Chlorine (CL_2) Analog Gas Transmitters

DESCRIPTION

Microprocessor-based analog gas transmitters for the detection of chlorine (CL_2) in the ambient air.

PolyGard®
AT-1193 V3

APPLICATION

To sense chlorine (CL_2) in a wide variety of commercial and industrial applications including water treatment plants, wastewater treatment plants and swimming pools and to transmit a linear and temperature compensated voltage or current signal to any compatible electronic controller, monitor, or automation system.

FEATURES

- *Continuous monitoring*
- *(0)4-20 mA, (0)2-10 VDC output, selectable*
- *Polarity protected*
- *Two-stage relay output control, opt.*
- *Electrochemical gas sensor, gas specific*
- *Temperature compensated*
- *Easy plug-in sensor*
- *Modular plug-in technology*
- *High-impact polycarbonate enclosure, NEMA 4X standard*
- *Easy maintenance*

Intertek

- NRTL Performance Tested
- EMC Directives 2014/30/EU
- EN 61010-1:2010
- ANSI/UL 61010-1
- CAN/CSA-C22.2 No. 61010-1
- CE

SPECIFICATIONS

Electrical	
Power supply	24 VAC ± 15%, 50/60 Hz, or 17-28 VDC, polarity protected
Power consumption	22 mA (0.6 VA), max.
- w/relay package	35 mA (1.0 VA), max.
- w/heater	235 mA (6 VA), max.
Sensor Performance	
Gas detected	Chlorine (CL_2)
Sensor element	Electrochemical, diffusion
Range	0-10 ppm (std.) 0-2, 0-5, 0-20 ppm (opt.)
Accuracy / Resolution	0.1 ppm
Repeatability	< 2% of reading
Long term output drift	< 2% of reading/month
Response time	t_{90} < 90 sec.
Sensor life expectancy	> 2 years, normal operating environment
Type of Control	
General	Continuous proportional analog sensor signal output
Analog output	(0)4-20 mA, load < 500 Ω; (0)2-10 VDC, load > 50K Ω; jumper selectable, polarity protected
Optional contact outputs	(2) relays, potential free

Environmental	
Permissible ambient	
- working temperature	14°F to 122°F (-10°C to 50°C)
- storage temperature	41°F to 86°F (5°C to 30°C)
- humidity	0 to 99% RH, non-condensing
- working pressure	Atmospheric ± 10%
Physical	
Enclosure “A”, standard	
- material	Polycarbonate, UL 94 V2, fire-retardant
- conformity	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	1 hole for 1/2 in. conduit for wall (surface) mounting, and 1 hole on back side of base plate for single gang electrical box mounting
Wire connection	Terminal blocks, screw type terminal
Wire size	Min. 24 AWG (0.25 mm²), Max. 14 AWG (2.5 mm²); *each terminal connection can handle two 18 AWG wires*
Weight	0.6 lb (0.25 kg)

SPECIFICATIONS

Calibration	Adjustment via on-board zero and gain potentiometers
Conforms to	NRTL Performance Tested EMC Directives 2014/30/EU EN 61010-1:2010 ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1 CE
Warranty	Two years material and workmanship, 12 months normal exposure for sensor element

ACCESSORY

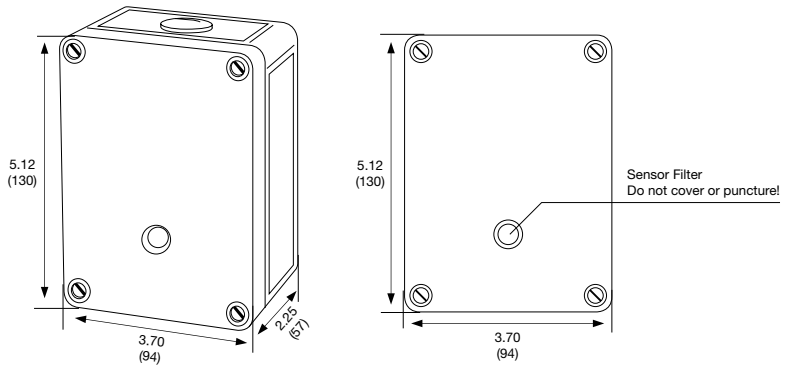
ADT-ENCL-DKIT-A	Duct Kit for Type “A” Enclosure: replacement enclosure, 10 in. probe, 6 ft. of tubing

