

## ANALOGUE LOAD CELL AMPLIFIER / SIGNAL CONDITIONER



The XTSGA Load Cell Amplifier is a versatile signal conditioning unit for silo weighing, process control and PLC interface applications. It can be powered from 110/230 VAC or 18-24 VDC (selected at time of order) and provides very stable excitation for up to 4 x 350 ohm load cells. It is housed in a black surface mounted ABS case, with IP65 environmental protection and full CE compliance. An optional isolated power supply module can extend the DC power range from 9 to 36 V.

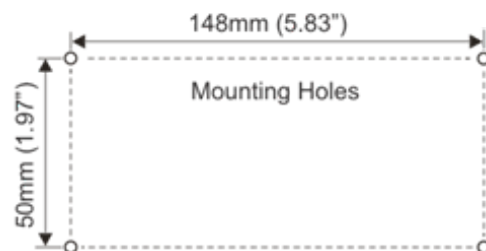
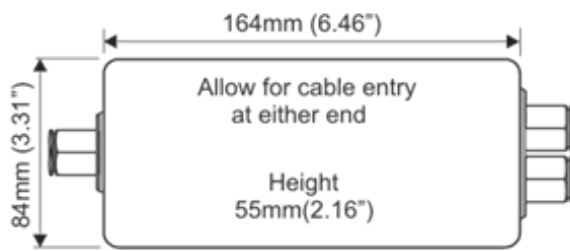
This compact unit converts the input from a single, or multiple, load cells into an analogue output. User selectable options include 0-20 mA, 4-20 mA, 0-10 V, 0-5 V,  $\pm 5$  V or  $\pm 10$  V. DIN rail mount or PCB only options are also available on request. Operation over a wide temperature range is possible.

It has been designed to be make calibration and configuration very simple, making it a very user friendly and cost effective solution when a digital display is not required.

- Cost effective analogue amplifier
- Rugged IP65 ABS casing with quick-release screws
- User selectable analogue output and offset ( $\pm 80$  % of full scale)
- 3 year warranty
- Selectable load cell sensitivity range
- 110/230 VAC or 18-24 VDC power options
- Wide, selectable filter cut-off range (1 Hz to 5 kHz)
- Surface mounted (DIN rail and PCB only options available)

# XTSGA AMPLIFIER

technical specification...



Mounting holes of diameter 4.5mm (qty. 4 off).  
Cable glands: 3 off M16, Nylon 66, for circular section cable of diameter 4mm to 7mm.

## XTSGA Amplifier

Electrical Specifications				
Parameter	Min	Typical	Max	Units
Power supply AC (XTSGA/A)		110 / 230		V AC
Power supply DC (XTSGA/D)	18		24	V DC*
Power supply current (DC)	50	90	200	mA
Load cell excitation voltage (10V selection)	9.75	10	10.25	V**
Load cell excitation voltage (5V selection)	4.85	5	5.15	V**
Load cell resistance	85			$\Omega$ ***
Load cell sensitivity (switchable)	0.06		30	mV/V
Gain adjustment (fine adjust by potentiometer)	0.06		1.0	mV/V
Coarse offset adjustment (switchable)	+/- 1.25		+/- 79	% full scale
Fine offset adjustment for voltage output (potentiometer)		+/- 2.8		% full scale
Fine offset adjustment for current output (potentiometer)		+/- 5.5		% full scale
Analogue output load (voltage output)			2	mA
Analogue output load (current output)	0		500	$\Omega$
Bandwidth (no filter; > 2 mV/V)	DC		6	kHz
Filter cut-off (switchable ranges)	1		5000	Hz
Temperature coefficient of zero (@ 2.5 mV/V)		0.002	0.009	%/°C @ 2.5mV/V full scale
Temperature coefficient of span		0.007	0.01	%/°C
Linearity		0.03		% full scale
Gain stability – first 1000 hours		0.2		% full scale
Gain stability – second 1000 hours		0.1		% full scale
90-day offset stability		3.3		$\mu$ V
Analogue output load stability gain (0 - 100%)			0.01	% full scale
Analogue output load stability offset (0 - 100%)			0.01	% full scale
Power supply rejection gain (0 - 100%)			0.01	% full scale
Power supply rejection offset (0 - 100%)			0.01	% full scale
Operating temperature range	-10		+50	°C
Storage temperature range	-20		+70	°C
Humidity			95	% RH

\* 18 VDC maximum at full current (four 350 Ohm Load Cells connected in parallel @ 10V excitation)

\*\* Switch SW4 position 8 on for 10V excitation, off for 5V excitation

\*\*\* Assuming 4 x 350 Ohm load cells connected in parallel @ 10V excitation

General Data
<b>Output options (set by on-board switch)</b> 0-20 mA, 4-20 mA, 0-10 V, 0-5 V, $\pm$ 5 V or $\pm$ 10 V
<b>Cable connections - internal</b> Field screw terminals, 2.5mm <sup>2</sup> rising clamp
<b>Cable connections – on case</b> 3 off M16 cable glands, Nylon 66, for circular section cable of diameter 4-7mm
<b>Mounting</b> Surface mount case (DIN rail or PCB only options available)
<b>Included controls</b> <ul style="list-style-type: none"> <li>• Gain potentiometer</li> <li>• Offset potentiometer</li> <li>• Coarse gain switches</li> <li>• Coarse offset switches</li> <li>• Filter cut-off switches</li> <li>• Output mode switch</li> </ul>
<b>Ingress Protection</b> IP65
<b>Approvals</b> <ul style="list-style-type: none"> <li>• EMC Directive 2004/108/EC</li> <li>• Low Voltage Directive 2006/95/EC</li> </ul>

DISTRIBUTED BY:



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Our policy is one of continuous product enhancement. We therefore reserve the right to incorporate technical modifications without prior notification.