ORDERING INFORMATION

VA301C Controller

☐ VA301C   Gas detection controller with display and plastic housing.

☐ VA301C-DLC   Gas detection controller with data logging, display and plastic housing.

☒ VA301C-DLC-BIP   Gas detection controller with data logging and display, BACnet/IP output and plastic housing.

☐ VA301CDS   Gas detection controller with data logging, display and industrial grade housing.

OPTIONS

☐ VA301AP   Annunciator panel for the VA301C

☐ VA301BDCM   BACnet/Ethernet communication module

☐ RouterIP   IP router

SPECIFICATIONS VA301C and VA301CDS (same if not specified)
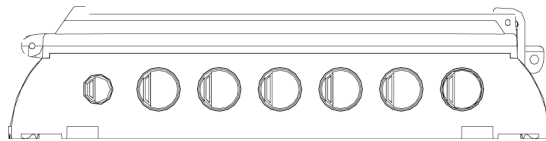
Power Requirements:	17 -27 Vac, 50 or 60 Hz
	24 - 38 Vdc, 500 mA
Operating Environment:	Indoor Use
Operating Temperature Range:	-4°F to 122°F (-20°C to 50°C)
Operating Humidity Range:	0 to 95% RH, (non-condensing)
Operating Altitude:	Up to 9843 feet (3,000 m)
Network Capacity:	Up to 96 transmitters, 32 per channel
	Channel 1 and 2: Modbus & Vulbus
	Channel 3 : Modbus only
	Channel 4 : Slave communication
	(i.e.: for BACnet option)
Communication	
(length of lines):	Up to 2,000 feet (600 m) per channel
	T-tap: 65 feet (20 m) maximum per t-tap
	130 feet (40 m) total
User Interface:	Graphic 122 x 82
	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)
Outputs:	4 DPDT relays
	5A, 30 Vdc or 250 Vac (resistive load)
Audible Alarm:	65dBA at 3 feet (1 m)
Time delays:	0, 30 , 45 sec and
	1 to 99 min.before/after delay
Battery:	Lithium Battery 3 Volts
Enclosure VA301C:	NEMA 4X, ABS - Polycarbonate,
	Indoor use
Enclosure VA301CDS:	Cast Aluminium #A356.0T6
Overvoltage category:	II
Pollution degree:	2
Dimensions VA301C:	7.99'' (H) x 11.02'' (W)x 2.76'' (D)
	(20.3cm x 28 cm x 7 cm)
Dimensions VA301CDS:	9,50'' (H) x 14,00'' (W) x 3,5'' (D)
	(24 cm x 36 cm x 9 cm)
Weight VA301C:	2.4 lbs (1.1 Kg)
Weight VA301CDS:	11,4 lbs (5.2 Kg)

INSTALLATION INSTRUCTIONS

Installation instructions must be strictly followed to ensure the proper functioning of the equipment. Honeywell Analytics 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.

WALL MOUNT INSTALLATION

VA301C WIRING DETAILS

CONTROLLER PCB

SD Card Datalogger

POWER (J22)
17 to 24 Vac, 24 to 38 Vdc, 500 mA
See note 1

V- V+
PREVIOUS
V+ V-
NEXT

VAC IN/VAC OUT +VDCIN GND
J23 J22
SHDN J13
C39 EOL2 R RC

A1 B1 A2 B2 SHIELD
A 1 Channel 1
B 1
A 2 Channel 2
B 2
C40 EOL3 R RC
LEFT SV5

J27
DOWN SV7
SV2 UP

SHIELD A3 B3 A4 B4
J24
PREVIOUS Channel 4
A 4 B 4
EOL4 R RC
RIGHT SV6

A 3 Channel 3
B 3
A 4 Channel 4
B 4
EOL1 R RC

ESC SV8
ENTER SV3

Notes:
1:Dedicated power supply must be used only for the controller.
2:Relays must not be linked directly on the ventilation system or other mecanism with a consumption higher than 1/6 HP.

