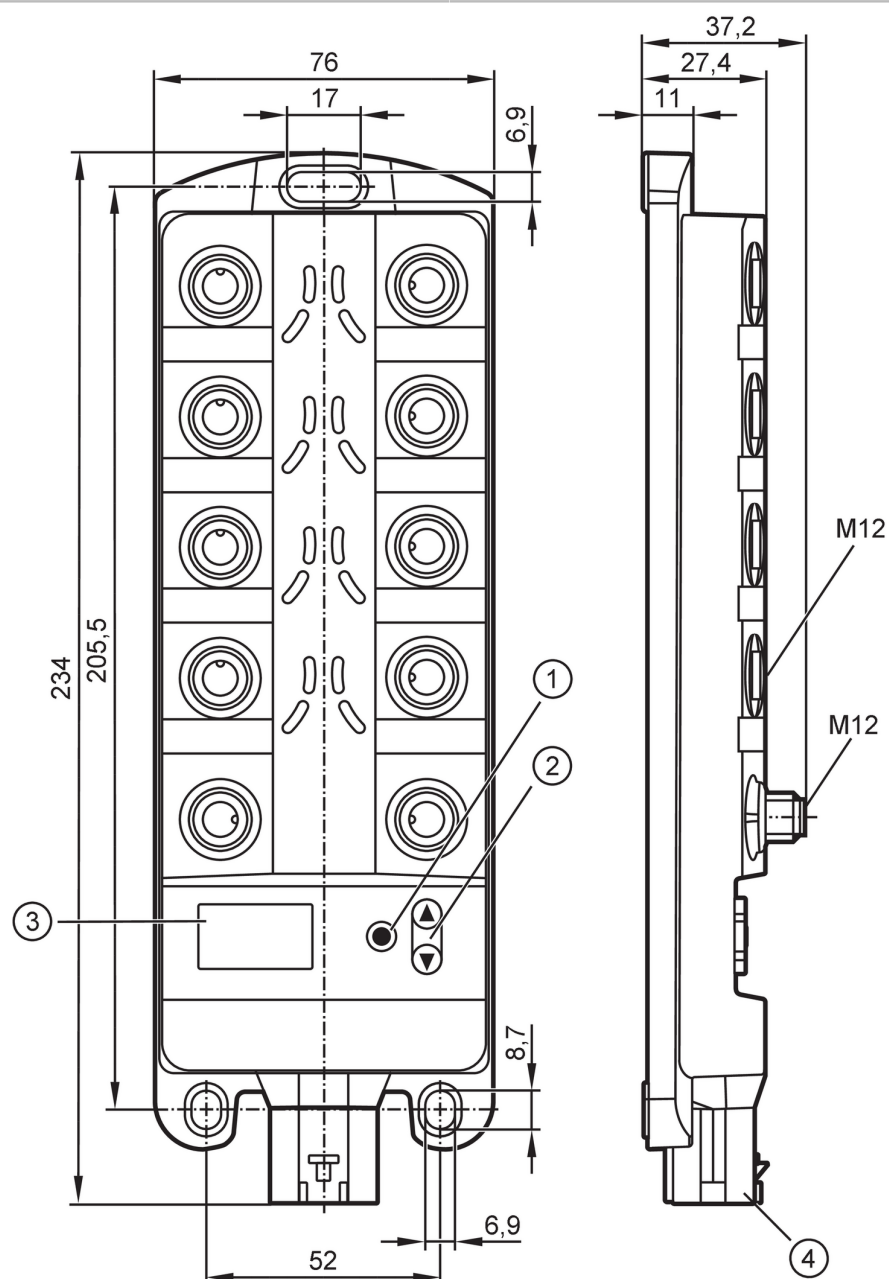


Output module for mobile machines

ioControl/Out 16/M12



- 1 pushbutton ENTER
- 2 Pushbuttons UP/DOWN
- 3 10-segment display
- 4 AMP connector



Application

Special feature gold-plated contacts

Electrical data

Operating voltage	[V]	8...32 DC
Nominal voltage DC	[V]	12 / 24
Current consumption	[mA]	188; (24 V DC: 105 mA; maximum: 300 mA)
Reverse polarity protection		yes
Overvoltage protection		yes; (36 V: $t \leq 10$ s)



