

# GAS & SPECIALTY SENSORS

## GAS DETECTION EXPANSION MODULE 301EM



**Honeywell Analytics**  
experts in gas detection



### DESCRIPTION

The **Honeywell Analytics 301EM Expansion Module** allows the monitoring of toxic and combustible gases and refrigerants. Up to four sensors can be placed 500' away for toxic and combustible gases, and 200' away for refrigerant gas monitoring. The transmitter is equipped with a backlit LCD display and keypad that can be placed in a safe area, remote from the sensors. Alarm relays and Modbus communication are standard. The unit is compatible with the **301C** controller.

### FEATURES

- Sense one to twenty zones
- Sensors available for toxic and combustible gases and refrigerants
- RS-485 Modbus communication
- Contact input for manual break-glass switches
- Three 24VDC outputs to activate strobes and horns
- 4-20mA output for each sensor
- Four relay outputs
- Easy-to-read LCD display
- Explosionproof sensors for combustible and toxic gases
- Additional gases available
- Programmable relay differential



301EM-RFSA



S301D2CO

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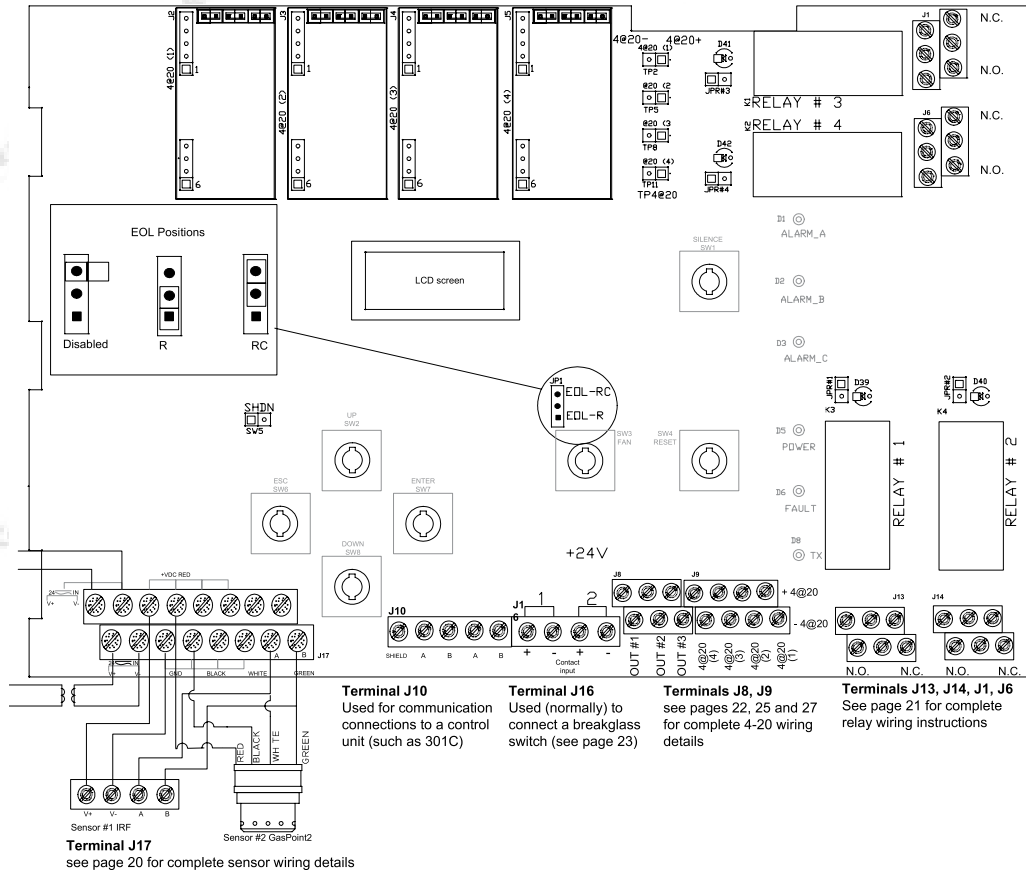
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SPECIFICATIONS	
<b>Supply Voltage</b>	22-27 VAC @ 48 VA, 50/60 Hz or 22-38 VDC @ 2 A max.
<b>Accuracy</b>	±40 ppm @ 500 ppm
<b>Signal Output</b>	4-20mA, 1000Ω @ 24 vdc each sensor
<b>Communication</b>	RS-485, Modbus
<b>Measurement Range</b>	
<b>CO</b>	0-250 ppm
<b>NO2</b>	0-10 ppm
<b>Refrigerants</b>	0-1000 ppm
<b>Sensing Technology</b>	
<b>CO</b>	Electrochemical
<b>Refrigerants</b>	Dual Infrared Sensor
<b>Distance To Transmitters</b>	Up to 500 feet (160 m), 200 ft (60.9m) maximum
<b>Calibration Interval</b>	6 months
<b>Visual Indication</b>	Green - Normal Red - Alarms A, B, & C Yellow - Fault/Service Alarm Amber - Tx (network mode)
<b>Display</b>	Backlit LCD
<b>Response Time</b>	60 seconds
<b>Relay Output</b>	4 DPDT relays (20 ppm diff) (4) 5A, 30 VDC or 250 VAC (resistive)
<b>Alarm Auditory Levels [Db]</b>	65 dBA @ 3 ft (1m) internal
<b>Gases Detected</b>	CO, NO2, R11, R12, R123, R125, R134A, R22
<b>Operating Temperature</b>	
<b>301RF, EM</b>	32° to 100°F (0 to 40°C)
<b>S301</b>	-40° to 104°F (-40 to 40°C)
<b>Operating Humidity</b>	0% to 95% RH (noncondensing)
<b>Enclosure Rating</b>	NEMA 1
<b>Dimensions</b>	
<b>301EM (controller)</b>	7.99"H x 11.02"W x 2.76"D (20.3 x 28 x 7 cm)
<b>301RF (sensor)</b>	4.02"H x 11.02"W x 2.48"D (10.2 x 28 x 6.3 cm)
<b>S301(sensor)</b>	3"H x 2" Diameter (7.6 x 5.1 cm)
<b>Weight</b>	
<b>301EM</b>	3.1 lb (1.4 Kg)
<b>301RF</b>	2.3 lb (1.0 Kg)
<b>S301</b>	2.0 lb (0.9 Kg)
<b>Approvals</b>	CSA
<b>Warranty</b>	1 year

