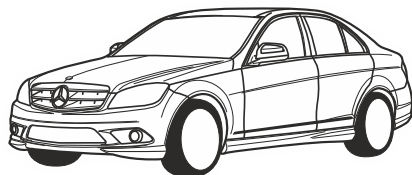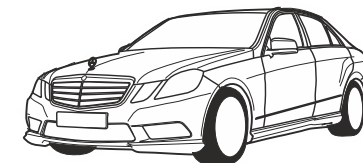# Ryder Towing Equipment Ltd

Vehicle-Specific Towing Electrical Kits
TF2352MERC

Mercedes Benz C Class 2000>2007 / 2007>2014 (203,204)
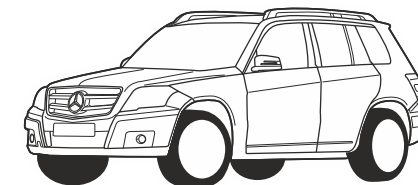
Mercedes Benz E Class 2002>2009 / 2009>2016 (211,212)

Mercedes Benz GLK 2002>2009 (209)

Caravan Auxiliary (12S) function is built in

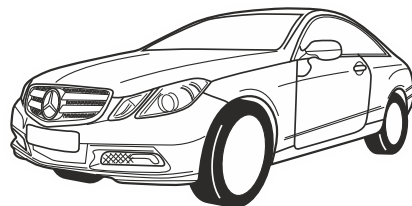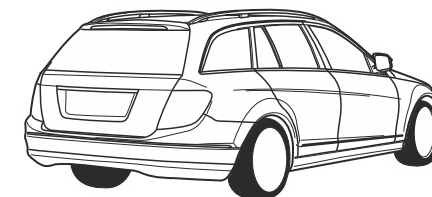**Installation is simple and quick - no need to "take the vehicle apart".**

High-quality connections throughout are easy and uncomplicated
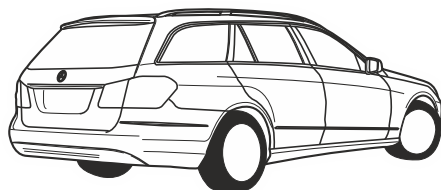
Contents

Fully compatible with vehicle management systems to activate all vehicle safety features
Type approved and built to OEM standards
Instructions are easy to follow

