

Transmitter



FEATURES

- Unique design to allow transducers in hazardous areas without the need of zener barriers
- Analog output $\pm 10\text{VDC}$, $\pm 0 - 20$ or $4 - 20\text{mA}$
- Serial communications: RS-485, MODBUS RTU protocol
- Relay outputs
- Compact DIN rail mounting
- CE compliant - EMC and Low Voltage
- ATEX approved

DESCRIPTION

AST 3IS is a DIN rail mounted, high performance isolation amplifier designed for applications with strain gauge transducers inside hazardous areas.

AST 3IS has at its heart a unique Nobel patented analog to digital converter. The unit is equipped with analog as well as digital outputs which can be conditioned to give the user accurate, stable and fast response measurement information.

The transmitter is fitted with two relay outputs having a short response time for use in high precision level control applications.

The set-up and calibration procedure is easily performed either from the front panel or by using the deltaCOM program via a standard PC running under windows

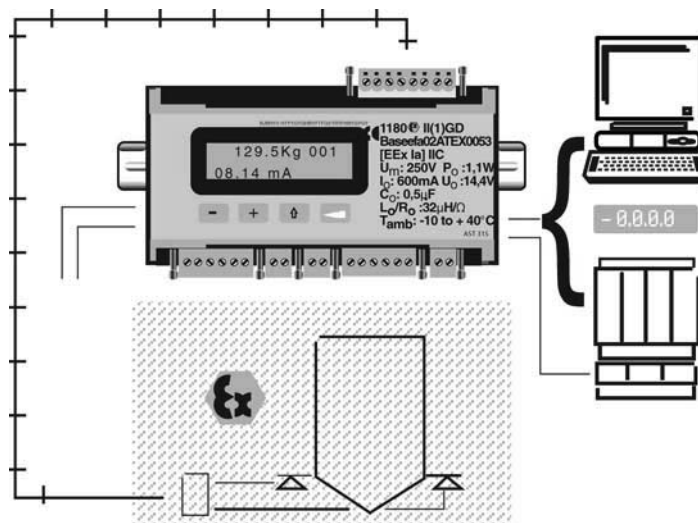
95/98/2000/NT4/ME/XP. All set-up data can be stored in the host computer and downloaded in case of replacement of the transmitter (full deltaCOM version is required).

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

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

The transmitter is CE marked, and fully compliant with the EMC and low voltage directives

CONFIGURATION



SPECIFICATION

EX APPROVAL	BASEEFA 02 ATEX 0053	Offset Drift Current	<0.35mV/°C 0-20mA, ± 20mA, 4-20mA or - 12-20mA
PERFORMANCE		Load Data Offset Drift	max 500 ohm <0.7µA/°C
Resolution	8300000 counts	DIGITAL INPUTS	
Conversion Speed	0.5 to 300Hz Accuracy 0.015%	Inputs	2 pcs (option)
Full Scale Range	± 3.3mV/V	Type and Load	24VDC, 6mA
Non-Linearity	<0.005% of used range	RELAY OUTPUTS	
Excitation Voltage	8.8VDC to 6VDC with 1 to 6 of 350 ohm transducers, isolated 500V	Number	2 pcs (each with 1 switching group)
Number of 350 ohm Filter	6 pcs (Total load > 55 ohms)	Load	Max 1A, 30V AC or DC
Offset, drift	<0.04µV/°C	COMMUNICATION INTERFACE	
Gain drift	<0.0015% of actual value/°C	Interface	RS-485 (two-wires or four-wires), isolated 500V
Calibration Methods	Data sheet, Table, Dead weight	Protocol	MODBUS RTU or ASCII
		Baud Rate	Up to 115.2 kbaud
		Function	For control communication (MODBUS RTU) or external display (ASCII)
ENVIRONMENTAL		MECHANICAL DATA	
Operating Temperature	- 10°C to + 40°C	Dimensions	75 x 149 x 110mm (H x W x D)
Storage Temperature	- 25°C to + 85°C	Standard Mounting	DIN 46277 and DIN EN 50022
Relative Humidity	95%	Connector Type	Plug-in screw terminals
IP Level	IP 20	Certifications	CE
FRONT PANEL			
Display Type and Size	2 x 16 character LCD display with backlight		
Keyboard	4 buttons for menu control and data entry		
POWER SUPPLY			
Voltage	24VDC ± 20%, stabilized voltage		
Power Consumption	6W		
Isolation	Digital inputs common with power supply. Other parts 500V		
ANALOG OUTPUT			
Type	Isolated 16-bit bipolar D/A converter		
Accuracy	0.04%		
Non-Linearity	<0.01% of used range		
Gain Drift	<0.003% of actual value/°C		
Filter	0.05 to 75Hz, type FIR, selectable bandwidth		
Voltage	0-10 or ± 10VDC		
Load Data	min 500 ohm		

Subject to change without notice.

- ATEX II (1) GD approved
- Excellent performance in spite of EX version
- Fully isolated
- Simple earthing (compared with zener barriers)
- Direct connection of transducers in hazardous areas without the need of zener barriers



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