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## GAS DETECTION EXPANSION MODULE 301EM

### WIRING



### ORDERING INFORMATION

MODEL	DESCRIPTION
301EM	Gas detection expansion module
301EM-RFSA	Wall mounted gas controller/expansion module with built in red strobe, light, and horn
S301D2CO	Remote Carbon Monoxide gas sensor
S301D2NO2	Remote Nitrogen Dioxide gas sensor
301IRFSR11	Remote R11 refrigerant sensor
301IRFSR12	Remote R12 refrigerant sensor
301IRFSR123	Remote R123 refrigerant sensor
301IRFSR125	Remote R125 refrigerant sensor
301IRFSR134A	Remote R134A refrigerant sensor
301IRFSR22	Remote R22 refrigerant sensor

ACCESSORIES	
691-K1A	Control transformer, 120:24 VAC, 100 VA
Calibration Gases	CO, CO2, NO2, O2, CH4, NH3, N2, H2S, H2, and Refrigerants (See calibration page)
DCP-1.5-W	Power supply, 24 VAC IN to 24 VDC OUT
DCPA-1.2	Power supply, 120 VAC IN to 24 VAC/24 VDC OUT (add to 9 VDC)
NIOSHSCBA	Self-contained breathing apparatus kit
NIOSHSCBA-WC	Self-contained breathing apparatus kit with SCBA-WALCASE wall case
UCK-1	Universal calibration kit for non-corrosive gases (N2, CO2, CH4, H2, O2, CO, and refrigerants)
UCK-2	Universal calibration kit for corrosive gases (NO2, H2S, SO2, and NH3)
UCK-3	Universal calibration kit for non-corrosive or corrosive gases