

## Weigh Indicator/Controller

### FEATURES

- High speed process control, 300 samples per second
- Batch, blend, and mix systems
- Up to 30 recipes with 24 activities each
- Excellent connectivity and operator interface
- Flow measurement capability
- Easy setup via front panel keypad or remote PC

### APPLICATIONS

- Batch/blend/mix systems
- Multiple recipe controller
- Quality-critical process weighing
- Custom weighing applications

### DESCRIPTION

The TAD 3 Weight Processor monitors and controls strain gage load-cell-based weighing systems. It has an A-D resolution of nearly 14 million counts and easily interfaces with other PC and PLC controllers via two communication ports. It can also be used with an external alphanumeric or graphical display, in addition to its integral backlit graphic liquid crystal display. High accuracy and very fast transmission rates make the TAD 3 ideal for advanced process control applications.

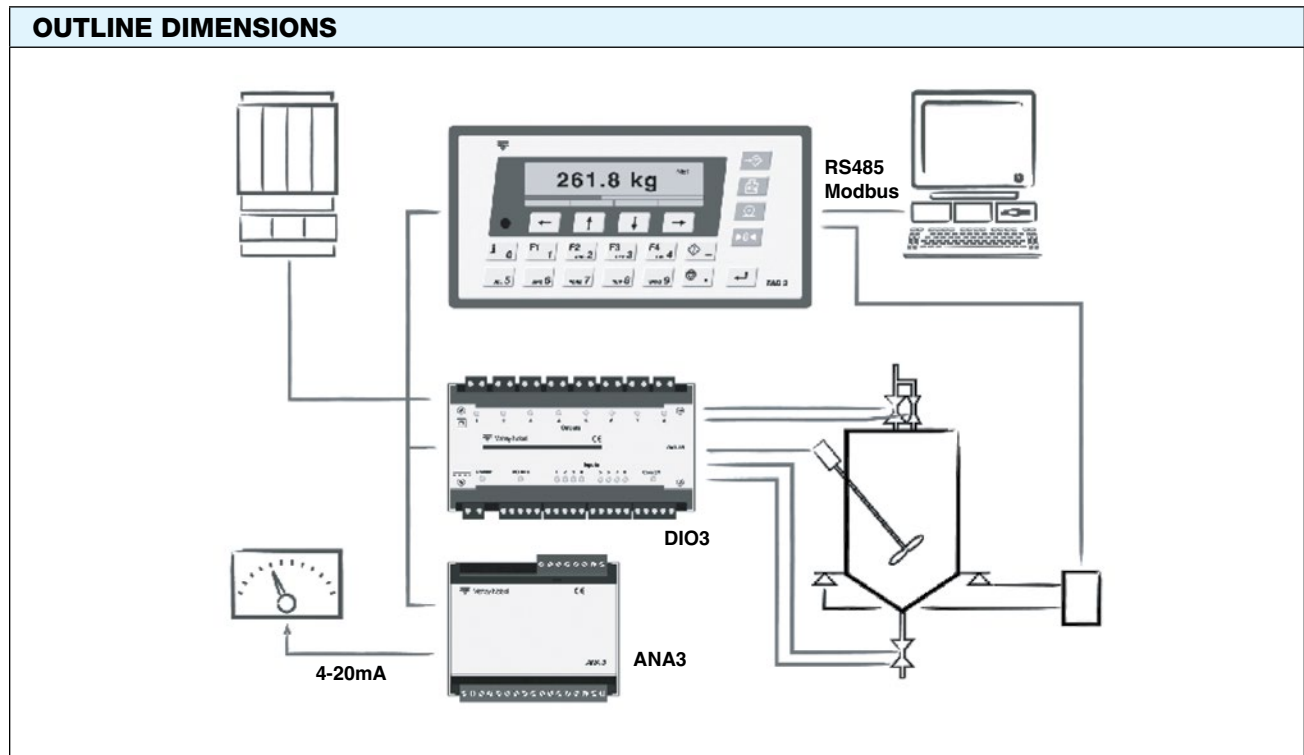
The TAD 3 recipe batching version allows storage of up to 30 recipes with up to 24 activities per recipe. Batching is carried out over separate, digital I/O units.



The batching version of the TAD 3 makes it possible to perform batching of up to six components in coarse and fine feeding phases. Other process functions like stirring, heating, dumping, etc. also can be controlled with the batching version.

A menu program leads the operator through all phases of the process. He can enter alphanumeric information in his own language on the graphic display. Another way to perform setup and calibration is to use the deltaCOM program on a PC (please see separate data sheet).

