Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
	Convenience control module (N57) Voltage supply, circuit 30	N57 2—(———————————————————————————————————	Ignition: OFF	11 – 14 V	Wiring.
⇒ 2.0	Convenience control module (N57) Voltage supply, circuit 15R/30		Turn ignition key to position "1". Doors: closed	11 – 14 V 11 – 14 V	Wiring, Convenience relay module (K24).
	Convenience control module (N57) Voltage supply, circuit 15R	N57 	Turn ignition key to position "1".	11 – 14 V	Wiring.

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 4.0	Convenience relay module (K24) Voltage supply	5 — (→ (V) [±])— 2	Ignition: OFF K24 disconnected. Turn ignition key to position "1".	11 – 14 V 11 – 14 V 11 – 14 V	Wiring.
⇒ 5.0	Front door contact switches (S17/3, S17/4) Circuit	K24 6 (- - () ⁺ -) -2	Left front door: OPEN	0 – 2 V 11 – 14 V 0 – 2 V 11 – 14 V	Wiring, ⇒ 5.1

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 5.1	Voltage supply	N57	Ignition: OFF		Wiring, S17/3,
		23 — 24 (E.1) (E.2)	Both front doors: CLOSED	0 – 2 V	S17/4.
			Left front door: OPEN	11 – 14 V	Model 124 PSE control module (A37/2),
			Front doors: CLOSED	0 – 2 V	Model 202: See section 3.2 PSE/CL.
			Right front door: OPEN	11 – 14 V	Values are OK: N57.
⇒ 6.0	Model 124: Sliding/pop-up roof (M12) Voltage supply	M12 6 — (→ () →) — 1	Ignition: ON	11 – 14 V	Wiring.
	Model 202: Sliding/pop-up roof (M12/1) Voltage supply	M12/1 6 — (→ (¥) → → 4	Ignition: ON	11 – 14 V	

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 7.0	Sliding/pop-up roof circuit (S13/2) Function: Closing sliding/pop-up roof Voltage supply	N57 16 — — —)— 15 (C.4 (C.3)	Ignition: OFF Disconnect connector C of N57. Ignition: ON S13/2 in rest position. Switch held in sliding/pop-up roof close position .	0 – 1 V 11 – 14 V	Wiring, S13/2. Values are OK: Sliding/pop-up roof relay (M12k1 or M12/1k1). Sliding/pop-up roof motor (M12m1 or M12/1m1).
⇒ 8.0	Sliding/pop-up roof switch (S13/2) Function: Opening sliding roof Voltage supply	N57 16—(— (C.4) (C.2)	Ignition: OFF Disconnect connector C of N57. Ignition: ON S13/2 in rest position. S13/2 held in sliding roof open position	0 – 1 V 11 – 14 V	Wiring, S13/2. Values are OK: Sliding/pop-up roof relay (M12k1 or M12/1k1). Sliding/pop-up roof motor (M12m1 or M12/1m1).
⇒ 9.0	Sliding/pop-up roof switch (S13/2) Function: Opening pop-up roof Voltage supply	N57 16—(———————————————————————————————————	Ignition: OFF Disconnect connector C of N57. Ignition: ON S13/2 in rest position. S13/2 held in pop-up roof open position	0 – 1 V 11 – 14 V	Wiring, S13/2. Values are OK: Sliding/pop-up roof relay (M12k1 or M12/1k1). Sliding/pop-up roof motor (M12m1 or M12/1m1).

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 10.0	Left front power window switch (S21/1) Function: Opening Voltage supply	(A.2) (A.5)	S21/1 held in open position "1". S21/1 held in open position	9 – 14 V 0 – 1 V 0 – 1 V	Wiring, ⇒ 10.1 Convenience control module (N57).
⇒ 10.1	Resistance	2 - (A.2) $(A.5)$	S21/1 held in open position "1". S21/1 held in open position	>20 k Ω 0 – 2 Ω	Wiring, S21/1.

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
	Left front power window switch (S21/1) Function: Closing Voltage supply	N57 2—(———————————————————————————————————	S21/1 held in close		Wiring, ⇒ 11.1, Convenience control module (N57).
⇒ 11.1	Resistance		S21/1 held in close		Wiring, S21/1.