Vulcain
508332
PCB301CR1
MADE IN CANADA

COMMUNICATION (J23-J24)
See note 2

Communication Wire Gauge:
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

*No transmitter can be connected to channel 4

RS-45
ETHERNET MODULE

EOL1
R RC
End-of-line jumper position
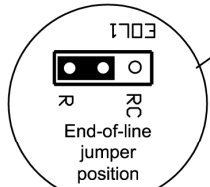
End-of-line specification:
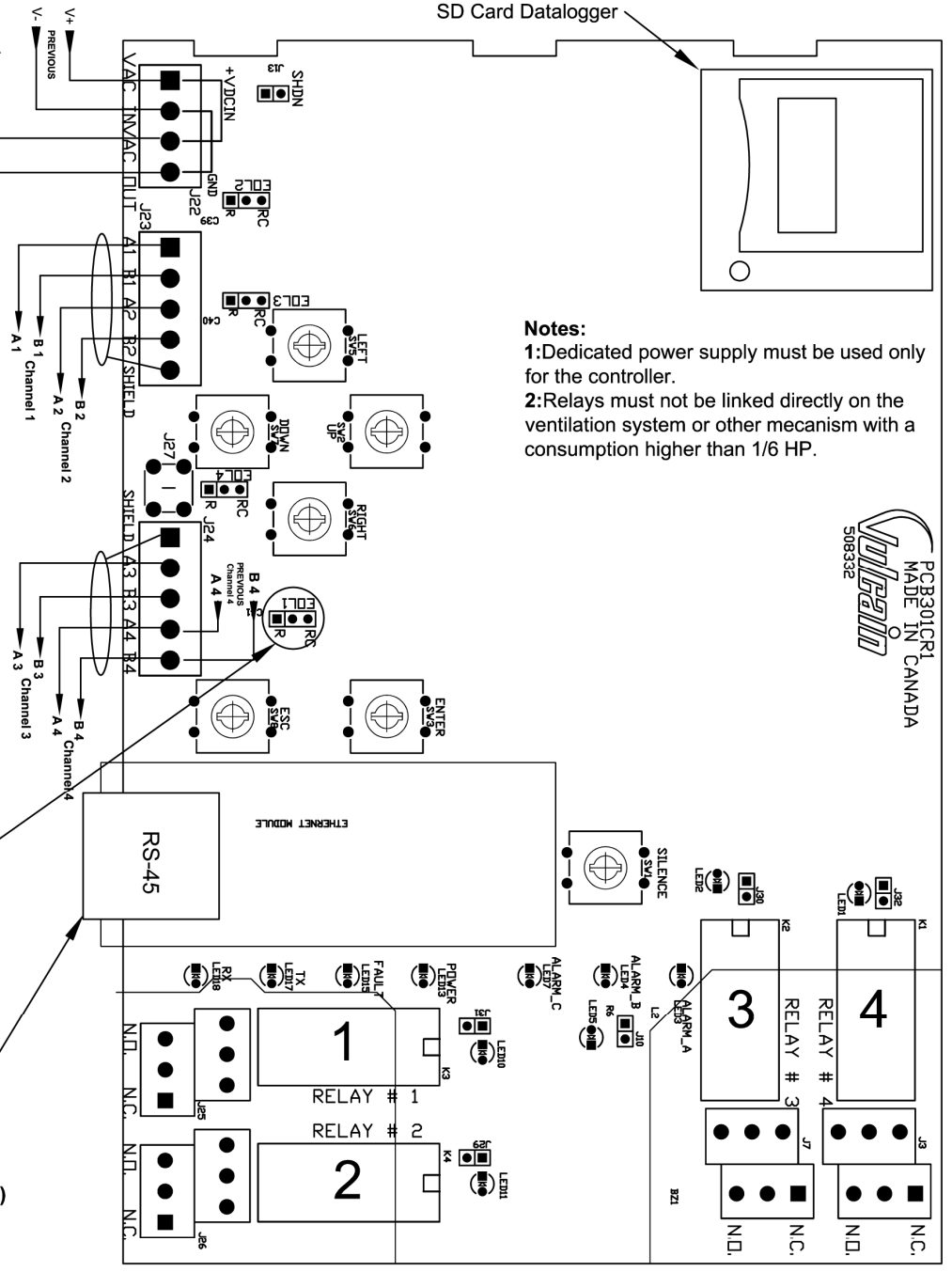The E.O.L. jumper for channels 1-2-3-4 must always be in E.O.L. position.

BACnet/IP MODULE (-BIP option)
Ethernet: 10/100-compatible with 10Base-T interface, RJ-45

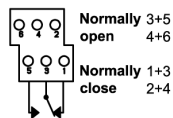Visual Indicators:
Green LED LINK
Yellow LED ACT

SILENCE SV4
LED2 J30

LED1 J32

K2 K1
3 RELAY # 3
4 RELAY # 4

RX LED8 TX LED7 FAULT LED5 POWER LED9 ALARM_C LED6 ALARM_B LED4 ALARM_A LED3
J31 J10
LED10

K3
1 RELAY # 1
RELAY # 2
2 K4 LED11

N.O. N.C. J25
N.O. N.C. J26

L2 BZ1

N.O. N.C. J7
N.O. N.C. J3

RELAY OUTPUTS (J3-J7-J25-J26)
5A,30Vdc or 250Vac (resistive load)

	Normally open	3+5 4+6
	Normally close	1+3 2+4

WIRING DETAILS

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 lenght 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
    Relais 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 diplayed on the screen
- the SDcard LED blinks

WARRANTY AND LIMITS OF LIABILITY

Honeywell Analytics Inc. 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 Analytics 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 Analytics 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 manual. However, Honeywell Analytics neither assumes 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 manual.

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