



Product Description

The FAD-4 A/D Converter is a very accurate, versatile, general purpose instrument. It is designed to connect 1 to 4 load cells. It incorporates high performance A/D conversion including digital calibration with individual digital corner adjustment.

The instrument is approved by Weights & Measures Authorities for use in Accuracy Class III applications with up to 10 000 increments (e) according to OIML R76 with Type FDT-A/B Display Terminal.

All communication via a bi-directional serial interface. This allows very easy connection to any PC, PLC or other device with network capability.

Standard weighing function are available: Auto zero maintenance, motion detection, auto-zero at power-up, zero, tare, gross, test.

The unique calibration and corner adjustment allows the use of dead weights to be placed on the scale. But in cases where calibration with dead weight is difficult (high capacity silos or hoppers) the calibration data from the individual load cells can be used.

The stainless steel housing offers the ideal solution for industrial applications.

A display unit with 6 digits LED red, 14 mm including tactile 6 key keypad is available for remote operation. See data sheet FDT-A / -B.

Key Features

- Independent connection for up to 4 load cells
- EU Type approved for 10 000 increments with Type FDT-A/B Display Terminal
- Single or dual scale interval
- Internal resolution 550 000 counts
- Full digital corner calibration by test weights or load cell calibration data in mV/V
- Analogue and digital filtering
- EEPROM calibration data storage
- Serial communication RS485A for direct connection to computer or other devices
- Multidrop communication capability
- Conversion up to 80 times per second
- Set points (2x) available
- Protection IP65

Available Accessories

- Mains adapter 230 V AC / 9 V DC, 500 mA
- RS485A to RS232C converter

Specifications

ACCURACY

Accuracy Class	III
EU Type approved	10 000 intervals

A/D CONVERTER

Type	Sigma-Delta ratio metric with integral analogue and digital filters
Conversion rate	8, 20, 40, 80 measurements per second (setup selectable) divided by the number of load cells connected
Minimum input per vs1	0.4 μ V per interval legal for trade, 0.1 μ V per interval non approved
Analogue input range	-0.25mV/V to 4 mV/V (-1.25mV to 20 mV)
Resolution	Internal 550 000 counts

WEIGHT OUTPUT

Weight digits	5
Weight steps	1, 2, 5, 10, 20, 50

SCALE CALIBRATION AND FUNCTIONS

Calibration	Calibration may be performed by application of weights or by the mV/V values of each load cell
Weighing functions	Auto zero maintenance, motion detection, auto-zero at power-up, zero, tare, gross, test
Memories	Serial EEPROM calibration memory
Set Points	2x set points, transistor output, opto-isolated, 24 V DC, 10 mA
Digital Input	1x opto-isolated input, 24 V DC
Tilt sense input	Inhibits weighing when scale is tilted

LINEARITY AND STABILITY

Linearity	Within 0.002 %
Long term stability	\leq 0.002% of full scale per year.
Temperature coefficient	Zero \leq 2 ppm/ $^{\circ}$ C (switched polarity), Span \leq 2 ppm/ $^{\circ}$ C

LOAD CELLS

Excitation	+5 V DC
Number of load cells	Up to 4 load cells 350 ... 1 100 Ω
Connection	4 wire technique

COMMUNICATION

Serial interface	RS485A half duplex, multidrop with networking address, 2400 to 115 000 baud Baudrate, data bits, parity and data output are programmable
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POWER

Power supply	7 - 10 V AC or 7.5 - 12 V DC, 200 mA
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ENVIRONMENT AND ENCLOSURE

EMC	According to OIML R76 and EN 45501 requirements
Operating temperature	-10 $^{\circ}$ C to +40 $^{\circ}$ C legal for trade / -20 $^{\circ}$ C to +50 $^{\circ}$ C non approved
Storage temperature	-10 $^{\circ}$ C to +70 $^{\circ}$ C
Humidity	90% RH max, non condensing
Enclosure	Stainless steel, protection IP65

OPTIONS

Mains adapter	230 V AC / 9 V DC, 500 mA
Converter	RS485A to RS232C converter including power adapter 230 V AC / 9 V DC, 500 mA.
Display terminal	See data sheet FDT-A / -B

Dimensions (in mm)