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 12.0	Left front power window switch (S21/1) Function: One-touch operation Voltage supply	N57 2—(———————————————————————————————————	S21/1 held in open position "1". S21/1 held in open position		Wiring, ⇒ 12.1, Convenience control module (N57).
⇒ 12.1	Resistance	N57 	Ignition: OFF Disconnect connector A of N57. S21/1 in rest position. S21/1 held in open position "1". S21/1 held in open position "2".		Wiring, S21/1.

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
	Right front power window switch (S21/2) Function: Opening Voltage supply	(A.2) (A.1)	S21/2 held in open position. "1". S21/2 held in open position		Wiring, ⇒ 13.1, Convenience control module (N57).
⇒ 13.1	Resistance	2 - (A.2) $(A.1)$	S21/2 held in open position "1". S21/2 held in open position		Wiring, S21/2.

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
	Right front window circuit (S21/2) Function: Closing Voltage supply	2 — $(A.2)$ — $(A.4)$	•		Wiring, ⇒ 14.1, Convenience control module (N57).
⇒ 14.1	Resistance	2 - (A.2) - (A.4)	Ignition: OFF Disconnect connector A of N57. S21/2 in rest position. S21/2 held in close position.	>20 kΩ 0 – 2 Ω	Wiring, S21/2.

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 15.0	Right front window circuit (S21/2) Function: One-touch operation Voltage supply	N57 2—(———————————————————————————————————	S21/2 held in open position	9 – 14 V 9 – 14 V	Wiring, ⇒ 15.1, Convenience control module (N57).
			S21/2 held in open position "2".	0 – 1 V	
⇒ 15.1	Resistance	$N57$ $2 \longrightarrow \bigcirc \bigcirc \bigcirc \longrightarrow \bigcirc $	Ignition: OFF Disconnect connector A N57. S21/2 in rest position. S21/2 held in open position "1".	>20 kΩ >20 kΩ	Wiring, S21/2.
			S21/2 held in open position	0 – 2 Ω	

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 16.0	Left rear power window switch (door) (S21/3), Left rear power window switch (center console) (S21/5) Function: Opening Voltage supply	N57 	Ignition: ON Rear power windows safety switch (center console) (S21/7): OFF S21/3 and S21/5 in rest position.	9 – 14 V	Wiring, ⇒ 16.1 Values are OK: ⇒ 20.0, Convenience control module (N57).
			S21/3 held in open position. S21/5 held in open position.	0 – 1 V 0 – 1 V	
⇒ 16.1	Left rear power window switch (door) (S21/3) Resistance	N57 	Ignition: OFF Disconnect connector B of N57. S21/3 and S21/5 in rest position.	>20 kΩ	Wiring, S21/3, S21/5, ⇒ 16.2
		(B.7) (B.1)	S21/3 held in open position.	0 – 3 Ω	

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 16.2	Left rear power window switch (center console) (S21/5) Resistance	N57	Ignition: OFF Disconnect connector B of N57. Disconnect S21/3 from wiring harness.		Wiring, S21/5.
		33 — 27 (B.7) (B.1)	S21/5 in rest position. S21/5 held in open position.	>20 kΩ 0 – 2 Ω	
⇒ 17.0	Left rear power window switch (door) (S21/3), Left rear power window switch (center console) (S21/5) Function: Closing	N57	Ignition: ON Rear power windows safety switch (center console) (S21/7): OFF		Wiring, ⇒ 17.1
	Voltage supply		S21/3 held in	9 – 14 V	Values are OK: ⇒ 20.0, Convenience control module (N57).
			S21/5 held in close position.	0 – 1 V 0 – 1 V	

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 17.1	Left rear power window switch (door) (S21/3) Resistance	N57 □□□□□ 33 — 34 (B.7) (B.8)	Ignition: OFF Disconnect connector B from N57. S21/3 and S21/5 held in rest position. S21/3 held in close position.	>20 kΩ 0 – 3 Ω	Wiring, S21/3, S21/5, ⇒ 17.2
⇒ 17.2	Left rear power window switch (center console) (S21/5) Resistance	N57 □□□□□ 33 — 34 (B.7) (B.8)	Ignition: OFF Disconnect connector B of N57. Disconnect S21/3 from wiring harness. S21/5 in rest position . S21/5 in close position .	>20 kΩ 0 – 2 Ω	Wiring, S21/5.

