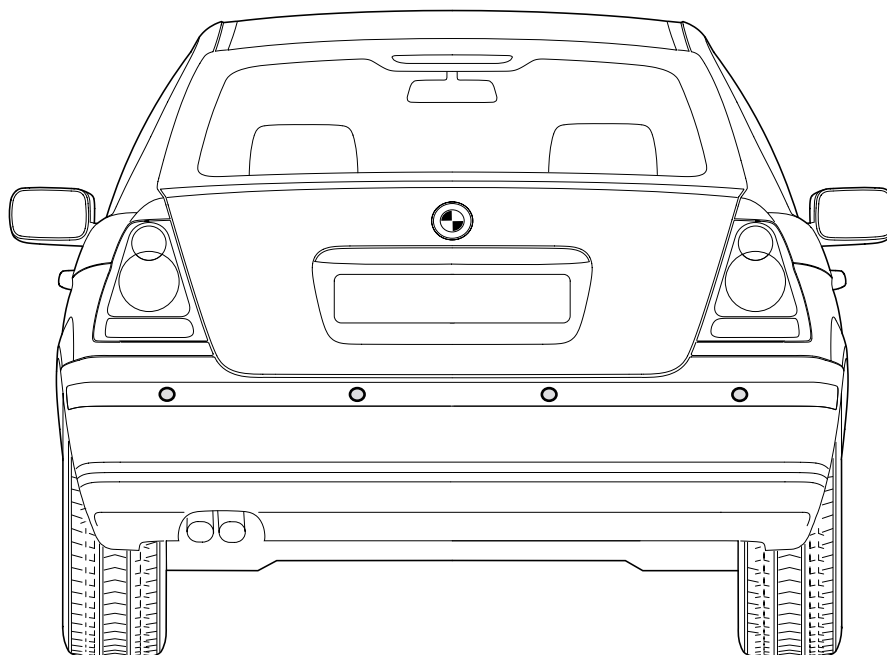




BMW Parts and Accessories Installation Instructions



F 46 0774 EVA

Park Distance Control (PDC) rear BMW 3 Series compact E46/5

The installation time is approx. 4 hours, but this may vary depending on the condition of the car and the equipment in it.

Retrofit / Installation kit No. 66 20 0 007 031

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Important information

The retrofit kit is for use within the BMW dealership organisation only.

Target group

The target group for these installation instructions is specialist personnel trained on BMW cars with specialist knowledge of body electrical systems.

All work is to be carried out using current BMW

- Repair manuals (see Technical Information System),
 - Circuit diagrams (see Diagnostics Information System),
- in a rational sequence with the prescribed tools (special tools) and taking into account the relevant health and safety regulations.

Installation information

The retrofit wiring harness is to be installed so that it cannot kink or chafe.

If the specified PIN chambers are occupied, bridges, double crimps or twin-lead terminals must be used.

All work is shown on a LHD car. On RHD cars some work must be completed the opposite way round.

All tightening torque values are to be taken from the current repair manuals and must be observed.

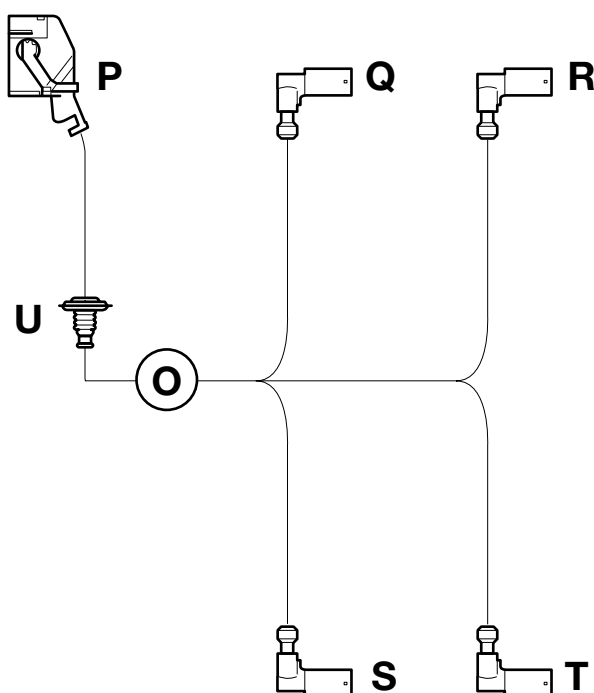
Safety instructions

The current accident prevention regulations must be followed.

