

# ViSmart® Viscosity Sensor Starter Kits

REAL TIME. ON-LINE. IN-LINE.



## Features

The ViSmart® Solid-State Viscosity Starter Kits contain all the essentials required to get you up and running to measure viscosity and temperature of your fluids, all in one simple kit. At the core of each kit is the VS-2511 or the VS-2610 solid-state Viscosity Sensor which can be installed directly in-line with the fluid path. The kits also include a VisConnect® VC-20xx Series Converter, power supply, and accessory cables. For hazardous locations, SenGenuity has assembled special safety certified kits that include ATEX, ETL and CSA approved components. The Starter Kit is a quick and powerful way to assess the value that the ViSmart® Viscosity Sensor can bring to your business.

### Get Familiar With ViSmart®

In the process of configuring, installing, and managing viscosity data from the ViSmart® Viscosity Sensor System, you will gain a deep understanding of the sensor capabilities. With this knowledge, you can identify and define solutions that serve your monitoring and control needs.

### Validate Your Application

Once you are familiar with the capabilities of the ViSmart® Viscosity Sensor System, the Starter Kit lets you test the sensor(s) as you see fit for the solution. You gain immediate, first-hand feedback on the feasibility and value of your application by conducting in-house testing.

## BENEFITS

### Quickly Acquire Viscosity Data

Often the largest challenge is gathering sample fluid viscosity data. With numerous Converters available, our Starter Kits allow you to choose a VisConnect® Converter which will help you to instrument your application and begin collecting viscosity and temperature data, and characterize your opportunity.

### Enable Decision Making

After examining the data, the Starter Kit provides a proof-of-solution that can enable decision making and allow us to partner with you to fulfill your specific needs and requirements.

Recommended Starter Kits for Water Based Inks, Coatings, and Adhesives		
Part No.	Description	Kit Contents
723200099	Kit, Viscometer Starter Kit for Non-Hazardous Locations, CANopen Protocol	<ul style="list-style-type: none"> <li>• ViSmart® VS-2511 Solid-State Viscosity Sensor</li> <li>• VisConnect® VC-2010 CANopen Converter</li> <li>• 2m Sensor Cable</li> <li>• DIN rail Mountable Power Supply</li> <li>• Quick Start Instructions &amp; Documentation on USB Stick</li> <li>• AC pigtail cable (specify plug when ordering)</li> <li>• DC power supply wires</li> <li>• Screwdriver</li> </ul>
723200100	Kit, Viscometer Starter Kit for Non-Hazardous Locations, ASCII over RS485 Protocol	<ul style="list-style-type: none"> <li>• ViSmart® VS-2511 Solid-State Viscosity Sensor</li> <li>• VisConnect® VC-2020 ASCII over RS485 Converter</li> <li>• 1.8m RS485-to-USB Cable</li> <li>• 2m Sensor Cable</li> <li>• DIN rail Mountable Power Supply</li> <li>• Quick Start Instructions &amp; Documentation on USB Stick</li> <li>• AC pigtail cable (specify plug when ordering)</li> <li>• DC power supply wires</li> <li>• Screwdriver</li> </ul>
723200101	Kit, Viscometer Starter Kit for Non-Hazardous Locations, MODBUS RTU over RS485 Protocol	<ul style="list-style-type: none"> <li>• ViSmart® VS-2511 Solid-State Viscosity Sensor</li> <li>• VisConnect® VC-2030 MODBUS over RS485 Converter</li> <li>• 1.8m RS485-to-USB Cable</li> <li>• 2m Sensor Cable</li> <li>• DIN rail Mountable Power Supply</li> <li>• Quick Start Instructions &amp; Documentation on USB Stick</li> <li>• AC pigtail cable (specify plug when ordering)</li> <li>• DC power supply wires</li> <li>• Screwdriver</li> </ul>
723200102	Kit, Viscometer Starter Kit for Non-Hazardous Locations, ASCII over RS232 Protocol	<ul style="list-style-type: none"> <li>• ViSmart® VS-2511 Solid-State Viscosity Sensor</li> <li>• VisConnect® VC-2040 ASCII over RS232 Converter</li> <li>• 1.8m RS232-to-USB Cable</li> <li>• 2m Sensor Cable</li> <li>• DIN rail Mountable Power Supply</li> <li>• Quick Start Instructions &amp; Documentation on USB Stick</li> <li>• AC pigtail cable (specify plug when ordering)</li> <li>• DC power supply wires</li> <li>• Screwdriver</li> </ul>
723200103	Kit, Viscometer Starter Kit for Non-Hazardous Locations, Analog 4-20 mA Protocol	<ul style="list-style-type: none"> <li>• ViSmart® VS-2511 Solid-State Viscosity Sensor</li> <li>• VisConnect® VC-2050 4-20mA Converter</li> <li>• 2m Sensor Cable</li> <li>• DIN rail Mountable Power Supply</li> <li>• Quick Start Instructions &amp; Documentation on USB Stick</li> <li>• AC pigtail cable (specify plug when ordering)</li> <li>• DC power supply wires</li> <li>• Screwdriver</li> </ul>

