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Data Sheet

August 15, 2026

ACROMAG

Acromag IP231-16E 16-Bit D/A Analog Output Module

Acromag Data Acquisition Systems (DAQ). Voltage / Current Range: -10 to +10 V output; ± 5 mA maximum output current, Accuracy: 0.00305% of 20 V span maximum at 25 °C, Current: ± 5 mA (minimum load resistance 5 k Ω at 10 V).



MODEL

Acromag IP231-16E

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

IP231-16E

LISTING

<https://aumictechlabs.com/products/ip231-16e-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Acromag IP231-16E is a 16-bit Digital-to-Analog (D/A) output module for industrial control and data acquisition systems. It delivers 16 independent single-ended analog voltage output channels, each with its own 16-bit DAC and 13 μ S settling time. The module operates over a bipolar output range of -10 to +10 V with maximum output current of ± 5 mA and supports both individual and simultaneous channel updates. Built to ANSI/VITA 4-1995 IP specifications, the IP231-16E functions across extended industrial temperatures from -40 to 85 °C, making it suitable for harsh environments where precision analog output is critical. Technical Specifications Analog Outputs 16 single-ended voltage output channels 16-bit D/A resolution with bipolar offset binary format Output range: -10 to +10 V Settling time: 13 μ S per channel System accuracy: 0.00305% of 20 V span maximum at 25 °C, unloaded Linearity error: ± 2 LSB maximum Maximum output current: ± 5

mA (minimum load resistance 5 k Ω at 10 V) Double-buffered data latches per channel Output at reset: 0 V Performance Single-channel update throughput: 13 μ S/conversion Simultaneous 16-channel update: 13 μ S/16 channels Built-in calibration coefficients for software calibration Individual D/A converters eliminate glitches and improve speed Access Times (8 MHz Clock) ID EEPROM read: 250 nS (0 wait states) DAC channel data write: 500 nS (2 wait states) Control register access: 375 nS (1 wait state) Offset/gain coefficient read: 375 nS (1 wait state) Environmental Operating temperature: -40 to 85 °C Storage temperature: -55 to 100 °C Relative humidity: 5 to 95% non-condensing MTBF: 3,445,793 hours at 25 °C (MIL-HDBK-217F, notice 2)Key Features Industry Pack (IP) module form factor per ANSI/VITA 4-1995 Individual update (transparent mode) or simultaneous update of all outputs Supports 14–26 AWG solid or stranded wiring with 85 °C minimum temperature rating Twisted pair or shielded twisted pair wiring recommendedTypical Applications Process control, instrumentation, automated test systems, industrial data acquisition, and closed-loop feedback systems requiring multi-channel precision analog output.Compatibility & Integration Designed for upright DIN rail mounting. Supports IOSel and IDSel data transfer cycle types for DAC data, control registers, and calibration coefficient access.

Features & description

From manufacturer datasheet

Built-in calibration coefficients

Outputs reset to 0 V Extended industrial temperature range Technical Specifications Model: IP231-16E Instrument Type: 16-bit analog voltage output Industry Pack module Output Channels: 16 single-ended Da Resolution: 16 bits Output Range: bipolar -10 to plus 10 V Settling Time: 13 us One Channel Update Time: 13 us per conversion Sixteen Channel Simultaneous Update: 13 us for 16 channels System Accuracy: 0.00305 percent of 20 V span maximum corrected error at 25 C unloaded Linearity Error: plus or minus 2 LSB maximum Data Format: bipolar offset binary Output At Reset: 0 V Output Current: -5 to 5 mA maximum Minimum Load At 10 V: 5 kOhm Id Eeprom Read Access: 0 wait states 250 ns at 8 MHz Dac Write Access: 2 wait states 500 ns at 8 MHz Operating Temperature: -40 to 85 C Storage Temperature: -55 to 100 C Relative Humidity: 5 to 95 percent non-condensing Mtbtf: 3445793 hours at 25 C MIL-HDBK-217F notice 2 Power Plus 5 V: 45 mA Power Plus 12 V: 200 mA Power Minus 12 V: 180 mA Ip Standard: ANSI/VITA 4-1995 Carrier Density: up to 64 outputs with four IP modules on one carrier Notes From Acromag IP231 16-Bit D/A Analog Output datasheet. IP231-16E adds extended temperature to the 16-channel IP231-16.

IP23116E Characteristics / Specifications

PARAMETER	VALUE
Model	IP231-16E
Instrument Type	16-bit analog voltage output Industry Pack module
Output Channels	16 single-ended
Da Resolution	16 bits
Output Range	bipolar -10 to plus 10 V
Settling Time	13 us
One Channel Update Time	13 us per conversion
Sixteen Channel Simultaneous Update	13 us for 16 channels
System Accuracy	0.00305 percent of 20 V span maximum corrected error at 25 C unloaded
Linearity Error	plus or minus 2 LSB maximum
Data Format	bipolar offset binary
Output At Reset	0 V
Output Current	-5 to 5 mA maximum
Minimum Load At 10 V	5 kOhm
Id Eeprom Read Access	0 wait states 250 ns at 8 MHz
Dac Write Access	2 wait states 500 ns at 8 MHz
Operating Temperature	-40 to 85 C
Storage Temperature	-55 to 100 C
Relative Humidity	5 to 95 percent non-condensing
Mtbf	3445793 hours at 25 C MIL-HDBK-217F notice 2
Power Plus 5 V	45 mA
Power Plus 12 V	200 mA
Power Minus 12 V	180 mA
Ip Standard	ANSI/VITA 4-1995
Carrier Density	up to 64 outputs with four IP modules on one carrier

PARAMETER	VALUE
Humidity	5 to 95 percent non-condensing

IP23116E Specifications

PARAMETER	VALUE
Applications	Precision multi-channel voltage stimulus in harsh temperature environments on IP carriers.
Key Features	Independent 16-bit DAC per channel
Technical Specifications	Model: IP231-16E
Notes	From Acromag IP231 16-Bit D/A Analog Output datasheet. IP231-16E adds extended temperature to the 16-channel IP231-16.

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	55 to 100 C
Operating temperature	40 to 85 C
Operating Temperature	40 to 85 C
Humidity	5 to 95 percent non-condensing
Relative Humidity	5 to 95 percent non-condensing
Mtbf	3445793 hours at 25 C MIL-HDBK-217F notice 2
Power Plus 5 V	45 mA
Power Plus 12 V	200 mA
Power Minus 12 V	180 mA
Ip Standard	ANSI/VITA 4-1995
Carrier Density	up to 64 outputs with four IP modules on one carrier Notes From Acromag IP231 16-Bit D/A Analog Output datasheet. IP231-16E adds extended temperature to the 16-channel IP231-16.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Notes

From Acromag IP231 16-Bit D/A Analog Output datasheet. IP231-16E adds extended temperature to the 16-channel IP231-16.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.