1. Preparations

Print out error memory.
Disconnect the battery.
Remove the rear window shelf.
Remove the boot mat.
Remove the rear seat bench.
Remove the rear seat backrest.
Remove the side padding at the rear left.
Remove the door sill strips on the right-hand side of the car.
Loosen the belt roller cover.
Remove the boot trim on the right.
Remove the right side trim and take out the insulation mat (refer to the safety instructions for cars with rear airbags).
Remove the rear bumper.
Remove the glove compartment.
Remove the footwell trim on the driver's side.

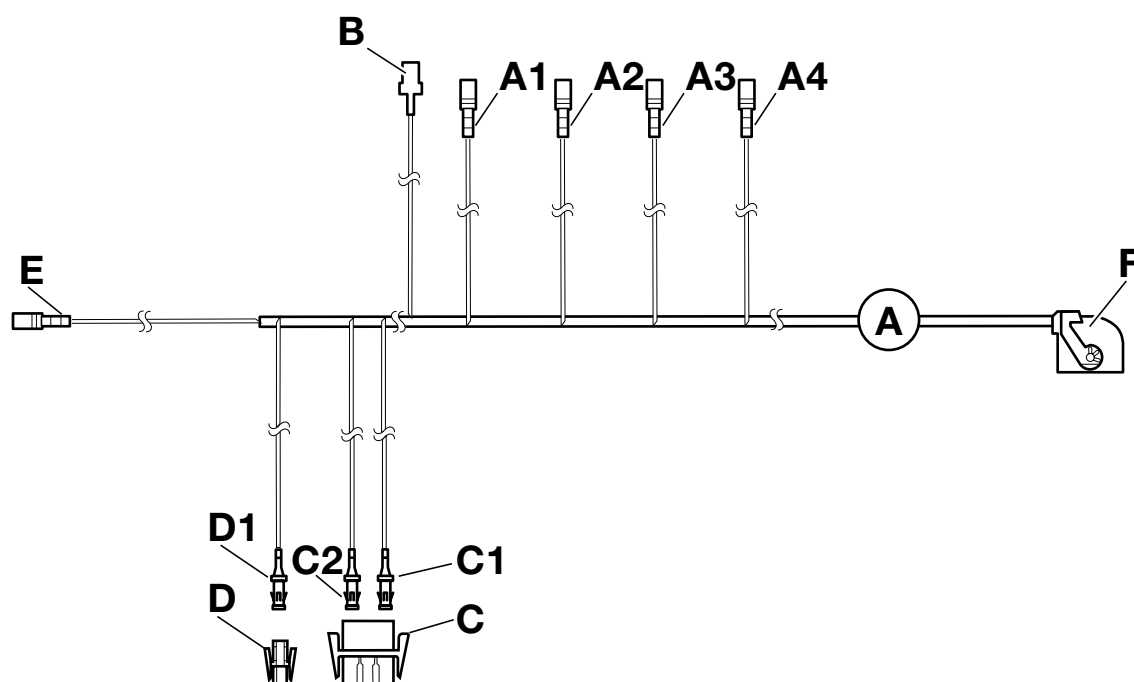
2. Ultrasonic converter wiring harness connection diagram



F 46 0190 EVA

Item	Design / Description	Cable colour	Connection location in the car	Abbreviation / Slot
O	Ultrasonic converter wiring harness			
P	12-pin plug		PDC control module	X 18013
Q	3-pin socket casing		To ultrasonic converter in the bumper, rear left	X 18020
R	3-pin socket casing		To ultrasonic converter in the bumper, rear centre left	X 18021
S	3-pin socket casing		To ultrasonic converter in the bumper, rear centre right	X 18022
T	3-pin socket casing		To ultrasonic converter in the bumper, rear right	X 18023
U	Grommet		Rear apron	

