

## PLUS+1™ IX024-010 Expansion Module

### Mobile Machine Management

The IX024-010 input 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

Input 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 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.

Local Address:



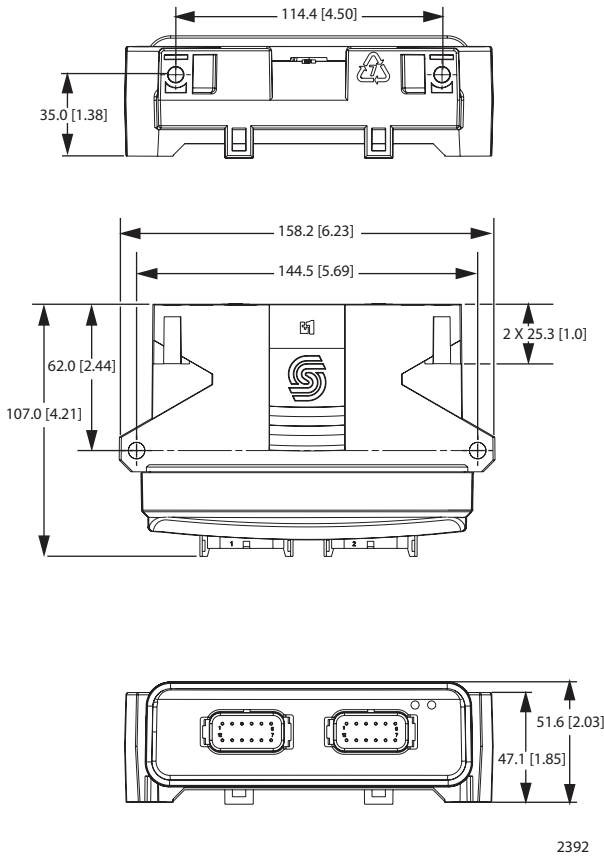
*IX024-010 Expansion Module*

### Features

- 24 pins: (2) individually keyed Deutsch® DTM 12 pin connectors
- 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
- 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

## IX024-010 Dimensions and Pin Assignments

mm [in]

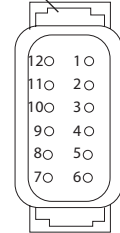


### 24 Pin

#### Connector 2

Pin	Controller function
C2-P1	DIN
C2-P2	DIN/AIN/FreqIN
C2-P3	DIN/AIN/FreqIN
C2-P4	DIN/AIN/FreqIN
C2-P5	DIN/AIN/FreqIN
C2-P6	DIN/AIN/FreqIN
C2-P7	DIN/AIN/FreqIN
C2-P8	DIN/AIN/FreqIN
C2-P9	AIN/Temp/Rheo
C2-P10	AIN/Temp/Rheo
C2-P11	AIN/Temp/Rheo
C2-P12	AIN/Temp/Rheo

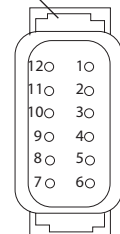
Connector 2  
'B' key (black)



#### Connector 1

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

Connector 1  
'A' key (gray)



2196B

Use care when wiring mating connector.  
Above pinouts are for device pins.

### ⚠ 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

### Ordering Information

<b>IX024-010</b>	10100998	
<b>Related product</b>	<b>Sauer-Danfoss material number</b>	
CG150 CAN/USB Gateway	10104136	
Deutsch® mating connector bag assembly	10102023 (16 to 20 AWG)	10100945 (20 to 24 AWG)
PLUS+1 GUIDE single user license	10101000	

Comprehensive technical information: *PLUS+1 Controller Family Technical Information*, **520L0719**;  
*PLUS+1 Compliant IX024-010 Function Block User Manual*, **11063397**  
 Sauer-Danfoss product literature on line at: [www.sauer-danfoss.com](http://www.sauer-danfoss.com)