Ryder Towing

Quality – Service – Innovation
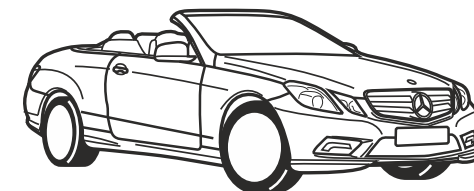
Cable routing, CAN & power connections for Mercedes C Class Limo and Estate (203, 204)
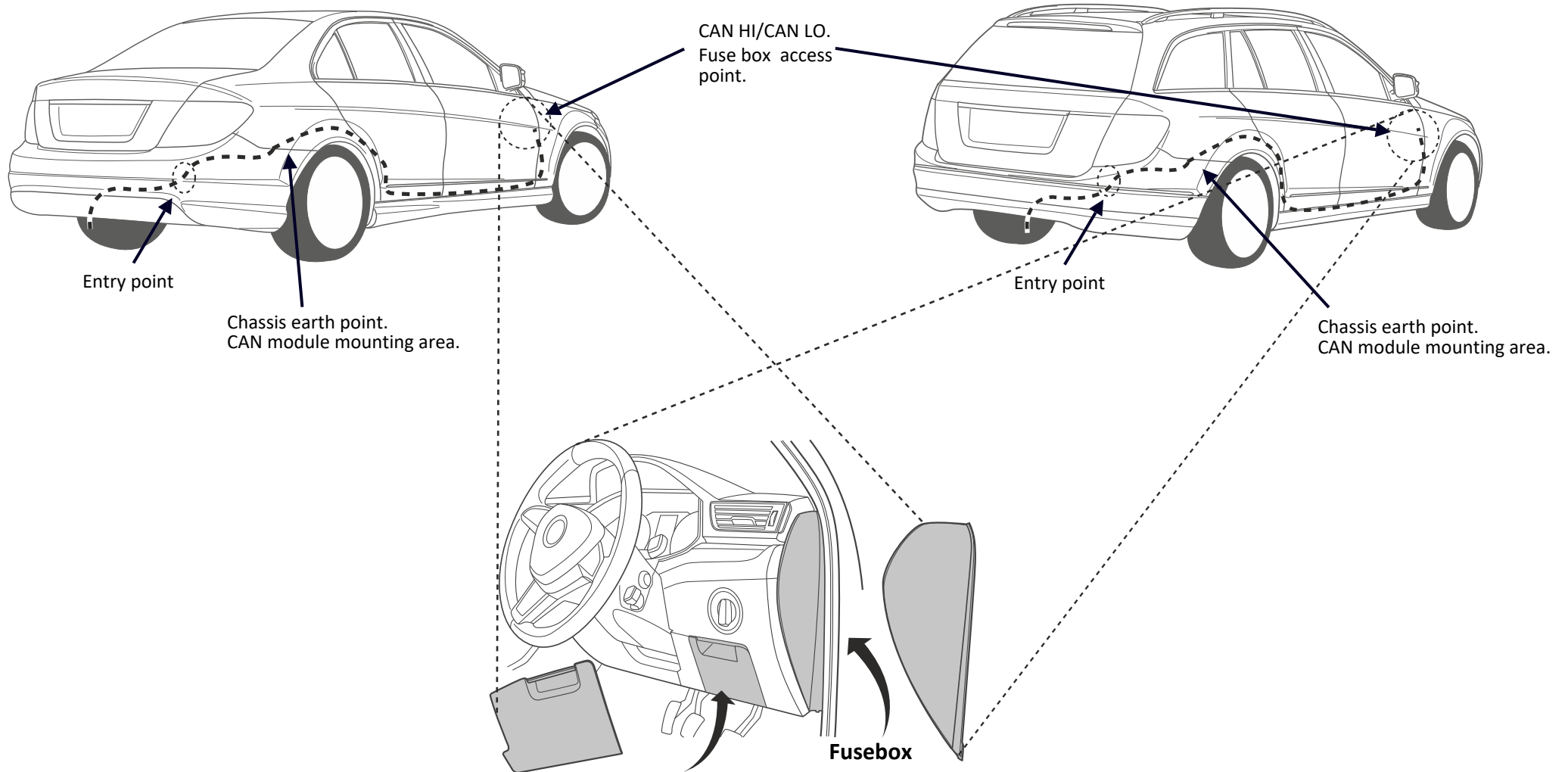
CAN HI/CAN LO.
Fuse box access point.

Entry point

Chassis earth point.
CAN module mounting area.

Entry point

Chassis earth point.
CAN module mounting area.

Fusebox

**Access to CAN wires.
CAN wires may be more easy to
find inside the steering column.**

CAN-HI   **Orange/green**
CAN-LOW   **Orange/brown**

**Fit the SmartCAN module in a
suitable spot in the boot**

Cable routing, CAN & power connections for Mercedes E Class Limo, Coupe and Estate (211, 212)

Entry point

Chassis earth point.
CAN module mounting area.

CAN HI/CAN LO.
Fuse box access
point.

