IP230A-x
16-Bit D/A, Analog Output

IP230A modules have a 16-bit D/A converter (DAC) to provide highly-accurate analog voltage outputs. Jumper-selectable output ranges give you the choice of unipolar or bipolar voltage output. And for greater flexibility, the IP230A module accepts conversion start triggers from software commands, or from external sources for synchronization to specific events.

Features
- IP230A-4: 4 analog voltage output channels
- IP230A-8: 8 analog voltage output channels
- Individual 16-bit D/A converters per channel
- 10µS settling time (100kHz throughput)
- Three output ranges: ±5V, ±10V, 0 to 10V (jumper-selectable)
- Two trigger modes (software or external trigger)
- External trigger output
- Extended temperature option (-40 to 85°C)

Benefits
- High channel density saves card cage slots.
- Internally stored calibration coefficients ensure accuracy.
- Flexible output control allows single cycle updating of individual channels or all channels simultaneously.
- Hardware jumpers allow output range selection on an individual channel basis.

Specifications
Analog Outputs
- Output configuration: 4 (IP230A-4/4E) or 8 (-8/8E).
- D/A Resolution: 16 bits.
- Output ranges: ±5V, ±10V, 0 to 10V (jumper-selectable).
- Maximum throughput rate:
  - One channel: 100kHz (10µS/conversion)
  - Four channels (IP235A-4): 100kHz (10µS/4 ch)
  - Eight channels (IP235A-8): 100kHz (10µS/8 ch).
- DAC programming: Immediate (transparently programmed to DAC output), simultaneous (input latches of multiple DACs are loaded with new data before simultaneously updating outputs).
- System accuracy: 0.0061% of 20V span maximum corrected error (i.e. calibrated) at 25°C with the output unloaded.
- Output at reset: 0V for bipolar output, 5V for unipolar.
- Output current: -5 to +5mA (maximum).
- Short circuit protection: Indefinite at 25°C.

Environmental
- Operating temperature: 0 to 70°C (IP230A-4/8) or -40 to 85°C (IP230A-4E/8E models).
- Storage temperature: -55 to 125°C (all models).
- Relative humidity: 5 to 95% non-condensing
- Power: +5V (+5%): 200mA maximum.
  ±12V (+5%) from P1: 150mA maximum.

Ordering Information
Industry Pack Modules
- IP230A-4:
  - Four high-resolution voltage outputs
- IP230A-4E:
  - Same as IP230A-4 plus extended temp. range
- IP230A-8:
  - Eight high-resolution voltage outputs

Acromag offers a wide selection of Industry Pack Carrier Cards.

Software
- IPSW-API-VXW
  - VxWorks® software support package
- IPSW-API-WIN32
  - 32-bit Windows® DLL driver software support package
- IPSW-API-WIN64
  - 64-bit Windows® DLL driver software support package
- IPSW-LINUX
  - Linux® support (website download only)

Accessories
See www.acromag.com for more information

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