

## Stationary detector of toxic gases and oxygen SC-TOX



Measurement of various toxic gases and oxygen. Temperature compensation and linearisation of the signal. Displaying of values on LCD with optional backlight level. Control using 2 pushbuttons after entering a 4-digit code. Czech, Russian and English in the standard version.

Connection to systems DKD2000, PNS and others using a current, voltage, frequency signal or using the protocol Modbus to RS-485-IS. Adjustable analog output, max. 5V, max. 22mA (e.g. 0.2-1mA, 4-20mA, 0.4-2V, etc.).

Adjustable digital output (galvanic-separated, PNP, Namur), monitoring of concentration level, temperature, adjustable frequency transmission 1-999Hz (e.g. 5-15Hz, 200-600Hz, etc.).

Check of external and internal voltages, temperature, age of calibration, age of the sensor, tests of memories, indications of special states on the display and on the outputs. Saving of concentration, temperature, voltage to the memory every minute cyclically for a period of 24 hours.

#### Use:

The detector SC-TOX is designed for permanent measurement of volume concentrations of various toxic gases or oxygen by an electrochemical sensor. The non-explosive design I M1/II 2GD Ex ia I/IIC T135°C allows use even in areas with a danger of explosion in coal mines or in zones 1, 2, 21 and 22.

According to the type of the electrochemical sensor the detector can measure these gases:  $O_2$ ,  $CO$ ,  $H_2S$ ,  $NH_3$ ,  $SO_2$ ,  $H_2$ ,  $HCN$ ,  $NO_2$ ,  $O_3$ ,  $Cl_2$ ,  $F_2$ ,  $HF$ ,  $ClO_2$ ,  $COCl_2$ ,  $PH_3$ ,  $AsH_3$ ,  $SiH_4$ .

#### Technical parameters of SC-TOX:

Design	I M1 Ex ia I II 2GD Ex ia IIC T135°C
Supply voltage	10-30V (10-22V sk. IIC)
Current consumption at 10V	16mA (+ output current) +5mA backlight +5mA commun.
Current consumption at 20V	14mA (+ output current) +3mA backlight +3mA commun.
Current consumption at 30V	13mA (+ output current) +2mA backlight +2mA commun.
Analog voltage output	within range 0.0-5.0V
Analog current output	within range 0.0-22.0mA
Frequency output	within range 1-999Hz
Error of outputs	<±1% of the range
Switched trans. output volt.	3-30V DC
Max. switched current	0.3A
Max. switched power	3W
Ambient temperature	-20°C to +50°C
Relative humidity	15-95% without condensation
Protection level	IP54
Dimensions incl. bushings	142x112x73mm

#### Spark-safe parameters:

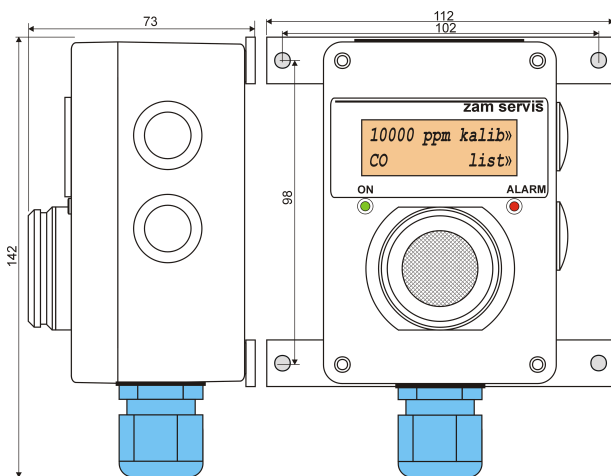
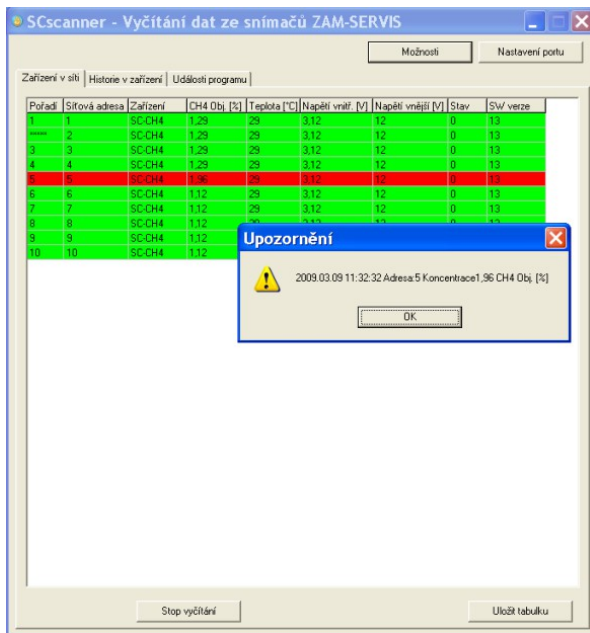
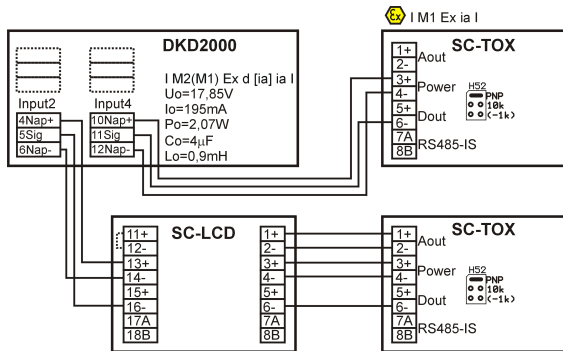
Ui	30V (I,IIA, IIB) 22V (IIC)
Pi	3W (I) 1.25W (II)
Ci	0
Li	200µH
Uo analog. output	7.9V
Io analog. output	80mA
Uo output RS485 (ver. 4)	4.15V
Io output RS485 (ver.4)	140mA

#### Parameters of measurement of basic gases:

Range of measurement of $O_2$	0-25%
Ranges of measurement of CO	100,500,1000,2000,5000, 10000 ppm
Ranges of measurement of $H_2S$	50,100,200,2000 ppm
Ranges of measurement of $NH_3$	100,500,1000,5000 ppm
Max. velocity of air	6m/s
Max. dustiness	1g/m <sup>3</sup>
Warm-up time	30s for measurement 30 minutes for calibration
Response time $T_{50}$	<10s
Response time $T_{90}$	<30s
Lifetime of the sensor	2-3 years
Atmospheric pressure	±10%
Long-term deviation	<5% of the signal per year

The catalogue has only those selected important parameters for your final decision. For project designs always ask for the user's guide for this product and any engineering consultation about possible uses.

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