

PolyXeta®2

Sensor for Freon & refrigerant gases, zone 1, PX2-1

Sensor for Freon & refrigerant gases, zone 2, PX2-2



Microprocessor based gas sensor with 4 – 20 mA / RS485-Modbus output signal, alarm and fault relays for monitoring the ambient air to detect refrigerant and Freon gases and vapours by means of a semiconductor sensor element. The calibration of sensors without LCD display is carried out via the calibration device STL06-PGX2 or the PC software PCE06-PGX2. Sensors with LCD display have an integrated calibration routine that is started from the outside by a permanent magnet without opening the housing. In case of an alarm or a fault, the backlight of the sensors with LCD display changes from green to red.



Sensor, zone 1, without display

APPLICATION

The PolyXeta®2 sensor is used in industrial areas like oil/gas industry, biogas plants, petrochemical industry, power plants etc. in Ex-Zone 1 or 2. The PolyXeta®2 sensor is also suitable for commercial areas like refrigeration plants etc. With the 4 – 20 mA / RS485-ModBus output signal the sensor is suitable for connection to the PolyGard®2 gas controller series by MSR-Electronic, as well as to any other controllers or automation devices. Optionally, the PolyXeta®2 sensor is also available with LCD display and relay output.



Sensor, zone 1, with LCD display

FEATURES

- ATEX and IEC Ex certificates MSR-Electronic for electrical Ex protection
- **PX2-1 for zone 1 (and also suitable for zone 2):**
 - Type “Ex d” with flame-proof enclosure
- **PX2-2 for zone 2:**
 - Type “Ex n” type of protection
- Enclosure: additional CSA certificate for Class I, Div. 1
- Continuous monitoring
- Microprocessor with 12 bit converter resolution
- Self-monitoring system
- Easy calibration
- Calibration service by exchanging the sensor head
- Proportional 4 – 20 mA output
- Serial interface to the control center
- Reverse polarity protection
- Overload protection
- LCD display with status LEDs (optional)
- Alarm and fault signal relay (optional)



Sensor, zone 2, without display



Sensor, zone 2, with LCD display



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OVERVIEW FREON GAS TYPES

MSR Freon group	MSR code	Freon type	Calibration gas	Group	Measuring range	Relative gas density (air =1)
FR02	2061-01	R23	R23	HFC	2000 ppm	2.4
	2061-02	R508b	R23	HFC	2000 ppm	> Air
FR03	2063-01	R1234yf	R1234yf	HFO	2000 ppm	> Air
	2063-02	R452a	R1234yf	HFO	2000 ppm	> 1
	2063-03	R513a	R1234yf	HCFC	2000 ppm	> Air
	2063-04	R454c	R1234yf	HFO	2000 ppm	> Air
	2063-05	R455a	R1234yf	HFO	2000 ppm	> Air
	2063-06	R454b	R1234yf	HFO	2000 ppm	> Air
	2063-07	R1234ze	R1234yf	HFO	2000 ppm	> Air
FR04	2064-01	R123	R123	HCFC	2000 ppm	> Air
FR06	2070-01	R22	R22	HCFC	2000 ppm	3
	2070-02	R401a	R22	HCFC	2000 ppm	> Air
	2070-03	R401b	R22	HCFC	2000 ppm	> Air
	2070-04	R402a	R22	HCFC	2000 ppm	> Air
	2070-05	R402b	R22	HCFC	2000 ppm	> Air
	2070-06	R403a	R22	HCFC	2000 ppm	> Air
	2070-07	R408a	R22	HCFC	2000 ppm	> Air
	2070-08	R409a	R22	HCFC	2000 ppm	> Air
	2070-09	R411a	R22	HFC	2000 ppm	> Air
FR07	2077-01	R134a	R134a	HFC	2000 ppm	> Air
	2077-02	R407a	R134a	HFC	2000 ppm	> Air
	2077-03	R416a	R134a	HFC	2000 ppm	> Air
	2077-04	R417a	R134a	HFC	2000 ppm	> Air
	2077-05	R422a	R134a	HFC	2000 ppm	> Air
	2077-06	R422d	R134a	HFC	2000 ppm	> Air
	2077-07	R427a	R134a	HFC	2000 ppm	> Air
	2077-08	R437a	R134a	HFC	2000 ppm	> Air
	2077-09	R438a	R134a	HFC	2000 ppm	> Air
	2077-10	R449a	R134a	HFC	2000 ppm	> Air
	2077-11	R407f	R134a	HFC	2000 ppm	> Air
	2077-12	R450a	R134a	HFO	2000 ppm	> Air
FR08	2080-01	R125	R407c	HFC	2000 ppm	4.2
	2080-02	R32	R407c	CFC	2000 ppm	1.8
	2080-03	R404a	R407c	HFC	2000 ppm	3.45
	2080-04	R407c	R407c	HFC	2000 ppm	> 1
	2080-05	R410a	R407c	HFC	2000 ppm	2.3
	2080-06	R434a	R407c	HFC	2000 ppm	> Air
	2080-07	R507a	R407c	HFC	2000 ppm	3.45
	2080-08	R448a	R407c	HFO	2000 ppm	1.55
	2080-09	R452b	R407c	HFO	2000 ppm	> Air
	2080-10	R143b	R407c	HFO	2000 ppm	> Air

No cross-sensitivity data is available for these sensors. It is well known that all semiconductor sensors are also sensitive to combustible gases, e.g. alcohols, etc.



