

IP-VAD-8418

16 Channel Simultaneous Sampling 16 Bit ADC

Description/Specifications

The Hytec IP-VAD-8418 is an Industry Pack that provides 16 channels of simultaneously sampled analogue digitisation with the following characteristics:-

- 16 simultaneously sampled channels using track and hold amplifiers
- Connector pin layout same as Hytec 8401/13/14/17 modules.
- Programmable bi-polar full-scale resolution all inputs +/-10V or +/-5V
- Conversion method: charge redistribution successive approximation ADCs
- Buffer registered readout
- Differential inputs.
- Resolution: 16 bits - no missing codes
- Input impedance: 1Mohms differential,
- Input capacitance: 5pF
- CMRR: 100dB at +/-5V wrt plant
- DNL: +/-0.99LSBs max.
- INL: +/-2LSBs max.
- Overvoltage protection: +/-16.5V input clamp protection
- ADC offset error : +/-5V=+/-12LSBs max +/-10V=+/-6LSBs max (With soft cal +/-2LSB)
- ADC gain error no cal: +/-8LSB Typ +/- 32LSBs max (With soft cal +/-4LSB)
- Offset drift: +/-5V =5uV/degC typical +/-10V =10uV/degC typical
- Gain drift: +/-2ppm/degC typical
- Sampling rate: 200ks/s max for all 16 channels
- On-board sample clock: programmable to 200ks/s
- Noise: 90dB SNR (95dB with oversampling)
- Crosstalk: 100dB
- Bandwidth (-3dB): 23kHz for +/-10V range
- External sample clock: isolated input
- External trigger: isolated input
- 8/32MHz IP system clock operation.
- Software calibration factors held in memory will improve ADC errors
- Serial number, PCB issue, firmware issue and calibration factors held in ID PROM
- EPICS and ASYN driver support.

Disclaimer

The above specifications have been derived from manufactures data sheets for the components used in the proposed IP-VAC-8418 module and from previous experience.