

# 301C PRODUCT SUBMITTAL

## ORDERING INFORMATION

### 301C Controller

VA301C	Gas detection controller with display and plastic housing.
VA301C-DLC	Gas detection controller with data logging, display and plastic housing.
301C-DLC-W	Wireless controller with datalogger
VA301C-DLC-BIP	Gas detection controller with data logging and display, BACnet/IP output and plastic housing.
301C-DLC-BIP-W	Wireless Controller with Datalogger and BACnet/IP
VA301CDS	Gas detection controller with data logging, display and industrial grade housing.
VA301C-CDS-BIP	Controller, w/ Datalogger, BACnet/IP Output, Industrial Enclosure

### Network Accessories

VA301R8	Relay module with 8 relays
301R8-W	Wireless relay module with 8 relays
301R8-W-F	Wireless relay module with 8 failsafe relays
VA301ADI	Analog Digital Input converter (4-20 mA to Modbus RS-485)
VA301AP	Annunciator panel for the VA301C
VA420I	Digital analog output converter (RS-485 to 4-20 mA)
BC201C	301C/EM/EMRP/AP - heated enclosure (enclosure only)

## 301C - SPECIFICATIONS

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Power requirements	17 -27 Vac, 50 or 60 Hz 24 - 38 Vdc, 500 mA
Response time:	N/A
Accuracy:	N/A
Detection technology	N/A
Deadband:	N/A
Operating temperature range:	-20°C to 50°C (-4°F to 122°F)
Operating humidity range:	0 to 95% RH, (non-condensing)
Alarm levels:	N/A
Outputs:	4 DPDT relays
Relay output rating:	5A, 30 Vdc or 250 Vac (resistive load)
Operating altitude	Up to 3000 m (9843 ft)
Network capacity:	Up to 96 transmitters, 32 per channel Channel 1 and 2: Modbus & Vulbus Channel 3 : Modbus only Channel 4 : Slave communication (i.e.: for BACnet option)
Communication cable:	Twisted and shielded 2-24 AWG (Belden 9841)
Length of communication lines:	Up to 609 m (2000 ft.) per channel T-tap maximum 20 m (65 ft) to a maximum of 40 m (130 ft) for all T-taps.
Time delays:	0, 30 , 45 sec and 1 to 99 min.before/after delay
Warm-up delay:	N/A
User Interface:	Graphic 122 x 32 dot matrix backlit display User friendly keypad
Visual indicators:	Power On = Green LED Alarm A = Red LED Alarm B = Red LED Alarm C = Red LED Fault = Amber LED Tx = Amber LED (blinks when in use) Rx = Green LED(blinks when in use)
Audible alarm:	65 dBa at 1 m (3 ft)
Overvoltage category:	II
Pollution degree:	2
Battery:	Lithium Battery, 3 Volts
Enclosure	NEMA 4 X ABS - polycarbonate
Operating environment:	Indoor use
Dimensions (HxWxD)	Standard housing: 21.3 x 13.4 x 5.7 cm (8.4" x 5.3" x 2.25") Industrial housing: 23.5 x 35.7 x 8.25 cm (9.5" x 14.06" x 3.25")
Weight	Standard housing: 1.1 Kg (2.4 lbs.) Industrial housing: 4.9 Kg (10.8 lbs.)
Certifications	ANSI/UL 61010-1 CAN/CSA C22.2 No. 61010-1

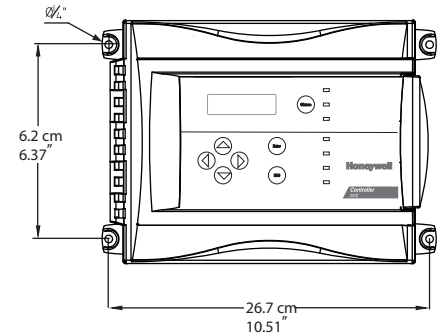
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## INSTALLATION INSTRUCTIONS

