BUCHER automation

JCM-X235

Controller



- 32-bit CPU > 200 MHz
- 2 CAN bus interfaces
- Programming in C/C++
- High continuous total current
- High-performance bridge outputs
- Encapsulated housing

Description

The compact controller JetControlMobile X235 offers a high number of flexibly configurable inputs and outputs despite its very compact dimensions. A special feature is the generously dimensioned half-bridges, which can be configured as full bridges and deliver up to 24 A in parallel operation. Short-circuit-proof reference and sensor supplies reduce wiring effort. Programming is carried out in C/C++ using the STM32 CUBE IDE.

Technical specifications

CPU	STM32 F7
Programming	C/C++
Operating voltage range	DC 8 V ... 32 V, with separate ECU power supply
Operating/storage temperature	-40 ... +85 °C
CAN ports	2; e.g. for CANopen, SAE J1939, ISOBUS, ... requires the corresponding stack
Max. amount of inputs/outputs	28
Inputs	
Analog	4; 0 ... 10 V/0 ... 20 mA, can be configured individually, resolution: 12 bits, input impedance: 35 kΩ, load resistor: 120 Ω
Digital/frequency	4; input impedance 5.6 kΩ; 0.1 Hz ... 10 kHz; NPN/PNP input, switchable via software
Outputs	
PWM, precision current measuring	8; 3 A, min. 10 Hz, max. 1.5 kHz; dithering; current-controlled; diagnostic capabilities; short-circuit-proof; alternatively usable as digital input active-low, input impedance 10 kΩ or digital output 3 A
PWM, half bridge	4; 12 A, min. 10 Hz, max. 15 kHz; dithering; diagnostic capabilities; short-circuit-proof; alternatively two half-bridges can be combined into a full bridge for DC motor control (open loop); parallel connection possible
PWM output	8; 3 A, min. 10 Hz, max. 1.5 kHz; dithering; diagnostic capabilities; short-circuit-proof; alternatively usable as digital input active-low, input impedance 10 kΩ or digital output 3 A
Sensor power supply	3 sensor supplies (of which 1x 10 V reference output)
Max. permitted total current	26 A
Degree of protection	IP66
Vibration	ISO 16750-3
Shock	ISO 16750-3
Protection against polarity reversal	Yes
Certifications	E1 (ECE R10), CE ISO 14982
Output diagnostics	Short circuit, no-load

