DESCRIPTION

Remote sensor module for connection to DT6 Digital Gas Transmitter. Available with any SC2-Series toxic or combustible gas sensor module.

Compliant with Safety Integrity Level 2 (SIL 2) and rigorous international standard EN 50545-1 for parking garages and tunnels, DT6-Series sensors utilize advanced self-diagnostics and flexible ventilation control functions to ensure maximum human safety without compromising energy efficiency.

Advanced, microprocessor-based X-Change sensor modules meet or exceed the EN 50545-1 self-diagnostic standards including notifying the controller when calibration is due. Although field calibration is possible, X-Change technology allows fast and cost-effective sensor module swaps minimizing field service time, eliminating system downtime and ensuring peak system performance for many years.

APPLICATION

DT6/DR6 transmitters in combination with DGC6 Digital Gas Controllers provide scalable solutions for monitoring and controlling toxic and/or combustible gas levels. DT6-CO (single gas) and DT6-CO-NO2 (dual gas) transmitters are economical electrochemical sensors ideally suited to parking garage, vehicle maintenance shops, package sorting and distribution facilities and tunnel applications. Methane monitoring is an economical addition with the DR6-COMB digital remote module.

FEATURES

- *Economical solution for monitoring additional gas concentration when appropriate mounting height is different than the nearest DT6 sensor/transmitter.*
- *X-Change toxic and combustible gas sensor modules for reliable operation and easy maintenance*
- *Mounts up to 16 feet (5 m) from DT6*
- *Digital measurement processing with temperature compensation*
- *Internal diagnostics including integrated hardware watchdog*
- *High-impact NEMA 4X (IP65) enclosure*
- *Hardware & software conforms to SIL 2 standard*

PolyGard®2 DR6

- EMC Directive 2014/30/EU
- CE
- EN 50271
- EN 61010-1:2010
- ANSI/UL 61010-1
- CAN/CSA-C22.2 No. 61010-1
- City of Los Angeles Approved

SPECIFICATIONS

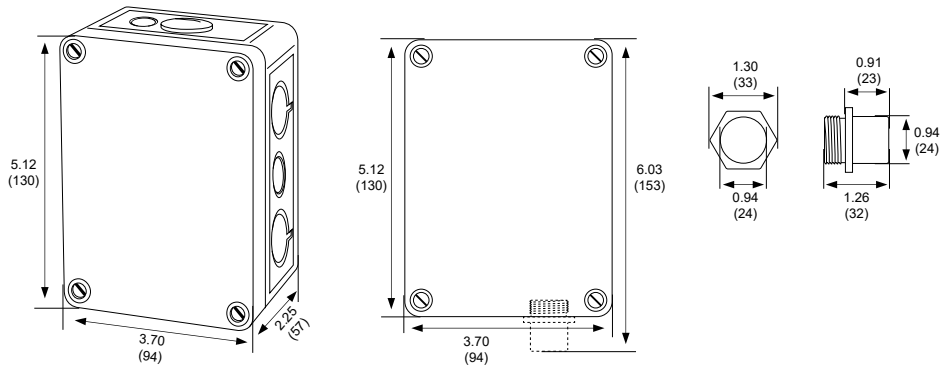
Electrical	
Power consumption	24 VDC
- base	0 mA
- sensor	*See SC2 datasheet*
Sensors*	SC2 Series; **Incompatible with infrared sensors*
- performance	*See SC2 datasheet for specific gases*
- coverage	*See SC2 datasheet for specific gases*
Storage time	6 months (for sensor elements)
Environmental	
Permissible ambient	*See SC2 datasheet for specific gases*
Physical	
Enclosure “A”, standard	
- material	Polycarbonate, UL 94-HB, fire retardant
- conforms to	UL 50
- color	Light gray
- protection	NEMA 4X (IP65)
- installation	Wall (surface) mounted, or single gang electrical box
Dimensions (H x W x D)	5.12 x 3.70 x 2.25 in. (130 x 94 x 57 mm)
Cable entry, knock out	1 hole (short side) for 1/2 in. conduit, closed w/screwed “plug”
Wire connection	
- field bus	Screw-type terminal; 24 AWG (0.25 mm^2), min. 14 AWG (2.5 mm^2), max.
- local bus for SC	3-pin connector
Cable lengths local bus for Remote Sensor Board	16.4 ft (5 m), max.
Weight	0.7 lb (0.3 kg)
Conforms to	EMC Directive 2014/30/EU CE EN 50271 EN 61010-1:2010 ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1 City of Los Angeles
Warranty	Two years material and workmanship, 12 months normal exposure for sensor element