Entry point

Chassis earth point.
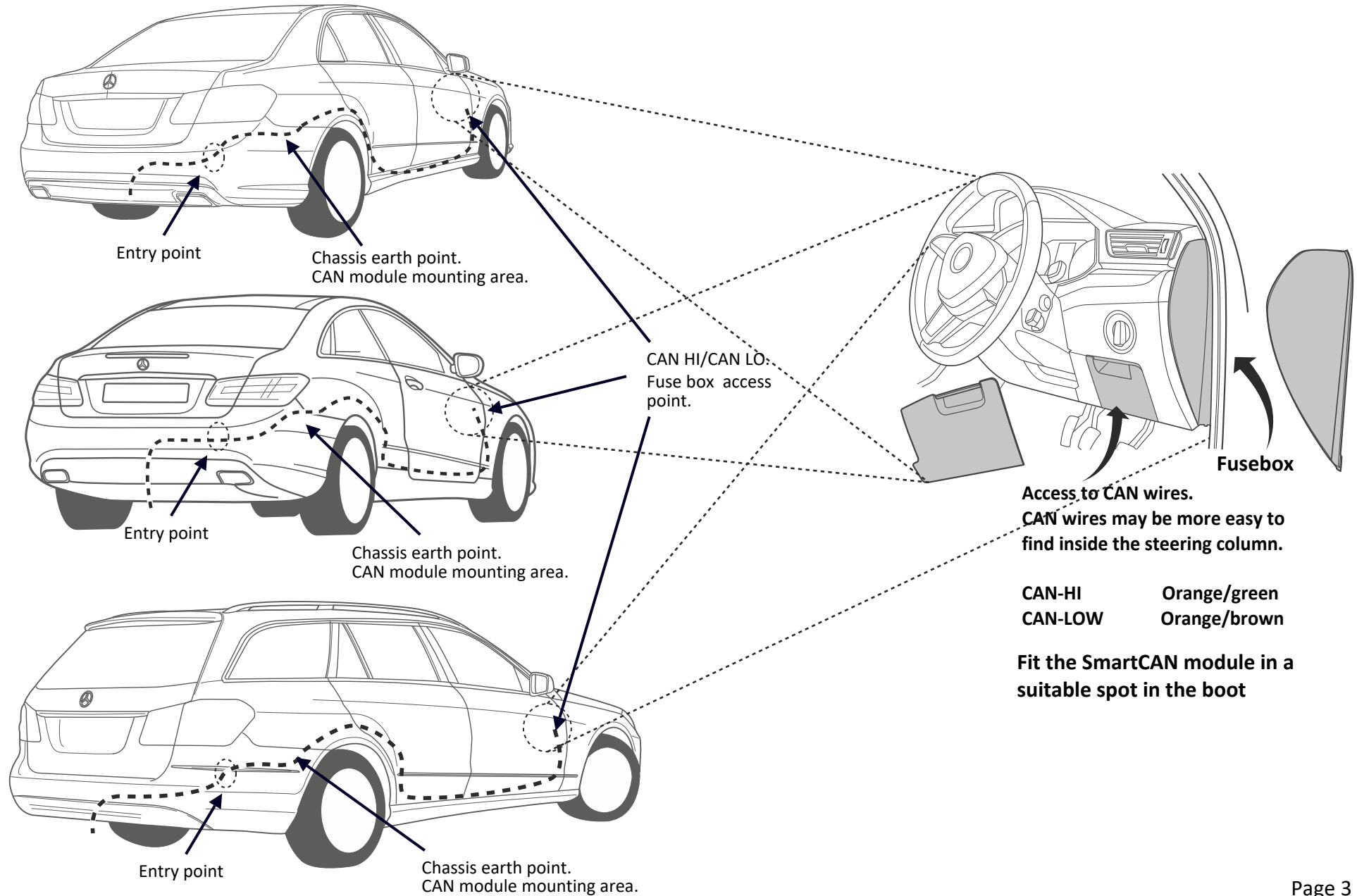CAN module mounting area.

Fusebox

**Access to CAN wires.
CAN wires may be more easy to
find inside the steering column.**

CAN-HI   Orange/green
CAN-LOW   Orange/brown

**Fit the SmartCAN module in a
suitable spot in the boot**

Entry point

Chassis earth point.
CAN module mounting area.

Cable routing, CAN & power connections for Mercedes GLK (209)
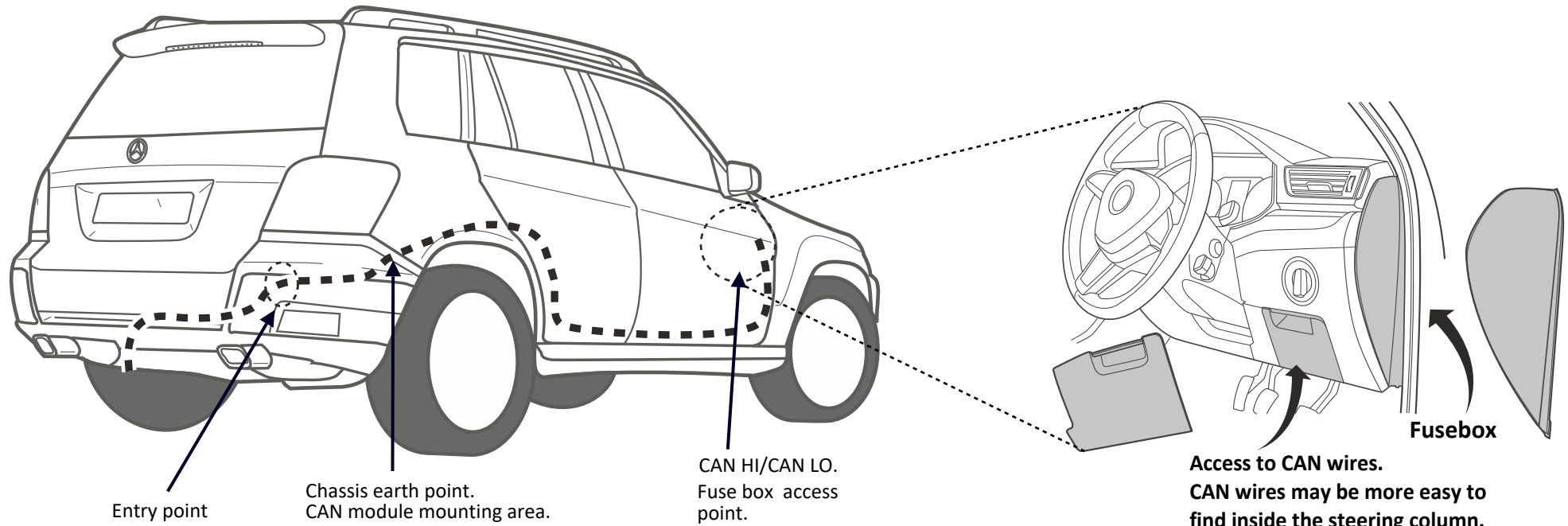
Entry point

