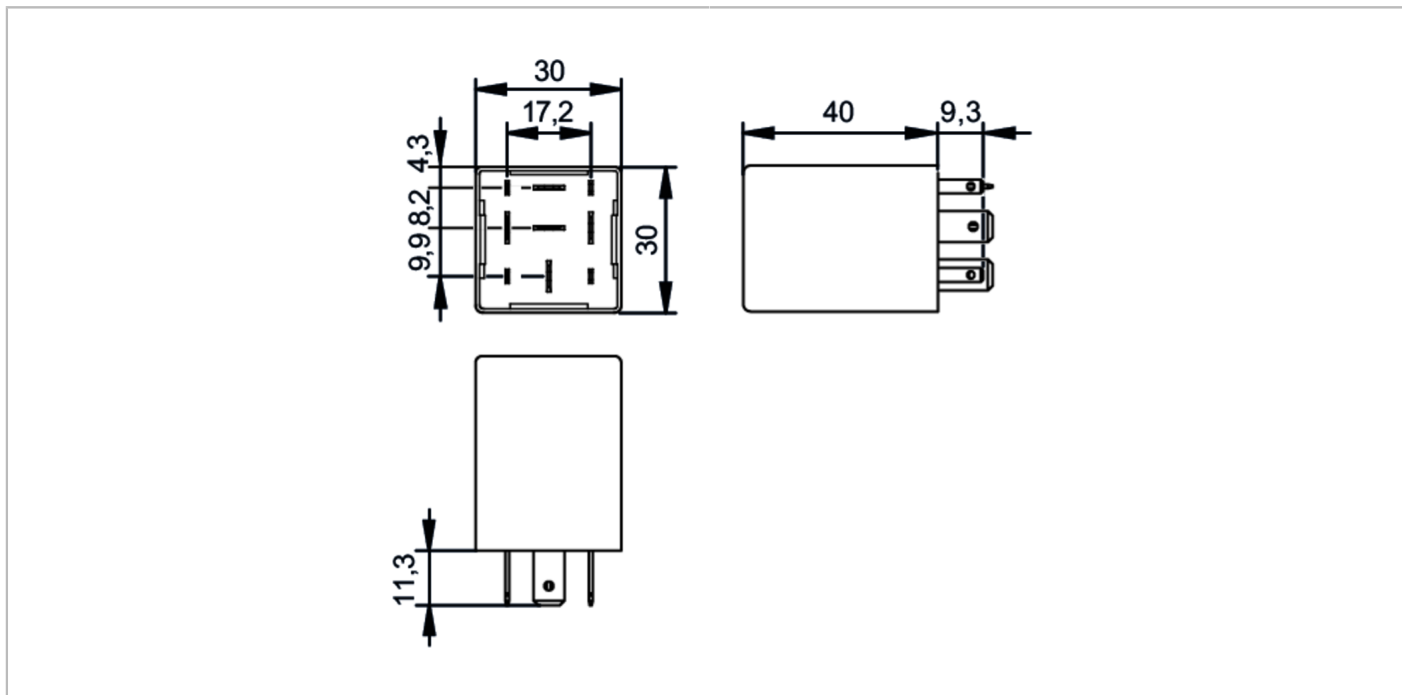


# CR3025



## I/O modules for mobile machines

ecomatRelay/1HB10A



Application		
UV resistant	yes	
Electrical data		
Operating voltage [V]	8...32 DC	
Nominal voltage DC [V]	12 / 24	
Current consumption [mA]	< 25; (without motor control)	
Power consumption [W]	0.6; (24 V; without motor control)	
Inputs / outputs		
Total number of inputs and outputs	4	
Number of inputs and outputs	Number of digital inputs: 3; Number of analog inputs: 3; Number of outputs with H-bridge: 1	
Inputs		
Total number of inputs	3	
Number of digital inputs	3	
Number of analog inputs	3	
Analog		
Analog input	input range [V]	0...32
	input resistance [ $\Omega$ ]	66600
	Resolution	12 Bit
	Accuracy	$\pm 29$ mV
	input frequency [Hz]	< 44



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Digital		
Digital input	input range [V]	0...32
	Switching level high [V]	> 70 % VBB30
	Switching level low [V]	< 30 % VBB30
	Resolution	12 Bit
	Accuracy	± 29 mV
	input frequency [Hz]	< 44
	input resistance [Ω]	66600
Outputs		
Total number of outputs		1
Permanent current rating of switching output DC [mA]		10000
Short-time current rating of switching output [mA]		12000; (t ≤ 5 min.)
Number of outputs with H-bridge		1
H-Brücke		
Output	Voltage range [V]	8...32
	switching current [A]	0...10
	output frequency [Hz]	0...25500
	pulse/pause ratio	0...1000 ‰
	protective circuitry	inductive load; thermal protection
	current measurement [A]	0...12
	accuracy of the current measurement [A]	± 3
Diagnostic functions	\$Lasterkennung	
Software / programming		
Parameter setting options	Baud rate; CAN parameter; Direction of rotation; Frequency output; node ID; pulse/pause ratio	
Interfaces		
Communication interface	CAN	
Number of CAN interfaces	1	
Transmission rate	20 kBit/s... 1 MBit/s	
Protocol	CANopen	
Interface	CAN Interface 2.0 A/B ISO 11898-5	
Factory settings	Transmission rate: 250 kBit/s node ID: 123	
Operating conditions		
Housing temperature [°C]	-40...85	
Storage temperature [°C]	-40...85	
Max. relative air humidity [%]	90; (non condensing)	
Max. height above sea level [m]	3500	
Protection	IP 67; (when mounted)	
Degree of soiling	2	
UV radiation	DIN EN ISO 4892-2 (procedure A, cycle B1, 1000 h)	
Chemical media	ISO 16750-5	AA, BA, BD, CC, DB, DC, DD

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Tests / approvals		
EMC	DIN EN 61000-6-2 noise immunity	
	DIN EN 61000-6-4 noise emission	
	CISPR25 automotive radiated emission	
	ISO 11452 automotive immunity to disturbances	
	FCC Part 15B Class A	
	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 A (24 V)
	ISO 7637-2 pulse 5	severity level 3 / function state A (24 V)
	ISO 7637-2 pulse 4	severity level 4 / function state A (12 V)
	Continuous shock resistance	ISO 16750-3
Vibration resistance	ISO 16750-3 Test VII	random, mounting place car body
MTTF [years]		308
Mechanical data		
Weight [g]		77.8
Housing		rectangular
Type of mounting		vertical
Dimensions [mm]		30 x 30 x 40
Material		Housing: PA 6.6-GF30
Information on service life	max. mating cycles of the crimp contacts:	10
Hardware		
Processor		8-Bit; 40 MHz
Working memory		4 KByte RAM
Mass storage		60 KByte Flash
Non-volatile memory		2 kByte
Remarks		
Pack quantity		1 pcs.

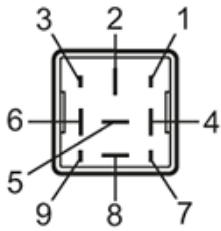
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### Electrical connection



1:	IN00
2:	VBB30
3:	IN01
4:	IN02
5:	OUT00
6:	GND
7:	CAN_H
8:	OUT01
9:	CAN_L