SENGENUITY
Sensor Engines by Vectron International

Datasheet

VisConnect®
VC-20xx Series
DIN Rail Converters

Description

The SenGenuity VisConnect® VC-20xx series of Converters are DIN rail mountable devices which provide viscosity and temperature readings from the SenGenuity ViSmart® VS-2000 and VS-2500 series of viscosity sensors. Supported protocols include CANopen, ASCII, and MODBUS RTU. The CAN and RS485 Converters have field configurable Node IDs and Bit Rates, plus a TBUS connector which reduces install time.

Performance Specifications

Parameter	Value
Physical IO	
Physical Layer, per OSI Model	CAN, RS485
Network Layer, per OSI Model	CANopen, MODBUS RTU, ASCII
Converter Data Outputs	Viscosity (AV)
	Temperature (C)
	Sensor and Converter Status
Electronic	
Power Supply Voltage (Vdc)	9 to 36
Power Supply Current (mA)	<100
Environmental	
Ambient Operating / Storage Temperature	0 to 60°C / -40 to 85°C
Relative Humidity	95%, no condensation
Mechanical	
Housing Dimensions	70.4mm (height) x 85mm (depth) x 22.5mm (width)
Mounting	DIN rail, 35mm, TBUS connector (optional)
Connector Type	PCB Terminal Blocks, 5mm
Vibration	EN60068-2-6 & EN60068-2-64
Shock	EN60068-2-27
Protection Degree	IP20
Approvals	
EMC Immunity/Emission	EN 55000, EN 61000-4-2, EN 61000-4-3, EN 61000-4-6
CANopen Protocol	CiA Certificate #: CiA201206-301V402/20-0153
MODBUS RTU Protocol	Modbus Conformance Test Specification Version 3.0

Electrical Connections

VC-2010 CANopen Converter

Terminal	Signal	Terminal	Signal
1	nc	9	MOSI
2	CANL	10	SCK
3	nc	11	A0
4	CANH	12	A1
5	Ground	13	GND
6	Power	14	V+
7	Ground	15	MISO
8	Power	16	GND

TBUS Electrical Connections

Terminal	Signal
1	Power
2	Ground
3	nc
4	CANH
5	CANL

nc = no connect

VC-2020 ASCII over RS485 Converter

Terminal	Signal	Terminal	Signal
1	B	9	MOSI
2	nc	10	SCK
3	A	11	A0
4	nc	12	A1
5	Ground	13	GND
6	Power	14	V+
7	Ground	15	MISO
8	Power	16	GND

TBUS Electrical Connections

Terminal	Signal
1	Power
2	Ground
3	nc
4	B
5	A

nc = no connect

VC-2030 MODBUS RTU over RS485 Converter

Terminal	Signal	Terminal	Signal
1	B	9	MOSI
2	nc	10	SCK
3	A	11	A0
4	nc	12	A1
5	Ground	13	GND
6	Power	14	V+
7	Ground	15	MISO
8	Power	16	GND

TBUS Electrical Connections

Terminal	Signal
1	Power
2	Ground
3	nc
4	B
5	A

nc = no connect

CANopen, ASCII & MODBUS RTU Converter DIP Switch Settings

Node ID Addressing Table

Address	DIP 1	DIP 2	DIP 3	DIP 4
10	OFF	OFF	OFF	OFF
11	OFF	OFF	OFF	ON
12	OFF	OFF	ON	OFF
13	OFF	OFF	ON	ON
14	OFF	ON	OFF	OFF
15	OFF	ON	OFF	ON
16	OFF	ON	ON	OFF
17	OFF	ON	ON	ON
18	ON	OFF	OFF	OFF
19	ON	OFF	OFF	ON
20	ON	OFF	ON	OFF
21	ON	OFF	ON	ON
22	ON	ON	OFF	OFF
23	ON	ON	OFF	ON
24	ON	ON	ON	OFF
25	ON	ON	ON	ON