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ORDERING INFORMATION

Sensor PX2-X- **X** -S20XX-XX-A- **XX**
 Exchange head¹ SX1-1- -S20XX-XX-A

P1 Aluminum die-cast housing for one cable entry
P3 Aluminum die-cast housing for three cable entries

OPTIONS

- Without option **0**
- Relay set (2) **1**
- LCD display **2**
- Relay set (2) + LCD display **3**

- Zone 1 **1**
- Zone 2 **2**

			GAS TYPE	Sensor type	Measuring range
S2061-01-A	R23	Semiconductor	20 – 2000 ppm		
S2061-02-A	R508b	Semiconductor	20 – 2000 ppm		
S2063-01-A	R1234yf	Semiconductor	20 – 2000 ppm		
S2063-02-A	R452a	Semiconductor	20 – 2000 ppm		
S2063-03-A	R513a	Semiconductor	20 – 2000 ppm		
S2063-04-A	R454c	Semiconductor	20 – 2000 ppm		
S2063-05-A	R455a	Semiconductor	20 – 2000 ppm		
S2063-06-A	R454b	Semiconductor	20 – 2000 ppm		
S2063-07-A	R1234ze	Semiconductor	20 – 2000 ppm		
S2064-01-A	R123	Semiconductor	20 – 2000 ppm		
S2070-01-A	R22	Semiconductor	20 – 2000 ppm		
S2070-02-A	R401a	Semiconductor	20 – 2000 ppm		
S2070-03-A	R401b	Semiconductor	20 – 2000 ppm		
S2070-04-A	R402a	Semiconductor	20 – 2000 ppm		
S2070-05-A	R402b	Semiconductor	20 – 2000 ppm		
S2070-06-A	R403a	Semiconductor	20 – 2000 ppm		
S2070-07-A	R408a	Semiconductor	20 – 2000 ppm		
S2070-08-A	R409a	Semiconductor	20 – 2000 ppm		
S2070-09-A	R411a	Semiconductor	20 – 2000 ppm		
S2077-01-A	R134a	Semiconductor	20 – 2000 ppm		
S2077-02-A	R407a	Semiconductor	20 – 2000 ppm		
S2077-03-A	R416a	Semiconductor	20 – 2000 ppm		
S2077-04-A	R417a	Semiconductor	20 – 2000 ppm		
S2077-05-A	R422a	Semiconductor	20 – 2000 ppm		
S2077-06-A	R422d	Semiconductor	20 – 2000 ppm		
S2077-07-A	R427a	Semiconductor	20 – 2000 ppm		
S2077-08-A	R437a	Semiconductor	20 – 2000 ppm		
S2077-09-A	R438a	Semiconductor	20 – 2000 ppm		
S2077-10-A	R449a	Semiconductor	20 – 2000 ppm		
S2077-11-A	R407f	Semiconductor	20 – 2000 ppm		
S2077-12-A	R450a	Semiconductor	20 – 2000 ppm		
S2080-01-A	R125	Semiconductor	20 – 2000 ppm		
S2080-02-A	R32	Semiconductor	20 – 2000 ppm		
S2080-03-A	R404a	Semiconductor	20 – 2000 ppm		
S2080-04-A	R407c	Semiconductor	20 – 2000 ppm		
S2080-05-A	R410a	Semiconductor	20 – 2000 ppm		
S2080-06-A	R434a	Semiconductor	20 – 2000 ppm		
S2080-07-A	R507a	Semiconductor	20 – 2000 ppm		
S2080-08-A	R448a	Semiconductor	20 – 2000 ppm		
S2080-09-A	R452b	Semiconductor	20 – 2000 ppm		
S2080-10-A	R143b	Semiconductor	20 – 2000 ppm		

¹ The exchangeable sensor head is only to be used in connection with the PolyXeta®2 Gas Sensor. Otherwise it loses its ATEX Certification.

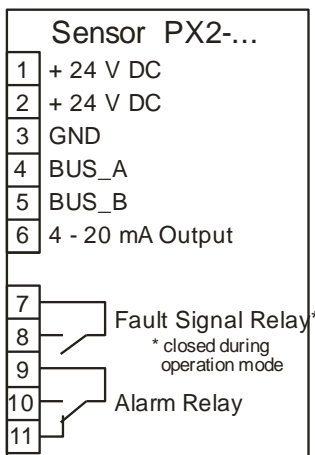


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ELECTRICAL CONNECTION



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