

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 for ECAS and mechanical suspension GIO1 + 4
 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

S Standard P Premium

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
 L₂ - SmartBoard
 L₁ - IVTM
 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

- 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	-

Using dismantling tool

How to connect cables

- 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.