

CO-CO (Carbon Monoxide) , CO-CO₂ (Carbon Dioxide) , CO-NO₂ (Nitrogen Dioxide) , CO-CH₄ (Methane) , CO-C₃H₈ (Propane) , CO-H₂(Hydrogen).

Features

- High accuracy Electrochemical Cell sensor for toxic gases and Catalytic (Pellistor) for flammables.
- 3 or 4- stage SPDT relay outputs with LED status indicators.
- NEMA 3 Robust Enclosure.
- Microprocessor-based control.
- 10 Step Bar Graph Display of gas levels.
- Programmable time delays to avoid nuisance alarms.
- Operational 4-20mA , 0-1V DC , 0-5V DC or 0-10V DC analog output.
- Operational remote sensor.

Applications

- Versatile and cost-effective way of detecting two gases simultaneously by a single controller.
- Energy savings through the intermittent operation of ventilation equipment in enclosed areas.
- Commercial or industrial locations where a sudden build-up of toxic and/or flammable gases may occur.
- Car parking and bus maintenance Garages, Tunnels, Warehouses, Factories, Food Processing and Bottling Plants, Wastewater Treatment Plants, Steel Mills, Cryogenic laboratories and Incineration Rooms.
- Stand-alone with relay outputs or analog outputs for direct connection to the existing Building Management System (BMS) or DDCS.



The Pergamon TwinSet and its microprocessor-based system features a high quality stand-alone controller providing all the necessary hardware for the continuous monitoring of two gases in the following combinations : CO/CO , CO/NO₂, CO/COMB. This unit is primarily geared towards providing alarm activated relays for simple applications such as small parking garages.

The TwinSet employs the best sensing technologies available : electrochem and pellistor (catalytic combustion) cells. These quality components provide virtually instantaneous detection of targeted gases and eliver long term trouble free operation. The main body of the Twinset detects carbon monoxide build up, while the remote sensor monitors either CO , NO₂ or a combustible.

installed within the monitored space, the Twinset monitors targeted gas concentration rates and automatically operates the mechanical ventilation system of a facility. Upon detection of low levels of hazardous and flammable gases the ventilation system is energized thereby protecting occupants, personnels and gas-sensitive goods and products.

The Twinset contains all the well known standard features of PERGAMON'S gas detection line; the latest sensing technologies and state-of-the-art electronics.

Standard unit specifications

GASES DETECTED:	CO, NO ₂ , O ₂ , H ₂ , CH ₄ (Methane), C ₃ H ₈ (Propane), NH ₃ , H ₂ S, Cl ₂
SENSOR TECHNOLOGY:	3-Electrode Electrochemical Cell
TOXIC:	Catalytic Pellistor
FLAMMABLE:	
SENSING METHOD:	Diffusion
POWER REQUIREMENTS:	24V or 120V or 240V 50/60HZ
OUTPUTS:	3 or 4-stage Relay; Contact rating 3 A @ 120VAC inductive
AUDIBLE ALARM:	Built in buzzer
OPTIONAL:	4-20mA, or one of the following 0-1V DC 0-5V DC 0-10V DC
OPERATING TEMPERATURE:	-4°F to 120°F (-20°C to +50°C)
HUMIDITY RANGE:	15-90% RH
ACCURACY:	+/- 5% of Calibrated value (electrochemical sensors) +/- 1 LEL CH ₄ (pellistor)
REPEATABILITY:	2% of Signal
RESPONSE TIME T90%:	40 seconds
EXPECTED SENSOR LIFETIME:	Electrochemical :7years for CO only 2 years for other gases Pellistor: 3 years
ENCLOSURE:	NEMA 3 Polystyrene Grey Surface Mounting
MAIN ENCLOSURE DIM:	6 in x 6 in x4 in (152 mm x152mm x102mm)
APPROVALS:	CAN/CSA C22.2 No. 61010-1:2004 ANSI/UL 61010-1:2004

* Extended temperature ranges available.