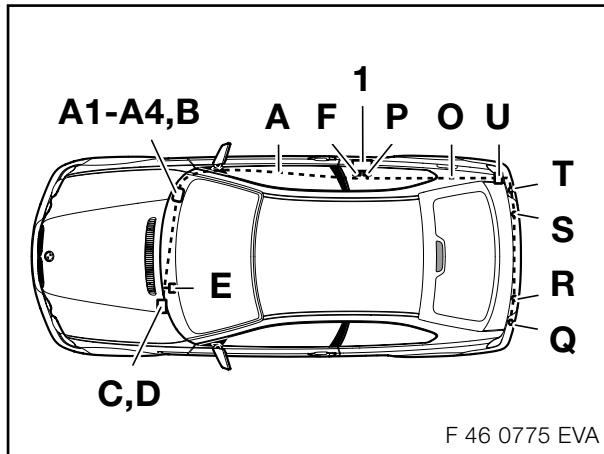
3. Power supply wiring harness connection diagram



F 46 0150 EVA

Item	Design / Description	Cable colour	Connection location in the car	Abbreviation / Slot
A	Power supply wiring harness			
A1	1-pin blade terminal contact	Bl/Ge	Connect to joint connector RS	X 428
A2	1-pin blade terminal contact	Br	Connect to earth joint connector, cars without gong only (H10)	X 219
A3	1-pin blade terminal contact	Ws/Rt/Ge	Connect to joint connector K bus	X 10116
A4	1-pin blade terminal contact	Rt/Ge	Cars without a gong (H10) only, terminal R behind the glove compartment	---
B	1-pin blade terminal contact	Gn/Ws	To fuse holder II, A47 slot F24	X 10016 Pin 48
C	3-pin socket casing		To gong (H10)	X 522
C1	1-pin socket contact	Br	Connect to socket casing C Pin 1	X 522 Pin 1
C2	1-pin socket contact	Rt/Ge	Connect to socket casing C Pin 3	X 522 Pin 3
D	1-pin socket casing		To gong (H10) Pin T4	X 363
D1	1-pin socket contact	Bl/Gr	Connect to socket casing D	X 363
E	1-pin blade terminal contact	Br/Sw	Connect to the joint connector in the footwell on the driver's side	X 217
F	12-pin plug		To PDC control module	X 300

4. Overview of connection points in the car



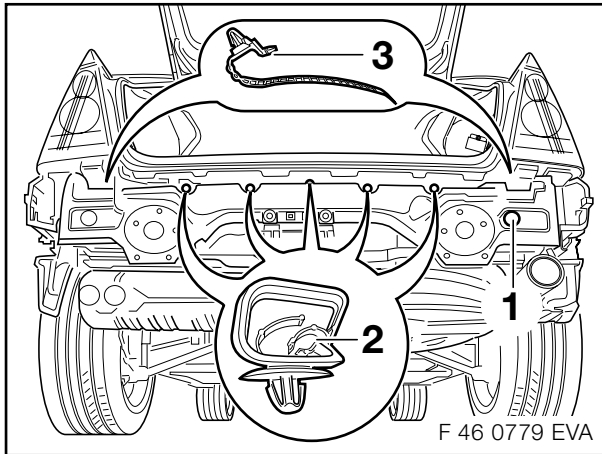
The power supply wiring harness **A** runs from the PDC control modules (1) forwards. Branches **A1-A4** and **B** are to be connected to the fuse box. The power supply wiring harness **A** continues to the driver's side. Branches **C** and **D** are to be connected to the PDC gong on the footwell trim, branch **E** to the joint connector near the steering column.

The ultrasonic converter wiring harness **O** runs from the PDC control module (1) to the rear, connect branches **Q, R, S,** and **T** to the ultrasonic converters.