OPTIONS

Relay Package	
Type	(1) SPDT (R1), and (1) SPST-NC or SPST-NO (R2), jumper selectable
Contact rating	30 VAC/VDC, 0.5 A, max.
Setpoint (factory set)	Lo/SPDT = 19%* Hi/SPST = 17%*
Switching differential (factory set)	1%* * other values on special request at time of ordering
Relay mode (factory set)	De-energized for each relay, energized (fail-safe) mode on special request
Status indicator	(2) LEDs, one for each relay
Relay approval	UL Recognized, E41515 CSA, C22.2 No. 0, No. 14 (File No. LR31928)
Heater, built-in	For low temperature environment
Ambient temperature	-40°F (-40°C)
Power consumption	0.2 A (5 VA), max.
Thermostatic control	32°F (0°C) ± 5°F (3°C)

DIMENSIONS

inches (mm)



ORDERING INFORMATION

AT-1193 - A - 000 - 2 *(Product label “AT-1193-x-xxx-x V3”)*

Enclosure	
A	Wall, NEMA 4X

A = Standard enclosure

Options	
000	No option
100	Integrated relay package
050	Heater

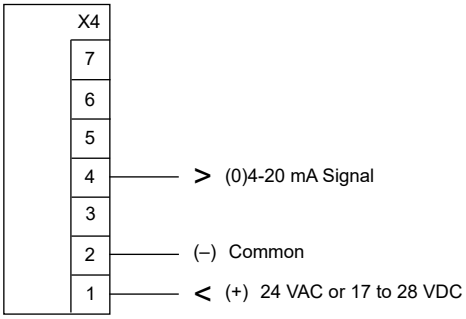
000 = Standard, no option

Range	
1	0-20 ppm
2	0-10 ppm
3	0-5 ppm
4	0-2 ppm

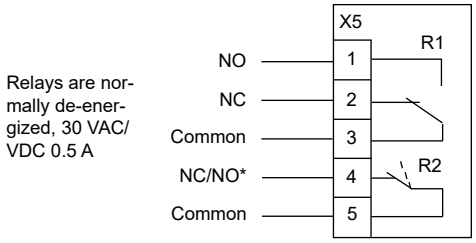
2 = Standard range

WIRING CONFIGURATION

AT-1193
(0)4-20 mA signal, 3-wire, 24 VAC or 24 VDC



Optional relay package
(0)4-20 mA signal, 3-wire, 24 VAC or 24 VDC**



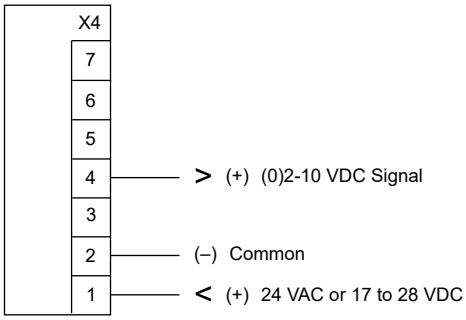
*Jumper SPST relay NC/NO selector:

Covers top two pins = SPST-NC
Covers bottom two pins = SPST-NO

Note: When using AT-1193 transmitter w/relay package as a stand-alone unit (no connection to a controller), pins on jumpers "V-A" and "0-20%" must be covered.

*See **Jumper output signal range selectors**.*

AT-1193
(0)2-10 VDC signal, 3-wire, 24 VAC or 24 VDC



Jumper output signal range selectors:

Over both pins = VDC
Pins not covered = mA

Over both pins = 4-20 mA / 2-10 VDC
Pins not covered = 0-20 mA / 0-10 VDC

Notes:

Signal range jumper selection:

Pins not covered

Pins both covered

Twisted, shielded wire is recommended.

Shield should be grounded only at the controller. DO NOT ground shield at both ends!

With optional heater:
The wiring must be sized appropriately for a power of 0.3 A, 24 VDC.