ENGINEERING TOMORROW

Data Sheet

PLUS+1® Expansion Module
IOX018-130 High Current

Mobile machine management

IOX018-130 High Current Expansion Module is an element of the flexible, powerful and expandable PLUS+1® family of mobile machine management products. Expansion modules provide cost-effective additional I/O to mobile machine control systems.

Product highlights

The PLUS+1® High Current expansion module employs a 32 bit Cortex-M3 Processor, providing the controller with extremely fast single cycle processing speed. It features high current capabilities for your machine control.

PLUS+1® compliance eliminates need for the system designer to write CAN transmit and receive messages in both the controller and associated expansion modules.

Application development

Users configure expansion modules using PLUS+1® GUIDE. This Microsoft® Windows®-based development environment features a user-friendly, field proven, icon-based graphical programming tool, application downloader, and service/ diagnostic tool.

Features

- User-programmable with PLUS+1® GUIDE (Graphical User Integrated Development Environment)
- 18 pins: (2) DEUTSCH connectors (DT and DTP), (2) 6 mm studs
- 12 bit analog-to-digital converter
- ARM 32 bit Cortex-M3 running at 120 MHz

Comprehensive technical literature is online at *www.danfoss.com*

4 inputs

- (2) Universal (DIN/AIN/FreqIN/Rheo)
  Digital: Pull up (5 VDC), pull down (0 VDC) or pull to center (2.5 VDC)
  Analog: 0 to 0.375 VDC, 0 to 5.25 VDC, or 0 to 36 VDC
  Frequency (timing): 1 Hz to 10 kHz
  Resistance: 0 to 10,000 ohm
- (1) Digital/Analog (DIN/AIN) that is user-defined as either:
  Digital: Pull up (5 VDC), pull down (0 VDC) or pull to center (2.5 VDC)
  Analog: 0 to 5.25 VDC or 0 to 36 VDC
- (1) Digital/Analog/CAN shield (DIN/AIN/CAN shield) that is user-defined as either:
  Digital: Pull up (5 VDC), pull down (0 VDC) or pull to center (2.5 VDC)
  Analog: 0 to 5.25 VDC or 0 to 36 VDC
  CAN shield

8 outputs

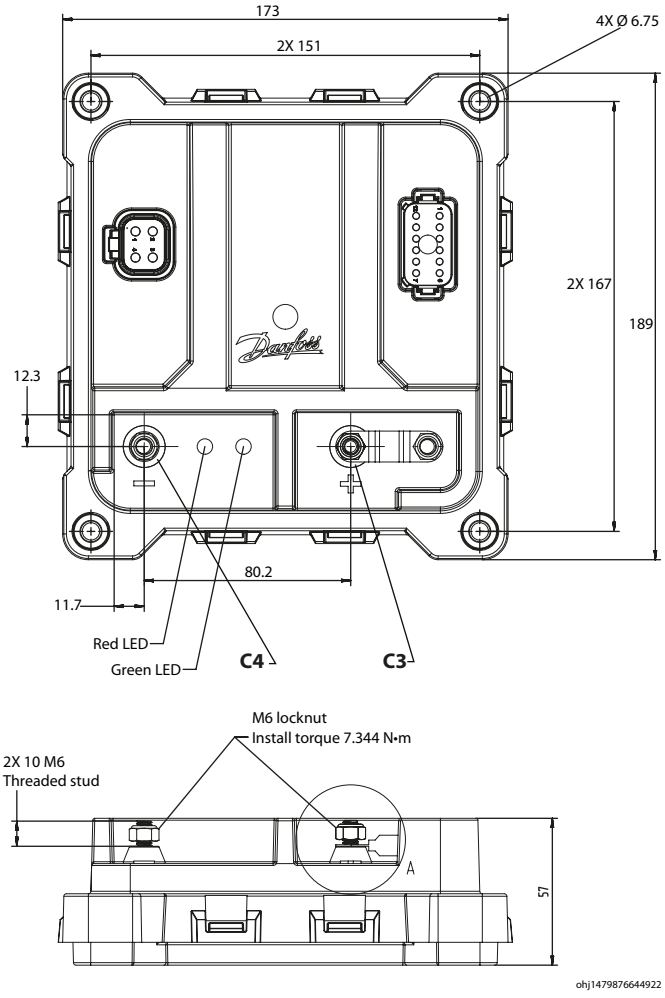
- (4) Universal (PWMOUT/DOUT/PVGOUT) that are user-defined as either:
  Digital: 15 A, configurable as source or sink
  PWM: 15 A (33 to 4000 Hz or 20 kHz), configurable as open or closed loop with current control
- (4) Universal (PWMOUT/DOUT/PVGOUT) that are user-defined as either:
  Digital: 25 A, configurable as source or sink
  PWM: 25 A (33 to 4000 Hz or 20 kHz), configurable as open or closed loop with current control

Characteristics

Supply voltage	9 to 36 VDC
Operating temperature (ambient)	– 40°C to 70°C [– 40°F to 158°F]
Storage temperature	– 40°C to 85°C [– 40°F to 185°F]
Programming temperature	– 40°C to 70°C [– 40°F to 158°F]
IP rating (with mating connector attached)	IP 67
EMI/RFI rating	100 V/M
Weight	1.29 kg [2.85 lb]
Vibration	IEC 60068-2-64
Shock	IEC 60068-2-27 test Ea
Maximum current, sourcing	120 A
Maximum current, sinking	120 A

Dimensions and pin assignments

Dimensions in millimeters



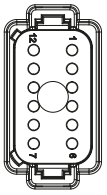
Device must be mounted on a flat metal surface that is less than 70° C (158° F) for full output capability.

If the metal surface is greater than 70° C (158° F), built in thermal protection will limit the maximum output current allowed for all PWM's.

Use care when wiring mating connector. Pinouts are for device pins.

C1

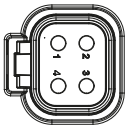
DEUTSCH DT Series 12 pin



Pin	Controller function	Pin	Controller function
1	Logic ground	7	DIN/AIN/FreqIN/Rheo
2	Logic power	8	DIN/AIN/FreqIN/Rheo
3	CAN_HI	9	15A PWM
4	CAN_LO	10	15A PWM
5	DIN/AIN1/CAN shield	11	15A PWM
6	DIN/AIN2	12	15A PWM

C2

DEUTSCH DTP Series 4 pin



Pin	Controller function
1	25A PWM
2	25A PWM
3	25A PWM
4	25A PWM

C3, C4

Pin	Controller function	Description
C3-P1	Battery power	120A battery connection (externally fused)
C4-P1	Battery ground	120A battery connection

Ordering information

Product part number

IOX018-130	11227542

Related products part numbers

CG150-2 CAN/USB Gateway	11153051
PLUS+1® GUIDE Professional	11179523

Danfoss mating connectors bag assemblies and fuse part numbers

4 pin DEUTSCH mating connector bag assembly (10 to 14 AWG)	11188220
12 pin DEUTSCH mating connector bag assembly (14 to 20 AWG)	11188221
4 and 12 pin DEUTSCH mating connector bag assembly	11188232
125 Amp fuse	11188233