Recommended Starter Kits for Solvent Based Inks, Coatings, and Adhesives		
Part No.	Description	Kit Contents
723200104	Kit, Viscometer Starter Kit for Hazardous Locations, CANopen Protocol	<ul style="list-style-type: none"> <li>• ViSmart® VS-2511 Solid-State Viscosity Sensor</li> <li>• VisConnect® VC-2010 CANopen Converter</li> <li>• VB-2510 Shunt-Diode Barrier</li> <li>• 2m Sensor Cable</li> <li>• 18in Converter to Barrier Cable</li> <li>• DIN rail Mountable Power Supply</li> <li>• Quick Start Instructions &amp; Documentation on USB Stick</li> <li>• AC pigtail cable (specify plug when ordering)</li> <li>• DC power supply wires</li> <li>• Screwdriver</li> </ul>
723200105	Kit, Viscometer Starter Kit for Hazardous Locations, ASCII over RS485 Protocol	<ul style="list-style-type: none"> <li>• ViSmart® VS-2511 Solid-State Viscosity Sensor</li> <li>• VisConnect® VC-2020 ASCII over RS485 Converter</li> <li>• 1.8m RS485-to-USB Cable</li> <li>• VB-2510 Shunt-Diode Barrier</li> <li>• 2m Sensor Cable</li> <li>• 18in Converter to Barrier Cable</li> <li>• DIN rail Mountable Power Supply</li> <li>• Quick Start Instructions</li> <li>• AC pigtail cable (specify plug when ordering)</li> <li>• DC power supply wires</li> <li>• Screwdriver</li> </ul>
723200106	Kit, Viscometer Starter Kit for Hazardous Locations, MODBUS RTU over RS485 Protocol	<ul style="list-style-type: none"> <li>• ViSmart® VS-2511 Solid-State Viscosity Sensor</li> <li>• VisConnect® VC-2030 MODBUS over RS485 Converter</li> <li>• 1.8m RS485-to-USB Cable</li> <li>• VB-2510 Shunt-Diode Barrier</li> <li>• 2m Sensor Cable</li> <li>• 18in Converter to Barrier Cable</li> <li>• DIN rail Mountable Power Supply</li> <li>• Quick Start Instructions</li> <li>• AC pigtail cable (specify plug when ordering)</li> <li>• DC power supply wires</li> <li>• Screwdriver</li> </ul>
723200107	Kit, Viscometer Starter Kit for Hazardous Locations, ASCII over RS232 Protocol	<ul style="list-style-type: none"> <li>• ViSmart® VS-2511 Solid-State Viscosity Sensor</li> <li>• VisConnect® VC-2040 ASCII over RS232 Converter</li> <li>• 1.8m RS232-to-USB Cable</li> <li>• VB-2510 Shunt-Diode Barrier</li> <li>• 2m Sensor Cable</li> <li>• 18in Converter to Barrier Cable</li> <li>• DIN rail Mountable Power Supply</li> <li>• Quick Start Instructions</li> <li>• AC pigtail cable (specify plug when ordering)</li> <li>• DC power supply wires</li> <li>• Screwdriver</li> </ul>
723200108	Kit, Viscometer Starter Kit for Hazardous Locations, Analog 4-20mA Protocol	<ul style="list-style-type: none"> <li>• ViSmart® VS-2511 Solid-State Viscosity Sensor</li> <li>• VisConnect® VC-2050 4-20mA Converter</li> <li>• VB-2510 Shunt-Diode Barrier</li> <li>• 2m Sensor Cable</li> <li>• 18in Converter to Barrier Cable</li> <li>• DIN rail Mountable Power Supply</li> <li>• Quick Start Instructions</li> <li>• AC pigtail cable (specify plug when ordering)</li> <li>• DC power supply wires</li> <li>• Screwdriver</li> </ul>