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 18.0	Right rear power window switch (door) (S21/4), Right rear power window switch (center console) (S21/6) Function: Opening Voltage supply	N57 □□□□□ 33 — (→ (¥) →) — 38 (B.7) (B.12)	Ignition: ON Rear power windows safety switch (center console) (S21/7): OFF S21/4 and S21/6 in rest position. S21/4 held in open position. S21/6 held in open position.	9 – 14 V 0 – 1 V 0 – 1 V	Wiring, ⇒ 18.1 Values are OK: ⇒ 20.0, Convenience control module (N57).
⇒ 18.1	Right rear power window switch (door) (S21/4) Resistance	N57 	Ignition: OFF Disconnect connector B of N57. S21/4 and S21/6 held in rest position. S21/4 held in open position.	>20 k Ω 0 – 3 Ω	Wiring, S21/4, S21/6, ⇒ 18.2

Test step DTC	Test scope	Test connect	ion	Test condition	Nominal value	Possible cause/Remedy
⇒ 18.2	Right rear power window switch (center console) (S21/6) Resistance	N5 	<u></u> → 38	Ignition: OFF Disconnect connector B from N57. Disconnect S21/4 from wiring harness. S21/6 in rest position .	>20 kΩ	Wiring, S21/6.
		(B.7)	(B.12)	S21/6 held in open position	0 – 3 Ω	
⇒ 19.0	Right rear power window switch (S21/4), Right rear power window switch (center console) (S21/6) Function: Closing Voltage supply	N5 ∭∭ 33 — (— (((B.7)	<u> </u>	S21/4 held in	9 – 14 V 0 – 1 V	Wiring, ⇒ 19.1 Values are OK: ⇒ 20.0, Convenience control module (N57).
				S21/6 held in close position.	0 – 1 V	

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 19.1	Right rear power window switch (door) (S21/4) Resistance	33 — → □ 35 (B.7) (B.9)	Ignition: OFF Disconnect connector B of N57. S21/4 and S21/6 in rest position. S21/4 in close position.		Wiring, S21/4, S21/6, ⇒ 19.2
⇒ 19.2	Right rear power window switch (center console) (S21/6) Resistance	N57 	Ignition: OFF Disconnect connector B of N57. Disconnect S21/4 from wiring harness. S21/6 in rest position . S21/6 held in close position .		Wiring, S21/6.

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Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 20.0	Rear power windows safety switch (center console) (S21/7) Voltage supply	N57 	Ignition: ON Rear power windows safety switch (center console) (S21/7): Unlocked S21/3 held in open position . Rear power window safety switch (center console) (S21/7): Locked S21/3 held in open position .	0 – 1 V 9 – 14 V	Wiring, ⇒ 20.1 Values are OK: ⇒ 16.0, Convenience control module (N57).
⇒ 20.1	Resistance	N57 □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□	Ignition: OFF Disconnect connector B of N57. S21/7 in unlocked position . S21/3 held in open position . S21/7 in locked position . S21/3 held in open position .	0 – 3 Ω >20 kΩ	Wiring, S21/7.

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
Model 202 only	Left and right front door lock switch (convenience) (S86/1, 87/1) and trunk lid lock switch (convenience) (S88/2) Function: Opening Voltage supply	(A.2) (D.2)	S86/1 in open position. S87/1 in open position.	9 – 14 V 0 – 1 V 0 – 1 V 0 – 1 V	Wiring, ⇒ 21.1
	Function: Closing Voltage supply	N57 2—(—(V)+-)— 22 (A.2) (D.6)	S86/1 in close position. S87/1 in close position.	9 – 14 V 0 – 1 V 0 – 1 V 0 – 1 V	