Chassis earth point.
CAN module mounting area.

CAN HI/CAN LO.
Fuse box access
point.

Fusebox

Access to CAN wires.
CAN wires may be more easy to
find inside the steering column.

CAN-HI   **Orange/green**
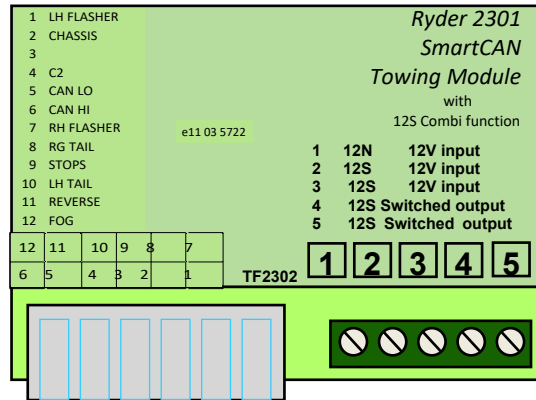**CAN-LOW**   **Orange/brown**

Fit the SmartCAN module in a
suitable spot in the boot

TF2352MERC

## Power and Caravan Auxiliary Detailed Connections

Module loom detail

1	LH FLASHER	YELLOW	Socket yellow 1
2	CHASSIS	WHITE	Ring terminal to chassis
3			
4	C2	PINK	Buzzer
5	CAN LO	BLACK	Twisted pair to CAN
6	CAN HI	RED	Twisted pair to CAN
7	RH FLASHER	GREEN	Socket green 4
8	RH TAIL	BROWN	Socket brown 5
9	STOPS	RED	Socket red 6
10	LH TAIL	BLACK	Socket black 7
11	REVERSE	YELLOW/WHITE	13-pin 8 or 12S 1
12	FOG	BLUE	Socket Blue 2

```
1   LH FLASHER                              Ryder 2301
2   CHASSIS                                 SmartCAN
3                                           Towing Module
4   C2
5   CAN LO                                       with
6   CAN HI                                  12S Combi function
7   RH FLASHER      e11 03 5722
8   RG TAIL                             1   12N    12V input
9   STOPS                               2   12S    12V input
10  LH TAIL                             3   12S    12V input
11  REVERSE                             4   12S Switched output
12  FOG                                 5   12S Switched output
```

```
12  11   10  9   8      7
6   5    4   3   2      1     TF2302     1  2  3  4  5
```

1   12N   12V input   The fused input for the road lights (15 amps)
2   12S   12V input   One of two connected inputs for the caravan auxiliary function
3   12S   12V input   Second of two connected inputs for the caravan auxiliary function. Use this for the unswitched caravan output
4   12S Switched 0utput   Two switched outputs for the caravan fridge.
5   12S Switched output   Having two outputs reduces voltage drop

The caravan auxiliary supply is controlled by the CAN system, using the engine revs. This means its function is not impaired if the vehicle has "Smart" charging.
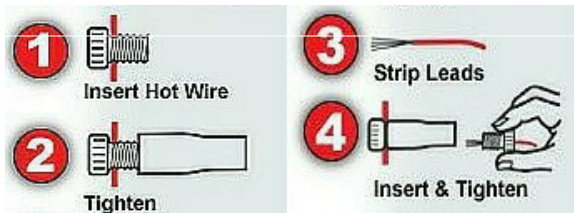

