

# DAD143.1 weight indicator



## product description

The DAD143 indicator is a universal device suitable for any weighing, filling or dosing operations that use strain gauge -based sensors.

It has ports that support a number of industrial Ethernet based protocols for industrial weighing, control and registration. Examples include analogue current or voltage output (0/4...20 mA, 0...5V, 0...10V, -5V...+5V and -10V...+10V), Ethernet based ports [such as Profinet, Modbus TCP, EtherNET/IP, EtherCat], a service port RS 232 and logic I/O's for direct control of valves or bars etc.

## applications

Universal process weighing systems and process automation & control applications.

## accessories

Graphical setup and analysis software running under MS Windows

## key features

Din-rail mounting TS35, IP40

Max conversion rate of 600 updates per second

Calibration with test weight or eCal

EU-Type Examination Certificate, 10,000 e

Input sensitivity: 0.2  $\mu\text{V}/\text{e}$  (legal-for-trade), 0.05  $\mu\text{V}/\text{d}$  (industrial)

Standard interfaces: RS232C, Ethernet

Power Supply 10...30 VDC

Standard fieldbuses Profinet, EtherNET/IP, EtherCAT

Modbus TCP/IP as standard

2x Digital Inputs / 3x Outputs Opto-isolated

Analogue Output 4...20mA, 0...10VDC



RoHS compliant



## specifications

Model name	DAD143.1
Accuracy	III
Test certificate according OIML R76	EU Type approved for 10,000 intervals
AD converter	Delta-Sigma $\pm$ 24 bit
Analogue input range	$\pm$ 15 mV bipolar ( $\pm$ 3 mV/V @ 5 VDC excitation)
Minimum input sensitivity	0.2 $\mu$ V/e (legal for trade); 0.05 $\mu$ V/d (non legal for trade)
Linearity	< 0.001% FS
Temperature effect on zero	< $\pm$ 4 ppm/ $^{\circ}$ K (typical < $\pm$ 2 ppm/ $^{\circ}$ K)
Temperature effect on span	< $\pm$ 8 ppm/ $^{\circ}$ K (typical < $\pm$ 4 ppm/ $^{\circ}$ K)
Excitation	5 V DC, load cell(s) resistance 50 - 2000 ohms; 6 wire technic
Conversation rate	Max. 600 values/second, selectable in 8 steps
Resolution rate	$\pm$ 600 000 counts @ $\pm$ 3 mV/V input signal

## Calibration & Weighing Functions

Calibration	Electronical calibration in mV/V (eCal) or with test weight(s)
Digital low pass filter	FIR Filter 2.5 to 19.7 Hz or IIR Filter 0.25 to 18 Hz - adjustable in 8 steps
Weighing functions	Zero, gross, tare, net, filter, etc.
Application modes	None automatic weighing instrument (NAWI) or triggered measurement

## Communication & Setup

Communication ports	RS232 and Ethernet
Setup & Calibration	via front panel buttons or Windows software 'DOP 4'
Display	6 digit 7 segments, green LED's, 5.08mm, 8 status LED green, spectral filter 565 nm for improved contrast
Keyboard	4 pcs, $\varnothing$ 3mm robust, for setup / calibration, zero, tare

## Power Supply

Power supply	10 ... 30 VDC, < 4.0 W @ 24 VDC
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### Environmental Conditions

Operating temperature	-15 °C to +55 °C at maximal 85% rh, non condensing
Storage temperature	-30°C to +70°C
Enclosure & protection	Plastic housing, for DIN rail mount (TS35) , protection IP40
Dimension and weight	120 x 102 x 23 mm (L x H x W), weight approx. 170 g
Vibration resistance	2.5g @ operation, 5g @ storage

### Interface

Service Port	RS 232, 9600 ... 460800 Baud – half/full duplex
Protocol & address range	ASCII; address range 1 ... 255
Ethernet Ports (2 pcs.)	RJ45, 10/100 Mbit/s, integrated 2 port switch, isolated
Duplex modes	Half Duplex, Full Duplex, Auto-Negotiation
MDI modes	MDI, MDI-X, Auto-MDIX
Data transport layer	Ethernet II, IEEE 802.3

### Input / Output

Analog current output	0 – 20mA or 4 – 20mA, 500ohm, isolated or
Analog voltage output	0 – 10V, 0 – 5V, ±5V, ±10V, 10kohm, isolated
Digital logic inputs	2 inputs (10 – 30V, 1 – 3mA), common ground, isolated
Digital logic outputs	3 outputs (semiconductor relais) 30 V DC/AC, 0.5 A, common ground, isolated

Dimensions and specifications are subject to change without notice.