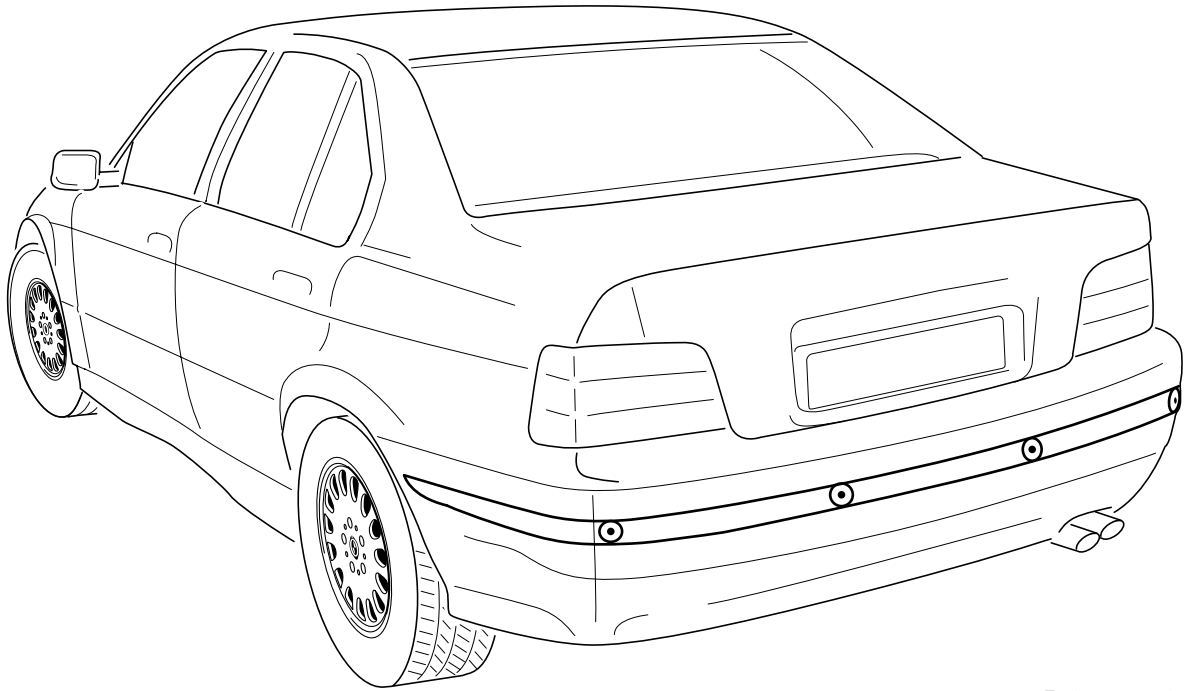




# Teile und Zubehör - Einbauanleitung



F 36 66 069

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## BMW Parts and Accessories - Installation Instruction

### Park Distance Control (PDC)

BMW 3 Series, saloon, Coupé, Convertible, touring, compact (E 36/4, -/2, -/C, -/3, -/5)

## Park Distance Control (PDC)

### BMW 3 Series, saloon, Coupé, Convertible, touring, compact (E 36/4, -/2, -/3, -/5)

Only for use within the BMW dealer organisation.  
Fitting time approx. 3 hours, depending on the condition of and equipment in the car.  
Electrical skills are required.

#### General notes

The fitting method is shown for left-hand drive models. For right-hand drive models the fitting work must be carried out the opposite way round on some occasions.

If the PIN slots specified in these instructions are already assigned, bridges, double crimps or parallel connections must be used.

Up to model year 1994, smooth painted bumper guards were fitted in the vehicles. The use of bumper guards for PDC (textured surface) in the rear bumper means that fitting replacement front bumper guards may also have to be considered to keep the car's uniform appearance.

#### Cable installation

Keep precisely to the designated cabling routes in the vehicle to avoid faults.

Under no circumstances should you use "Scotchlock quick connectors" since they may cause faults in the vehicle electrical systems.

Ensure that when you fit the cables in the car they are not kinked or damaged since otherwise faults may occur whose later location may require a great deal of work. The costs incurred by this work will not be reimbursed by BMW.