USE ONE OR TWO POWER TAPS TO TAKE POWER FROM THE FUSEBOX IN THE BOOT OF THE CAR
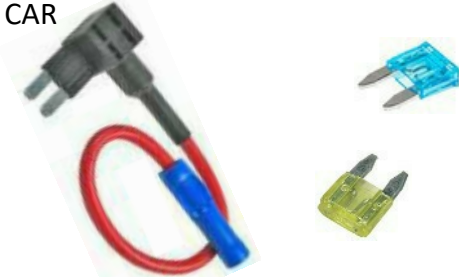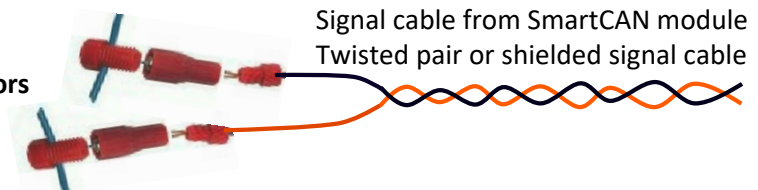
USE ONE POWER TAP FOR A (12N) INSTALLATION (7 OR 13-PIN)

USE TWO FOR A DOUBLE (12N+12S) INSTALLATION (TWIN 7 OR 13-PIN)

FUSE THE 12N CONNECTION 15 AMPS

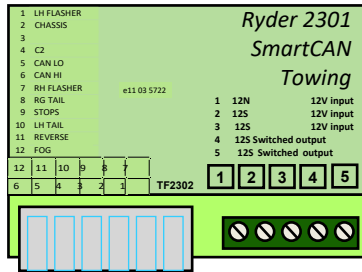## Use Posi-Taps to make the connections to CAN HI and CAN LO

How Posi-Taps connect.

1 Insert Hot Wire
2 Tighten
3 Strip Leads
4 Insert & Tighten

PosiTap connectors

Signal cable from SmartCAN module
Twisted pair or shielded signal cable

TF2301
SmartCAN
module

1	LH FLASHER			*Ryder 2301*
2	CHASSIS			
3				*SmartCAN*
4	C2			
5	CAN LO			*Towing*
6	CAN HI			
7	RH FLASHER	e11 03 5722		
8	RG TAIL		1 12N	12V input
9	STOPS		2 12S	12V input
10	LH TAIL		3 12S	12V input
11	REVERSE		4 12S Switched output
12	FOG		5 12S Switched output

12 11 10 9 8 7
6 5 4 3 2 1 TF2302

1 2 3 4 5

SmartCAN loom
with CANbus Plug

Butt-terminated
cables 150mm

5m twisted pair with
red Posi-Taps

Power and CAN Cables

12N   5 metres 1mm^2 single cable

12S   5 metres 2.5mm^2 twin cable

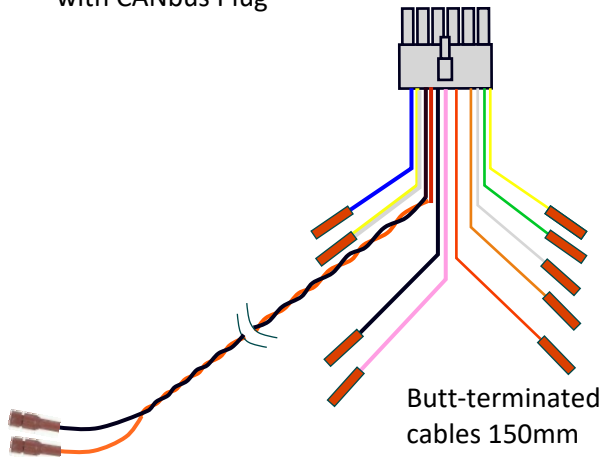CAN   5 metres shielded signal
cable

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Kit Components

13-pin kit
1 x 13-pin socket assembly, 2 metres
1 x Mini buzzer
1 x 15 amp mini fuse
1 x Twin 35s Aux power cable, 5m
2 x PowerTap Mini
1 x 20 amp mini fuse
3 x ring terminals

