

Data Sheet

MC018-130 High Current PLUS+1[®] Controllers



Mobile machine management

Danfoss PLUS+1[®] controllers are elements of the flexible, powerful, expandable, and affordable family of mobile machine management products. These devices are general-purpose controllers that are equally suited for use as a member of a distributed machine control system, with intelligence in every node, or as a stand-alone controller.

Product highlights

The PLUS+1[®] High Current controller employs a 32 bit Cortex-M3 Processor, providing the controller with extremely fast single cycle processing speed and 512K internal flash. It features high current capabilities for your machine control.

Application development

Users develop MC018-130 applications with 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 powersolutions.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

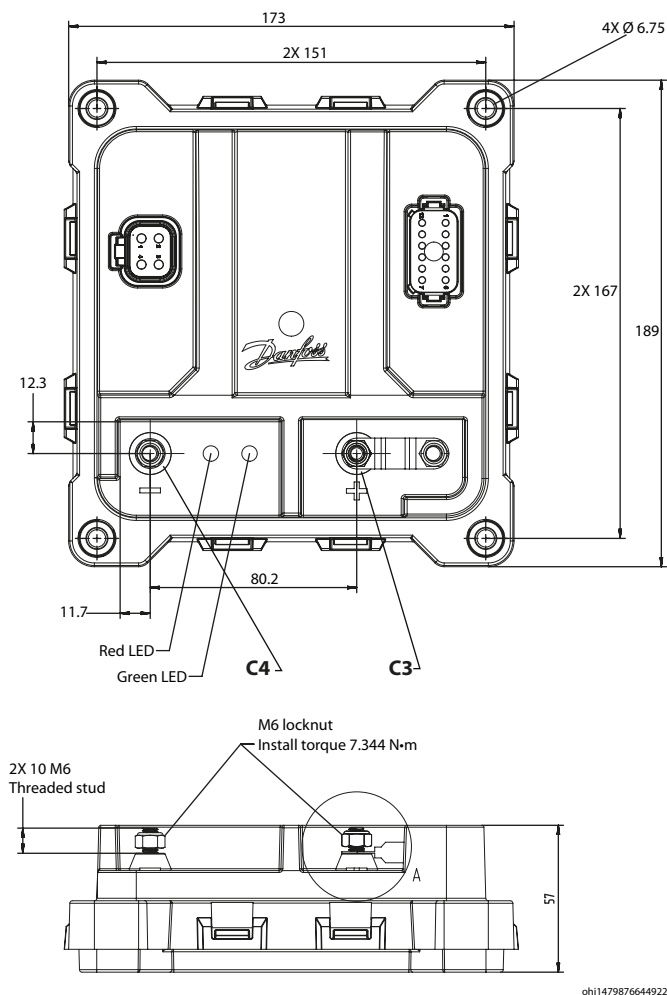
- (4) Universal (PWMOUT/DOUT/PVGOUT) that are user-defined as either:
Digital: 15 A, configurable as source or sink
PWM: 15 A (33 to 4000 Hz or 20 kHz), configurable as open or closed loop with current control
- (4) Universal (PWMOUT/DOUT/PVGOUT) that are user-defined as either:
Digital: 25 A, configurable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

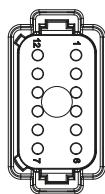
Dimensions and pin assignments

Dimensions in millimeters



C1

DEUTSCH DT Series 12 pin

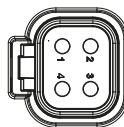


nmp1479876497075

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



cv11479876589499

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

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.



Ordering information

Product part number

MC018-130	11187841
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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