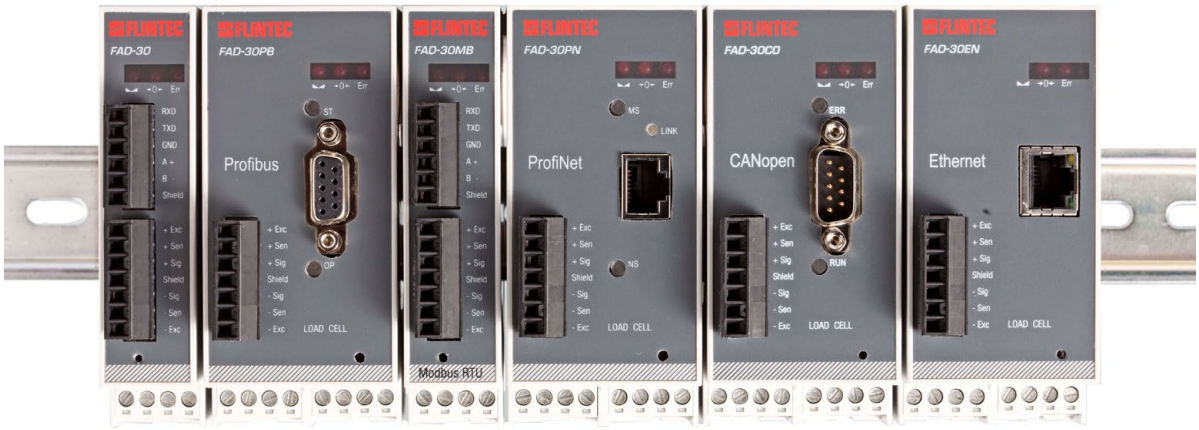
FAD-30 A/D converter series



product description

The FAD-30 A/D converter series consists of powerful and economic state-of-the-art instruments for static and dynamic weighing applications plus force and torque measurements.

Each instrument of the series converts the analogue low-level signal from a load cell or a strain gauge sensor to a digital high-resolution and high accuracy signal and transmits the digital data to an external PLC or PC system. As a special feature the instruments can switch between unipolar and bipolar input range without affecting the external resolution. The FAD-30 A/D converter series comprises various instruments for different industrial bus systems:

converter options

- FAD-30 (RS485)
- FAD-30MB (Modbus RTU)
- FAD-30PB (Profibus DP)
- FAD-30PN (Profinet)
- FAD-30CO (CANopen)
- FAD-30EN (Ethernet TCP/IP)
- FAD-30EI (EtherNet IP)
- FAD-30EC (EtherCat)
- FAD-30CC (CC-Link)
- FAD-30PL (Powerlink)

applications

Universal process weighing systems and process automation & control applications.

accessories

Setup software running under MS Windows

key features

- Easily convert analogue to digital
- Various instrument versions for different industrial bus systems
- Load cell excitation 5VDC for up to 6 load cells at 350Ω
- 6 wire load cell connection
- Linearity better than 0.0015%
- Calibration with weight or in mV/V
- Max. conv. rate of 800 values/s
- Internal resolution up to 8mil counts
- External resolution up to 2mil counts
- Digital filter, switchable
- Power supply 12...28 VDC
- DIN-rail mounting

CE RoHS compliant IP20

flintec quality + precision

specifications

A/D converter

Type	24-bit Delta-Sigma ratiometric with integral analogue and digital filter
Analogue input range	0mV to 18mV (unipolar) or -18mV to +18mV (bipolar), switchable
Linearity	< 0.0015% FS
Temperature coefficient	< 2ppm/°C
Min. input per vsi	0.1µV/d
Conversion rate	Up to 800 measurement values per second
Internal resolution	Up to 8 million counts
External resolution	Up to 100,000 counts (weight value, force, torque) respective 1 million raw counts (unipolar) respective 2 million raw counts (bipolar)

Calibration & weighing functions

Calibration	Electronic calibration without test weights (eCal) or calibration by test weights
Digital filter	10 step adjustable digital adaptive filter
Weighing functions	Tare, zero, auto zero tracking, motion detection, auto-zero at power-up, save tare at power-off, increased resolution

Load cells

Excitation	5 VDC at 58...1,200Ω, max. 100 mA, for up to 6 load cells at 350Ω or 18 load cells at 1,100Ω
Connection	4 or 6 wire technique, cable length 250m/mm^2 for 6 wire connection

Communication & setup

Serial interface RS232C	9,600 baud (8, N, 1)
Other interfaces	Depends on intrument version
Response time	< 4ms (delay after each read or write command)
Setup & calibration	By PC software via RS232C, backup data stored on PC

Power supply

DC power supply	11...28 VDC, < 200 mA, not galvanically isolated

Environment & enclosure

Operating temperature	Between -10°C and +40°C at maximum 85% RH, non-condensing
Enclosure & protection class	Polyamide, for DIN-rail mounting, protection class IP20

Instrument with RS485 interface: Type FAD-30

Serial interface RS485A	1,200 to 57,600 baud (8N1, 7E1, 7O1), bus capability up to 31 units
Communication mode	Continuous or requested
Dimensions & weight	99 x 22.5 x 114.5mm (L x W x H), weighs appr. 110g

Instrument with Modbus RTU interface: Type FAD-30MB

Serial interface RS485A	1,200 to 57,600 baud (8N1, 7E1, 7O1), bus capability up to 31 units
Communication mode	Continuous or requested or Modbus RTU
Address range	1...31
Dimensions & weight	99 x 22.5 x 114.5mm (L x W x H), weighs appr. 110g

Instrument with Profibus DP interface: Type FAD-30PB

Profibus DP-V0 and DP-V1	9,6 kbit/s to 12 Mbit/s (automatic), galvanically isolated interface
Address range	1...126
Dimensions & weight	99 x 45 x 114.5mm (L x W x H), weighs appr. 150g

Instrument with ProfiNet interface: Type FAD-30PN

ProfiNet	100 Mbit/s (full duplex), galvanically isolated interface
IP settings	DHCP or manual setup by PC software
Dimensions & weight	99 x 45 x 114.5mm (L x W x H), weighs appr. 150g

Instrument with CANopen interface: Type FAD-30CO

CANopen V.2.0	10 kbit/s...1 Mbit/s (automatic), galvanically isolated interface
Address range	1...126
Dimensions & weight	99 x 45 x 114.5mm (L x W x H), weighs appr. 150g

Instrument with Ethernet TCP/IP interface: Type FAD-30EN

Ethernet TCP/IP	10 Mbit/s (full duplex), galvanically isolated interface
IP settings	Manual setup by PC software
Dimensions & weight	99 x 45 x 114.5mm (L x W x H), weighs appr. 150g
Other	Web client interface

Dimensions and specifications are subject to change without notice.