating faces of the starter motor body and the crankcase.

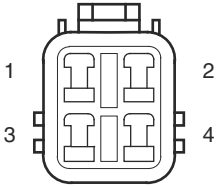
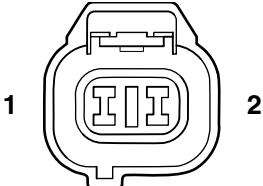
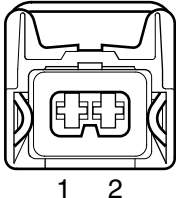
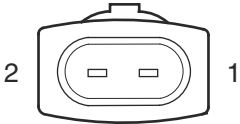
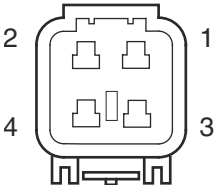
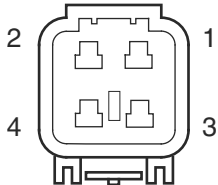
Key To Wiring Colour Codes

Code	Wiring Colour
B	Black
U	Blue
N	Brown
G	Green
S	Slate/Grey
O	Orange
K	Pink
R	Red
P	Purple
W	White
Y	Yellow
LG	Light Green
LU	Light Blue

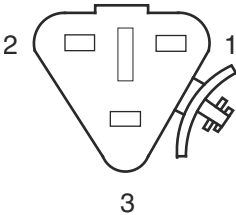
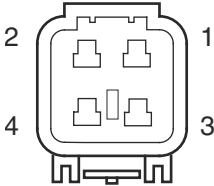
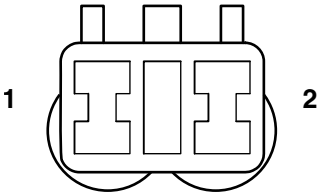
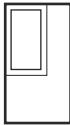

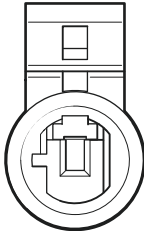
MAIN WIRING HARNESS ELECTRICAL CONNECTORS

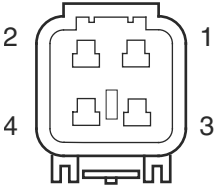
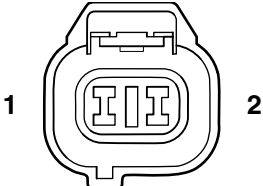
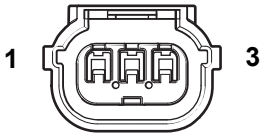
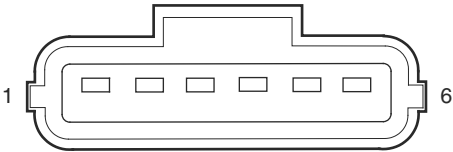
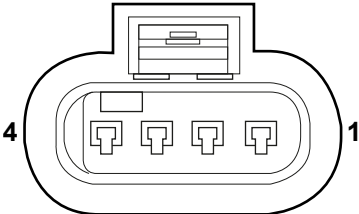
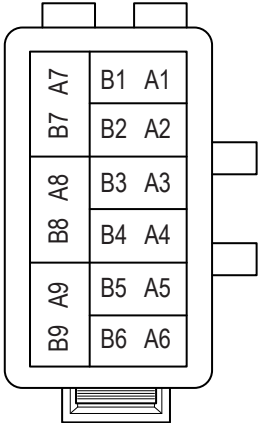
The table below shows the connector pin diagrams for each electrical connector on the main wiring harness for this model.

	
E02A - Engine ECM connector A	E02B - Engine ECM connector B
	
E02C - Engine ECM connector C	E04 - Diagnostic connector
	
E05 - Crankshaft position sensor	E06 - Fuel pump

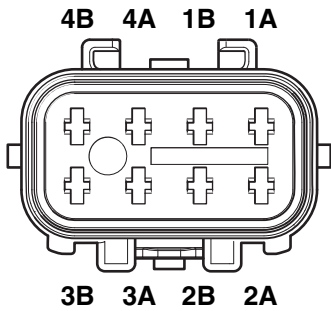
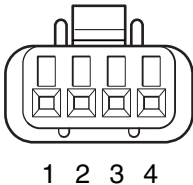
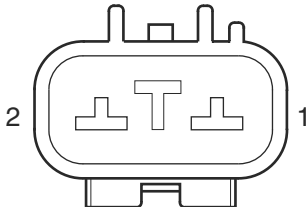
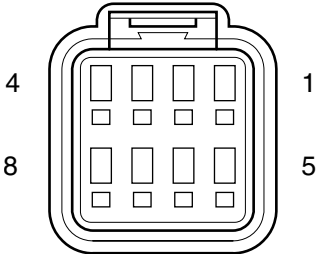
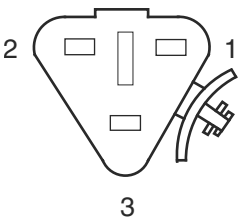
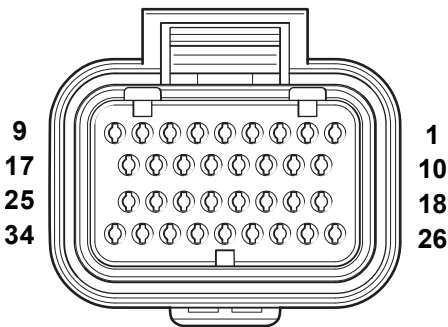
	