Pinout

X1

VBAT_PWR	1
VBAT_PWR	2
GND_PWR	3
GND_PWR	4

Pinout

X2

VBAT_PWR	1
VBAT_PWR	2
GND_PWR	3
GND_PWR	4

Pinout

X4

VBAT_ECU	1
CAN1_L	2
BOOTSEL	3
CAN1_H	4

Pinout

X5

VBAT_ECU	1
CAN1_L	2
GND	3
CAN1_H	4

Pinout

X6

OUT_VREF_SEN	1
AI_1	2
GND_SEN	3
AI_2	4

Pinout

X7

OUT_VREF_SEN	1
AI_3	2
GND_SEN	3
AI_4	4

Pinout

X8

OUT_VEXT_SEN_1	1
DI_1	2
GND_SEN	3
DI_2	4

Pinout

X9

OUT_VEXT_SEN_2	1
DI_3	2
GND_SEN	3
DI_4	4

Pinout

X10

VBAT_ECU	1
PWMi_H3_1	2
GND_PWR	3
PWMi_H3_2	4

Pinout

X11

VBAT_ECU	1
PWMi_H3_3	2
GND_PWR	3
PWMi_H3_4	4

Pinout

X12

VBAT_ECU	1
NC	2
GND	3
NC	4

Pinout

X13

VBAT_ECU	1
PWMi_H3_5	2
GND_PWR	3
PWMi_H3_6	4

Pinout

X14

VBAT_ECU	1
PWMi_H3_13	2
GND_PWR	3
PWMi_H3_14	4

Pinout

X15

VBAT_ECU	1
PWMi_H3_15	2
GND_PWR	3
PWMi_H3_16	4

Pinout

X16

VBAT_ECU	1
PWMi_H3_7	2
GND_PWR	3
PWMi_H3_8	4

Pinout

X17

VBAT_ECU	1
PWMi_H3_9	2
GND_PWR	3
PWMi_H3_10	4

Pinout

X18

GND_PWR	1
PWMI_HL12_1	2
GND_PWR	3
PWMI_HL12_2	4

Pinout

X19

GND_PWR	1
PWMI_HL12_3	2
GND_PWR	3
PWMI_HL12_4	4

Pinout

X20

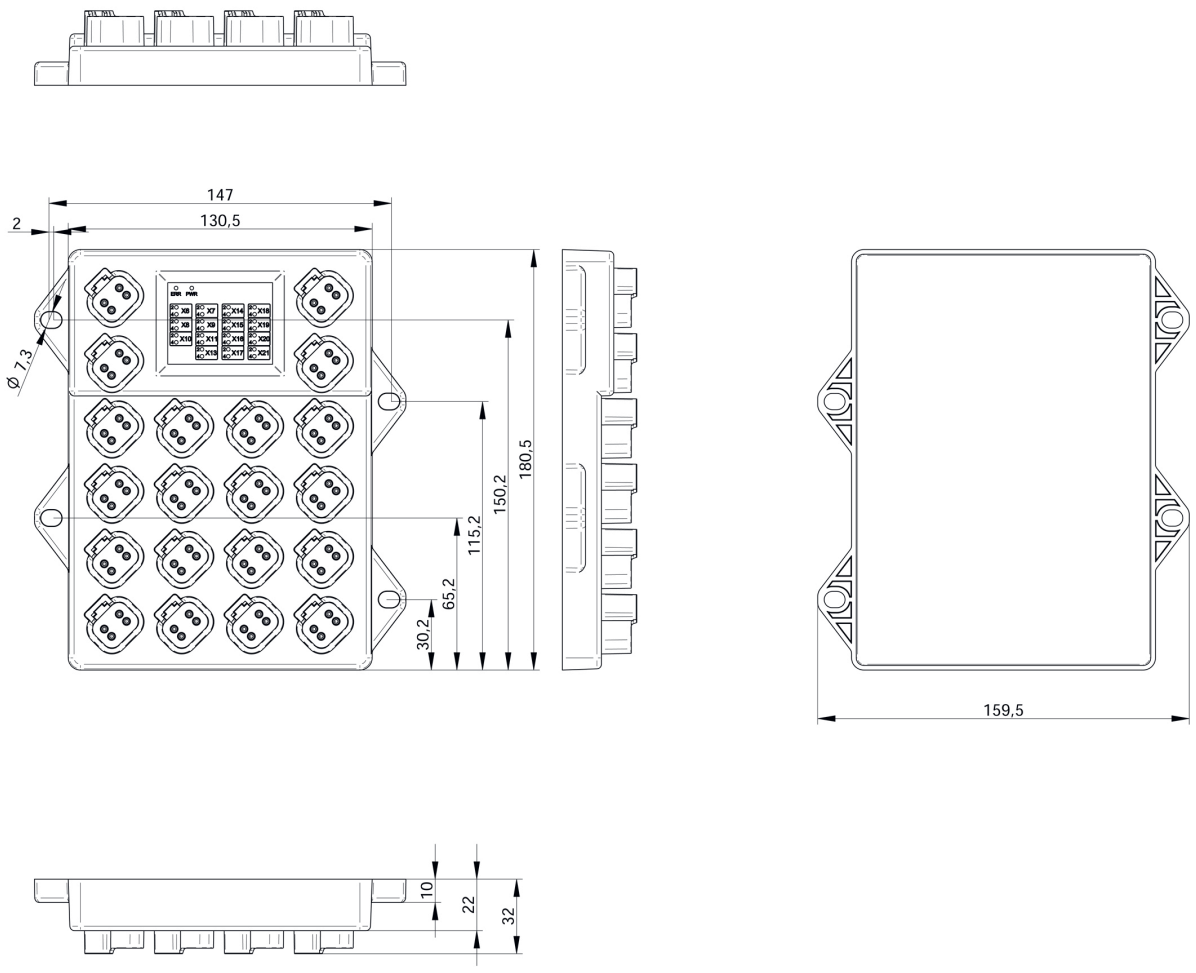
VBAT_ECU	1
PWMi_H3_11	2
GND_PWR	3
PWMi_H3_12	4

Pinout

X21

VBAT_ECU	1
CAN2_L	2
GND	3
CAN2_H	4

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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