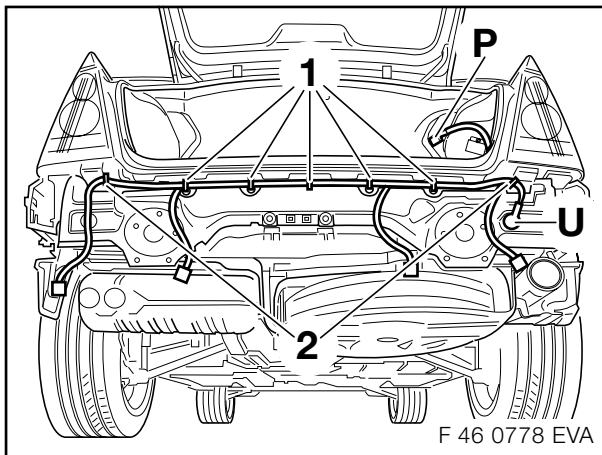


The precise installation route is described in the following sections. ◀

5. To install the ultrasonic converter wiring harness and the ultrasonic converters



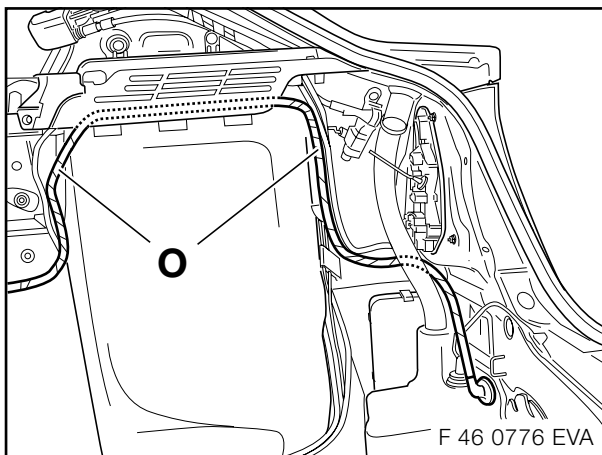
Remove the cover cap (1) and clip in the retaining clips (2) and cable ties (3).



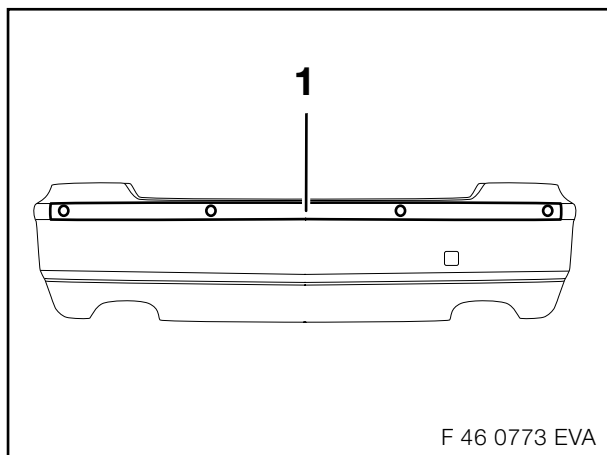
On cars with a trailer hitch module, the cover cap has been replaced with a grommet. Remove the grommet from the ultrasonic converter **U**, take the plug casing on branch **P** off the plug strip and thread the plug strip through the existing grommet in the trailer hitch module. Then fit the plug casing again. ◀

Lay branch **P** on the ultrasonic converter wiring harness into the boot and seal the hole with the grommet **U**. Lay the ultrasonic converter wiring harness along the rear apron, clip it into the cable holders (1) and secure it with the cable ties (2).

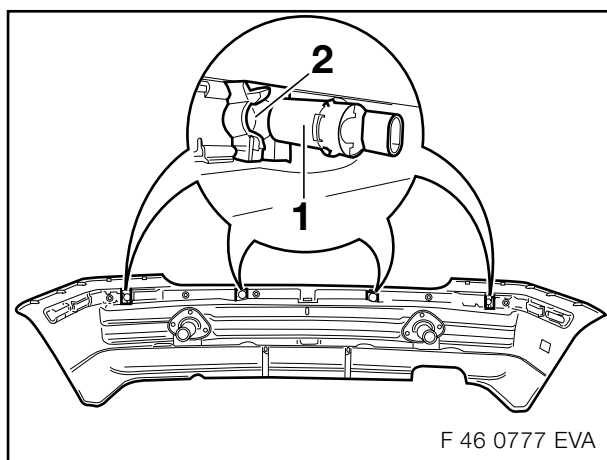
Lay the ultrasonic converter wiring harness **O** along the standard wiring harness to the front and secure it with cable ties.