E07 - Fuel level sensor	E09 - Purge valve
	
E10 - Coolant temperature sensor	E11 - Fuel injector 1 E12 - Fuel injector 2
	
E15 - Gear position sensor	E16 - Oxygen sensor, bank 1 sensor 1

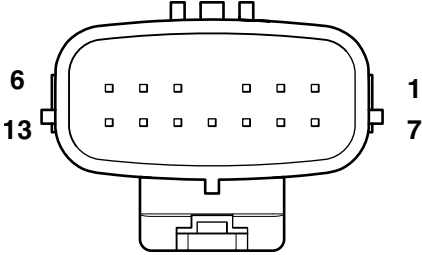
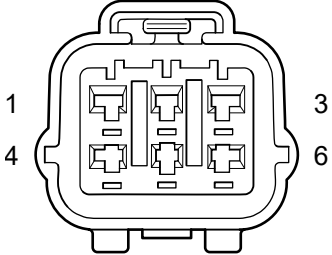

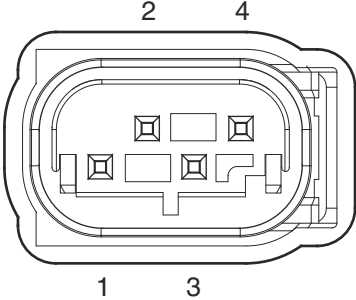
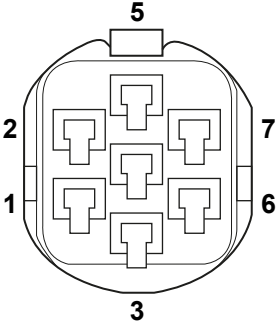
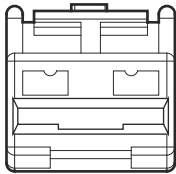
Main Wiring Harness Electrical Connectors

	
E17 - Side stand switch	E18 - Oxygen sensor, bank 2 sensor 1
	
E19 - Cooling fan 1	E21A - Ignition coil 1 connector A E21B - Ignition coil 1 connector B
	
E22A - Ignition coil 2 connector A E22B - Ignition coil 2 connector B	E25 - Oil pressure sensor

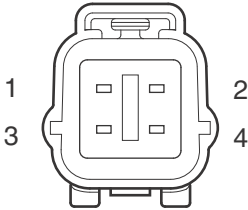
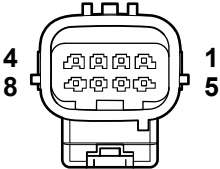

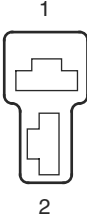
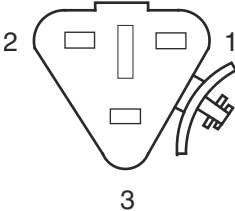
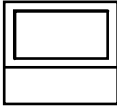
	
E26 - Secondary oxygen sensor 1	E37 - Secondary air injection
	
E39 - Ambient air pressure sensor	E47 - Throttle body
	
E53 - Temperature and manifold absolute pressure sensor	F19 - Fuse box 1

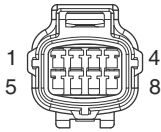
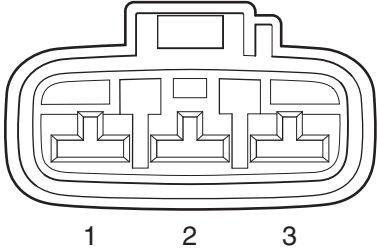
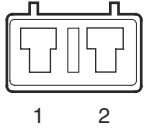
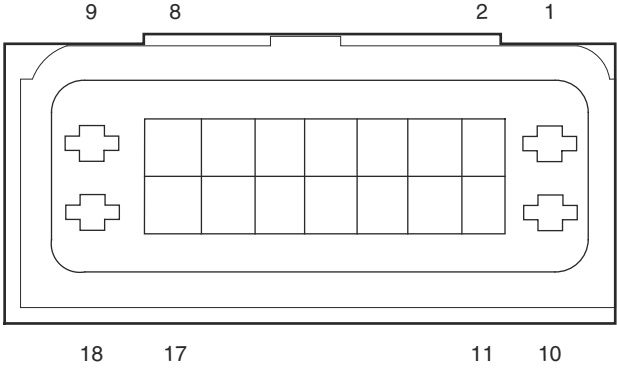
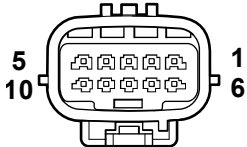
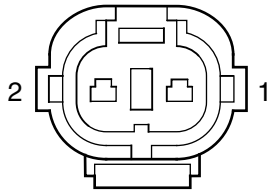
Main Wiring Harness Electrical Connectors

