

Trailer EBS E Modulator: Connections for cables and pipes

Cable connections

GENERIC IN/OUTPUTS

GIO5	Modulator
GIO4	Power
GIO3	Subsystems
GIO2	Subsystems
GIO1	IN/OUT
ABS-f/GIO6	GIO7/ABS-e
ABS-d	ABS-c

S Standard P Premium

Piping connections left side

Brake cylinder (11)
 Supply Reservoir - brake
 Suspension Air suspension pressure
 Control PREV (Port 21)

Piping connections right side

without PEM:
 Brake cylinder Test connector
 Supply Reservoir - brake
 Brake cylinder (11)

Piping PEM (Pneumatic Extension Module)

Springbrakes (12) PREV (22)
 Aux. supply e.g. Reservoir - air suspension, Levelling valve, Lifting axle valve, ECAS solenoid valve, Rotary slide valve
 Test connector Brake pressure (22)
 PREV (1-2)
 Supply (PREV 1-2) Reservoir - brake

Cables for connecting Trailer EBS E Modulator

GIO

Wear indicator BVA (GIO1...4, GIO1...7)
 449 816 013 0 (1.3 m)
 449 816 030 0 (3.0 m)

Adapter (GIO1...4, GIO1...7)
 449 819 010 0 (1 m)

GIO - open end (GIO1...4, GIO1...7)
 4-core cable for duplicate GIOs
 449 535 060 0 (6 m)

Traction Help (GIO1 + 3, GIO1 + 3)
 449 813 050 0 (5 m)

Traction Help / forced lowering (GIO1 + 3, GIO1 + 3)
 449 815 253 0 (6 m / 6 m)
 449 815 258 0 (15 m / 6 m)

24N / TH / forced lowering (GIO1 + 3 IN/OUT, GIO1 + 3 IN/OUT)
 449 356 023 0 (1 m, 0.5 m, 1 m / 0.4 m)

Lift axle valve, RTR (GIO1...4, GIO1...7)
 449 443 008 0 (0.8 m)
 449 443 010 0 (1.0 m)
 449 443 020 0 (2.0 m)
 449 443 040 0 (4.0 m)
 449 443 060 0 (6.0 m)
 449 443 100 0 (10.0 m)

GIO

Pressure sensor (GIO1 + 3, GIO1 + 3)
 axle load sensor or demand pressure sensor
 449 812 030 0 (3 m)
 449 812 100 0 (10 m)

Diagnostic (GIO5)
 449 611 030 0 (3 m)
 449 611 040 0 (4 m)
 449 611 060 0 (6 m)
 449 611 080 0 (8 m)

ECAS solenoid valve (GIO2 + 3)
 449 445 010 0 (1 m)
 449 445 030 0 (3 m)
 449 445 050 0 (5 m)

Height sensor (GIO1 + 4)
 for ECAS and mechanical suspension
 449 811 010 0 (1 m)
 449 811 050 0 (5 m)
 449 811 080 0 (8 m)

External ECAS (GIO4)
 449 438 050 0 (5 m)

Telematic (GIO5)
 449 915 010 0 (1 m)

ABS Sensor + GIO6 / 7 (GIO6 + 7)
 449 818 022 0 (0.4 m / 0.4 m)

Y-cable for GIO (GIO1...3, GIO1...7)
 449 629 022 0 (0.4 m / 0.4 m)

Modulator

EBS relay valve (Modulator)
 449 429 010 0 (1 m)
 449 429 030 0 (3 m)
 449 429 080 0 (8 m)

ABS relay valve (Modulator)
 449 436 030 0 (3 m)
 449 436 080 0 (8 m)

Power

ISO 7638 semi-trailer (Power, Power)
 449 173 090 0 (9 m)
 449 173 120 0 (12 m)
 449 173 130 0 (13 m)
 449 173 150 0 (15 m)

ISO 7638 draw-bar trailer (Power, Power)
 449 273 060 0 (6 m)
 449 273 100 0 (10 m)
 449 273 120 0 (12 m)

ISO 7638 adapter (Power, Power)
 449 347 003 0 (0.3 m)
 449 347 025 0 (2.5 m)

ISO 7638 open end (Power, Power)
 449 371 120 0 (12 m)
 449 371 180 0 (18 m)

ABS sensor c, d, e, f

Sensor (ABS-c + d, ABS-c...f)
 449 723 003 0 (0.3 m)
 449 723 018 0 (1.8 m)
 449 723 023 0 (2.3 m)
 449 723 030 0 (3.0 m)
 449 723 040 0 (4.0 m)
 449 723 080 0 (8.0 m)
 449 723 100 0 (10.0 m)

Subsystems

SmartBoard (Subsystems, Subsystems)
 449 911 040 0 (4 m)
 449 911 060 0 (6 m)
 449 911 120 0 (12 m)

SmartBoard + IVTM (Subsystems, Subsystems)
 449 916 182 0 (0.4 m / 4 m)
 449 916 253 0 (6.0 m / 6 m)

Universal 8 core (Subsystems, Subsystems)
 449 437 020 0 (2 m)
 449 437 060 0 (6 m)

Telematic (Subsystems, Subsystems)
 449 914 010 0 (1 m)

ECAS control box (Subsystems, Subsystems)
 449 627 060 0 (6 m)

ECAS RCU (Subsystems, Subsystems)
 449 628 050 0 (5 m)

IVTM ECU (Subsystems, Subsystems)
 449 913 050 0 (5 m)

IN/OUT

ISO 1185 (24N) (IN/OUT, IN/OUT)
 449 349 040 0 (4 m)
 449 349 060 0 (6 m)
 449 349 100 0 (10 m)
 449 349 150 0 (15 m)

ISO 1185 (24N) (IN/OUT, IN/OUT)
 449 350 010 0 (1 m)

TCE (socket X22) (IN/OUT, IN/OUT)
 449 348 020 0 (2 m)

Installation Instructions

How to pipe 'New Line' system

Hose adaptor 893 129 467 4

Fitting for 12 x 1.5 mm plastic tube
 Brake hose 11.5 x 3.5 mm
 Hose to be clipped after 500 mm
 Insertion depth
 Dismantling tool 899 700 920 2
 Using dismantling tool

- Use plastic tube according to DIN 74324, 73378 or ISO 7628.
- Mark insertion length on the pipe according table using e.g. tape.
- Pipes must be cut at right angles. A maximum deviation of 15° is permissible.
- Fully push in the pipe into the bottom of the connector.
- Check that the mark is touching the connector to ensure insertion is complete.
- Control connection with pulling the pipe with 20 to 50 N where the pipe must not move out of the connector.
- A dismantling tool is required to remove a pipe from the push-in coupling. Follow description according drawing 'Using Dismantling Tool'.

Plastic tube	Product number	Insertion depth	Hose adaptor Product number
8 x 1 mm	828 251 008 6	20.5 mm	-
12 x 1.5 mm	828 251 112 6	25.0 mm	893 129 467 4
15 x 1.5 mm	828 251 115 6	27.0 mm	-
16 x 2 mm	828 252 116 6	27.0 mm	-

How to connect cables

AF13
 max. 300 mm
 R ≥ 10x Ø

- The installation position of ISO 7638 socket is 0°...30° down inclined. Otherwise water can penetrate into the contact area while coupling the connector.
- Cables should only be fastened on inflexible solid elements with a rigid connection to the device e. g. the vehicle frame. Fastening cables on flexible elements can lead to cable breakdown and leakages.
- Open end cables have to be sealed separately or be coupled to a sealed junction box.