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 21.1 Model 202 only	S86/1, S87/1 and S88/2 Function: Opening Resistance	N57 $2 - ($		>20 k Ω 0 – 5 Ω 0 – 5 Ω	Wiring, S86/1, S87/1, S88/2, PSE control module (A37/4, A37/5). See section 3.2 (PSE/CL).
	Function: Closing Resistance	N57 	S88/2 in open position. S86/1, S87/1 and S88/2 in rest position. S86/1 in close position. S87/1 in close position.	$0 - 5 \Omega$ >20 kΩ $0 - 5 \Omega$ $0 - 5 \Omega$ $0 - 5 \Omega$	

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
Model 124 without ATA	Left and right front door lock switch (convenience) (S86/1, S87/1) and trunk lid lock	N57	S86/1, S87/1 and S88/2 in rest position.	9 – 14 V	Wiring, ⇒ 22.1
	switch (convenience) (S88/2) Function: Opening Voltage supply	(A.2) (D.4)	S86/1 in open position.	0 – 1 V	
	Voltage supply		S87/1 in open position.	0 – 1 V	
			S88/2 in open position.	0 – 1 V	
	Function: Opening Voltage supply				
			S86/1 in close position .	0 – 1 V	
			S87/1 in close position .	0 – 1 V	
			S88/2 in close position .	0 – 1 V	

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 22.1	S86/1, S87/1, and S88/2 Function: Opening Resistance	$2 - (-20)^{+} - 20$	Disconnect and cover battery negative cable. Disconnect connector D of N57. S86/1, S87/1 and S88/2 in rest position. S86/1 in open position.	>20 k Ω 0 – 5 Ω	Wiring, S86/1, S87/1, S88/2.
	Function: Closing Resistance		S88/2 in open position. S86/1 in close position. S87/1 in close position. S88/2 in close position.	$0-5 \Omega$ $0-5 \Omega$ $0-5 \Omega$ $0-5 \Omega$	

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
Model 124 with ATA	Left and right front door lock switch (convenience) (S86/1, S87/1) and trunk lid lock switch (convenience) (S88/2) Voltage supply	N57	S86/1 and S87/1 in rest position.	9 – 14 V	Wiring, ⇒ 23.1
	remage supply		S86/1 in open position.	0 – 1 V	
		N57	S87/1 in open position.	0 – 1 V	
		2—(———————————————————————————————————	S86/1 and S87/1 in rest position.	9 – 14 V	
				0 – 1 V	
			S87/1 in close position.	0 – 1 V	
		N57 	000/0		
		$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	•	9 – 14 V	
				0 – 1 V	
			S88/2 in open position.	0 – 1 V	

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 23.1	S86/1 and S87/1 Resistance	N57 2—(—— ① —— 18 (A.2) (D.2)	Ignition: OFF Disconnect connector D of N57. S86/1 and S87/1 in rest position. S86/1in open position. S87/1 in open position.	>20 k Ω 0 – 5 Ω 0 – 5 Ω	Wiring, S86/1, S87/1, ⇒ 23.2
		N57 	S86/1 and S87/1 in rest position. S86/1in close position. S87/1 in close position.	>20 k Ω 0 – 5 Ω 0 – 5 Ω	
⇒ 23.2	S88/2 Resistance	N57 2—(—— ① —— 20 (A.2) (D.4)	Ignition: OFF Disconnect connector D of N57. S88/2 in rest position. S88/2 in open position. S88/2 in open position.	>20 k Ω 0 – 5 Ω 0 – 5 Ω	Wiring, S88/2.

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 24.0 Model 124 only	Left front door actuator (S47) Voltage supply	(D.5) (E.2)	Vehicle locked. Vehicle unlocked.	0 – 1 V 11 – 14 V 11 – 14 V 0 – 1 V	Wiring, S47, Supply pump (central locking system/orthopedic backrest) (M14/2). Anti-theft alarm control module (N26).
⇒ 25.0 Model 124 only	Right front door actuator (S47) Voltage supply	19 — 24 (D.3) (E.2)	Vehicle locked. Vehicle unlocked.	0 – 1 V 11 – 14 V 11 – 14 V 0 – 1 V	Wiring, S48, Warning buzzer contact (exterior lamps/central locking system) (S88/2). Supply pump (central locking system/orthopedic backrest)(M14/2). Anti-theft alarm control module (N26).