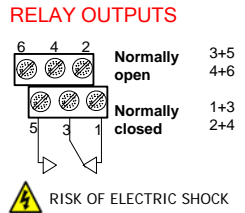
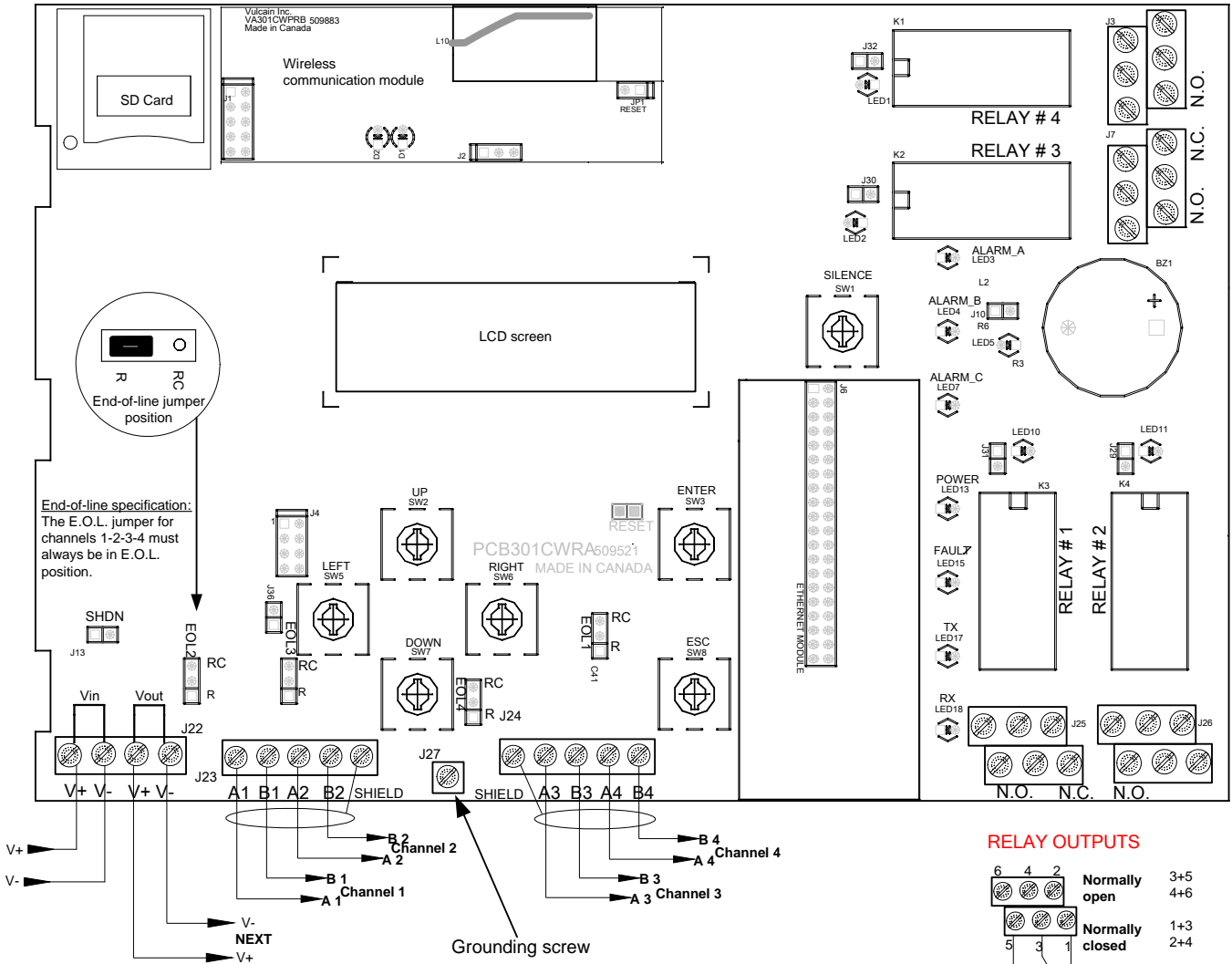
Installation instructions must be strictly followed to ensure the proper functioning of the equipment. Honeywell will not be liable or responsible for any malfunctions or incidents that may occur from improper installation:

- Place each unit in a location that is easily accessible for service.
- Avoid placing units near sources of vibrations.
- Avoid placing units near equipment that emits electromagnetic interference.
- Avoid any location where there are large temperature swings.
- Before installing, verify all local codes, standards or legislation that could impact choice of installation location.

