

## PolyGard® Single Point Controller SPC-X3-34XX for Combustible Gases

### 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. The SPC-X3-34XX 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-X3-34XX is suitable for a wide range of industrial and commercial applications. Free programmable parameters and set-points enable the individual adaptation to a variety of 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
- Approved according to EN 61010-1; ANSI/UL 61010 1; CAN/CSA-C22.2 No. 61010-1
- 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)



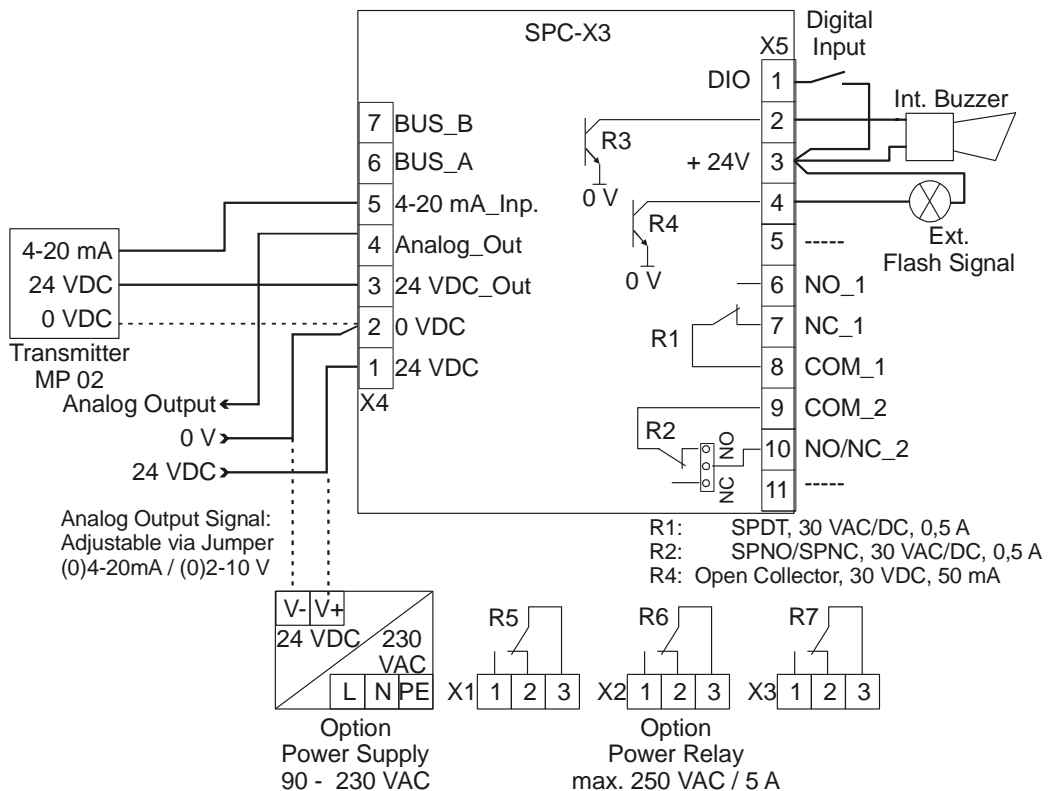
## SPECIFICATIONS

<b>Electrical</b>	
Power supply	18 - 28 VDC/AC, reverse polarity protected
Power consumption (without options)	130 mA, max. (2.5 VA)
Analog output, current or voltage selectable	0 (4) – 20 mA, load ≤ 500 Ω 0 (2) – 10 V, load ≥ 50 kΩ 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 Ω
Voltage for ext. analog transmitter	24 VDC max. load 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 sensor	Combustible gases (see order inform.)
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 – 95 % 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 ± 10 %
<b>Physical</b>	
Enclosure Plastic Type C*	Polycarbonate
Flammability	UL 94 V2
Enclosure color*	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 3 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>Guidelines</b>	EMC Directives 2004/108/EC Low Voltage Directive 2006/95/EC EN 61010-1:2010 ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1 CE
<b>Warranty</b>	1 year on material (without sensor)

