

PT110LC, PT111LC, PT112LC

ANALOGUE LOAD CELL CONDITIONERS



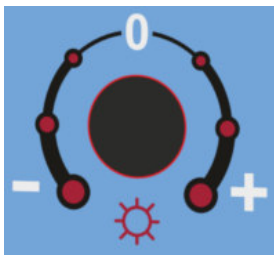
...Azure Signature Series!



Accupoint weigh module

The PT110LC, PT111LC and PT112LC are DIN rail mounted micro-controller based analogue load cell transmitters. They have very high accuracy and long term stability with advanced design.

Using an up to-date delta-sigma ADC and 16 bit DAC to achieve higher speed and accuracy these instruments give the system designers a lot of advantages towards increasing system reliability and reducing the installation and service times. All instruments' analogue outputs are matched during production to simplify calibration with a PLC and to simplify exchanging the instrument without re-calibration in service when initial adjustment has been performed in the PLC.



There are 8 position rotary switches and annunciator LEDs on the front panel of the instruments. The upper rotary switch adjusts the empty scale's analogue output level (zero adjustment) and the lower rotary switch adjusts the gain of the instrument (span).



HPT Pressure Transducers

The PT110LC is good for weighing where the weight of the item does not change quickly, such as silos, tanks, scales and reservoir pressure.

Additionally the PT111LC has 2 set point relay outputs for process control or high or low alarms, more analogue output options and an RS232 port for configuration via PC and AzComT software.



The PT112LC is a high response speed version of the PT111LC and also has an input for remote zeroing and a 6 wire load cell connection. With it's fast response the PT112LC could also be used for filling, batching, check-weighing and monitoring varying pressure.

Features

- Minimised zero and span drifts due to use of micro-controller technology.
- High accuracy, very low temperature drift 24 bit ADC and 16 bit DAC converters.
- Compact DIN rail mounting, size is only 22.5mm × 99mm from the front.
- Long term stability and low temperature drifts eliminate the need for frequent readjustment.
- Digital adaptive anti-vibration filter to minimize errors from environmental vibrations.
- All instruments have been pre-calibrated to 0–10 V and to 4–20 mA analogue output ranges for 0–2mV/V load cell signal range as a factory default.
- Factory matching facilitates swap out without PLC readjustment.

Integration

- Analogue output
 - 0-10V
 - 4-20mA

PT111LC extra features

- Additional output options 0-5V, 0-20mA.
- 2 set point relay outputs.
- Programmable via PC, PLC and AzComT software.
- Calibration without calibration weights (using load cell mV/V entry)

PT112LC extra features

- Faster response time.
- Increased stability.
- 9 step filter for stabilisation.
- 6 wire load cell connection.
- Up to 8x 350Ω load cells.
- Additional output options 0-5V, 0-20mA.
- 2 set point relay outputs.
- 1 input for remote zero.
- Programmable via PC, PLC and AzComT software.
- Calibration without calibration weights (using load cell mV/V entry)

Specifications			
	All Models		
Power Supply	12-28VDC max., 200mA.		
Span stability	<0.007% FSO/°C (PT112LC <0.005% FSO/°C)		
Non-linearity	<0.01% FSO/°C		
Isolation (Input to output)	Common ground connection (VDC, GND). EMC Immunity Class E2		
Operating Environment	-10°C to 45°C (14°F to 113°F); max. 85% RH, non-condensing. IP20.		
Physical	Polyamide, DIN-rail mount, IP20, Front Width:22.5 x Height: 99, Depth:114.5, weight 0.45kg		
Mounting	DIN rail 35 mm x 7.5 mm, DIN 46277-3		
Digital Section			
Analogue to digital converter	Ratiometric 24 bit delta sigma ADC with integral analogue and digital filters		
Digital to analogue converter	16 bit low drift DAC		
Resolution	16 000 000 internal / 65 000 external		
Annunciators	Run, Current/voltage, Error		
Analogue Input			
Load cell type	All strain gauge load cells and pressure transducers, 4 or 6 wire.		
Load cell Supply (excitation)	5VDC		
Analogue input range	0 to 20mV		
	PT110LC	PT111LC	PT112LC
Zero point adjustment	-19mV to +19mV	-19mV to +19mV	-18mV to +18mV
Span adjustment for full output	Input 0.2mV/V to 4mV/V	Input 0.2mV/V to 4mV/V	Input 0.16mV/V to 3.6mV/V
Load cell connection	4 wire connection.	4 wire connection.	6 wire connection.
Number of load cells	4x 350Ω, 8x 700Ω (min. 85Ω)	4x 350Ω, 8x 700Ω (min. 85Ω)	8x350Ω, 16x700Ω (min. 43Ω)
Digital Input	N/A	N/A	Remote Zero
Output			
Analogue Output Format	4 to 20mA (max. 500Ω) or 0 to 10V	4 to 20mA, 0 to 20mA (max. 500Ω) or 0 to 10V, 0 to 5V DC	4 to 20mA, 0 to 20mA (max. 500Ω) or 0 to 10V, 0 to 5V DC
Programmable Set point output	N/A	2 relay set points, 230 VAC, 0.5 A	2 relay set points, 230 VAC, 0.5 A
Output step response time (fastest)	Typically 500ms	Typically 500ms	Typically 25ms (Slower relay response)
Setup and Communication			
Front panel	2x rotary switches, 3x status LEDs		
RS-232C	N/A	Set up and calibration with PC, PLC and AzComT software	
Calibration	Performed with rotary switches on the front of the instrument.	Performed with rotary switches on the front of the instrument. With AzComT, can be performed via PC without calibration weights.	
Electronic calibration	N/A	YES	YES
Fast calibration	N/A	YES	YES
Digital Filter	Non-adjustable	3 step adjustable digital adaptive filter adjusted via PC with AzComT	9 step adjustable digital adaptive filter adjusted via PC with AzComT

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