## Ordering Information - Starter Kits (continued)

Recommended Starter Kits for Oils, Lubricants, Fuels, and Industrial Fluids		
Part No.	Description	Kit Contents
723200122	Kit, Viscometer Starter Kit for High Temp, Non-Hazardous Locations with CANopen Protocol	<ul style="list-style-type: none"> <li>• ViSmart® VS-2610 Solid-State Viscosity Sensor</li> <li>• VisConnect® VC-2010 CANopen Converter</li> <li>• 2m Sensor Cable</li> <li>• DIN rail Mountable Power Supply</li> <li>• Quick Start Instructions &amp; Documentation on USB Stick</li> <li>• AC pigtail cable (specify plug when ordering)</li> <li>• DC power supply wires</li> <li>• Screwdriver</li> </ul>
723200116	Kit, Viscometer Starter Kit for High Temp, Non-Hazardous Locations with ASCII over RS485 Converter	<ul style="list-style-type: none"> <li>• ViSmart® VS-2610 Viscosity Sensor, High Temp</li> <li>• VisConnect® VC-2020 ASCII over RS485 Converter</li> <li>• 1.8m RS485-to-USB Cable</li> <li>• 2m Sensor Cable</li> <li>• DIN rail Mountable Power Supply</li> <li>• Quick Start Instructions &amp; Documentation on USB Stick</li> <li>• AC pigtail cable (specify plug when ordering)</li> <li>• DC power supply wires</li> <li>• Screwdriver</li> </ul>
723200113	Kit, Viscometer Starter Kit for High Temp, Non-Hazardous Locations with MODBUS RTU over RS485 Converter	<ul style="list-style-type: none"> <li>• ViSmart® VS-2610 Viscosity Sensor, High Temp</li> <li>• VisConnect® VC-2030 MODBUS over RS485 Converter</li> <li>• 1.8m RS485-to-USB Cable</li> <li>• 2m Sensor Cable</li> <li>• DIN rail Mountable Power Supply</li> <li>• Quick Start Instructions &amp; Documentation on USB Stick</li> <li>• AC pigtail cable (specify plug when ordering)</li> <li>• DC power supply wires</li> <li>• Screwdriver</li> </ul>
723200130	Kit, Viscometer Starter Kit for High Temp, Non-Hazardous Locations, ASCII over RS232 Protocol	<ul style="list-style-type: none"> <li>• ViSmart® VS-2610 Viscosity Sensor, High Temp</li> <li>• VisConnect® VC-2040 ASCII over RS232 Converter</li> <li>• 1.8m RS232-to-USB Cable</li> <li>• 2m Sensor Cable</li> <li>• DIN rail Mountable Power Supply</li> <li>• Quick Start Instructions &amp; Documentation on USB Stick</li> <li>• AC pigtail cable (specify plug when ordering)</li> <li>• DC power supply wires</li> <li>• Screwdriver</li> </ul>
723200133	Kit, Viscometer Starter Kit for High Temp, Non-Hazardous Locations with Analog 4-20mA Converter	<ul style="list-style-type: none"> <li>• ViSmart® VS-2610 Viscosity Sensor, High Temp</li> <li>• VisConnect® VC-2050 4-20mA Converter</li> <li>• 2m Sensor Cable</li> <li>• DIN rail Mountable Power Supply</li> <li>• Quick Start Instructions &amp; Documentation on USB Stick</li> <li>• AC pigtail cable (specify plug when ordering)</li> <li>• DC power supply wires</li> <li>• Screwdriver</li> </ul>

