

Transmitter



FEATURES

- Unique design to allow transducers in hazardous areas without the need of zener barriers
- Analog output ± 10 VDC, $\pm 0 - 20$ or $4 - 20$ 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

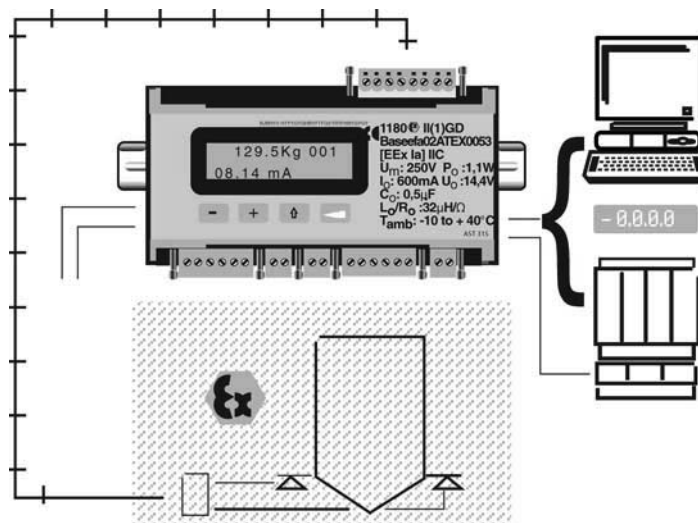
95/98/2000/NT4/ME/XP. All set-up data can be stored in the host computer and downloaded in case of replacement of the transmitter (full deltaCOM version is required).

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



Disclaimer

ALL PRODUCTS, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Vishay Precision Group, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay Precision Group"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

The product specifications do not expand or otherwise modify Vishay Precision Group's terms and conditions of purchase, including but not limited to, the warranty expressed therein.

Vishay Precision Group makes no warranty, representation or guarantee other than as set forth in the terms and conditions of purchase. **To the maximum extent permitted by applicable law, Vishay Precision Group disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.**

Information provided in datasheets and/or specifications may vary from actual results in different applications and performance may vary over time. Statements regarding the suitability of products for certain types of applications are based on Vishay Precision Group's knowledge of typical requirements that are often placed on Vishay Precision Group products. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

No license, express, implied, or otherwise, to any intellectual property rights is granted by this document, or by any conduct of Vishay Precision Group.

The products shown herein are not designed for use in life-saving or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay Precision Group products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay Precision Group for any damages arising or resulting from such use or sale. Please contact authorized Vishay Precision Group personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.