7-pin kit
1 x 7-pin socket assembly, 2 metres
1 x Mini buzzer
1 x Black single 35s Aux power cable 5m
1 x PowerTap Mini
1 x 15 amp mini fuse
1 ring terminal
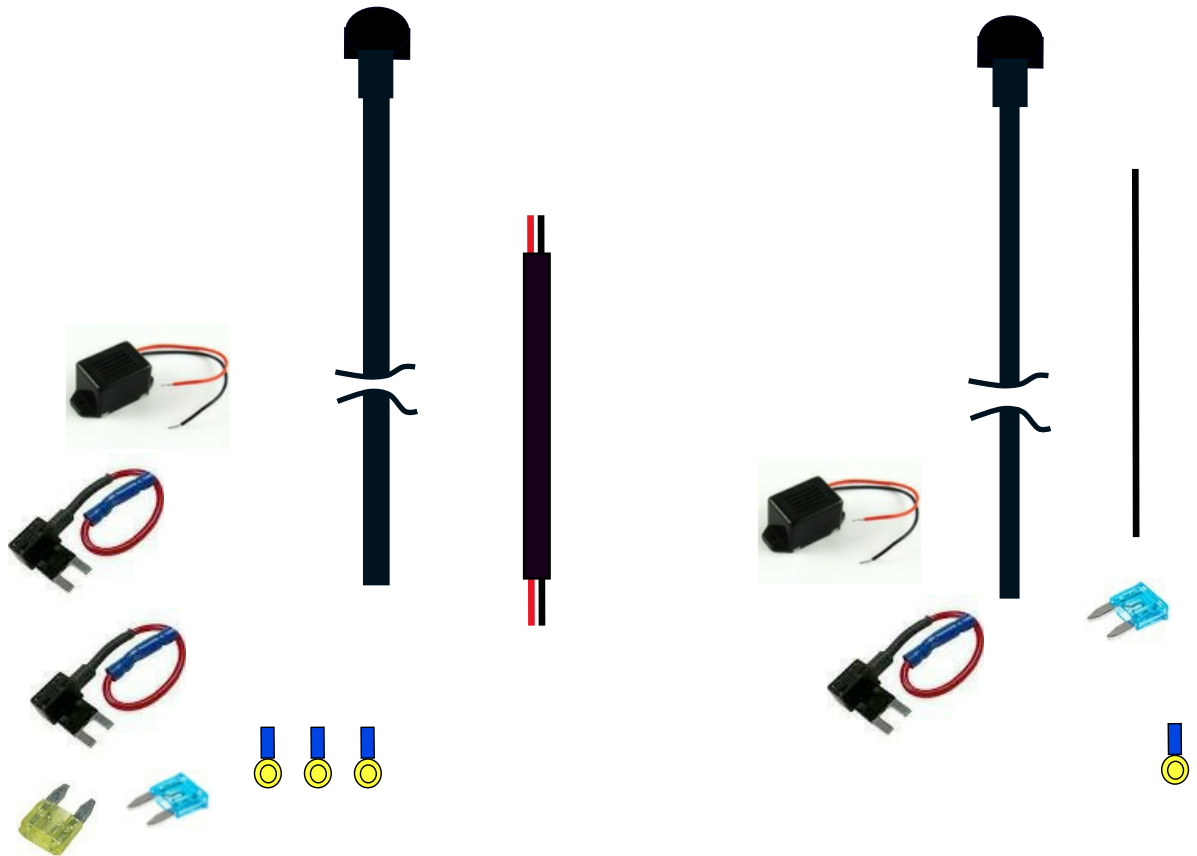
TF2352MERC