	
F24 - Fuse box 2	H01 - Fog light subharness
	
H02 - Battery subharness	H03 - Rear light subharness
	
H04 - Heated grips subharness	M01 - Instruments

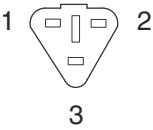
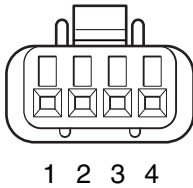
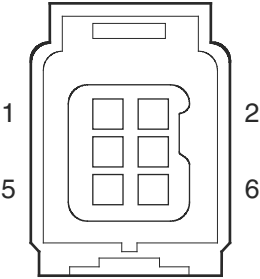

	
M02A - Left handlebar switch housing connector (13 pin)	M02B - Left handlebar switch housing connector (6 pin)
	
M04A - Front left direction indicator connector A M04B - Front left direction indicator connector B	M06 - Inertial measurement unit
	
M07 - Headlight	M11A - Horn connector A M11B - Horn connector B

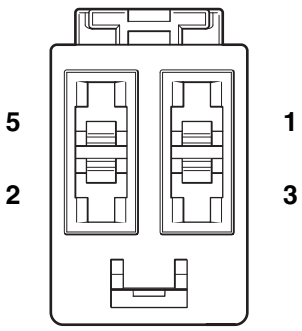
Main Wiring Harness Electrical Connectors

 <p>A square-shaped connector with four terminals labeled 1, 2, 3, and 4. Terminal 1 is at the top left, 2 at the top right, 3 at the bottom left, and 4 at the bottom right.</p>	 <p>A rectangular connector with two rows of terminals. The top row has four terminals labeled 4, 8, 1, and 5 from left to right. The bottom row has four terminals labeled 4, 8, 1, and 5 from left to right.</p>
M13 - Ignition switch	M14 - Right handlebar switch housing connector
 <p>A circular connector with a central pin and a surrounding ring.</p>	 <p>A T-shaped connector with a single terminal labeled 1 at the top and a single terminal labeled 2 at the bottom.</p>
M19A - Front right direction indicator connector A M19B - Front right direction indicator connector B	M21 - Accessory socket, live
 <p>A triangular connector with three terminals labeled 1, 2, and 3. Terminal 1 is at the top right, 2 at the top left, and 3 at the bottom center.</p>	 <p>A rectangular connector with two terminals labeled 1 and 2. Terminal 1 is at the top and terminal 2 is at the bottom.</p>
M26 - Rear brake switch	M28A - Starter solenoid connector A M28B - Starter solenoid connector B

 <p>A circular connector with 8 pins. The pins are numbered 1, 4, 5, and 8 around the perimeter.</p>	 <p>A rectangular connector with 3 pins. The pins are numbered 1, 2, and 3 from left to right.</p>
M36 - Alarm	M48A - Regulator rectifier connector A
 <p>A small rectangular connector with 2 pins. The pins are numbered 1 and 2 from left to right.</p>	 <p>A large rectangular connector with 18 pins. The pins are numbered 9, 8, 2, 1, 18, 17, 11, and 10 around the perimeter.</p>
M57 - Front ABS wheel speed sensor M58 - Rear ABS wheel speed sensor	M59 - ABS modulator
 <p>A circular connector with 10 pins. The pins are numbered 5, 10, 1, and 6 around the perimeter.</p>	 <p>A circular connector with 2 pins. The pins are numbered 2 and 1 from left to right.</p>
M68 - Immobiliser/TPMS ECM	M70 - USB socket

Main Wiring Harness Electrical Connectors

	
M71 - Front brake switch	M72 - Bluetooth module
	
M73 - Twist grip position sensor	M81 - Right hand fog light M81 - Left hand fog light

 <p>The diagram shows a top-down view of a rectangular electrical connector. It has two main vertical columns of terminals. The left column has three terminals, with the top one labeled '5' and the bottom one labeled '2'. The right column has three terminals, with the top one labeled '1' and the bottom one labeled '3'. At the bottom center, there is a single terminal. Above the main body of the connector, there is a separate component with two pins.</p>	
<p>R03 - Fuel pump relay R04 - Cooling fan relay R05 - Horn relay R06 - Dip beam relay R07 - Engine management system relay R09 - Starter motor relay R12 - Main beam relay</p>	