Data Sheet

PLUS+1® Expansion Module
IX024-010

Mobile Machine Management

IX024-010 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

Expansion modules are associated with a PLUS+1® controller. PLUS+1® GUIDE (Graphical User Integrated Development Environment) applications running in the controller read inputs from and write outputs to expansion module pins as if the pins are physically located on the controller. Pin properties are configured in the controller's GUIDE application.

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.
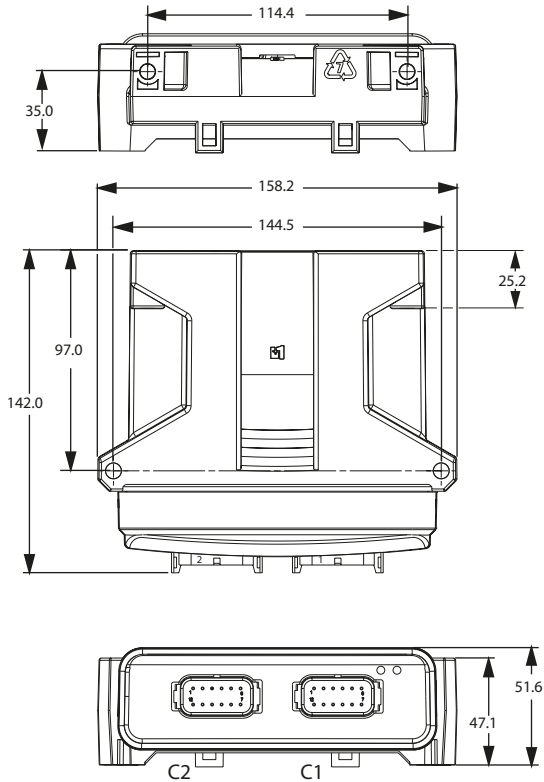
Features

- 24 pin: (2) individually keyed DEUTSCH DTM 12 pin connectors
- 10 to 36 Vdc power supply, monitored internally
- Power supply for external sensors rated at 5 Vdc to 200 mA and regulated internally
- 3 mounting alternatives: stack, end, or side
- CE compliant

- 18 inputs
  - (7) universal (DIN/AIN/FreqIN) that the user can define as either: *Analog*: with configurable ranges 0 to 5.25 Vdc (with over range protection) or 0 to 36 Vdc; *Digital*: pull up (5 Vdc), pull down (0 Vdc) or pull to center (2.5 Vdc); *Frequency (timing)*: 1 Hz to 10 kHz
  - (4) analog (AIN/Temp/Rheo) 0 to 5 Vdc or 0 to 10,000 ohm rheostat

  - (6) digital (DIN) configurable as pull up (5 Vdc), pull down (0 Vdc)
  - (1) fixed-range analog (AIN/CAN shield) 0 to 5.25 Vdc or CAN shield pin

Comprehensive technical literature is online at *www.danfoss.com*
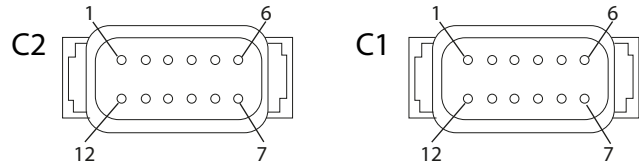
IX024-010 Dimensions and Pin Assignments

mm [in]

Caution

This device is not field serviceable. Opening the device housing will void the warranty.

Specifications

Supply voltage	10 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]
IP rating (with mating connector attached)	IP 67
EMI/ RFI rating	100 V/m
Weight	0.40 kg [0.88 lb]
Vibration	IEC 60068-2-64
Shock	IEC 60068-2-27 test Ea

Connector 2 'B' key (black), Connector 1 'A' key (gray)

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

Pin	Controller function	Pin	Controller function
C2-P1	DIN	C1-P1	Power ground -
C2-P2	DIN/AIN/FreqIN	C1-P2	Power supply +
C2-P3	DIN/AIN/FreqIN	C1-P3	CAN +
C2-P4	DIN/AIN/FreqIN	C1-P4	CAN -
C2-P5	DIN/AIN/FreqIN	C1-P5	AIN/CAN shield
C2-P6	DIN/AIN/FreqIN	C1-P6	5 Vdc sensor power +
C2-P7	DIN/AIN/FreqIN	C1-P7	Sensor power ground -
C2-P8	DIN/AIN/FreqIN	C1-P8	DIN
C2-P9	AIN/Temp/Rheo	C1-P9	DIN
C2-P10	AIN/Temp/Rheo	C1-P10	DIN
C2-P11	AIN/Temp/Rheo	C1-P11	DIN
C2-P12	AIN/Temp/Rheo	C1-P12	DIN

Ordering information

Product part number

IX024-010	10100998

Related products part numbers

CG150 CAN/USB Gateway	11153051	
DEUTSCH mating connector bag assembly	10102023 (16 to 20 AWG)	10100945 (20 to 24 AWG)
PLUS+1® GUIDE Professional	11179523	