# GAS ALARM SYSTEMS

Options	
<b>Power supply 230 VAC</b>	90 bis 250 VAC 50/60 Hz
<b>Power relay</b>	230 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	- 30 °C (- 22 °F)
Power supply	18 - 28 VDC/AC
Power consumption	0.5 A; 12 VA

## CONNECTING DIAGRAM



## ORDERING INFORMATION

**SPC-X3-3XXX-X-XXXXXXXXXX**

Version	
1XXXXXXXX	Power supply 230 VAC <sup>1</sup>
2XXXXXXXX	Emergency power supply <sup>2</sup>
X3XXXXXXXX	Flashlight <sup>1</sup>
XX1XXXXXX	Heating
1XX1XXXXX	1 x power relay <sup>1,2</sup>
1XX2XXXXX	2 x power relay <sup>1,2</sup>
1XX3XXXXX	3 x power relay <sup>1,2</sup>
XXXXXXXX1X	Factory calibration
XXXXXXXX0	Menu language German
XXXXXXXX1	Menu language English
XXXXXXXX2	Menu language USA
XXXXXXXX3	Menu language Dutch
XXXXXXXX4	Menu language Danish
XXXXXXXX5	Menu language Czech
XXXXXXXX6	Menu language French

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

Gas types			
23-3400	Methane	CH <sub>4</sub>	0 - 100% LEL
23-3408	Ammoniac	NH <sub>3</sub>	0 - 100% LEL
23-3410	Ethylene	C <sub>2</sub> H <sub>4</sub>	0 - 100% LEL
23-3425	Ethyl alcohol	C <sub>2</sub> H <sub>6</sub> O	0 - 100% LEL
23-3427	Ethyl-acetate	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>	0 - 100% LEL
23-3430	Benzene	C <sub>6</sub> H <sub>6</sub>	0 - 100% LEL
23-3435	n-Hexane	C <sub>6</sub> H <sub>14</sub>	0 - 100% LEL
23-3440	Hydrogen	H <sub>2</sub>	0 - 100% LEL
23-3445	Iso propanol alcohol	C <sub>3</sub> H <sub>8</sub> O	0 - 100% LEL
23-3450	Methanol	CH <sub>4</sub> O	0 - 100% LEL
23-3458	Methyl ethyl ketone	C <sub>4</sub> H <sub>8</sub> O	0 - 100% LEL
23-3460	n-Butane	C <sub>4</sub> H <sub>10</sub>	0 - 100% LEL
23-3470	n-Octane	C <sub>8</sub> H <sub>18</sub>	0 - 100% LEL
23-3475	n-Pentane	C <sub>5</sub> H <sub>12</sub>	0 - 100% LEL
23-3480	Propane (LPG)	C <sub>3</sub> H <sub>8</sub>	0 - 100% LEL
23-3485	Acetone	C <sub>3</sub> H <sub>6</sub> O	0 - 100% LEL
23-3490	Toluene	C <sub>7</sub> H <sub>8</sub>	0 - 100% LEL
23-3491	n-Heptane	C <sub>7</sub> H <sub>16</sub>	0 - 100% LEL
23-3498	JP8		0 - 100% LEL
E3-3482	Nitrogen trifluoride (Semi.)	NF <sub>3</sub>	5 - 50 ppm
D3-3400	Methane (Infrared)	CH <sub>4</sub>	0 - 100% LEL
D3-3480	Propane (Infrared)	C <sub>3</sub> H <sub>8</sub>	0 - 100% LEL
43-3H55	Methane (Semi-cond.)	CH <sub>4</sub>	0 - 50% LEL
43-3H60	n-Butane (Semi-cond.)	C <sub>4</sub> H <sub>10</sub>	0 - 100% LEL
43-3H80	Propane (Semi-cond.)	C <sub>3</sub> H <sub>8</sub>	0 - 100% LEL

<sup>1</sup> Not available with stainless steel enclosure

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

**Example:** Single Point Controller SPC-X3 for methane, stainless steel housing, buzzer, incl. factory calibration 0 - 100 % LEL, menu language English

**Order No.:** SPC-23-3400-5-01000011