

Data Sheet

PLUS+1® Controllers HMC 211-010 and HMC 211-012

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

Both controllers employ a Digital Signal Processor (DSP), providing the controllers with extremely fast single cycle processing speed and 128K internal flash. Both controllers feature an IP 69K front panel with a non-contact, step-less rotary input dial, non-contact pushbutton switch, and dual color LED.

Application development

The HMC 211-012 employs an application key that enables the use of Danfoss developed PLUS+1[®] GUIDE machine control solutions. The same PLUS+1[®] GUIDE HWD file is used with both controllers.

Users develop HMC 211-010 and HMC 211-012 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)
- 32 bit fixed-point DSP running at 150 MHz
- 12 bit analog-to-digital resolution
- IP 69K housing with the following human machine interfaces:
- 1 non-contact push button switch (digital input)
- 1 stepless non-contacting rotary switch (analog input)
- 1 dual color (yellow/red) LED
- 9 to 36 Vdc supply power
- 1 CAN 2.0B port. The fixed range analog (AIN/ CANShield) pin may be configured as a shield pin
- 5 Vdc power supply for external sensors rated at 70 mA, monitored and regulated internally
- 18-pin DEUTSCH DT16-18S connector
- HMC 211-012 contains application key required to run Danfoss developed machine control application software
- CE compliant



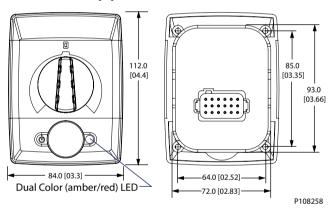
7 inputs

- 2 universal (DIN/AIN/FreqIN) that are user defined as either: Digital: pull up (5 Vdc), pull down (0 Vdc) or pull to center (2.5 Vdc) Analog: with user-defined ranges of either: 0 to 5.25 Vdc or 0 to 36 Vdc Frequency: 1 Hz to 10 KHz
- 4 digital/analog (DIN/AIN) that are user defined as either: Digital: pull up (5 Vdc), pull down (0 Vdc) or pull to center (2.5 Vdc) Analog: with user defined ranges of either: 0 to 5.25 Vdc or 0 to 36 Vdc
- 1 fixed range analog (AIN/CAN shield) that is user defined as either a 0 to 5.25 Vdc range analog input or CAN shield pin

Dimensions and pin assignments

Mounting dimensions and pin assignments

Dimensions in mm [in]



6 outputs

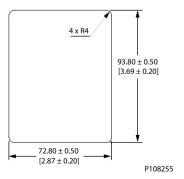
- (2) universal (PWMOUT/DOUT/PVGOUT)
 that are user-defined as either:
 Digital: (3 A), configurable as source or
 sink
 PWM: (30 to 4000 Hz), configurable as
 open or closed loop with current
 control
 Analog voltage: open loop PWM at 4000
 Hz
- Any PWMOUT/DOUT/PVGOUT can be used to provide reference power to one PVG valve
- 4 Digital (DOUT) (2A) Configurable as source only



Caution

Warranty will be voided if device is opened. Device is not field serviceable. Do not open the device.

Panel cutout

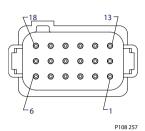


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Use care when wiring mating connector. Pinouts are for device pins.

Pin connector



18 pin connector - C1

Pin	Controller function	Pin	Controller function
C1-P1	Power ground -	C1-P10	DIN/AIN
C1-P2	Power supply +	C1-P11	DIN/AIN
C1-P3	CAN+	C1-P12	DIN/AIN
C1-P4	CAN -	C1-P13	PWMOUT/DOUT/
			PVGOUT
C1-P5	AIN/CAN shield	C1-P14	PWMOUT/DOUT/
			PVGOUT
C1-P6	5 Vdc sensor power +	C1-P15	DOUT
C1-P7	DIN/AIN/FreqIN	C1-P16	DOUT
C1-P8	DIN/AIN/FreqIN	C1-P17	DOUT
C1-P9	DIN/AIN	C1-P18	DOUT

Product parameters

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	0°C to 70°C [32 °F to 158°F]
IP rating (with mating connector attached)	IP 69 (front) IP 67 (rear)
Weight	0.23 kg [0.50 lb]
Maximum current, sourcing	11.5 A
Maximum current, sinking	11.5 A

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Ordering information

HMC 211-010	11071494
HMC 211-012	11071495

Related products part numbers

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

DEUTSCH mating connector bag	11012648
assembly (16 to 20 AWG)	
Panel mounting kit	11083012

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