

# Critical Environment Technologies Canada Inc.

www.critical-environment.com

## GEM Type "B" Single-Channel Gas detection Controller for one Remote Sensor or Analog Transmitter Low Voltage Installation Drawing Rev-A October 15, 2010

**NOTE:** THIS PHOTO SHOWS THE OPTIONAL LED DIGITAL DISPLAY



INSTALLER SUPPLIED  
LOW VOLTAGE  
OPERATING POWER

GEM MOUNTING HEIGHT 4' TO 6' FROM THE FLOOR "BREATHING ZONE"

LOW VOLTAGE SIDE

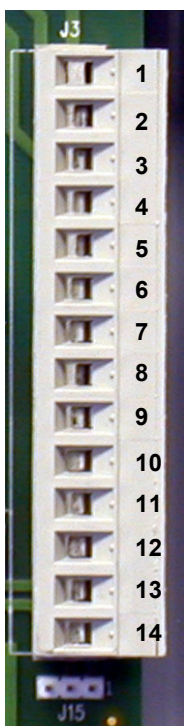
LINE VOLTAGE SIDE



AVAILABLE OPTIONAL TOTALLY ENCLOSED TRANSFORMER ALLOWING 115VAC INCOMING AND OUTPUTTING 22VAC TO GEM SYSTEM

LOW VOLTAGE & LINE VOLTAGE ARE SEGREGATED INSIDE THIS TRANSFORMER

**WIRING TERMINATIONS:** DO NOT USE SOLID-CORE WIRE. ANY DAMAGE CAUSED BY USE OF SOLID-CORE WIRE WILL VOID WARRANTY. USE STRANDED WIRE ONLY



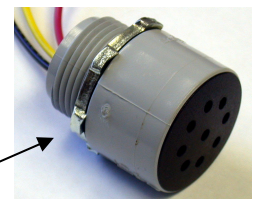
1	N/O	RELAY-1 (LOW ALARM)
2	COM	RELAY-1 (LOW ALARM)
3	N/C	RELAY-1 (LOW ALARM)
4	N/O	RELAY-2 (HIGH ALARM)
5	COM	RELAY-2 (HIGH ALARM)
6	N/C	RELAY-2 (HIGH ALARM)
7	4-20	4-20 ANALOG OUTPUT
8	NEG	NEG. ANALOG OUTPUT
9	POS	POS. TERMINAL TO REMOTE SEN.
10	SIG+	SIG.+ TERMINAL TO REMOTE SEN.
11	NEG	NEG. TERMINAL TO REMOTE SEN.
12	GND	INCOMING POWER: 24VDC
13	24V	INCOMING POWER: 24VDC / 24VAC
14	24V	INCOMING POWER: 24VAC

**NOTE:** TWO INTERNAL DRY CONTACT RELAYS ARE RATED 5-AMPS @ 240VAC EACH S.P.D.T.

DO NOT RUN LINE VOLTAGE AND LOW VOLTAGE WIRES IN SAME CONDUIT

TERMINATE REMOTE ANALOG TRANSMITTER OR REMOTE SOLID-STATE SENSOR HERE. POLARITY MUST BE OBSERVED

REMOTE ANALOG TRANSMITTER AST OR ATW SERIES. MAXIMUM DISTANCE IS 2000' USING 18-GAUGE SHIELDED CABLE. ATW = 2 CONDUCTOR, AST = 3-CONDUCTOR. OBSERVE PROPER MOUNTING HEIGHT FOR TARGET GAS



REMOTE SOLID-STATE SENSOR FOR COMBUSTIBLE GASES OR REFRIGERANTS MAXIMUM DISTANCE FROM GEM IS 500' USING 18-GAUGE WIRE. OBSERVE PROPER MOUNTING HEIGHT FOR TARGET GAS