

JXM-IO-E31

Expansion module for mobile machinery

Short description

The JXM-IO-E31 expansion module is a universal, distributed module for self-propelled machines. Its well-balanced I/O configuration enables it to handle almost all decentralized tasks and is particularly suitable for controlling brushed DC motors in self-propelled machines.

Communication with the JXM-IO-E31 is carried out via CANopen®. This way, the module can be integrated into common CAN networks of self-propelled machines.

Due to its rugged, encapsulated housing, the expansion module can be used very flexibly in rough environmental conditions.



Features

- 15 inputs and 12 diagnostic-capable outputs - including powerful H-bridge high-current paths and PWM with current control
- High application flexibility through a temperature sensor input for PT1000 sensors
- Thanks to CAN ID addressing via tristate inputs, up to nine nodes in a network are supported without the need for software configuration. This lets you implement your common parts strategy.
- High switching capacity through parallel connection of H-bridges and high total continuous current for controlling DC motors
- The frequency inputs can be conveniently switched between NPN/PNP via software. This allows, for example, vehicle speed signals to be read in
- Three sensor power supplies allow an extended connection of sensor networks
- Rugged, potted housing with proven automotive connector

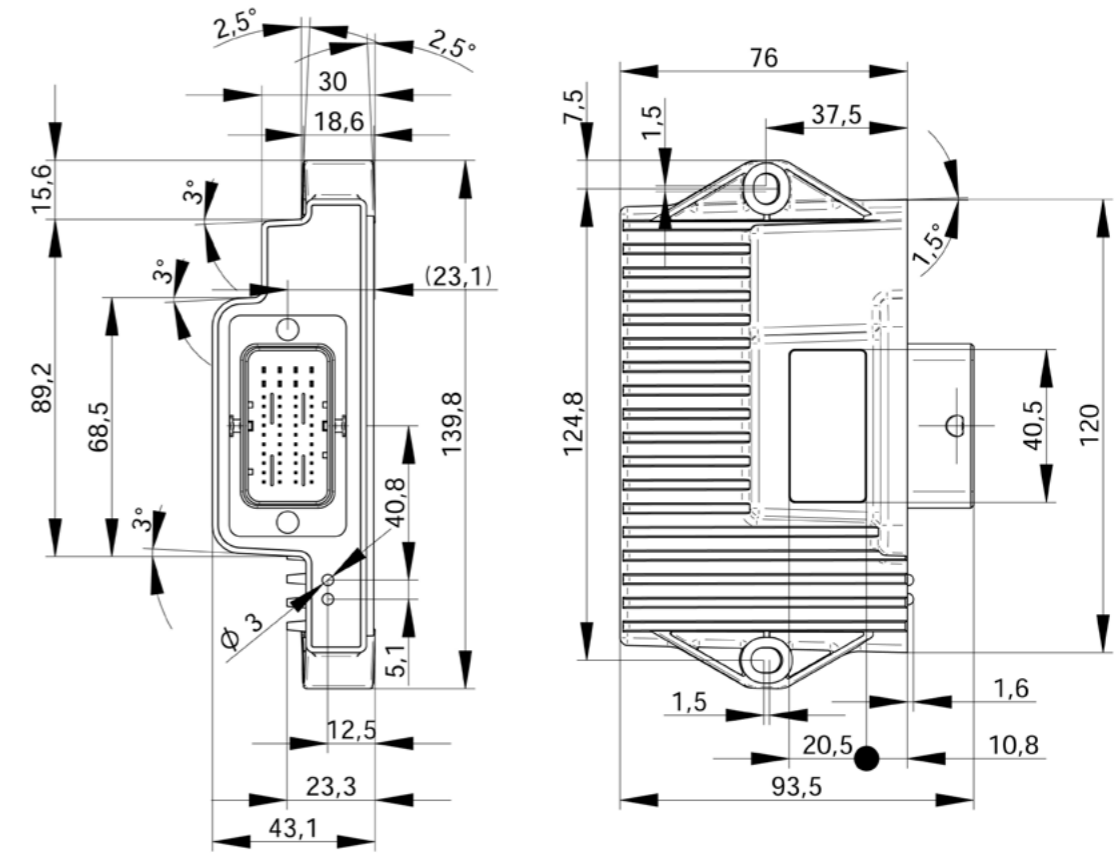
JXM-IO-E31

Technical data

JXM-IO-E31	
Operating voltage range	DC 8 ... 32 V, ECU voltage supplied separately
Operating / storage temperature range	-40 °C ... +85 °C
Interfaces CAN	1 CANopen®
Maximum number of inputs/outputs	27
Inputs	
Analog	6; 0 ... 10 V/0 ... 20 mA, individually configurable; resolution 12 bit, input impedance 35 kΩ, load 120 Ω
Temperature sensor inputs	1; PT1000
Digital / frequency	8; input impedance 5.6 kΩ; 0.1 Hz ... 10 kHz; NPN/PNP input switchable via software
Digital / CAN Coding	2 Coding of the CAN ID, Tristate
Outputs, diagnostic capable (short circuit, cable break)	
