XTSGA AMPLIFIER

Thames Side

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, ±5 V or ±10 V. DIN rail mount or PCB only options are also available on request. Operation over a wide temperature range is possible.

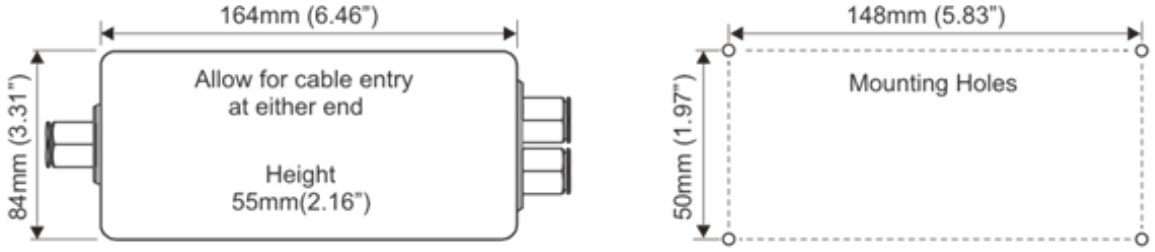
It has been designed to be make calibration and configuration very simple, making it a very user friendly and cost effective solution when a digital display is not required.

- Cost effective analogue amplifier
- Rugged IP65 ABS casing with quick-release screws
- User selectable analogue output and offset (±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)

CE

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			Ω***
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	Ω
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		µV
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

General Data

Output options (set by on-board switch)
0-20 mA, 4-20 mA, 0-10 V, 0-5 V, ±5 V or ±10 V

Cable connections - internal
Field screw terminals, 2.5mm² rising clamp

Cable connections – on case
3 off M16 cable glands, Nylon 66,
for circular section cable of diameter 4-7mm

Mounting
Surface mount case
(DIN rail or PCB only options available)

Included controls
- Gain potentiometer
- Offset potentiometer
- Coarse gain switches
- Coarse offset switches
- Filter cut-off switches
- Output mode switch

Ingress Protection
IP65

Approvals
- EMC Directive 2004/108/EC
- Low Voltage Directive 2006/95/EC

* 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

DISTRIBUTED BY:

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Issue: XTSGA.05.15

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