

## PolyGard® Single Point Controller SPC-X3-11XX for Toxic Gases and Oxygen

### DESCRIPTION

Gas measuring and monitoring controller based on state-of-the-art micro-technology with integrated sensor and internal buzzer for the continuous monitoring of the ambient air and detecting toxic gases and vapours or oxygen. The SPC-X3 is provided with an input for one external analog transmitter. 4 alarm thresholds per sensor/transmitter are free programmable. Configuration and operation are possible via the logical, simple system menu structure without specific programming knowledge.

### APPLICATION

The SPC-X3-TOX is suitable for a wide range of commercial and industrial applications. Free programmable parameters and setpoints enable the individual adaptation to a variety of possible applications in the field of gas measuring and monitoring.



Standard enclosure

### FEATURES

- Continuous monitoring
- Integrated gas sensor
  - Good resistance to poisoning
  - Long life expectancy
- Modular design (plug-in technology)
- Standard version with display/LED/keyboard and internal buzzer
- Reverse polarity protected, overload-proof and short-circuit-proof
- (0) 4 – 20 mA / (0) 2 – 10V analog signal output
- 2 x relay outputs 30 VAC/DC, 0.5A
- 1 binary output, 30 VDC, 0.05A
- 4 – 20 mA input for external transmitter
- Different housing versions
- Flashlight (option)
- 230 VAC power supply (option)
- Up to 3 power relays (potential-free, 250 VAC/DC 5A) (option)
- Uninterruptible emergency power supply (option)
- Heating (option)
- Duct mounting (option)