Ordering Information

MODEL NUMBER	GASES DETECTED
CC-TWR**-X**-Y**	CO-CO
CN-TWR**-X**-Y**	CO-NO ₂
CH-TWR**-X**-Y**	CO-H ₂
CM-TWR**-X**-Y**	CO-CH ₄
CM-TWR**-X**-Y**	CO-C ₃ H ₈

Power Supply Options

**X	LINE VOLTAGE
24	24 V 50/60 HZ
120	120V 50/60 HZ
240	240V 50/60 HZ

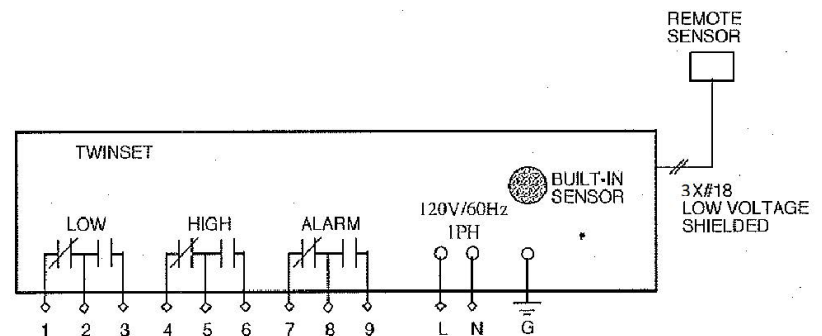
**y = 1 Bar Graph

**y = 0 or Leave empty for no Bar Graph

**R = 3 For 3 relays

**R = 4 For 4 relays

Typical Wiring Diagram



IN CANADA

PERGAMON PERCEPTIVE TECHNOLOGIES

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IN THE U.S.A.

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REPRESENTED BY:



OPERATION AND MAINTENANCE MANUAL FOR PERGAMON TWINSET GAS DETECTOR

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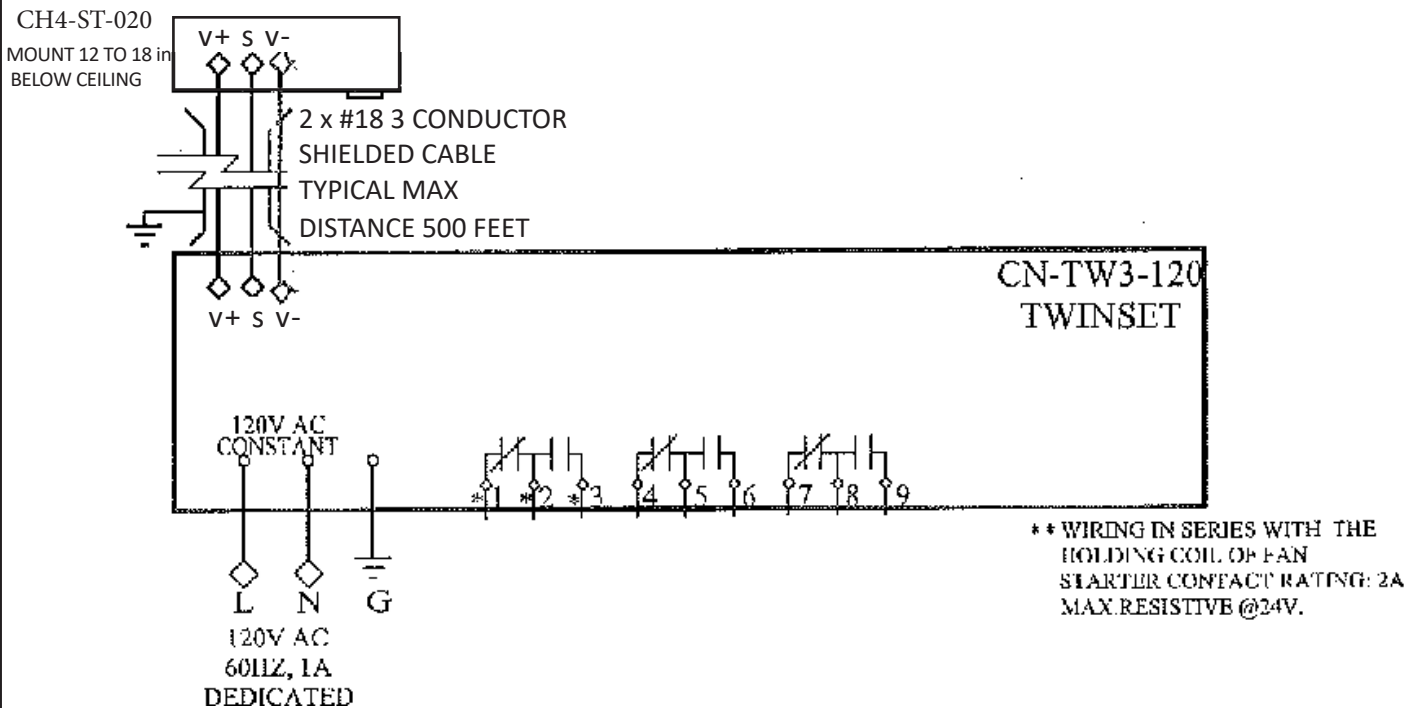
**PLEASE CALL PERGAMON PERCEPTIVE TECHNOLOGIES TO ORDER YOUR
REPLACEMENTS**