#### Tools and equipment required

Cross slot screwdriver  
Straight slot screwdriver  
SW 10 mm open-ended spanner  
Centre punch  
Anti-corrosion paint  
1/2 inch reversible ratchet

1/2 inch extension  
1/2 inch SW 10 mm, 13 mm, 16 mm and 17 mm sockets  
Torx wrench  
Drill  
3.5 mm and 9 mm twist drill bits  
40 mm stage drill bit  
Special tool to remove jacks  
Special crimping tool  
Water-soluble pen  
Hammer  
Round file  
Tape measure  
Zinc-rich primer

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## 1. Preparatory work on the car

- Print out the error memory
- Disconnect the battery
- Remove the rear bumper

## 2. Power supply wiring harness/ Overview

F 36 66 070

Item	Description	Cable colour	Connection point in car	Code designation/ Pug-in-place
A	1-pole pin casing	Blue/Yellow	Connect to connector A1	
A1	1-pole socket casing		To jack from tail light unit and connect to connector A	
B	Jack	Blue/Yellow	In the plug for left or right (E 36/5) tail light unit	X 318/E36/5 X 319/E36
C	1-pole pin casing	Brown	Connect to connector C1	
C1	1-pole socket casing		To jack from tail light unit and connect to connector CA	
D	Jack	Brown	In the plug for left or right (E 36/5) tail light unit	X 318/E36/5 X 319/E36
E	2-pole plug		To PDC gong	X 363
F	26-pole plug		To PDC control unit	X 300

### 3. Ultrasonic transducer wiring harness/Overview

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Item	Description	Cable colour/ Cross-section	Connection point in car	Code designation/ Pug-in-place
G	26-pole plug		To control unit in left or right (E 36/5) rear side section	X 18013
H	Socket		To ultrasonic transducer, left	X 18020
I	Socket		To ultrasonic transducer, centre left	X 18021
J	Socket		To ultrasonic transducer, centre right	X 18022
K	Socket		To ultrasonic transducer, right	X 18023

#### 4. To fit the power supply and ultrasonic transducer wiring harnesses

##### 4.1 Model E 36/2, -/4

###### F 36 66 072

Fit the power supply wiring harness (1) from the tail light unit (2) to the control unit (3) and to the rear window shelf (4). Fit the ultrasonic transducer wiring harness (5) from the control unit (3) to the ultrasonic transducers (6).

###### F 36 66 073

Remove the luggage compartment mat (1), side trim (2) and the tail light covers (3) on both sides.

###### F 36 66 074

Remove the nuts (1) and expanding rivets (2). Take the floor cover (3) out of the car.

###### F 36 66 075

Remove the expanding rivets (1). Fold back the rear trim (2) in the direction indicated by the arrow. Pull the wiring harness (3) out of the clips. Remove the rear trim (2).

###### F 36 66 076

Disconnect the jacks (1, 2) from the socket (3) in the left-hand tail light unit.

E 36/2	Jack (1)	<b>Pin 5</b>
	Jack (2)	<b>Pin 1</b>
E 36/4	Jack (1)	<b>Pin 6</b>
	Jack (2)	<b>Pin 4</b>

Connect jack (1) into socket casing (A1) and jack (2) into socket casing (C1). Connect connector (A) to connector (A1) and connector (C) to connector (C1). Connect up connectors (B and D) in socket (3) as follows:

E 36/2	Connector (B)	<b>Pin 5</b>
	Connector (D)	<b>Pin 1</b>
E 36/4	Connector (B)	<b>Pin 6</b>
	Connector (D)	<b>Pin 4</b>

Fit the plug (F) to the left-hand wheel arch and plug (E) to the rear window shelf.

###### F 36 66 077

Centre punch the dimensions and drill the holes with a 5.5 mm twist bit. Expand the hole to a diameter of 32 mm.

A = 135 mm, B = 30 mm

###### F 36 66 078

Drill the holes (1) with a diameter of 5.5 mm and thread the cable straps (2) through them. Secure the wiring harness (3) in the cable straps (2). Thread the plug (G) through the hole and move it to the installation site for the control unit. Insert the grommet (4).

###### F 36 66 079

Fit the plug (E) for the power supply wiring harness (1) from the luggage compartment through the grommet (2) to the rear window shelf.

###### F 36 66 080

Connect the plug (E) to the PDC gong (1).

###### F 36 66 081

Insert the thread and journal of the PDC gong into the holes and secure it under the rear window shelf using a hexagonal nut (1).

##### Vehicles with a low recess in the rear window shelf

###### F 36 66 082

Secure the bracket (1) on the PDC gong (2) using the nut (3) and bolt the assembly to the vehicle beneath the rear window shelf using the nut (4).

##### All models E 36/2, -/4

###### F 36 66 083

Secure the bracket (1) using hexagonal screws (2). Insert the plugs (F, G) into the counter plugs of the same colour on the control unit and secure them with the fuse bars (3).