ACCESSORIES

Duct Mounting Kit	**PG2-DUCTKIT**
- flow rate	Min. 3.1 mph (5000 m/h), max. 12.4 mph (20,000 m/h)
- air duct diameter	Min. 3.94 in. (0.1 m), max. 39.37 in. (1.0 m)
- length of sampling tube	9.84 in. (250 mm), adaptable
- hose length	2 x 39.37 in. (1000 mm)
Calibration Kits	
- carbon monoxide	**CALKIT-PG2-CO** Sensor calibration adapter w/ tube and cup, 500 mL/min. regulator, 17L 200 ppm carbon monoxide, 17L 99.99% nitrogen, carrying case
- combustible gases	**CALKIT-PG2-COMB** Sensor calibration adapter w/ tube and cup, 150 mL/min. regulator, 17L 2.5% methane, 17L 99.99% nitrogen, carrying case
- nitrogen dioxide	**CALKIT-PG2-NO2** Sensor calibration adapter w/ tube and cup, 500 mL/min. regulator (stainless steel), 70L 10 ppm nitrogen dioxide, 70L 99.99% nitrogen, carrying case
- carbon monoxide & nitrogen dioxide	**CALKIT-PG2-CO-NO2** Sensor calibration adapter w/ tube and cup, 500 mL/min. regulator (for CO), 500 mL/min. regulator (stainless steel, for NO2), 17L 200 ppm carbon monoxide, 70L 99.99% nitrogen, 70L 10 ppm nitrogen dioxide, and (2) carrying cases

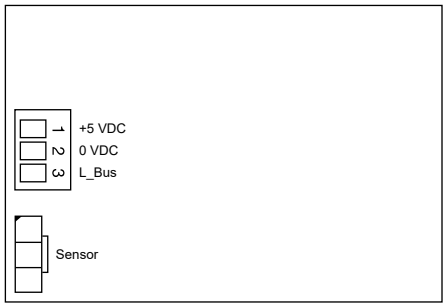
DIMENSIONS

inches (mm)

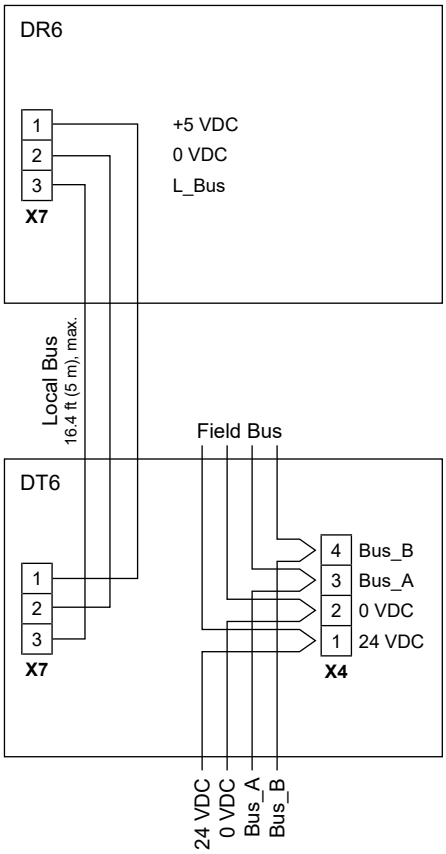


WIRING CONFIGURATION

DR6 Sensor Board



DR6 piggybacking a DT6 transmitter module



ORDERING INFORMATION

PART NUMBER	DESCRIPTION
BUNDLED SENSORS AND CONTROLS	
DR6-P3400-A	DR6, (1) 0-100% LEL CH_4 sensor
SENSOR PLATFORM	
DR6-01	DR6, *connects to DT6*, (1) sensor input capable; includes "A" enclosure; sensor cartridges ordered separately

SC2 Sensor Cartridges available separately.
See SC2 datasheet for specifications.

The DR6 accepts (1) SC2 Sensor Cartridge.

The DR6's chosen sensor module cannot be an identical part number to ones that already exists on the connected DT6 transmitter.

If tethered to a SGC6, the DR6's chosen module cannot be a 3rd sensor of the same type, for example with a SGC6-02-CO-CO configuration.

Incompatible with SC2 infrared sensors.

