

VA301EM

Honeywell



**The complete solution for
Mechanical Rooms. Monitor up
to 20 sensors for Refrigerant,
Toxic and Combustible gases.**

The VA 301EM-20 acts as a controller for up to 20 remote sensors and suits a variety of gas detection system solutions for Mechanical Rooms.



User Friendly

- Easy to read LCD display
- Auto-diagnostic capabilities

Economical Solution

- Cost-effective answer for installation in Mechanical Rooms locations

Flexible Operation

- Able to operate with up to 20 remote sensors at a time
- Various types of sensors available to simultaneously detect a range of different Refrigerant, Toxic and Combustible gases
- Robust and reliable RS-485 Modbus communication

Output Adaptability

- Three 24 Vdc alarm outputs and four 4-20 mA outputs

Safety Measures

- Four fully programmable relays
- Three alarm levels with built-in visual indicators and audible alarm

Beneficial Options

- Convenient stand-alone or network operation

Particularly configured to meet ASHRAE 15, B-52 and International Mechanical Code requirements, the VA301EM is commonly used to optimize gas detection in mechanical and chiller rooms. A full complement of sensors (including toxic, oxygen, combustible gases and a full line of refrigerant sensors), horns, strobes and remote panels provide added flexibility to suit a variety of gas detection system solutions.

ASHRAE No 15 Mechanical Standard and B-52 Code Compliance

The ASHRAE and B-52 security standards have been established to minimize risk and protect the safety of mechanical room personnel and the environment at large. Available in a special configuration, the VA301EM mechanical room controller has been carefully designed to meet and even exceed these rigorous standards. The VA 301EM can be configured to offer automatic fan, horn and strobe activation in addition to manual fan activation. Latching relay for manual alarm recognition, silence key for manual horn deactivation, built-in 24 Vdc outputs for horn operation, and 2 breakglass switch accessories for manual alarm activation ensure optimal performance.

Find out more

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General Specification				
Use	Wall mounted mechanical room controller for use with Honeywell Analytics range of gas sensors. Four (4) onboard relays can be used to activate alarms or deactivate equipment.			
Power Requirement	22-27 Vac, 29-38 Vdc, 2A max @ 29Vdc			
Size	28 x 20.3 x 7 cm (11.02 x 7.99 x 2.73 in.)			
Weight	1.02 kg (2.25 lb.)			
Distance Between Controller and Sensor	VA301IRFS refrigerant sensors: Up to 200 ft. / 60.9 m S301D2 toxic/combustible sensors: Up to 500 ft. / 152.4 m			
Visual Indicators	Normal Operation	Green LED		
	Alarm Level 1	Red LED		
	Alarm Level 2	Red LED		
	Alarm Level 3	Red LED		
	Signal Tx	Blinking amber LED		
	Failure Indication	Yellow LED		
Alarm Levels	3 with high and low setpoints			
Outputs	4 DPDT relays (alarms and/or fault), buzzer Three 24 Vdc, 250 mA (per output) Four 4-20 mA outputs Modbus RFS option: 24 Vdc built-in red strobe RFS option: 24 Vdc built-in red strobe & 105 dBA horn			
Relay Output Rating	5 A, 30 Vdc or 250 Vac (resistive load)			
Gases Detected	Gases Detected	Detection Range	Operating Temperature	Operating Humidity Range
	VA301IRFS			
	R11, R12, R22, R123, R125, R134A, R227, R245A, R404A, R407C, R410A, R507A, R508B	0-1000 ppm	0 to 40 °C (32 to 104°F)	0-95% non-condensing
	Gases Detected	Detection Range	Operating Temperature	Operating Humidity Range
	S301D2			
	Hydrogen Sulfide (H ₂ S)	0-50 ppm	-40 to 40°C (-40 to 104°F)	0 - 90% RH, non-condensing
	Carbon Monoxide (CO)	0-250 ppm	-20 to 40°C (-4 to 104°F)	0 - 90% RH, non-condensing
	Oxygen (O ₂)	0-25%	-20 to 40°C (-4 to 104°F)	5 - 95% RH, continuous
	Nitrogen Dioxide (NO ₂)	0-10 ppm	-20 to 40°C (-4 to 104°F)	15 - 90% RH, non-condensing
	Sulfur Dioxide (SO ₂)	0-10 ppm	-20 to 40°C (-4 to 104°F)	15 - 90% RH, non-condensing
	Combustibles - Catalytic	0-100% LEL	-40 to 50°C (-40 to 122°F)	0 - 80% RH, non-condensing
	EC-F9-NH3			
	Ammonia NH3	0-100 ppm	-50 to 120 C (ATMOS)	5-100% RH
	Accuracy is +/- 3 % for IFRS and D2 sensors, +/- 5 % for EC-F9 sensor			
Ratings and Certifications				
Certified to	CAN/CSA C22.2 No. 61010-1  116662			
Conforms to	ANSI/UL 61010-1			