## 4.2 Model E 36/3

### F 36 66 084

Fit the power supply wiring harness (1) from the tail light unit (2) to the control unit (3) and to the left-hand ventilation grille (4). Fit the ultrasonic transducer wiring harness (5) from the control unit (3) to the ultrasonic transducers (6).

### F 36 66 085

Open the cover (1), remove the tail light covers (2) on both sides. Undo the cross slot screws (3) and remove the D column trim (4). Remove the rear trim (5).

### F 36 66 086

Remove the cross slot screw (1) and the C pillar trim (2). Take out the cover (3).

### F 36 66 087

Remove the cross slot screws (1) and ventilation grille (2). Undo the cross slot screws (3) and remove the bracket (4).

### F 36 66 088

Lever out the cover (1), undo the cross slot screws (2) and remove the belt mounting (3). Undo the expanding rivet (4) and remove the cover (5).

### F 36 66 089

Undo the hexagonal nut (1) and the cross slot screws (2) and remove the trim (3).

### F 36 66 090

Disconnect jacks 1 (pin 6) and 2 (pin 4) from the socket (3) on the left-hand tail light unit. Connect jack (1) to socket casing (A1) and jack (2) to socket casing (C1). Connect connector (A) to connector (A1) and connector (C) to connector (C1). Connect connectors (B and D) to the socket (3) as follows:

Connector (B) **Pin 6**  
Connector (D) **Pin 4**

### F 36 66 077

Centre punch the dimensions and drill the holes with a 5.5 mm twist bit. Expand the hole to a diameter of 32 mm.

A = 135 mm, B = 30 mm

### F 36 66 078

Drill the holes (1) with a diameter of 5.5 mm and thread the cable straps (2) through them. Secure the wiring harness (3) in the cable straps (2). Thread the plug (G) through the hole and insert the grommet (4).

### F 36 66 091

Move the plug (G) for the ultrasonic wiring harness (1) to the installation site for the control unit.

### F 36 66 092

Place the speed nuts (2) on the trim (1) and secure the control unit (3) using cross slot screws (4). Fit the trim (1).

### F 36 66 093

Insert the plugs (F, G) into the counter plugs of the same colour on the control unit (1) and secure them with the fuse bars (2).

### F 36 66 094

Pull the insulation mat (1) out of the grille (2) and mark the dimensions. Drill holes using a 6.5 mm twist drill bit.

A = 36 mm, B = 10 mm

### F 36 66 095

Cut the nipple (2) off the PDC gong (1). Secure the PDC gong (1) using the hexagonal nut (3).

### F 36 66 096

Cut out the insulation mat (1) and connect the plug (E) to the PDC gong (2).

## 4.3 Model E 36/5

### F 36 66 097

Fit the power supply wiring harness (1) from the tail light unit (2) to the control unit (3). Fit the ultrasonic transducer wiring harness (4) from the control unit (3) to the ultrasonic transducers (5).

### F 36 66 098

Remove the tail light units on both sides. Take out the luggage compartment mat (1). Remove the plastic nut (2) and lever out the left-hand luggage compartment tray (3).

### F 36 66 099

Remove the plastic nuts (1) and lever out the right-hand luggage compartment tray (2).

### F 36 66 100

Remove the rivets (1) and take out the rear trim (2).

### F 36 66 101

Disconnect jacks 1 (pin 6) and 2 (pin 8) from the socket (3) on the right-hand tail light unit. Connect jack (1) to socket casing (A1) and jack (2) to socket casing (C1). Connect connector (A) to connector (A1) and connector (C) to connector (C1). Connect connectors (B and D) to the socket (3) as follows:

Connector (B) **Pin 6**  
Connector (D) **Pin 8**

Fit the plugs (E and F) to the bracket for the control unit.

### F 36 66 102

Centrepunch the dimensions and drill the holes with a 5.5 mm twist bit. Expand the hole to a diameter of 32 mm.

A = 110 mm, B = 55 mm

### F 36 66 103

Drill the holes (1) with a diameter of 5.5 mm and thread the cable straps (2) through them. Secure the wiring harness (3) in the cable straps. Insert the grommet (4). Fit the plug (G) to the installation site for the control unit.

A = 400 mm, B = 700 mm, C = 970 mm

### F 36 66 104

Secure the control unit (1) with plastic nuts (3) and the signal generator (2) with the hexagonal nut (4) to the bracket (5).



The plug connections point upwards. ◀

### F 36 66 105

Fit the nut bracket to the car.