### OUTLINE DIMENSIONS



## Weigh Indicator/Controller

SPECIFICATIONS		PARAMETER	VALUE
<b>PERFORMANCE</b>		<b>Resolution</b>	13 800 000 counts
<b>Conversion speed</b>			0.5 to 300 Hz, ratiometrically integrating converter
<b>Update rate</b>			0.5 to 60 Hz
<b>Display divisions</b>			100 000, legal 10 000
<b>Minimum division</b>			0.3 $\mu$ V, legal 0.5 $\mu$ V
<b>Accuracy</b>			0.002% of full scale
<b>Full scale range</b>			$\pm$ 3.3 mV/V
<b>Non-linearity</b>			<0.002% of used range
<b>Excitation voltage</b>			9.7 VDC to 5.5 VDC with 1 to 8 of 350 $\Omega$ transducers
<b>Number of 350 <math>\Omega</math> I.c.</b>			8 pcs (Total load >45 $\Omega$ )
<b>Filter</b>			0.04 to 20 seconds digital average. Adaptive filter.
<b>Offset drift</b>			< $\pm$ 0.01 $\mu$ V/ $^{\circ}$ C
<b>Gain drift</b>			< $\pm$ 0.00015% of actual value/ $^{\circ}$ C
<b>Calibration methods</b>			Data sheet, table, dead weight, shunt
<b>ENVIRONMENTAL</b>			
<b>Operating temperature</b>			-10 $^{\circ}$ C to +50 $^{\circ}$ C
<b>Storage temperature</b>			-25 $^{\circ}$ C to +85 $^{\circ}$ C
<b>Relative humidity</b>			95%
<b>IP level</b>			IP 65 at the front end by panel mounting
<b>FRONT PANEL</b>			
<b>Display type and size</b>			Graphic LCD with backlight, 248 $\times$ 60 pixels (94 $\times$ 20 mm)
<b>Keyboard</b>			Total of 21 buttons. Digit and character entry, -sign, decimal point, ENTER, 4 function buttons, tare, gross/net, print, zero
<b>POWER SUPPLY</b>			
<b>Voltage</b>			24 VDC $\pm$ 20%
<b>Power consumption</b>			8 W
<b>DIGITAL INPUTS</b>			
<b>Inputs</b>			2 pcs
<b>Type and load</b>			24 VDC, 6 mA
<b>RELAY OUTPUTS</b>			
<b>Number</b>			2 pcs (each with 1 switching group)
<b>Load</b>			max. 1 A, 30 VAC or VDC
		<b>PARAMETER</b>	<b>VALUE</b>
		<b>COMMUNICATION INTERFACE, COM 1</b>	
		<b>Interface</b>	RS-485/RS422 (two-wires or four-wires) or RS-232
		<b>Protocol</b>	MODBUS RTU or ASCII
		<b>Baud rate</b>	Up to 115.2 kbaud
		<b>Function</b>	For control communication (MODBUS RTU), external display/printer (ASCII) or fieldbus communication (via GATE 3S).
		<b>COMMUNICATION INTERFACE, COM 2</b>	
		<b>Interface</b>	RS-485/RS422 (two-wires or four-wires)
		<b>Protocol</b>	MODBUS RTU or ASCII
		<b>Baud rate</b>	Up to 460.8 kbaud
		<b>Function</b>	For control communication (MODBUS RTU), optional I/O units, external display/printer (ASCII) or fieldbus communication (via GATE 3S).
		<b>MECHANICAL DATA</b>	
		<b>Dimensions</b>	100 $\times$ 200 $\times$ 123 mm (H $\times$ W $\times$ D) Depth behind panel 135 mm (add 50 mm if D-sub connector is used for RS-232)
		<b>Standard mounting</b>	Panel mounting (max. 10 mm thick panel). Cut-out 92 $\times$ 186 mm, r <5 mm.
		<b>Connector type</b>	Plug-in screw terminals, D-sub (RS-232)
		<b>Certifications</b>	CE, Welmeq TC to OIML 10000e
		<b>HARDWARE OPTIONS</b>	
		Separate units, connected to a serial communication port of TAD 3.	
		<b>Analog Output unit ANA 3</b> Two units can be connected to serial communication port COM 2 of TAD 3. See separate data sheet.	
		<b>Digital I/O unit DIO 3 R</b> Two units (up to four in special applications) with each 8 in-/outputs, can be connected to serial communication port COM 2 of TAD 3. See separate data sheet.	
		<b>Gateway GATE 3/GATE 3S</b> For fieldbus communication. One unit can be connected to one of the serial communication ports of TAD 3. See separate data sheet.	

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