DURAN® electrónica

SENTRY VISIBILIMETER

Visibility sensor

SENTRY is an electro optical device to measure the visibility through air existing particles (dust, gas emission, fog, rain, snow, etc).

It uses frontal dispersion principle, receiving a sample of light in a 42º angle. The width of this angle allows it to detect big size particles.

SENTRY advantages against others:

1. It does not need calibration during the installation
2. External vibrations do not affect the sensor calibration.
3. Wide Detection Range. Sentry uses the forward scatter principle. Other visibilimeters use less effective technologies as back scatter

CHARACTERISTICS

An integrated, one-piece housing design keeps all cabling internal to the sensor for the ultimate protection against the elements. The sensor housing is made from anodized aluminium and the enclosures are rugged, UV-resistant fiberglass rated to IP66.

The sensor uses a "look down" geometry to reduce window contamination and clogging from blowing snow.

Optionally, heaters are available to prevent freezing in cold environments.

All power and signal lines are protected with surge and EMI filtering to help guarantee uninterrupted service for the life of the sensor.

INSTALLATION, MAINTENANCE AND CALIBRATION

Installation and maintenance are very simple (follow instructions in user manual).
It is not necessary to calibrate the equipment during installation as it comes calibrated from the factory.

It is recommended to carry out zero adjustment procedure every year.

If desired, calibration in the field may be carried out using a kit specific for that purpose, or by sending the equipment to DURÁN ELECTRÓNICA..

TECHNICAL CHARACTERISTICS

Opacity Range	From 30m to 16.000m
Precision	+/- 10% RMSE Operational +/- 1% Full Scale Calibration
Time constant	60 s
Dispersion angle	42º nominal
Source	850 nm LED
Output	isolated 4-20mA with option of diagnostic relay

Power supply	10-30 VDC
Working temperature	-40º to 60º C
Humidity	0-100%
Protection	IP66 (NEMA-4-X)
Weight (kg)	8
Dimensions (cm)	88,9 x 29,2 x 30,5

THIS DEVICE IS GUARANTEED AGAINST ANY MANUFACTURING DEFECT FOR 1 YEAR FROM THE DATE OF PURCHASE

I-fichavisibilimetro-v06

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Visibility sensor

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TECHNICAL CHARACTERISTICS

Outputs	0-10 VDC	full scale analog voltage provides the best analog resolution. The output impedance is 50 ohms.s
	0-5 VDC	full scale analog voltage provides a reduced analog resolution that may be necessary for some data acquisitions systems. The output impedance is 50 ohms.
	4-20 mA single-ended	an industry standard method of transmitting the sensor data over long cables. The standard 4-20 ma option uses a single-ended configuration. Operates over total loop resistances of up to 500 ohms.
	4-20 mA isolated	an industry standard method of transmitting the sensor data over long cables. The isolated 4-20 ma option is for installations prone to severe ground loops. Operates over total loop resistances of up to 500 ohms.
Options	1 Control Relay	Control Relay Output provides user adjustable visibility threshold to activate a relay. This option allows simple control of warning lights, foghorns, gate closures, and other indication devices. The SPDT relays provide normally open (NO) and normally closed (NC) contacts and are rated at 100 VDC, 0.25A.
	Diagnostic Relay	Diagnostic Relay Output provides remote indication of sensor status. The relay is continuously activated and will deactivate if a complete power failure occurs or when any of 4 diagnostic tests fail. It checks +5 VDC, +12 VDC, -12 VDC, and transmitter sync for proper operation. The SPDT relays provide normally open (NO) and normally closed (NC) contacts and are rated at 100 VDC, 0.25A
	2 Control Relays	
	1 Control & 1 Diagnostic Relay	
	2 Control & 1 Diagnostic Relay	

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