CANbus Connections

TF2301 CANbus module
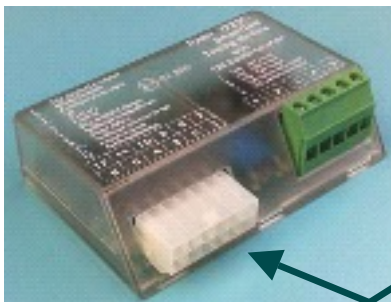
12-pin plug and loom
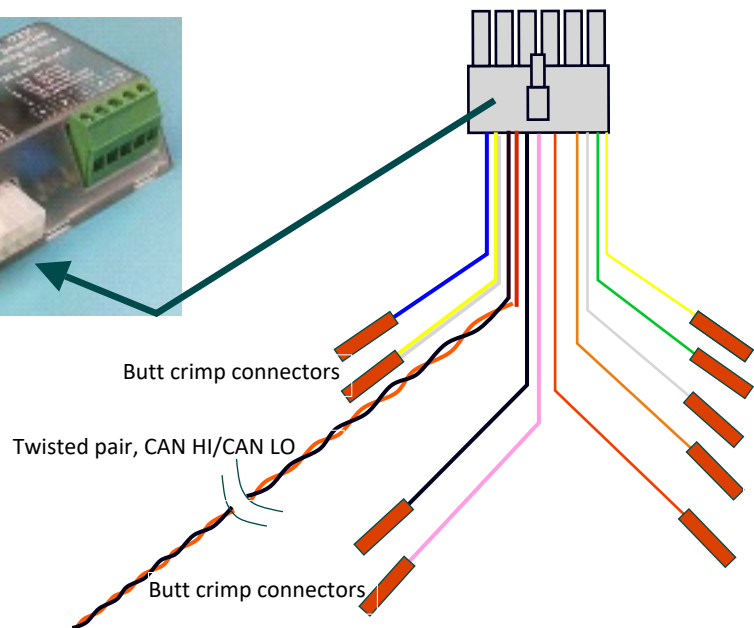
Module loom detail

1	LH FLASHER	YELLOW	Socket yellow 1
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9	STOPS	RED	Socket red 6
10	LH TAIL	BLACK	Socket black 7
11	REVERSE	YELLOW/WHITE	13-pin 8 or 12S 1
12	FOG	BLUE	Socket Blue 2

Butt crimp connectors

Twisted pair, CAN HI/CAN LO

Butt crimp connectors

Connections to CAN HI and CAN LO

PosiTap connectors
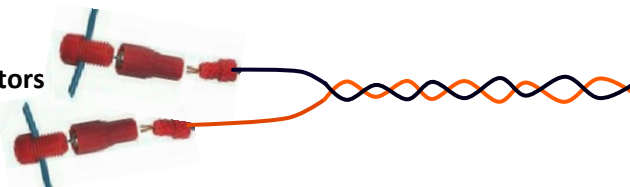
CAN HI and CAN LO: See model specific instructions for CANbus colours.
Or
At OBDll, Pin 3 (HI) and Pin 11 (LO) (Dependent on model).

Socket assemblies

13-pin socket

The orange wire from Pin 9 connects to terminal 3 of the module - unswitched 12S (Interior lights/battery charging)

The grey wire from Pin 10 connects to terminals 4 and 5 of the module - switched 12S (Fridge)

Wires from socket terminals 1 and 2 and 4 to 8 connect to the module plug via the red butt crimp connectors

Overall length of the socket cable is determined by the installation requirements