5. To install the ultrasonic converter wiring harness and the ultrasonic converters



Replace the centre bumper trim with the bumper trim (1) supplier in the parts kit as described in repair manual 51 12 080.

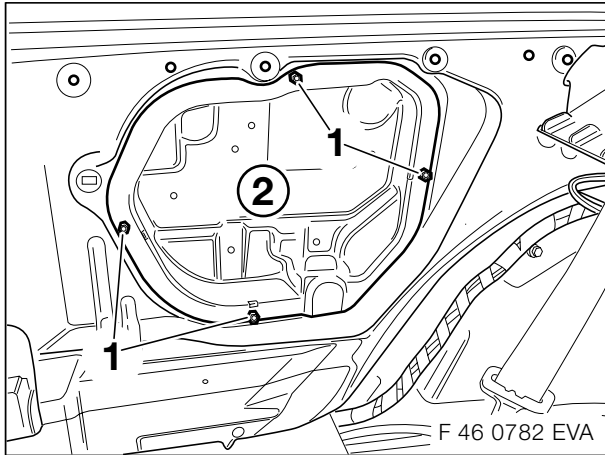


Lock the ultrasonic converters (1) into the mountings (2) in the bumper trim- Connect the connection plugs **Q, R, S, T** on the ultrasonic converter wiring harness to the appropriate ultrasonic converters (1). Assemble the bumper again following the instructions to dismantle it in reverse order.

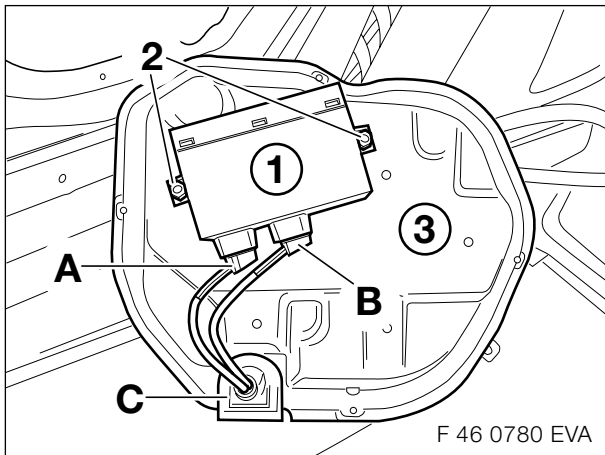


As you install the ultrasonic converter wiring harness and the connection plugs on it, ensure that it is not in contact with parts of the exhaust or other moving parts. ◀

6. To install the PDC control module



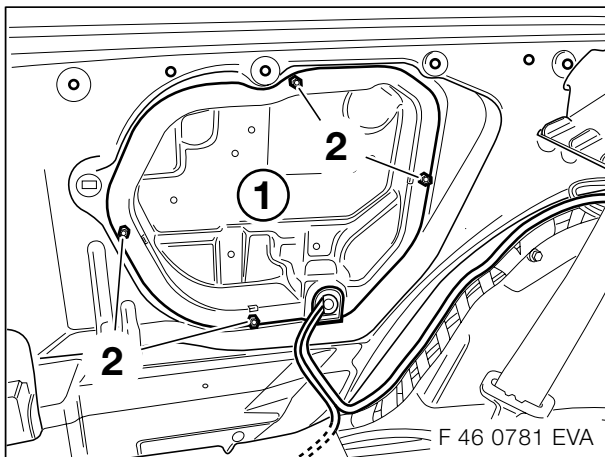
Unscrew the securing screws SW 8 (1) and remove the cover (2).



Secure the PDC control module (1) to the stud bolt on the inside of the cover (3) using two plastic nuts (2). Connect branches A and B to the connections on the PDC control module (1) with the same colours and insert grommet C into the cover.