CANopen Bit Rate Settings

DIP	Switch
5	OFF = 125 kbps
5	ON = 250 kbps

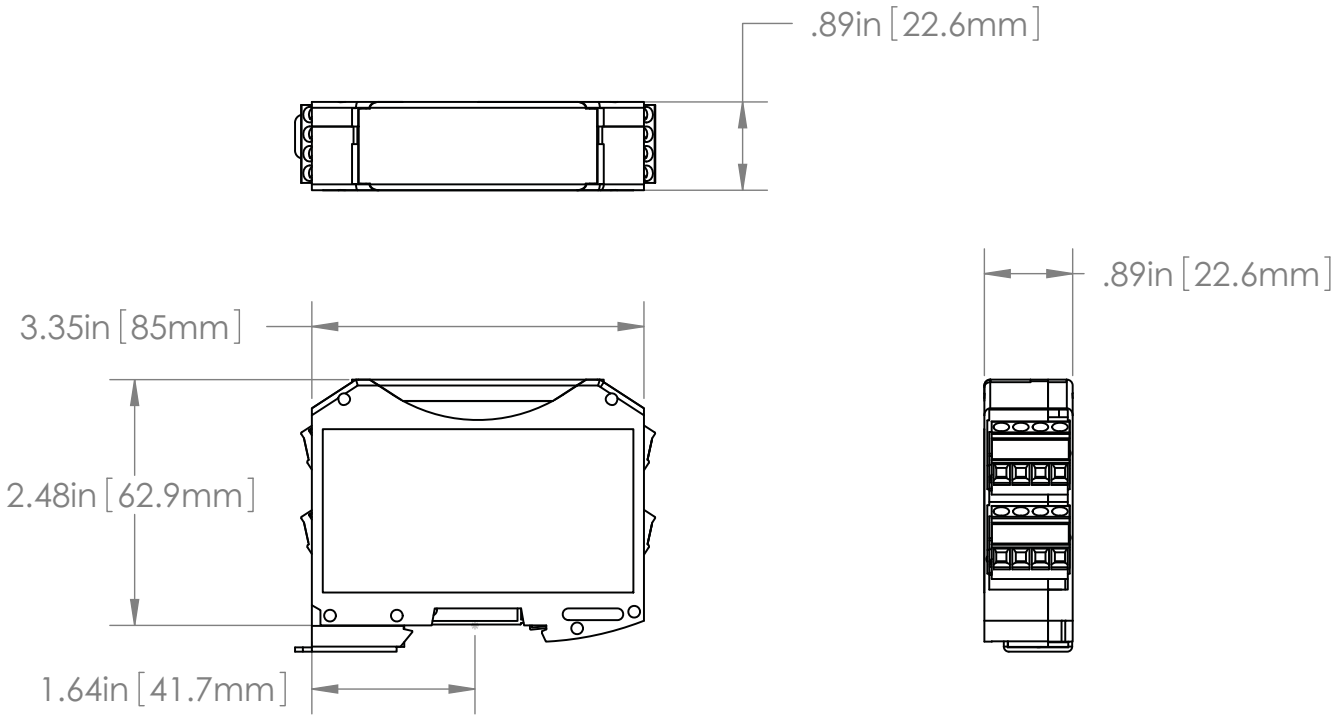
Bus Termination Settings

DIP	Switch
6	ON = 120Ω termination enabled
6	OFF = 120Ω termination disabled

ASCII & MODBUS RTU Bit Rate Settings

DIP	Switch
5	OFF = 9600 bps
5	ON = 19200 bps

Physical Dimensions



Ordering Information

Part No.	Model	Description
720200018	VC-2010	VC-2010 VisConnect CANopen Converter DIN Rail Mount
720200022	VC-2020	VC-2020 VisConnect ASCII RS485 Converter DIN Rail Mount
720200023	VC-2030	VC-2030 VisConnect Modbus RTU Converter DIN Rail Mount

*Please contact Vectron International for OEM applications

VC - 2 0 1 X - XXXX

DIN Rail Mount Series
2 = DIN Rail Mount Converter

Reserved
0 = reserved

Converter Output Protocol
1 = CANopen
2 = ASCII over RS485
3 = MODBUS RTU over RS485

Customer Special Code
blank = standard
XXXX = unique customer config/private label

External Connection Options
0 = 5 mm Screw Terminals, DIN rail TBUS connector & M/F plugs

Please contact SenGenuity at sensors@sengenuity.com for further details.