Output module for mobile machines

ioControl/Out 16/M12

Inputs / outputs		
Total number of inputs and outputs	16	
Number of inputs and outputs	Number of digital outputs: 16	
Outputs		
Total number of outputs	16	
Number of digital outputs	16	
Short-circuit protection	yes	
Short-circuit proof	yes	
Number of PWM outputs	16	
Number of PWM-I outputs	8	
Software / programming		
Parameter setting options	CODESYS 2.3	
PLC function to IEC 61131-3	yes	
Interfaces		
Communication interface	CAN	
Number of CAN interfaces	2	
Transmission rate	20 kBit/s... 1 MBit/s	
Protocol	CANopen; SAE J1939; free protocol	
Profile	CiA DS 301 Version 4; CiA DS 401 Version 1.4	
Interface	CAN Interface 2.0 A/B ISO 11898	
Factory settings	CAN1: 250 kBit/s	
	CAN2: 250 kBit/s	
Operating conditions		
Ambient temperature	[°C]	-40...85
Storage temperature	[°C]	-40...85
Max. relative air humidity	[%]	90; (non condensing)
Max. height above sea level	[m]	2000
Protection	IP 65; IP 67	
Degree of soiling	2	
Tests / approvals		
EMC	UN/ECE-R10 Noise emission and noise interference:	100 V/m
	DIN EN 61000-6-2 ESD	
	DIN EN 61000-6-4 Burst	
	ISO 7637-2 pulse 1	severity level 4 / function state C (24 V)
	ISO 7637-2 pulse 2a	severity level 4 / function state A (24 V)
	ISO 7637-2 pulse 2b	severity level 4 / function state C (24 V)
	ISO 7637-2 pulse 3a	severity level 4 / function state A (24 V)
	ISO 7637-2 pulse 3b	severity level 4 / function state A (24 V)
	ISO 7637-2 pulse 4	severity level 4 / function state B (24 V)
	ISO 7637-2 pulse 5	severity level 3 / function state C (24 V)
	ISO 7637-2 pulse 4	severity level 3 / function state C (12 V)
Continuous shock resistance	ISO 16750-3	30 g 6 ms / 24000 shocks
Fast temperature changes	EN 60068-2-30 damp heat: cyclical	55 °C upper temperature limit / 6 cycles
	EN 60068-2-78 damp heat: constant	40 °C 93 % rH / test period 21 days

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Output module for mobile machines

ioControl/Out 16/M12

Vibration resistance	ISO 16750-3 Test VII EN 60068-2-6 Sinus	random, mounting place car body 10...500 Hz / 10 cycles/axis, sine
MTTF [years]		95

Mechanical data

Weight [g]	136.5
Housing	rectangular
Type of mounting	Backplane mounting
Dimensions [mm]	234 x 76 x 37.2
Material	housing: PA6/6.6; Display: PA; Pushbuttons: silicone

Displays / operating elements

Display	function and status display setting parameters	LEDs, multi-color 10-segment LED display, red/green 4-digit
Operating elements	navigation	pushbuttons

Hardware

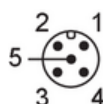
Processor	Freescall PowerPC 50 MHz
Working memory	592 kByte
Mass storage	1536 kByte Flash / 1 kByte FRAM

Remarks

Pack quantity	1 pcs.
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Electrical connection - CAN IN

Connector: 1 x M12; coding: A; Contacts: gold-plated

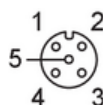


CAN IN

1	Shield
2	V_CAN
3	GND_CAN
4	CAN1_H
5	CAN1_L

Electrical connection - CAN OUT

Connector: 1 x M12; coding: A; Contacts: gold-plated



CAN OUT

1	Shield
2	V_CAN
3	GND_CAN
4	CAN1_H
5	CAN1_L

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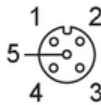


Output module for mobile machines

ioControl/Out 16/M12

Electrical connection - Outputs

Connector: 8 x M12; coding: A; Contacts: gold-plated

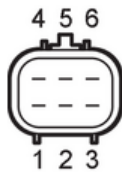


Con. 1...8

1	n.c.
2	OUTn
3	GND1
4	OUTn
5	n.c.

Electrical connection - supply / CAN interface

Connector: 1 x AMP connector (TE-AMP 1745078-1); Contacts: tin-plated



X1

1	GND1
2	CAN2_L
3	GND2
4	VBBs
5	CAN2_H
6	VBB2