1. Select installation location
2. Measure and mark mounting holes (as shown)
3. Pre-drill or prepare as required by mounting surface (drywall plugs, etc.)
4. Position unit and align mounting holes with markings and install necessary screws.



# Wiring Details 301C



- Always respect minimum voltage requirements at device
- RISK OF ELECTRIC SHOCK

## COMMUNICATION

**Communication Wire Gauge:**  
 2-24 AWG (Belden 9841)  
 Twisted and shielded cable  
 2000 feet (600 m) per channel  
 T-tap: 65 feet (20 m) / T-tap  
 130 feet (40 m) total

**Channel Specifications:**  
 Channel 1-2: Modbus, Vulbus protocol  
 Channel 3: Modbus protocol only  
 Communicates only with Vulcain transmitters  
 Channel 4: Modbus output  
 Communicates only with VA301BDCM

**Wireless Communication:**  
 ISM worldwide  
 Indoor range 30m

## BacNet/IP MODULE (-BIP option)

Ethernet: 10/100-compatible with 10Base-T interface, RJ-45

Visual Indicators:  
 Green LED LINK  
 Yellow LED ACT

**\*No transmitter can be connected to channel 4**

## Wiring Specifications

- Power :** The power requirement range is 17-27 Vac, 24-38 Vdc, 500 mA. In both AC or DC mode, the polarisation is not important. The system must be grounded on the transformer. A dedicated circuit-breaker should be used.
- Communication:** The communication cables have to be grounded using the shield terminal. Use twisted and shielded Belden cable 24 AWG # 9841 for the connection. The network can be up to 2000 feet (600 m) per channel. The length of a T-tap can be a maximum of 65 feet (20 m). A maximum of 130 feet (40 m) for all the T-tap must be respected.
- Relay Output:** The relay output will withstand up to 5 A at 30Vdc or 250Vac (resistive load only). They can be used to activate horns and strobes. Refer to drawing below for proper wiring. Each relay can be configured in the programming menu. Default setting is :
- Relay 1 (J25) = A
  - Relay 2 (J26) = B
  - Relays 3 (J3) = C
  - Relay 4 (J7) = Fault 5 A, 30 Vdc or 250 Vac (resistive load)

### BACnet/IP MODULE ( -BIP option)

Specifications:

- Ethernet Port :** 10/100-compatible with 10Base-T interface, RJ-45
- Visual Indicators :** Green LED = LINK  
Yellow LED = ACT

### DATALOGGER (-DLC option)

The DLC option for the controller collects data automatically and stores it on a digital flash Multimedia Card (SDcard). If ever the SDcard gets full:

- the information logging is stopped
- no SDc flag is displayed on the screen
- the SDcard LED blinks

## WARRANTY AND LIMITS OF LIABILITY

Honeywell warrants to the original purchaser that its product, and the component parts thereof, will be free from defects in workmanship and materials for a period of one year from the date of purchase. Honeywell will, without any charge and at its option, repair or replace defective products or components upon their delivery to its Repair and Service Department. This warranty does not apply in the event of misuse or abuse of the product, or as a result of unauthorized alterations or repairs. Honeywell shall not be liable for any consequential damages, including, without limitation, damages resulting from loss of use. Every precaution for accuracy has been taken in the preparation of this document. However, Honeywell assumes neither responsibility for any omissions or errors that may appear, nor liability for any damages that may result from the use of the products in accordance with the information contained in this document.

To obtain warranty service, return the product, along with a complete description of the defect, transportation prepaid. Honeywell assumes no risk for damage in transit. Following warranty repair, the product will be returned to the buyer, transportation prepaid.