BUCHER automation

JXM-IO-E30

I/O module



- 12 inputs, and 14 outputs with diagnostic capabilities – including high current paths and PWM with current control
- High switching capacity thanks to parallel output connection and high total continuous current
- CAN ID addressing via tri-state inputs allows for integration of up to 9 nodes in one network without software configuration, and testifies to the common part strategy
- Short-circuit-proof sensor supplies
- Rugged potted housing

Description

The JXM-IO-E30 expansion module is the universal building block for remote I/Os on mobile machines. Thanks to its fine-tuned I/O configuration, it can take on almost any remote task and this way significantly reduce wiring expenses. It comes with a reference output supporting standard sensors and pre-processing applications.

Communication with the JXM-IO-E30 takes place via SAE J1939. This allows for integration into conventional CAN networks used in mobile machinery.

Featuring a sturdy potted housing, the expansion module is designed to perform reliably even in the harshest operating environments.

Technical specifications

Operating voltage range	DC 8 V ... 32 V, with separate ECU power supply
Operating/storage temperature	-40 ... +85 °C
CAN ports	1 SAE J1939
Max. amount of inputs/outputs	26
Inputs	
Analog	8; 0 ... 5 V/0 ... 20 mA, can be configured individually; resolution: 12 bits, input impedance: 35 kΩ, load resistor: 120 Ω
Digital/frequency	4; active-high; input impedance 5.6 kΩ; 0.1 Hz ... 10 kHz
Digital / CAN coding	2; Coding of the CAN ID, tri-state
Outputs with diagnostic capabilities (short-circuit, cable break)	
PWM, precision current measuring	4; 3 A, 1.5 kHz max., dithering, current-controlled, diagnostic capabilities, short-circuit-proof Alternative usage: - Digital input, active-low, input impedance 10 kΩ - Digital output 3 A - PNP input
PWM	6; 7 A, 1.5 kHz max., dithering, diagnostic capabilities, short-circuit-proof Alternative usage: - Digital input, active-low, input impedance 10 kΩ - Digital output 7 A - PNP input
Digital (50 % ON period)	4; 3 A high-side, diagnostic capabilities, short-circuit-proof, (with 50 % ON period) Alternative usage: - Digital input, active-low, input impedance 10 kΩ - PNP input
Sensor power supply	3 x VBAT for independent sensor supply
Max. permitted total current	25 A
Degree of protection	IP66
Vibration	ISO 16750-3
Shock	ISO 16750-3
Protection against polarity reversal	Yes
Output diagnostics	Short circuit, no-load

Pinout

JXM-IO-E30

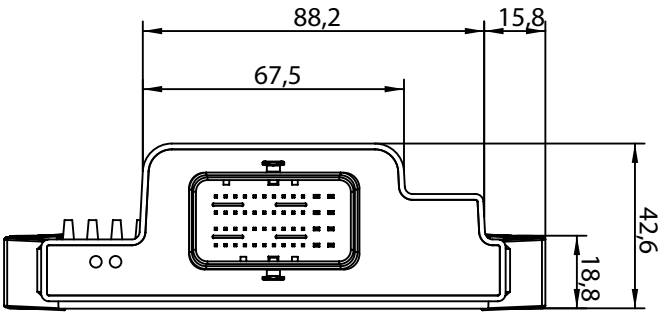
CAN high signal	A1
CAN low signal	B1
PWMi_H3_4 – high-side PWM output	C1
PWMi_H3_3 – high-side PWM output	D1
PWMi_H3_2 – high-side PWM output	E1
PWMi_H3_1 – high-side PWM output	F1
DO_H3_4 – Digital high-side output	G1
DO_H3_3 – Digital high-side output	H1
DO_H3_2 – Digital high-side output	J1
DO_H3_1 – Digital high-side output	K1
VBAT PWR – power supply	L1
VBAT PWR – power supply	M1
CAN_TERM2 – CAN termination	A2
CAN_TERM1 – CAN termination	B2
DI_P_1 – Digital and frequency input	C2
DI_P_2 – Digital and frequency input	D2
DI_P_3 – Digital and frequency input	E2
DI_P_4 – Digital and frequency input	F2
GND_SEN – ground for sensor supply	G2
VEXT_SEN_3 – sensor supply	H2
VEXT_SEN_2 – sensor supply	J2
VEXT_SEN_1 – sensor supply	K2
VBAT PWR – power supply	L2
PWM_H7_1 – high-side PWM output	M2
n.c.	A3
AI_1 – analog input, current/voltage	B3
AI_2 – analog input, current/voltage	C3
AI_3 – analog input, current/voltage	D3
AI_4 – analog input, current/voltage	E3
AI_5 – analog input, current/voltage	F3
AI_6 – analog input, current/voltage	G3
AI_7 – analog input, current/voltage	H3
AI_8 – analog input, current/voltage	J3
VBAT ECU – logic circuit supply	K3
GND_PWR – ground for power outputs	L3
PWM_H7_2 – high-side PWM output	M3
PWM_H7_5 – high-side PWM output	A4
PWM_H7_5 – high-side PWM output	B4
PWM_H7_6 – high-side PWM output	C4
PWM_H7_6 – high-side PWM output	D4
PWM_H7_4 – high-side PWM output	E4
PWM_H7_4 – high-side PWM output	F4
PWM_H7_3 – high-side PWM output	G4
PWM_H7_3 – high-side PWM output	H4
CFG1_IN	J4
CFG2_OUT	K4
GND_PWR – ground for power outputs	L4
GND_PWR – ground for power outputs	M4

