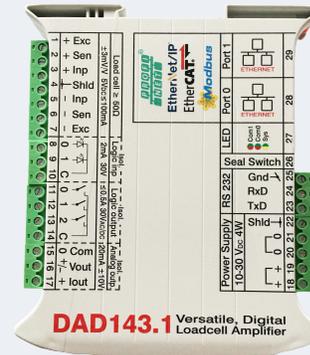


A full featured Ethernet IP ready, digital amplifier, the DAD 143.1 is the ideal solution for automatic & non-automatic weighing solutions as well as filling or loss-in-weight applications.



FEATURES

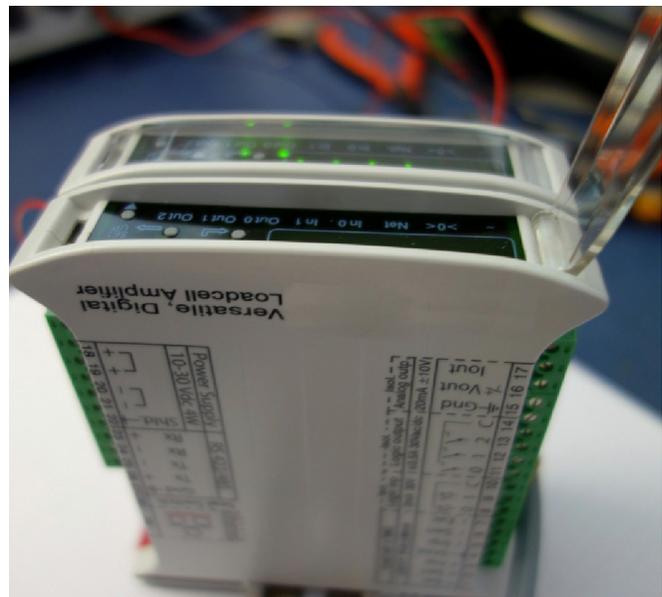
- Weighing mode, Input:
 - Drives up to 6 pcs 350 ohm Load cells
 - External resolution $\pm 600\,000$ increments at $\pm 3\text{mV/V}$ input signal
 - Output update rate 1-600 upd./sec
 - Bandwidth 0.2-20Hz
 - OIML R-76 Class III: 10000e; $e=0.2\ \mu\text{V/VSI}$
- Input/Outputs, standard:
 - Analogue current output
 - Analogue voltage output
 - Triple logic output
 - Dual logic input
 - Ethernet based ports
 - RS232 service port, full & half duplex
- Built in special programs:
 - Check-weighing
 - Dozing and filling of bulk goods (pending)
 - Loss-in-weight applications (pending)
- Features:
 - Six digit display and keyboard for direct set-up, calibration and operation
 - Advanced digital filter performance (FIR or IIR etc.)
 - Load cell (mV/V) calibration
 - PC program (Buzzard DOP) is available for set-up, calibration and process analyzing
 - Ethernet IP ready
 - Supports Ethernet/IP (AB), Profinet, EtherCAT and Modbus TCP
 - RS232 service port supporting all the same ASCII commands used with the DAD 141.1

APPLICATIONS

- Non-automatic and automatic weighing, filling or loss-in-weigh operations
- Analog current- and voltage output, 2 ethernet based ports, RS232 service port and logic I/O's for direct control of valves or bars and simple remote operations

DIMENSIONS

Height/Length/Weight	L:105mm (4.1"); H:120mm (4.7"); W22.5mm (.9")
Weight	170g (6oz)
All connection points	Pluggable, coded, 5.08mm (0.2") pitch
Mounting	To be clipped on to DIN rail TS35



SPECIFICATIONS

Performance	Linearity	<0.001% of full scale
	Load cell excitation voltage	5Vdc
	Load cell drive capability	RLC 58-2000 Ω (≤ 6 pc 350 Ω load cells)
	Load cell wiring system	6 wires inclusive sense
	Load cell input range	± 3.3 mV/V equivalent to ± 16.5 mVdc
	Load cell input resolution	C ≈ 50 nV/incl. (≈ 200 000 counts at 2 mV/V input)
	A/D conversion rate	600 updates/second
	Fix LP filter, default	20 Hz; 60 db/decade
	Adjustable digital IIR LP filter	18-0.25Hz; 40db/decade, selectable in 8 steps
	Adjustable digital FIR LP filter	19.7-2.5Hz, selectable in 8 steps
	Output update rate	600-0.6 updates/second, selectable in 8 steps
	Display averaging rate	5 updates/second
General I/O's	Service port	RS232 via DB9
	Data transmission rates RS232(service port)	9.6; 19.2; 38.4; 57.6; 115.2 kB up to 460800 baud
	Data transmission protocol	Get results or auto transmit
	Ethernet based ports	Profinet, EtherCAT and Modbus TCP, Ethernet IP
	Analogue current output	0-20mA or 4-20mA. 500ohm. Isolated
	Analogue voltage output	0-10V; 0-5V; ± 5 V; ± 10 V. 10kohm. Isolated
	Logic inputs	2 (10-30 V; 1-3 mA) common ground.; Isolated
	Logic outputs	3 FET's (30 Vac; 0.5 A) common ground; Isolated
	Internal calibration reference	2.000 mV/V
Power supply	10-30Vdc $\leq 15\%$ ripple; ≤ 4 Watt. Isolated	
Facilities	Display, optical spectral filtered	6 digit, 7seg. Green LED's, 5.08mm
	Indicators	8 green LEDs
	Keyboard	4 pc $\varnothing 3$ mm robust, short travel push buttons
	Sealing for legal operations (Green M)	Plug and key-board lid to be sealed with labels
Influences	Temperature effect on Zero	Typical ± 2 ppm/ $^{\circ}$ K, Max ± 4 ppm/ $^{\circ}$ K
	Temperature effect on Span	Typical ± 4 ppm/ $^{\circ}$ K, Max ± 8 ppm/ $^{\circ}$ K
	Temperature effect on Calibration Ref.	Typical ± 4 ppm/ $^{\circ}$ K, Max ± 8 ppm/ $^{\circ}$ K
	Relative humidity	0-95 % non condensing
	General I/O protection, all connections	Reversed polarity, excess voltage and surge
	Vibration	2.5 G operational; 5 G non-operational
	Protection un-installed, environment	IP40
Standards	Conform to Council Directive	CE in accordance with 2011/77/EC ; 2004/108/EC
	Certificate of EMC performance	2004/22/EC MID E2 (for industrial applications).
	Certified accuracy	OIML R-76 Class III: 10000e; e=2 μ V/VSI