LIMITED WARRANTY

The Company warrants to the original purchaser that the products manufactured by us are free from defects in material and workmanship when properly stored, installed, operated, and maintained. Our obligation under this warranty is limited to repair or replacement, at our option, of defective parts, which in our examination shall disclose to our satisfaction to be thus defective, and when such parts are returned to the factory, freight prepaid, within one year from the date of installation and start up or eighteen months from the date of shipment, whichever occurs first. Notification of the return of any parts must be given and acknowledged by us prior to shipment. All repairs and replacement parts furnished under this warranty shall be FOB factory. The owner shall pay all necessary freight and delivery charges and all removal and installation costs. Warranty on Controls and Accessories not manufactured by the Company shall be as offered by the respective manufacturer. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON OUR PART, AND WE NEITHER ASSUME NOR AUTHORIZE ANY OTHER PERSON TO ASSUME FOR US, ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF OUR PRODUCTS. THIS WARRANTY SHALL NOT APPLY TO OUR PRODUCTS OR ANY PART THEREOF WHICH HAS BEEN SUBJECT TO ACCIDENT, NEGLIGENCE, ALTERATION, ABUSE OR MISUSE. WE MAKE NO WARRANTY WHATSOEVER IN RESPECT TO ACCESSORIES OR PARTS NOT SUPPLIED BY US. THE TERM "ORIGINAL PURCHASER" AS USED IN THIS WARRANTY, SHALL BE DEEMED TO MEAN THAT PERSON FOR WHOM OUR PRODUCTS ARE ORIGINALLY INSTALLED AND MADE OPERABLE. THIS WARRANTY SHALL APPLY ONLY WITHIN THE BOUNDARIES OF THE UNITED STATES AND CANADA AND SHALL NOT ATTACH UNTIL THE PRODUCTS HAVE BEEN PAID FOR IN FULL AND SHALL TERMINATE AT THE END OF THE WARRANTY PERIOD PROVIDED FOR.

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This Twinset model CN-TW3 gas monitor consists of one (1) Controller with one (1) integrated CO sensor and one (1) remote CH4 sensor as shown on the above diagram.

The CO sensors are electrochemical cell type and have measuring ranges of 0-200 ppm,
Also, the CO sensors have a life expectancy of 7 years and must be discarded and replaced upon expiry of their life span.

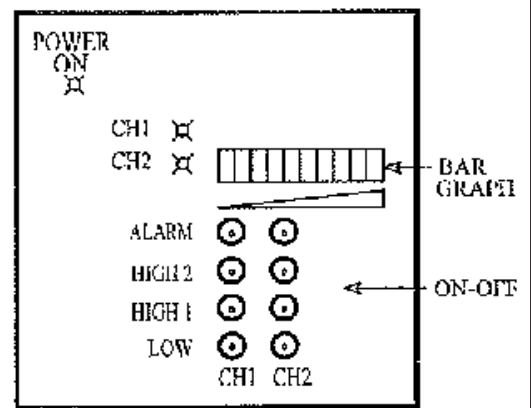
The CH4 sensors are electrochemical cell type and have measuring ranges of 0-40% LEL,
Also, the CO sensors have a life expectancy of 3 years and must be discarded and replaced upon expiry of their life span.

A 10-segment bar graph displays the gas levels from the two sensors, CH-1 (built in) and CH-2 (remote) LED's toggle to indicate the channel number being displayed.

There are three (3) on board relays with status LED's that are energized at LOW and ALARM on-off levels. The threshold values for the on-off levels are user-settable (see instructions provided).

The relay output contacts are SPDT and have a capacity of 3 amperes at 120V AC.

A built in buzzer is also activated at the ALARM LEVEL



IMPORTANT FOR INSTALLATION

All PERGAMON systems are operated at the factory for a minimum of one week prior to factory calibration. The unit must be powered from 120V , 1PH,60HZ dedicated constant power source.