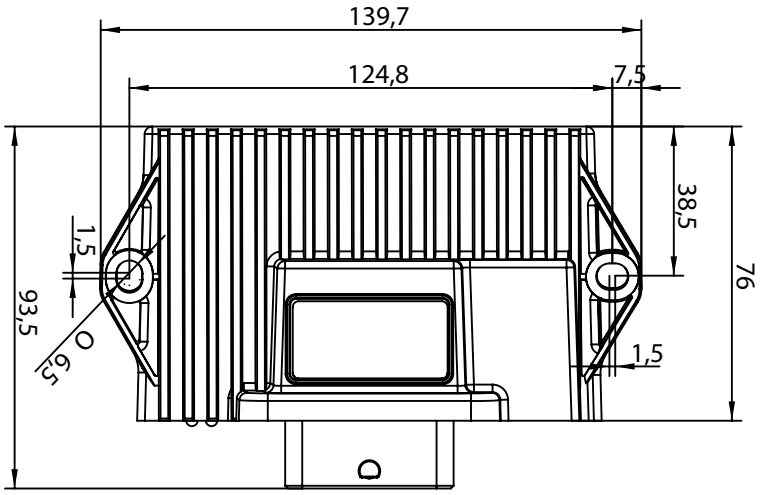
Pinout

JXM-IO-E30-G20-K00-O01

CAN high signal	A1
CAN low signal	B1
PWMi_H3_4 – high-side PWM output	C1
PWMi_H3_3 – high-side PWM output	D1
PWMi_H3_2 – high-side PWM output	E1
PWMi_H3_1 – high-side PWM output	F1
DO_H3_4 – Digital high-side output	G1
DO_H3_3 – Digital high-side output	H1
DO_H3_2 – Digital high-side output	J1
DO_H3_1 – Digital high-side output	K1
VBAT PWR – power supply	L1
VBAT PWR – power supply	M1
CAN_H_OUT	A2
CAN_L_OUT	B2
DI_P_1 – Digital and frequency input	C2
DI_P_2 – Digital and frequency input	D2
DI_P_3 – Digital and frequency input	E2
DI_P_4 – Digital and frequency input	F2
GND_SEN – ground for sensor supply	G2
VEXT_SEN_3 – sensor supply	H2
VEXT_SEN_2 – sensor supply	J2
VEXT_SEN_1 – sensor supply	K2
VBAT PWR – power supply	L2
PWM_H7_1 – high-side PWM output	M2
n.c.	A3
AI_1 – analog input, current/voltage	B3
AI_2 – analog input, current/voltage	C3
AI_3 – analog input, current/voltage	D3
AI_4 – analog input, current/voltage	E3
AI_5 – analog input, current/voltage	F3
AI_6 – analog input, current/voltage	G3
AI_7 – analog input, current/voltage	H3
AI_8 – analog input, current/voltage	J3
VBAT ECU – logic circuit supply	K3
GND_PWR – ground for power outputs	L3
PWM_H7_2 – high-side PWM output	M3
PWM_H7_5 – high-side PWM output	A4
PWM_H7_5 – high-side PWM output	B4
PWM_H7_6 – high-side PWM output	C4
PWM_H7_6 – high-side PWM output	D4
PWM_H7_4 – high-side PWM output	E4
PWM_H7_4 – high-side PWM output	F4
PWM_H7_3 – high-side PWM output	G4
PWM_H7_3 – high-side PWM output	H4
CFG1_IN	J4
CFG2_OUT	K4
GND_PWR – ground for power outputs	L4
GND_PWR – ground for power outputs	M4

Dimensional drawing





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Further details and order information are available on request. Specifications are subject to change without notice. Errors and omissions excepted.

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