

Gas sensors



- ▶ Wide range of sensors optimized for indoor air quality monitoring
- ▶ Portable and stand-alone applications in indoor environments
- ▶ Sensors with 4...20 mA output and RS485 Modbus and free-wire cable (PRGSx900 and DSOxxx range). Sensors with mV output, cable and MiniDIN connector (range PRGSx200 and ESOxxx range)

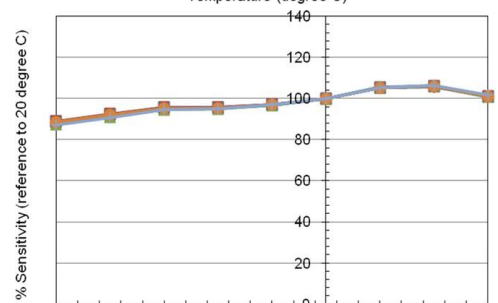
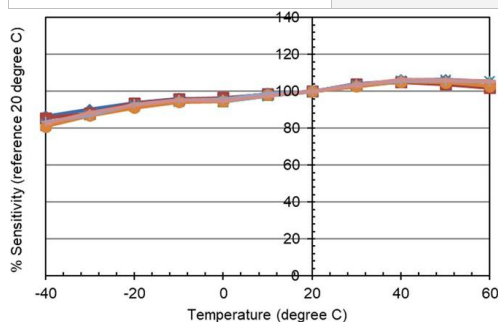
Range of sensors for measuring gas concentration in indoor environments. The line includes sensors (PRGSx200 and ESOxxx) with cables and mini-DIN connectors for use with LSI LASTEM data loggers type M-Log (ELO009) and sensors with 4...20 mA output and RS485 Modbus (PRGSx900 and DSOxxx) that can be used by third-party systems or LSI LASTEM data loggers with terminal block. The sensors are based on electrochemical cell, infrared (CO₂) and PID (VOC) technology.

Technical Specifications

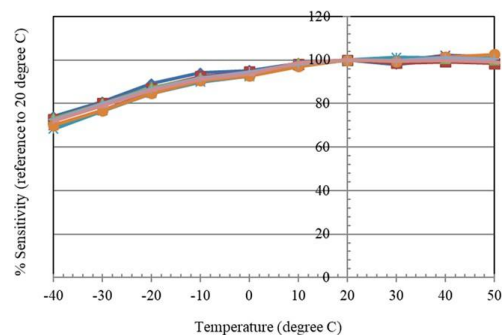
PN	PRGSx200	PRGSx900	ESOxxx	DSOxxx
Output	200...1000 mV	4...20 mA RS485 Modbus	60...300 mV	4...20 mA
Power supply	9 V DC	10...30 V DC	12 V DC	12 V DC (not for DSO205)
Cable + connector	L= 5 m + mini-Din connector	L= 5 m free wires	L= 2 m + mini Din connector	L= 10 m free wires
Data logger compatibility	M-Log (ELO009)	E-Log Alpha-Log	M-Log	E-Log Alpha-Log
Operative pressure	900...1100 hPa			
Mounting	MAGFA2007 accessory for mounting on BVA320-315 stands		Mounting screw for BVA315-320 stands (except for DSO205)	