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 26.0 Model 124 only	Trunk lid actuator (S49) Voltage supply	(D.1) (E.2) 2—(———————————————————————————————————	Ignition: OFF Vehicle unlocked Vehicle locked Vehicle unlocked	0 – 1 V 11 – 14 V 11 – 14 V	Wiring, S49, Supply pump (central locking system/orthopedic backrest) (M14/2). Anti-theft alarm control module (N26).
		(A.2) (D.1)	Vehicle locked	0 – 1 V	
⇒ 27.0	Convenience relay module (K24) Function:Convenience feature	K24 6 — (→ () + →) — 2	Ignition: OFF Doors: Closed	0 – 2 V	Wiring, Convenience control module (N57).
	Voltage supply		Lock vehicle and hold key in lock position.	11 – 14 V	

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
	Left front power window motor (M10/3)	N57 	Ignition: OFF CAUTION! Disconnect connector A of control module (N57).		Wiring, M10/3.
		11 (A.11)	Ignition: ON Bridge sockets 11 and 10 with fused jumper wire 124 589 37 63.	Window opens.	
	Right front power window motor (M10/4)	N57 2 — (— —) — (A.2)	Ignition: OFF CAUTION! Disconnect connector A of control module (N57). Ignition: ON		Wiring, M10/4.
		(A.3)	Bridge sockets 3 and 10 with fused jumper wire	Window opens.	

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
	Left rear power window motor (M10/5)		Ignition: OFF CAUTION! Disconnect connector B of control module (N57).		Wiring, M10/5.
			Ignition: ON Pridge sockets 28 and 32 With fused jumper wire 124 589 37 63	Window opens.	
	Right rear power window motor (M10/6)		Ignition: OFF CAUTION! Disconnect connector B of control module (N57).		Wiring, M10/6.
			Ignition: ON Bridge sockets 32 and 37 with fused jumper wire 124 589 37 63	Window opens.	

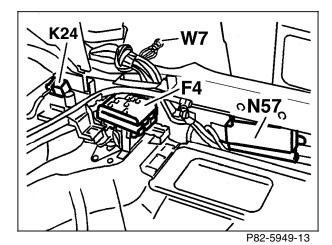


Figure 1 Model 202

W7/1 Ground (right rear tail lamp in trunk)

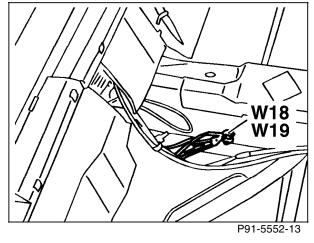


Figure 2 Model 202

W18 Ground (left front seat crossmember)
W19 Ground (right front seat crossmember)

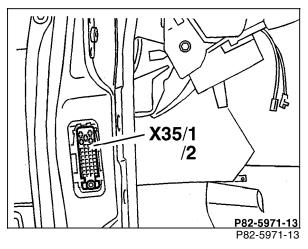


Figure 3 Model 202

X35/1 Left front door plug connection
X35/2 Right front door plug connection
(mirror image of left shown)

5.2 CF

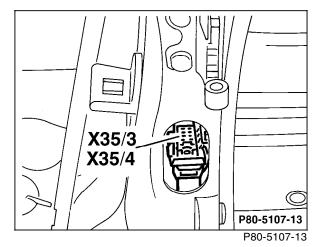


Figure 4 Model 202

X35/3 Left rear door plug connectionX35/4 Right rear door plug connection

(mirror image of left shown)

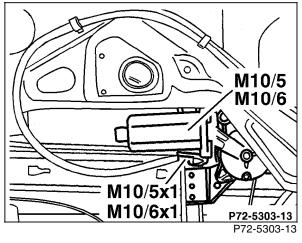


Figure 5 Model 202

M10/5x1 Left rear power window motor connector

M10/6x1 Right rear power window motor connector

(mirror image of left shown)