

CYBER 4-20mA

Smart gas sensing transmitter

DS3638 rev.5 dated 18/03/2019



Key Features

- 32 mm diameter, to fit industry standard 4- or 7-series EC sensors and pellistors
- Multi board module
- Industry-standard 4-20mA analogue output
- MODBUS protocol on RS-485, for long-distance digital communication
- Supplied complete with sensor, configured and pre-calibrated
- Simple calibration in the field, with software, calibration pad or Modbus commands
- Local Threshold alarm outputs
- Watchdog and local fault outputs
- Special ranges supplied on request

General description

N.E.T. CYBER 4-20 is a microprocessor driven electronic interface to turn any gas sensor in a legitimate detector, with industry-standard 4-20mA and Modbus RS-485 output along with contacts for fault and alarms.

It fits virtually any technology of gas sensing device with standard 4- or 7-series built, will sample and process signals from it, linearize it and compute it in standard outputs easy to interface.

The combination of CYBER and a gas sensor is a pre-configured and pre-calibrated unit with a standard, high-level interface, sparing the user the need to calibrate the detec-

tor for the specific sensor employed and hiding the need of dealing with low level signal acquisition and processing.

CYBER 4-20 features 3 fully user-configurable alarm contacts and one watch-dog-activated fault alarm contact.

The CYBER software, supplied with every unit, will allow you to easily recalibrate the sensor, change alarm thresholds, recalibrate the analogue output, change digital communication parameters, print calibration reports, verify sensor lifetime and plot live readings. The unit calibration can also be performed via specific Modbus commands.

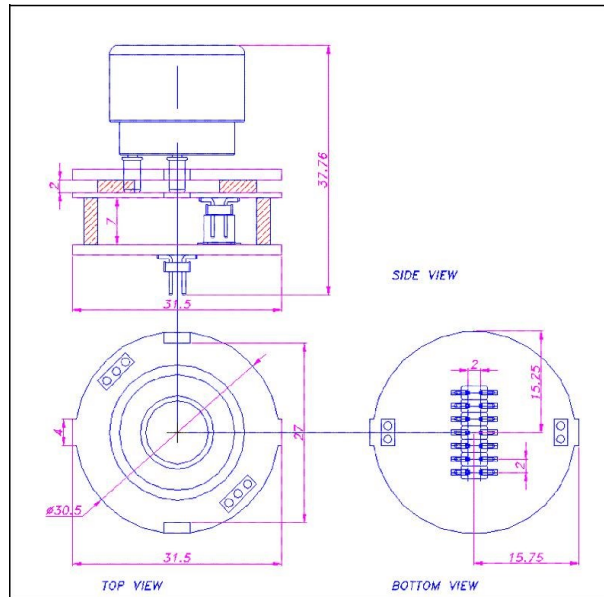
Warranty and warning

The WARRANTY of CYBER Boards is 3 years from the purchased date against defects in materials or production. This warranty however is not valid for articles that have been broken, repaired by a third person or not used according to the instructions contained in this document or supplied with the products, related to the storage, installation, operation, maintenance, or servicing of the products.

The WARRANTY on the specific sensor coupled with the CYBER board is specified in the relevant data sheet available at www.nenvitech.com

Recalibration of the sensor will void the calibration warranty

Pinout and Mechanical specifications



Product specifications

General	Product type:	Cyber 4-20mA
	Sensing Element:	IR sensor, EC cell, Catalytic bead
	Operating temperature range	Depend by the sensor technology (See Sensor specification)
	Storage temperature range	Depend by the sensor technology (See Sensor specification)
	Maximum temperature cycle variations	± 1°C/min
	Operating humidity range	0-95% NDIR & catalytic 20-90% EC cell
	Operating pressure range	800-1200 mBar NDIR sensor 900-1100 mBar EC cell & catalytic
	Output signals	3 Threshold Alarms Fault Alarm Watchdog +5V
	Calibration	Individually calibrated with temperature compensation. Test report supplied.
Measurement	Range	ppm; %vol; %lel
	Response time	Depend by the sensor
	Digital to analog error	±3%F.S
	Digital error	±5%F.S
Electrical	Power Voltage	Nominal 12-24Vdc
	Current Consumption @12V	20-25mA with EC cell 75-85mA with NDIR 40-60mA with catalytic bead
	Current Consumption @24V	25-35mA with EC cell 40-50mA with NDIR 20-30mA with catalytic bead
	Warm up time	90 s for full operation @ 25 °C 1 hour for full specification @25°C
	Max output current	24 mA
	Output load resistor range	330Ω with Vin between 12-15V 500Ω with Vin between 15-24V
	DC output impedance	100 Ω
Signal Output	Analog output	4-20mA
	Digital communication	Modbus protocol RS485
	Baud Rate	9600 bps

Ordering details

CY-AIN-(infrared sensor part no.)	Cyber module supplied with NDIR sensor for hydrocarbons, CO2 or refrigerant gases
CY-AFL-[catalytic sensor part no]	Cyber module supplied with pellistor
CY-ATX-[electrochemical cell part no]	Cyber module supplied with electrochemical cell
CY-AO2-[oxygen sensor part no]	Cyber module supplied with Oxygen Sensor range 0-25%

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