Technical Specifications

PN	PRGSA5200 PRGSA5900	PRGSA4200 PRGSA4900	PRGSA6200 PRGSA6201 PRGSA6900 PRGSA6901	PRGSA7200 PRGSA7900
				
Gas	CO	NO ₂	SO ₂	H ₂ S
Range	0...1000 ppm	0...20 ppm	PRGSA6200/PRGSA6900: 0...20 ppm PRGSA6201/PRGSA6901: 0...100 ppm	0...100 ppm
Accuracy	±3%	±5%	±2%	±2%
Stability	<±1%	<±3%	<±3%	<±5%
Detection technology	Electrochemical cell			
Repeatability (% reading)	±2%	±2%	±2%	±2%
Resolution	1 ppm	0.1 ppm	PRGSA6200/PRGSA6900: 0.1 ppm PRGSA6201/PRGSA6901: 0.3 ppm	0.1 ppm
Operative temperature	-40...50 °C			-40...50 °C
Operative humidity	15...90%			
Drift signal loss/ year	<5% / month	<2% / month	<2% / month	<2% / month
Thermal drift	ND	ND	According to the chart	
Typical range in pure air	-2...3 ppm	< 0.2 ppm	-0.2. 0.5 ppm	-0.1. 0.4 ppm
Max zero shift	<10 ppm @ -20...50 °C	<0.2 ppm @ -20...40 °C	<0.2 ppm @ -30...50 °C	<0.5 ppm @ -20...40 °C
Response time (T90)	<1 s	<10 s	PRGSA6200/PRGSA6900: 25 s PRGSA6201/PRGSA6901: 30 s	< 30 s
Sensor life	3 years	3 years	2 years	2 years
Storage	0..20 °C; < 6 months			

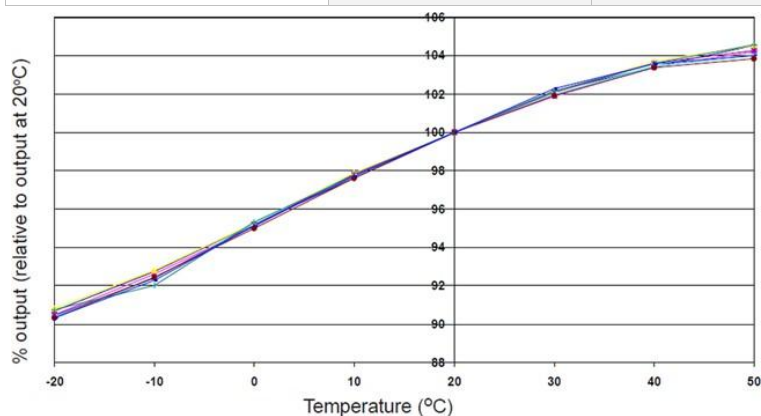


► Thermal drift graphs of SO₂ sensors.
Top: the curve for PRGSA6200 and PRGSA6900 with measuring range 0...20 ppm;
Bottom: the curve for PRGSA6201 and PRGSA6901 with measuring range 0...100 ppm.

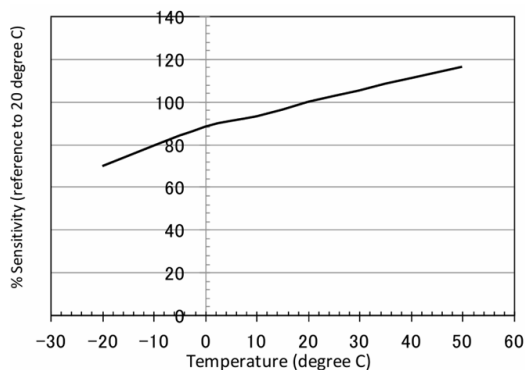


► Thermal drift graph of H₂S sensors PRGSA7200 and PRGSA7900

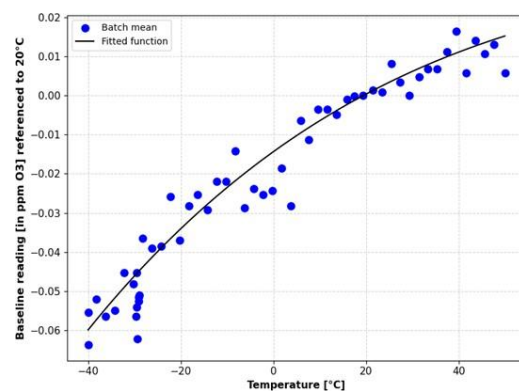
PN	PRGSA8200 PRGSA8900	PRGSA9200 PRGSA9900	PRGSAA200 PRGSAA900	PRGSAB200 PRGSAB900
				
