

Transmitter

FEATURES

- Analog output ± 10 VDC, 0–20 or 4–20 mA
- Serial communications: RS-485, MODBUS RTU protocol
- Internal resolution >8,000,000 counts
- Relay outputs
- Compact DIN rail mounting
- CE compliant – EMC and Low Voltage

DESCRIPTION

AST 3P is a DIN rail mounted, high performance transmitter designed for applications with strain gauge transducers. It converts the output from connected loadcells into a very stable signal suitable for PC or PLC based control systems

AST 3P is typically used where a local display is essential either for displaying data or for front panel set-up. The set-up and calibration procedure is easily performed either from the front panel or by using the deltaCOM programme via a standard PC running under Windows 95/98/2000/NT4/ME/XP/Windows 7/Windows 8/Windows 10. All set-up data can be stored in the host computer and downloaded in case of replacement of the transmitter with PC software deltaCOM.

The transmitter is fitted with two relay outputs having a response time of less than 20 ms. for use in high precision level control applications.

A unique and patented A/D converter, of high resolution and stability, serves as the heart of the transmitter. This advanced technology provides both analogue and



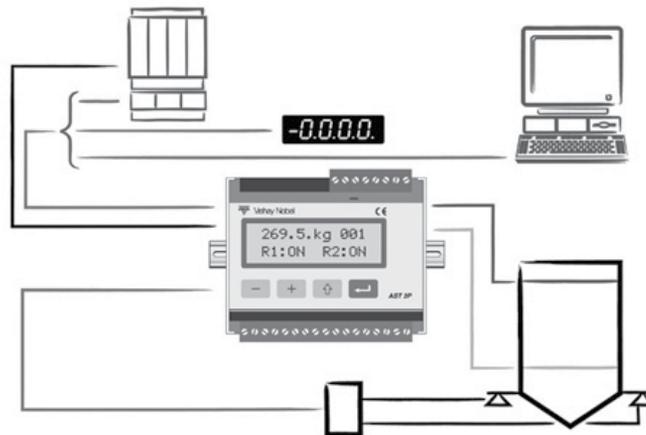
serial outputs which can be conditioned to give the user accurate, stable and rapid response measurement information.

The AST 3P is compatible with other instruments in the BLH Nobel program and can communicate via standard RS-485/MODBUS RTU protocol with a common process control host – PC/PLC.

Fieldbus communication is possible via the GATE 3S module from BLH Nobel.

The transmitter is CE marked, and fully compliant with the EMC and Low Voltage directives

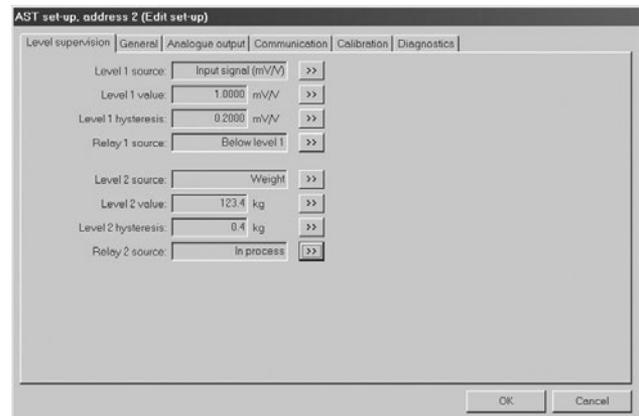
CONFIGURATION



Transmitter

SPECIFICATIONS		PARAMETER	VALUE
PERFORMANCE		Resolution	8,300,000 counts
Conversion Speed			0.5 to 300 Hz accuracy 0.015%
Full Scale Range			±3.3 mV/V
Non-Linearity			<0.005% of used range
Excitation Voltage			8.8 VDC to 5.5 VDC with 1 to 8 of 350 Ω transducers, isolated 500 V
No. of 350 Ω load cells			8 pcs (total load >45 Ω)
Filter			0.05 to 75 Hz, type FIR, selectable bandwidth
Offset, drift			<0.04 μV/°C
Gain drift			<0.0015% of full scale
Calibration Methods			Data sheet, table, dead weight
ENVIRONMENTAL		Operating Temperature	-10°C to +50°C
Storage Temperature			-25°C to +85°C
Relative Humidity			95%
IP Level			IP20
FRONT PANEL		Display Type and Size	2×6 character LCD display with backlight
Keyboard			4 buttons for menu control and data entry
POWER SUPPLY		Voltage	24 VDC ±20%
Power Consumption			7 W
Isolation			Digital inputs common with power supply. Other parts -500 V
ANALOG OUTPUT		Type	Isolated 16-bit bipolar D/A converter
Non-Linearity			<0.01% of full scale
Gain Drift			<0.003% of full scale/°C
Filter			0.05 to 75 Hz, type FIR, selectable bandwidth
Voltage			0-10 or ±10 VDC
Load Data			min. 500 Ω
Offset Drift			<0.35 mV/°C
Current			0 to 20 mA, ±20 mA, 4 to 20 mA or -12 to 20 mA
Load Data			max. 500 Ω
Offset Drift			<0.7 μA/°C
PARAMETER	VALUE	PARAMETER	VALUE
DIGITAL INPUTS		Inputs	2 pcs (option)
Type and Load			24 VDC, 6 mA
RELAY OUTPUTS		Number	2 pcs (each with 1 switching group)
Load			max. 1 A, 30 VAC or VDC
COMMUNICATION INTERFACE		Interface	RS-485 (two-wires or four-wires), isolated 500 V
Protocol			MODBUS RTU or ASCII
Baud Rate			Up to 115.2 kbaud
Function			For control communication (MODBUS RTU) or external display (ASCII)
MECHANICAL DATA		Dimensions	75 × 100 × 110 mm (H × W × D)
Standard Mounting			DIN 46277 and DIN EN 50022
Connector Type			Plug-in screw terminals
Certifications			CE

Subject to change without notice.



Setup Example