### F 36 66 106

Insert the plugs (F, G) into the counter plugs of the same colour on the control unit (1) and secure them with the fuse bars (2). Insert the plug (E) to the signal generator (3). Secure the bracket (4) with hexagonal screws (5).

## 4.4 Model E 36/C

### F 36 66 107

Fit the power supply wiring harness (1) from the tail light unit (2) to the control unit (3) and to the right-hand trim (6). Fit the ultrasonic transducer wiring harness (4) from the control unit (3) to the ultrasonic transducers (5).

### F 36 66 108

Open the hood box cover (1) slightly (30 mm to 50 mm). Then push the hood box cover downwards in the direction indicated by the arrow so that the luggage compartment lid (3) can be opened.

### F 36 66 109

Remove the luggage compartment mat. Take out the tail light units on both sides. Undo the expanding rivet (1) and remove the left-hand luggage compartment trim (2). Unscrew the plastic nuts (3) and take out the cover (4).

### F 36 66 110

Unscrew the expanding rivet (2) and plastic nut (1) and then remove the cover (3).

### F 36 66 075

Remove the expanding rivets (1). Fold back the rear trim (2) in the direction indicated by the arrow. Pull the wiring harness (3) out of the clips and then remove the rear trim (2).

### Vehicles with electric hood only

### F 36 66 111



Do not move the mechanism for the hood flap and electric motor. ◀

Push the bar (1) in the direction indicated by the arrow until the motor (2) is released. Undo the spring clips (3) and disconnect both Bowden cables. Remove the securing clips (5). Undo the spring clips (6) and taken out the strut (7).

### F 36 66 112

Disconnect the plug (1). Unscrew the hexagonal nuts (2) and remove the bracket (3).

### All E 36/C models

### F 36 66 113

Disconnect jacks 1 (pin 5) and 2 (pin 1) from the socket (3) on the left-hand tail light unit. Connect jack (1) to socket casing (A1) and jack (2) to socket casing (C1).

Connect connector (A) to connector (A1) and connector (C) to connector (C1).

Connect connectors (B and D) to the socket (3) as follows:

Connector (B) **Pin 5**  
Connector (D) **Pin 1**

Fit the plug (F) to the left-hand wheel arch and plug (E) through the cable passage in the left-hand backrest to the right-hand side.

#### F 36 66 114

Secure the control unit (1) to the bracket (3) using plastic nuts (2). Only turn the cross slot screws (4) on the bracket (3) in a few turns.

#### F 36 66 077

Centre punch the dimensions and drill the holes with a 5.5 mm twist bit. Expand the hole to a diameter of 32 mm.

A = 135 mm, B = 30 mm

#### F 36 66 078

Drill the holes (1) with a diameter of 5.5 mm and thread the cable straps (2) through them. Secure the wiring harness (3) in the cable straps (2). Thread the plug (G) through the hole and insert the grommet (4). Fit the plug (G) at the control unit's installation site.

#### F 36 66 115

Insert the plugs (F, G) into the counter plugs of the same colour on the control unit (1).

#### F 36 66 116

Push the control unit into the gap between the wing and the luggage compartment plate. Push the cross slot screws on the bracket (1) through the oval holes and secure them,

#### F 36 66 117

Fit the plug (E) for the power supply wiring harness (1) from the luggage compartment to the seat box and connect it to the standard cable ties (2). Fit the plug (E) to the right-hand side of the car.

#### F 36 66 118

Connect the plug (E) into the PDC gong (1) and secure the PDC gong (1) to the bracket (3) using the hexagonal nut (2). Ensure that the journal (4) locks into the hole provided for it.

#### F 36 66 119

Secure the bracket (1) to the existing welded studs using the plastic nuts (2).

### 5. To fit the bracket, ultrasonic transducer and bumper guards

#### F 36 66 120

Carefully lever out the bumper guards (1) in the direction indicated by the arrow using a screwdriver, and remove them.

#### F 36 66 121

Hammer the expanding pins (1) inwards and lever the expanding rivets (2) out of the bumper.

#### F 36 66 122

Hammer the expanding pins (1) downwards and lever the expanding rivets (2) out of the bumper.

#### F 36 66 123

Carefully lift out the bumper support (1) and the bumper insert (2).

#### E 36/5 models only

#### F 36 66 124

Undo the hexagonal nut (1), then pull out the Torx bolt (2). Lift out the impact absorber (3).