Gas Sensor & Range

#	TOXIC GASES AND OXYGEN			Mounting Height (ft)
E1110-E	Carbon Monoxide	CO	0-250 ppm	5-6
E1110-F	Carbon Monoxide	CO	0-300 ppm	5-6
E1130-A	Nitrogen Dioxide	NO_2	0-10 ppm	5-6
E1130-B	Nitrogen Dioxide	NO_2	0-20 ppm	5-6
E1130-C	Nitrogen Dioxide	NO_2	0-30 ppm	5-6
E1130-D	Nitrogen Dioxide	NO_2	0-500 ppm	5-6
E1125-A	Ammonia	NH_3	0-100 ppm	Ceiling
E1125-B	Ammonia	NH_3	0-300 ppm	Ceiling
E1125-C	Ammonia	NH_3	0-500 ppm	Ceiling
E1125-D	Ammonia	NH_3	0-1000 ppm	Ceiling
E1193-C	Chlorine	Cl_2	0-10 ppm	Floor
E1189-C	Ethylene	C_2H_4	0-200 ppm	5-6
E1185-B	Formaldehyde	CH_2O	0-10 ppm	Floor
E1186-D	Hydrogen Chloride	HCl	0-20 ppm	Floor
E1183-C	Hydrogen Cyanide	HCN	0-100 ppm	Ceiling
E1197-A	Hydrogen Sulfide	H_2S	0-50 ppm	Floor
E1195-A	Oxygen	O_2	0-25 Vol%	5-6
E1190-A	Ozone	O_3	0-5 ppm	Floor
E1196-B	Sulfur Dioxide	SO_2	0-20 ppm	Floor
#	**INFRARED SENSORS** *(Incompatible with DR6 module)*			**Mounting Height (ft)**
I1164-B	Carbon Dioxide	CO2	0-5 Vol%	5-6
I1164-C	Carbon Dioxide	CO2	0-2 Vol%	5-6
I1164-D	Carbon Dioxide	CO2	0-5000 ppm	5-6
#	**COMBUSTIBLE GASES**			**Mounting Height (ft)**
P3485-A	Acetone	C_3H_6O	0-100% LEL	Floor
P3408-A	Ammonia	NH_3	0-100% LEL	Ceiling
P3460-A	Butane	C_4H_{10}	0-100% LEL	Floor
P3472-A	Cyclopentane	C_5H_{10}	0-100% LEL	Floor
P3427-A	Ethyl Acetate	$C_4H_8O_2$	0-100% LEL	Floor
P3425-A	Ethyl Alcohol	C_2H_5OH	0-100% LEL	Floor
P3410-A	Ethylene	C_2H_4	0-100% LEL	Ceiling
P3496-A	Gasoline Vapors	-	0-100% LEL	-
P3491-A	Heptane	C_7H_{16}	0-100% LEL	Floor
P3435-A	Hexane	C_6H_{14}	0-100% LEL	Floor
P3440-A	Hydrogen	H_2	0-100% LEL	Ceiling
P3476-A	Isopentane	C_5H_{12}	0-100% LEL	Floor
P3482-A	Isopropyl Alcohol	C_3H_8O	0-100% LEL	Floor
P3402-A	LPG	-	0-100% LEL	-
P3400-A	Methane	CH_4	0-100% LEL	Ceiling
P3450-A	Methanol	CH_3OH	0-100% LEL	Floor
P3458-A	Methyl Ethyl Ketone	C_4H_8O	0-100% LEL	Floor
P3475-A	Pentane	C_5H_{12}	0-100% LEL	Floor
P3480-A	Propane	C_3H_8	0-100% LEL	Floor
P3480-C	Propane	C_3H_8	0-5000 ppm	Floor
P3484-A	Propyl Alcohol	C_3H_8O	0-100% LEL	Floor
P3490-A	Toluene	C_7H_8	0-100% LEL	Floor

ACCESSORIES	
PG2-DUCTKIT	(1) Duct mounting kit for SC2 / AT6 sensor
CALKIT-PG2-CO	Carbon monoxide calibration kit for SC2 / AT6 sensors
CALKIT-PG2-COMB	Combustible calibration kit for SC2 / AT6 sensors
CALKIT-PG2-NO2	Nitrogen dioxide calibration kit for SC2 / AT6 sensors
CALKIT-PG2-CO-NO2	CO & NO2 calibration kit for SC2 / AT6 sensors