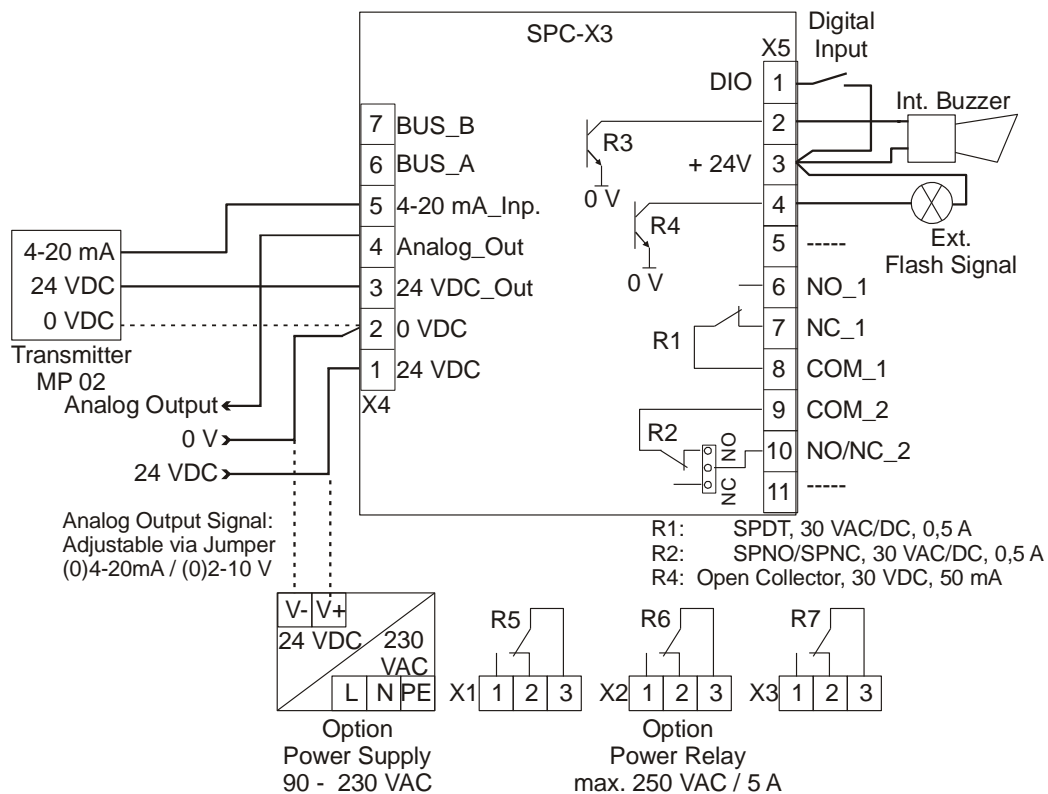
## SPECIFICATIONS

<b>Electrical</b>	
Power supply	18 - 28 VDC/AC, reverse polarity protected
Power consumption (without options)	100 mA, max. (2,5 VA)
Analog output, current or voltage selectable	0 (4) – 20 mA, load $\leq$ 500 $\Omega$ 0 (2) – 10 V, load $\geq$ 50 k $\Omega$ overload-proof and short-circuit-proof
Alarm relay (1)	30 VAC/DC 0.5 A, potential-free, SPDT
Alarm relay (1)	30 VAC/DC 0.5 A, potential-free, SPNO/SPNC
Binary output (1)	30 VDC /0.05 A, open collector
<b>Analog input</b>	4 – 20 mA overload-proof and short-circuit-proof, input resistance 200 $\Omega$
Tension for external analog transmitter	24 VDC max. charge 50 mA
<b>Visualisation</b>	
Display	Two lines, 16 characters each
Status LED (4)	Normal operation- Fault- Alarm1- Alarm 2
Operation	4 push-buttons – menu-driven
<b>Buzzer</b>	
Acoustic pressure	83 dB (A) (distance 200 mm) (0.6 ft.)
Frequency	2300 Hz
<b>Gases</b>	
Internal gas sensor	Toxic gases, etc. (see Ordering Information)
Sensor data	See corresponding datasheet of ADT transmitter
External transmitter	Toxic gases, Ex gases, Freons, temperature, humidity, pressure, etc.
<b>Operating environment</b>	
Humidity	15 – 90 % RH non-condensing
Working temperature	-10 °C to + 50 °C (14 °F to 122 °F)
Storage temperature	5 °C to 30 °C (86 °F to 122 °F)
Pressure range	Atmospheric $\pm$ 10 %
<b>Physical</b>	
Enclosure Plastic Type C	Polycarbonate
Flammability	UL 94 V2
Enclosure colour	RAL 7032 (light grey)
Dimensions (W x H x D)	130 x 130 x 75 mm (5.12 x 5.12 x 2.95 inch.)
Weight	Approx. 0.6 kg (1.323 lbs.)
Protection class	IP 65
Installation	Wall mounting
Cable entry	Standard 6 x M 20
Wire connection	Screw type terminal, min. 0.25 mm <sup>2</sup> (24 AWG) max. 2.5 mm <sup>2</sup> (14 AWG)
<b>Certificates</b>	
	VDI 2053 Air treatment systems for garages and tunnels*
<b>Guidelines</b>	
	EMC Directive 2004/108/EEC CE
<b>Warranty</b>	
	1 year on material (without sensor)
* in preparation	

# GAS ALARM SYSTEMS

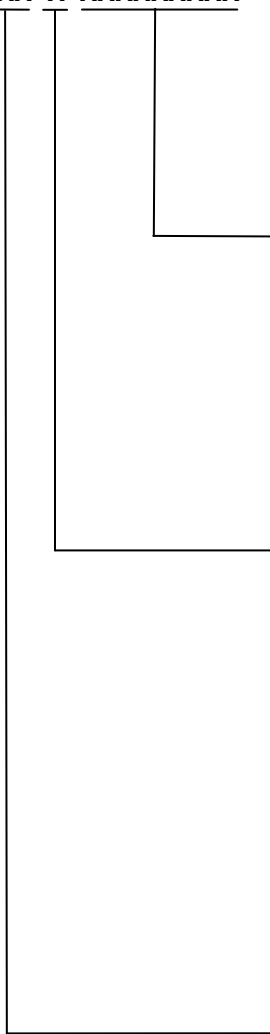
Options	
<b>Power supply 230 VAC</b>	90 to 250 VAC 50/60 Hz
<b>Power relay</b>	250 VAC, 5 A, potential-free, change-over contact
<b>Emergency power supply</b>	Supply duration 60 Min., maintenance-free
<b>Flashlight</b>	IP65, LED, 3500 lm.
<b>Heating</b>	
Temperature controlled	3 °C ±2°C (37.5 °F ± 3.6°F)
Ambient temperature	- 40 °C (- 40 °F)
Power supply	18 - 28 VDC/AC
Power consumption	0.5 A; 12 VA