#### Vehicles without standard holes only

#### F 36 66 125

Insert the support for PDC (1) into the bumper casing (2). Secure it in position with several expanding rivets and then mark the holes for the sensors. Remove the support and drill the holes.

#### F 36 66 126

Secure the bracket (1) with hexagonal nuts (3) and Torx bolts (4) to the support for PDC (2). Then insert the bracket in the rear trim and secure it with expanding rivets.

#### F 36 66 127

Fit the bumper guards (1). Align and secure the bumper guard (2).



The angled section on the centre bumper guard must point upwards. ◀

#### F 36 66 128

Fit the ultrasonic transducers in the bumper guards from the rear.



The ultrasonic transducers must lock into the mountings. ◀

#### F 36 66 129

Connect the plugs to the ultrasonic transducers and secure the bumper to the car.

#### For all cars



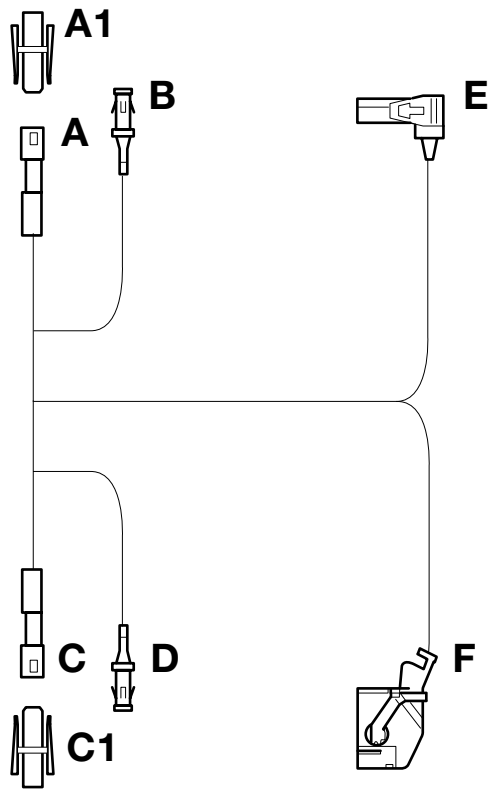
The fusible insert for the reversing lights also acts as the fuse for the Park Distance Control. After fitting, a note is to be made on the sticker in the fuse box. ◀

## 6. Circuit diagram

### Legend

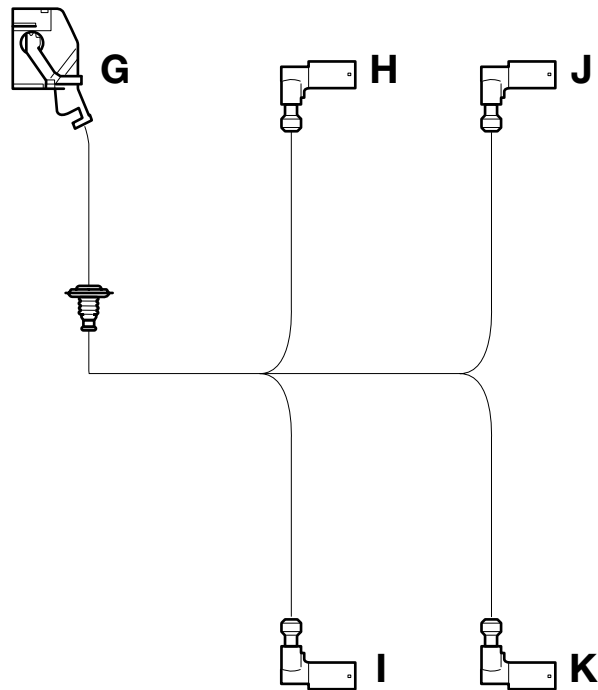
X18013 PLUG FOR SENSOR WIRING HARNESS  
A81 PDC CONTROL UNIT  
H40 PDC GONG  
X300 PDC CONTROL UNIT PLUG  
X319 TAIL LIGHT  
X363 PDC GONG  
X001 REVERSING LIGHT CONNECTOR  
X18020 TRANSDUCER PLUG REAR LEFT  
X18021 TRANSDUCER PLUG REAR  
CENTRE LEFT  
X18022 TRANSDUCER PLUG REAR  
CENTRE RIGHT  
X18023 TRANSDUCER PLUG REAR RIGHT  
B34 SENSOR REAR LEFT  
B35 SENSOR REAR CENTRE LEFT  
B36 SENSOR REAR CENTRE RIGHT  
B37 SENSOR REAR RIGHT

**1**



F 36 66 070

**2**



F 36 66 071