PWM, precision current measurement	4; 3 A, min. 10 Hz, max. 1.5 kHz, dithering, current controlled, diagnosable, short-circuit proof; alternatively to be used as digital input active-low, input impedance 10 kΩ; digital output 3 A
PWM, half bridge	4; 12 A, min. 10 Hz, max. 15 kHz, dithering, diagnosable, short-circuit-proof; alternatively, two half bridges can be connected together to form a full bridge to control DC motors (open loop control), parallel connection possible
PWM, half bridge	4; 5 A, min. 10 Hz, max. 5 kHz, dithering, diagnosable, short-circuit-proof; alternatively, two half bridges can be connected together to form a full bridge to control DC motors (open loop control), parallel connection possible
Sensor supply	3 power supplies for sensors (of which 1 x 10 V reference output)
Maximum permissible total current	24 A
Protection class	IP66
Vibration	ISO 16750-3
Shock	ISO 16750-3
Reverse polarity protection	Yes
Certifications	E1 (ECE R10), CE ISO 14982
Diagnosis of the outputs	short circuit, cable break

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

Dimensional drawing



JXM-IO-E31

Connector pinout JXM-IO-E31-G20-K00

JXM-IO-E31	
CAN1_H	A1
CAN1_L -	B1
PWMI_HL5_1	C1
PWMI_HL5_2	D1
PWMI_HL5_3	E1
PWMI_HL5_4	F1
DI_5	G1
DI_6	H1
DI_7	J1
DI_8	K1
VBAT PWR	L1
VBAT PWR	M1
CAN1_TERM2	A2
CAN1_TERM1 -	B2
DI_1	C2
DI_2	D2
DI_3	E2
DI_4	F2
GND_SEN	G2
VREF_SEN	H2
VEXT_SEN_1	J2
VEXT_SEN_2	K2
PWMI_HL12_1	L2
PWMI_HL12_2	M2

JXM-IO-E31	
n.c.	A3
AI_1	B3
AI_2	C3
AI_3	D3
AI_4	E3
AI_5	F3
AI_6	G3
AI_PT1000	H3
GND_PT1000	J3
VBAT ECU	K3
PWMI_HL12_4	L3
PMWi_HL12_3	M3
n.c.	A4
n.c.	B4
n.c.	C4
n.c.	D4
PWMI_H3_1	E4
PWMI_H3_2	F4
PWMI_H3_3	G4
PWMI_H3_4	H4
CFG_1	J4
CFG_2	K4
GND	L4
GND	M4

Connector pinout JXM-IO-E31-G20-K00-001

JXM-IO-E31	
CAN1_H	A1
CAN1_L	B1
PWMI_HL5_1	C1
PWMI_HL5_2	D1
PWMI_HL5_3	E1
PWMI_HL5_4	F1
DI_5	G1
DI_6	H1
DI_7	J1
DI_8	K1
VBAT PWR	L1
VBAT PWR	M1
CAN_H_OUT	A2
CAN_L_OUT	B2
DI_1	C2
DI_2	D2
DI_3	E2
DI_4	F2
GND_SEN	G2
VREF_SEN	H2
VEXT_SEN_1	J2
VEXT_SEN_2	K2
PWMI_HL12_1	L2
PWMI_HL12_2	M2

JXM-IO-E31	
n.c.	A3
AI_1	B3
AI_2	C3
AI_3	D3
AI_4	E3
AI_5	F3
AI_6	G3
AI_PT1000	H3
GND_PT1000	J3
VBAT ECU	K3
PWMI_HL12_4	L3
PMWi_HL12_3	M3
n.c.	A4
n.c.	B4
n.c.	C4
n.c.	D4
PWMI_H3_1	E4
PWMI_H3_2	F4
PWMI_H3_3	G4
PWMI_H3_4	H4
CFG_1	J4
CFG_2	K4
GND	L4
GND	M4