## CONNECTING DIAGRAM



## ORDERING INFORMATION

**SPC-X3-11XX-X-XXXXXXXXXX**



### Version

1XXXXXXXXX	Power supply 230 VAC <sup>1</sup>
2XXXXXXXXX	Emergency power supply <sup>2</sup>
X3XXXXXXXX	Flashlight
XX1XXXXXXXX	Heating
1XX1XXXXXX	1 x power relay <sup>2</sup>
1XX2XXXXXX	2 x power relay <sup>2</sup>
1XX3XXXXXX	3 x power relay <sup>2</sup>
XXXXXXXX1X	Factory calibration
XXXXXXXX4X	Change of meas. range to 2000ppm <sup>3</sup>
XXXXXXXX5X	Change of meas. range to 5000ppm <sup>3</sup>
XXXXXXXX8X	Change of meas. range to 20vol.% <sup>3</sup>
XXXXXXXXX0	Menu language German
XXXXXXXXX1	Menu language English
XXXXXXXXX2	Menu language USA
XXXXXXXXX3	Menu language Dutch
XXXXXXXXX4	Menu language Danish
XXXXXXXXX5	Menu language Czech
XXXXXXXXX6	Menu language French

### Enclosure

C	Plastic (standard)
B	Duct mounting
5	Stainless steel
E	Plastic (for option EPS/ power relay)

### Gases

03-1110	Carbon monoxide	CO	0 - 300 ppm
13-1110	Carbon monoxide (UL)	CO	0 - 300 ppm
53-1110	Carbon monoxide	CO	0 - 2000 ppm
23-1120	Ammoniac (EI-chem.)	NH <sub>3</sub>	0 - 300/1000 ppm
33-1120	Ammoniac (Semi-cond.)	NH <sub>3</sub>	0 - 300
D3-1120	Ammoniac (IR)	NH <sub>3</sub>	0 - 3,5 vol%
23-1129	Nitrogen oxide	NO	0 - 20 ppm
23-1130	Nitrogen dioxide	NO <sub>2</sub>	0 - 20 ppm
C3-1160	VOC (Semi-cond.)	VOC	0 - 4000ppm
D3-1164	Carbon dioxide (IR)	CO <sub>2</sub>	0 - 5 vol%
63-1181	Chlorine dioxide	ClO <sub>2</sub>	0 - 1 ppm
63-1182	Hydrogen fluoride	HF	0 - 10 ppm
53-1183	Hydrogen cyanide	HCN	0 - 100 ppm
D3-1184	Sulphur hexafluoride (IR)	SF <sub>6</sub>	0 - 1000 ppm
53-1185	Formaldehyde	CH <sub>2</sub> O	0 - 10 ppm
53-1186	Hydrogen chloride	HCL	0 - 20 ppm
53-1187	Phosphine	PH <sub>3</sub>	0 - 5 ppm
53-1188	Silane	SiH <sub>4</sub>	0 - 50 ppm
53-1189	Ethylene (EI-chem.)	C <sub>2</sub> H <sub>4</sub>	0 - 10 ppm
43-1189	Ethylene (Semi-cond.)	C <sub>2</sub> H <sub>4</sub>	20 - 2000 ppm
D3-1189	Ethylene (IR)	C <sub>2</sub> H <sub>4</sub>	0 - 2000 ppm
53-1190	Ozone	O <sub>3</sub>	0 - 5 ppm
D3-1192	Nitrous oxide (IR)	N <sub>2</sub> O	0 - 2000 ppm
53-1193	Chlorine	CL <sub>2</sub>	0 - 20 ppm
93-1195	Oxygen	O <sub>2</sub>	0 - 25 % vol
23-1196	Sulphur dioxide	SO <sub>2</sub>	0 - 20 ppm
53-1197	Hydrogen sulphide	H <sub>2</sub> S	0 - 50 ppm
63-1198	Fluorine	F <sub>2</sub>	0 - 1 ppm

<sup>1</sup> Not available with stainless steel enclos.

<sup>2</sup> Only in combination with 230 VAC supply

<sup>3</sup> For D3-1164

### Example:

Single Point Controller for CO, plastic housing, 230 VAC supply, 1x power relay, incl. factory calibration 0 - 300 ppm, menu language English

**Order No.: SPC-03-1110-C-100100011**