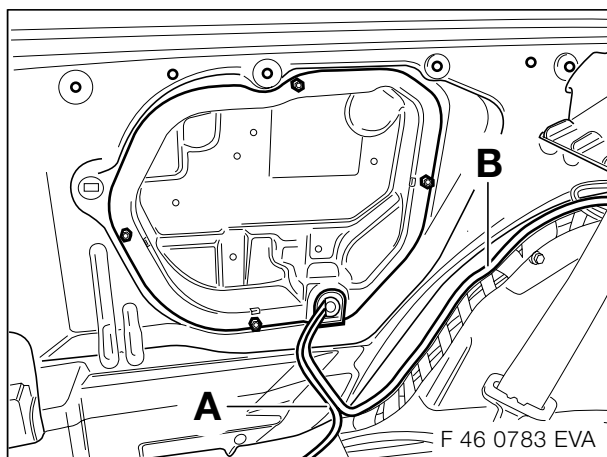


On cars with a trailer hitch module, slit open the grommet C and thread branches A and B through the grommet. ◀



Fit the cover (1) and secure it with the four securing screws SW 8 (2).

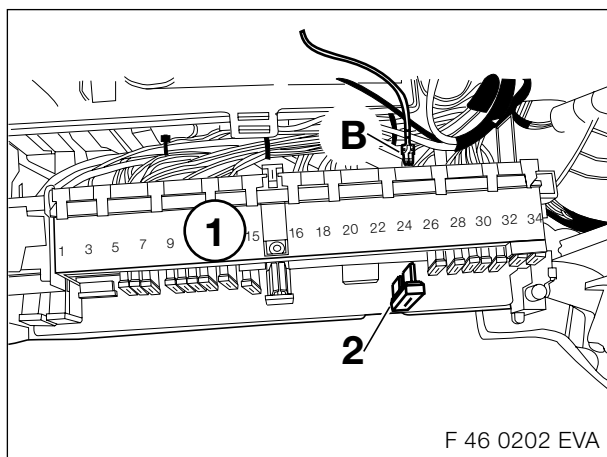
7 To install the power supply wiring harness



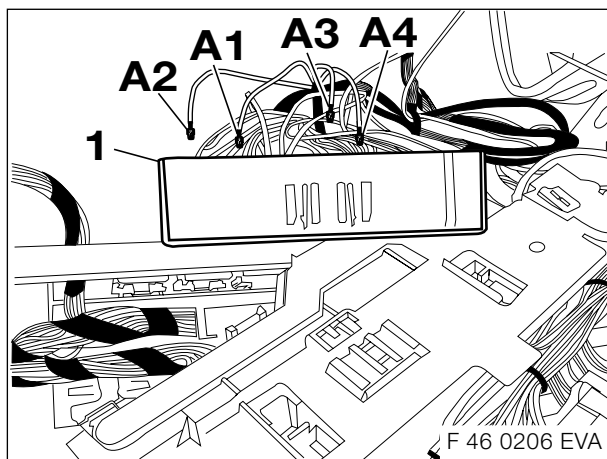
Lay the power supply wiring harness **A** from the PDC control module along the standard wiring harness in the right sill to the fuse box above the glove compartment.



In RHD cars the same installation route for the power supply wiring harness is to be used as in LHD cars. To do this the ties on the power supply wiring harness also have to be cut open. ◀



Connect branch **B** on the power supply wiring harness, green/white cable, to the fuse holder II, A47 (1) (X10016) slot F 24, Pin 48 and insert a flat-bladed fuse (2) 5A.



Connect the cables on the power supply wiring harness to the appropriate joint connectors in the joint connector box (1) as shown in the table below:

Vehicles without a gong only

Cable **A1** with the blue/yellow cable
 Cable **A2** with the brown cable
 Cable **A3** with the white/red/yellow cable
 Cable **A4** with the red/yellow cable

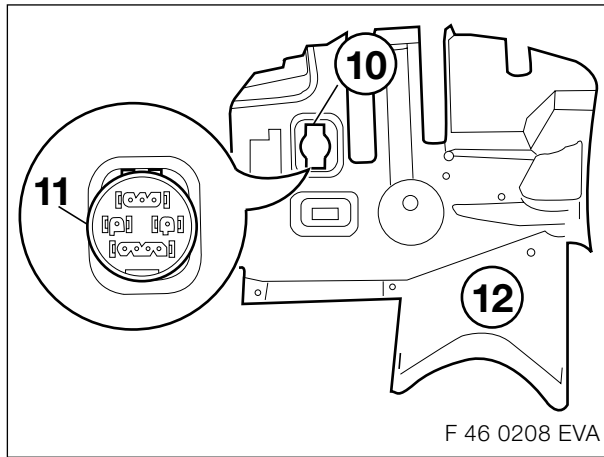
Connector X428
 Connector X219
 Connector X10116
 Terminal R

Vehicles with a gong only

Cable **A1** with the blue/yellow cable
 Cable **A3** with the white/red/yellow cable

Connector X428
 Connector X10116

7. To install the power supply wiring harness



Vehicles without a gong only

Cut the prepared cut-out (1) for the gong (2) out of the footwell trim on the driver's side (3) and insert the gong (2).