Gas	O ₂	O ₃	NO	NH ₃
Range	0...25%	0...3 ppm	0...300 ppm	0...100 ppm
Detection technology	Electrochemical cell			
Repeatability (% reading)	ND	<±2%	±2%	±10%
Resolution	ND	0.05 ppm	0.5 ppm	1 ppm
Operative temperature	-30...55 °C	-40...50 °C	-20...50 °C	-40...50 °C
Operative humidity	15...95%	15...90%		
Drift signal loss/ year	<2% / 3 months	<2% / month	<2% / month	<2% / month
Thermal drift	According to the chart			
Typical range in pure air	ND	<1 ppm	<3 ppm	<2 ppm
Max zero shift	ND	<0.07 ppm @ -20...40 °C	<4 ppm @ -20...40 °C	<3 ppm @ -30...50 °C
Response time (T90)	< 15 s	T80<60 s	<40 s	<60 s
Sensor life	3 years	2 years	2 years	2 years
Storage	3...20 °C; < 6 months	0...20 °C; < 6 months		



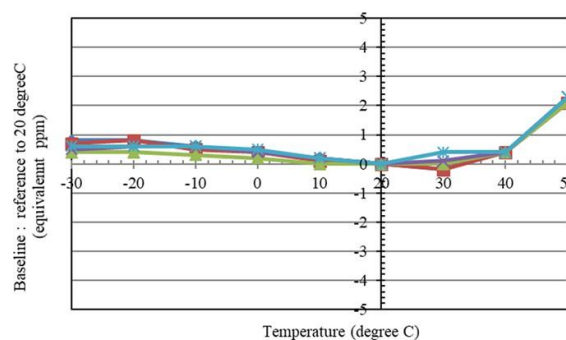
► Thermal drift graph of O₂ sensors PRGSA8200 and PRGSA8900



► Thermal drift graph of NO sensors PRGSAA200 and PRGSAA900



► Thermal drift graph of O₃ PRGSA9200 and PRGSA9900 sensors



► Thermal drift graph of NH₃ sensors PRGSAB200 and PRGSAB900

PN	ESO204	DSO205	ESO150 DSO150A	DSO152A
				
Gas	CO ₂		VOCs	VOCs
Range	0...5000 ppm		0...20 ppm	0...2000 ppm
Detection principle	Infrared absorption cell (NDIR)		PID	
Detectable threshold	-		<0.01 ppm Isobutylene response	<1 ppm Isobutylene response
Accuracy	±50 ppm (+2% reading value)		3% range	
Stability	<±1%			
Resolution	-	1ppm	0.001 ppm	1 ppm
Operative temperature	-40...60 °C		-20...60 °C	
Thermal drift	± (1+CO2 concentration [ppm] / 1000) ppm/°C (@ -20...45 °C)		-	
Output	0.2...1 V	4...20 mA	ESO150-152: 60...300 mV DSO150A-152: 4...20 mA	
Power supply	6...9 V DC	10...30 V DC/AC	6...9 V DC	
Power consumption	120 mA		30 mA	
Cable	L=2 m	Not included (DWA5xx)	L=2 m	L=10 m
Response time (T90)	<1 s		<15 s	
Cell life	5 years		1 year	

Accessories

	SVICA7002	Calibration certificate. ISO9000 type (Gas sensor)
	DWA505	Cable L= 5 m for DSO205 sensor
	DWA510	Cable L= 10 m for DSO205 sensor
	DWA525	Cable L= 25 m for DSO205 sensor
	DWA526	Cable L= 50 m for DSO205 sensor
	DWA527	Cable L= 100 m for DSO205 sensor
	MAGFA2007	Mounting accessory for PRGSA* sensors to stands
	BVA320	Stand for fixing sensors on BVA304 tripod or to wall, for PRGSA* sensors MAGFA2007 accessory is needed
	BVA315	Stand for fixing sensors on BVA304 tripod, for PRGSA* sensors MAGFA2007 accessory is needed
	BXAOA1000	Box with ventilation grid for gas sensors. Wall and pole installation with included brackets.