Entry grommet

Wires from pins 3, 11 and 13 connect to the chassis (earth)
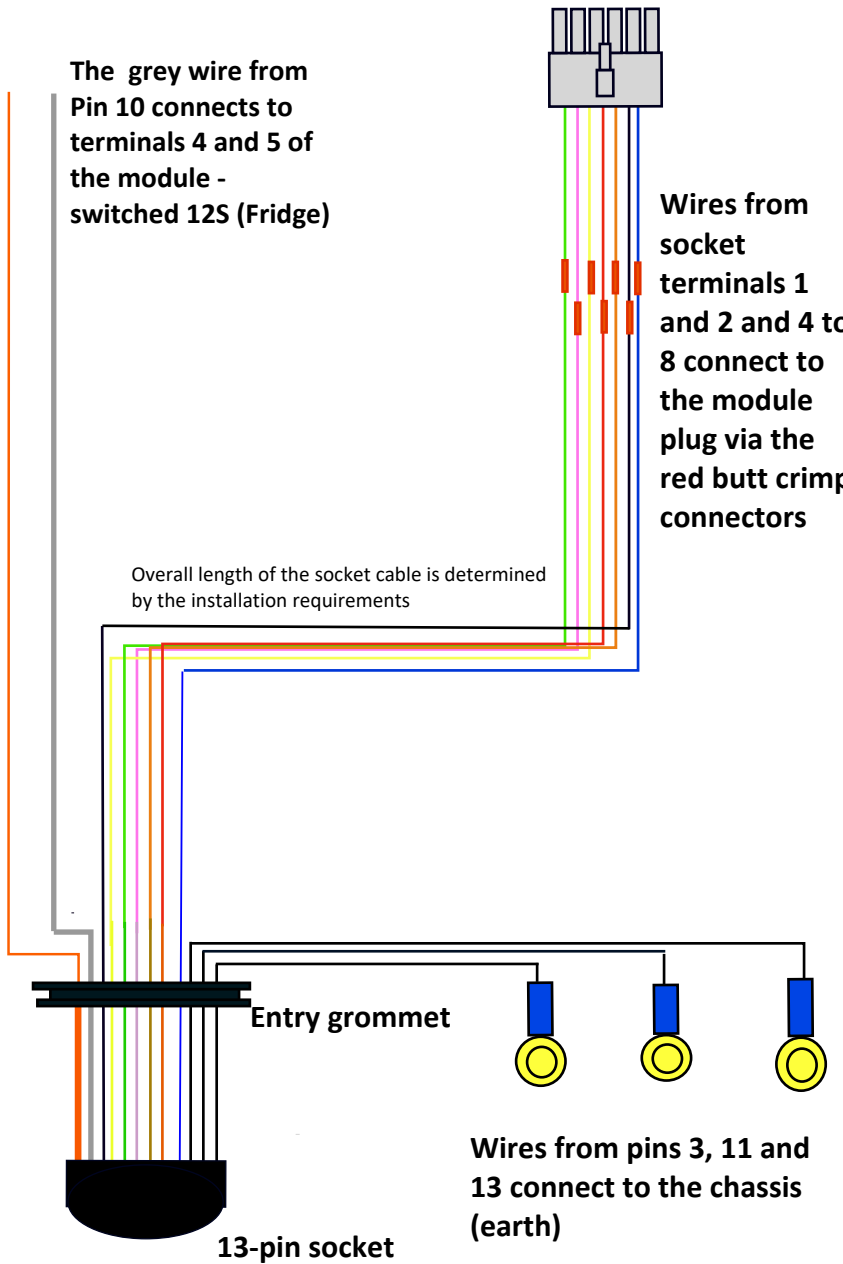
13-pin socket

7-pin socket

Wires from socket terminals 1 and 2 and 4 to 7 connect to the module plug via the red butt crimp connectors

Overall length of the socket cable is determined by the installation requirements
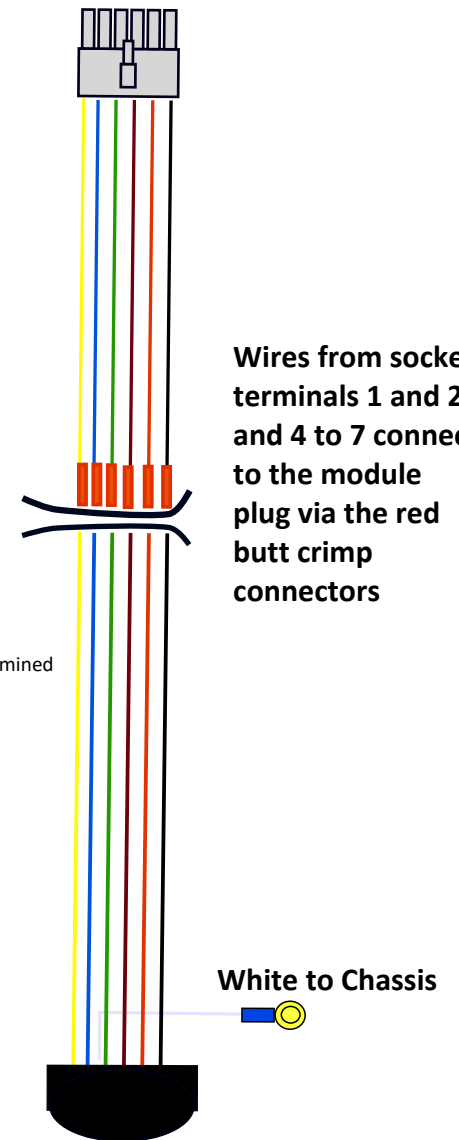
White to Chassis

7-pin socket

TF2352MERC

Testing and Coding

With the engine both running and at rest, test all functions

Recoding adds C2 on dash; PDC; FCO

or use pink wire from module and a buzzer for C2

(Coding is only required if CAN based C2, Bulb failure monitoring and Trailer present functions are needed.)

(TF2301 SmartCAN unit will provide basic trailer light output, and switched power output without coding)

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