Connect socket contact **D1**, blue/grey cable, to the 1-pin socket casing **D**. Connect socket contact **C1**, brown cable, to the 3-pin socket casing **C** Pin 1 and socket contact **C2**, red/yellow cable, to the 3-pin socket casing **C** Pin 3. Connect the socket casing **D, C** to the appropriate slots on the gong:

1-pin socket casing **D** to slot T4 (X363)

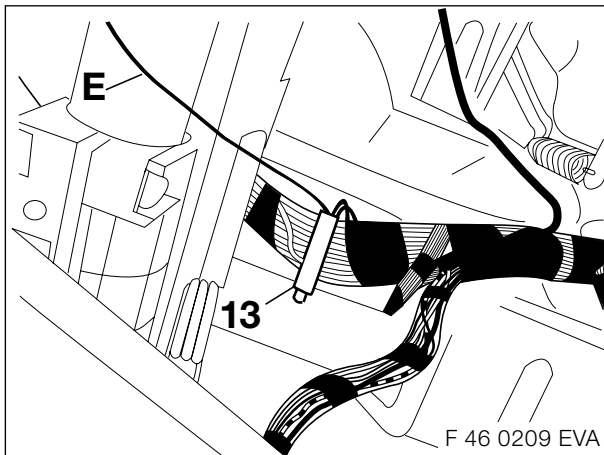
3-pin socket casing **C** to slot T3 (X522)

Vehicles with a gong only

Connect socket contact **D1**, blue/grey cable, to the 1-pin socket casing **D** and connect this to slot T4 (X363) on the gong.



Tie back the cable lengths that are not required. ◀



Connect the blade terminal contact **E**, brown/black cable, to the joint connector (1) (X217) near the steering column in the footwell on the driver's side.

Tie back the cable lengths that are not required on the RHD model.



Select the installation route of the cables so that they cannot be damaged by moving parts. Secure the joint connectors and cables at suitable points using cable ties. ◀

8. To assemble the car

Assemble the car again following the instructions for its dismantling in reverse order.

9. Coding

To ensure that the PDC retrofit system adjusts to the specific car perfectly the PDC control module must be coded. The Mobile Diagnostic Computer MoDiC (III) or the DIS with CD version 15 (or higher) is required to code the PDC control module. It cannot be coded with an older version.

The steps for this procedure are described briefly below:

Connect MoDiC (III) to the diagnostics plug in the car and switch on the ignition.



Ensure that there is sufficient battery voltage during the coding procedure, connect a battery charger if necessary. ◀

Select menu point **“Coding/Program.”**

“Coding ZCS”

<Enter>

“Coding via central coding key (ZCS)”

Version C15.0 (or higher)

<Enter>

Select **“Series E46”**

<Enter>

“Retrofit”

<Enter>

“PDC”

<Enter>

“Automatic coding”

<Yes>



After completing the coding switch off the ignition for approx. 10 seconds. ◀

Retrofit / Installation kit No. 66 20 0 007 031
Installation Instructions No. 01 29 0 137 628 Issue date: 02.2002



10. Circuit diagram

A47	Fuse holder
A81	PDC plug casing
H10	Gong
X217	31E connector
X219	31 connector
X300	12-pin plug
X363	1-pin plug
X428	VB RS
X522	3-pin plug
X10016	Fuse holder
X10116	I bus connector
Terminal R	Consumer cut-out connector
X18013	12-pin plug
X18020	3-pin plug
X18021	3-pin plug
X18022	3-pin plug
X18023	3-pin plug
B34	Rear left converter
B35	Rear centre left converter
B36	Rear centre right converter
B37	Rear right converter