Please Note:

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H_301EM_DS01007_V4

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301EM-20 SPECIFICATIONS

Controller

General Specification				
Use	Wall mounted mechanical room controller for use with Honeywell Analytics 301IRFS and S301D2 gas sensors for up to 20 points of detection. Four (4) onboard relays can be used to activate alarms or deactivate equipment.			
Power Requirement	22-27 VAC, 29-38 VDC, 2A max @ 29VDC			
Size	11 (H) x 8 (W) x 2.7 (D) in. (28 x 20.3 x 7 cm)			
Weight	2.25 lbs. (1.02 kg)			
Distance Between Controller and Sensor	301IRFS refrigerant sensors: Up to 200 ft. (60.9 m) S301D2 toxic/combustible sensors: Up to 500 ft. (160 m)			
Visual Indicators	Normal Operation	Green LED		
	Alarm Level 1	Red LED		
	Alarm Level 2	Red LED		
	Alarm Level 3	Red LED		
	Signal Tx	Blinking amber LED		
	Failure Indication	Yellow LED		
Alarm Levels	3 with high and low setpoints			
Outputs	4 DPDT relays (alarms and/or fault), buzzer			
	Three 24 VDC, 250mA (per output)			
	Four 4-20mA outputs			
	Modbus			
	RFS option: 24 VDC built-in red strobe			
	RFSa option: 24 VDC built-in red strobe & 105 dBA horn			
Relay Output Rating	5 A, 30 VDC or 250 VAC (resistive load)			
Gases Detected	Gases Detected	Detection Range	Operating Temperature	Operating Humidity Range
301IRFS				
	R11, R12, R22, R13B1, R123, R125, R134A, R227, R245A, R404A, R407C, R410A, R507A, R508B	0-1,000 ppm	32° to 104°F (0° to 40 °C)	0-95% non-condensing
S301D2				
	Carbon Monoxide (CO)	0-250 ppm	-40° to 100°F (-40° to 40°C)	0-95% non-condensing
	Chlorine (Cl ₂)	0-15 ppm	-40° to 100°F (-40° to 40°C)	0-95% non-condensing
	Nitrogen Dioxide (NO ₂)	0-10 ppm	-40° to 100°F (-40° to 40°C)	0-95% non-condensing
	Hydrogen Sulfide (H ₂ S)	0-50 ppm	-40° to 100°F (-40° to 40°C)	0-95% non-condensing
	Sulfur Dioxide (SO ₂)	0-10 ppm	-40° to 100°F (-40° to 40°C)	0-95% non-condensing
	Oxygen (O ₂)	0-25%	-4° to 104°F (-20° to 40°C)	0-95% non-condensing
	Combustibles	0-100% LEL	-40° to 112°F (-40° to 50°C)	0-95% non-condensing
Ratings and Certification				
Alarm Levels	CAN/CSA C22.2 No. 61010-1			
	116662			
Conforms to	ANSI/UL 61010-1			

Find out more

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301IRFS SPECIFICATIONS

Infrared Refrigerant Gas Detector



General Specification		
Use	Infrared refrigerant sensor to be used with the 301EM-20 and SQN8x.	
Gases Detected	R11, R12, R13B1, R22, R123, R125, R134A, R227, R245A, R404A, R407C, R410A, R507A, R508B	
Sensing Technology	Infrared sensor	
Measurement Range	0-1,000 ppm	
Resolution	1 ppm	
Deadband	20 ppm	
Accuracy	± 40 ppm @ 500 ppm	
Response Time (T90)	60 seconds	
Warmup time	15 minutes	
Operating Environment	Indoor Use	
Operating Temperature Range:	32° to 100°F (0° to 40°C)	
Operating Humidity Range:	0 to 95% RH (non-condensing)	
Enclosure	ABS – Polycarbonate	
Size	4 (H) x 11 (W) x 2.5 (D) in. (10.2 x 28 x 6.3 cm)	
Weight	2.33 lbs. (0.603 kg)	
Visual Indicators	Normal Operation	LED blinks according to the sensor addresses on the 301EM-20
	Failure Indication	LED will remain on

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