## Accessories - Available AC Power Supply Plugs

Part Number	Description
238200322	Power Cord, Euro Plug to pigtail, 8ft
238200323	Power Cord, US Plug to pigtail, 6.5ft
238200324	Power Cord, UK Plug to pigtail, 8ft

Note: One power cord of choice will be delivered free of charge with each starter kit

Part Number	Description
721200073	Fluid Sensor Test Cell 25 mL <sup>1</sup>
231200456	QuickVis Tee Fitting For ViSmart Viscosity Sensor <sup>2</sup>
238200219	CABLE, M12 8pin F to pigtail 2m <sup>3</sup>
238200220	CABLE, M12 8pin F to pigtail 5m <sup>3</sup>
238200221	CABLE, M12 8pin F to pigtail 10m <sup>3</sup>
238200418	CABLE, M12 8pin F to pigtail 15m <sup>3</sup>
238200419	CABLE, M12 8pin F to pigtail 20m <sup>3</sup>
238200383	CABLE, M12 8pin F Right Angle to pigtail 5m <sup>3</sup>
238200326	CABLE, M12 8pin F to pigtail 30m, halogen free <sup>3</sup>

1. For further information regarding the Fluid Sensor Test Cell please visit [http://www.sengenuity.com/tech\\_ref/Fluid%20Sensor%20Test%20Cell%2025%20mL.pdf](http://www.sengenuity.com/tech_ref/Fluid%20Sensor%20Test%20Cell%2025%20mL.pdf)
2. Requires two 3/4" NPT pip fittings. For further information please visit [http://www.sengenuity.com/tech\\_ref/QuickVis%20T-Fitting%20for%20ViSmart%20Sensor.pdf](http://www.sengenuity.com/tech_ref/QuickVis%20T-Fitting%20for%20ViSmart%20Sensor.pdf)
3. ViSmart® Viscosity Sensor Cordsets data sheet available at [http://www.sengenuity.com/tech\\_ref/ViSmart%20Viscosity%20Sensor%20Cordsets.pdf](http://www.sengenuity.com/tech_ref/ViSmart%20Viscosity%20Sensor%20Cordsets.pdf)

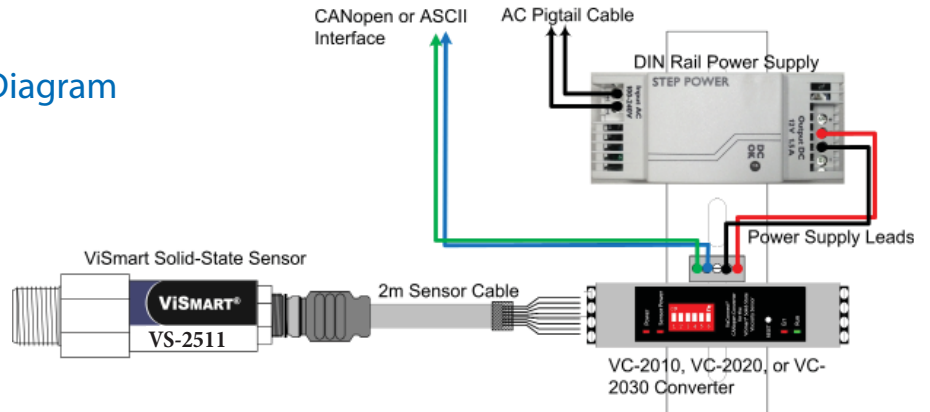
## Ordering Information

### Ordering Instructions

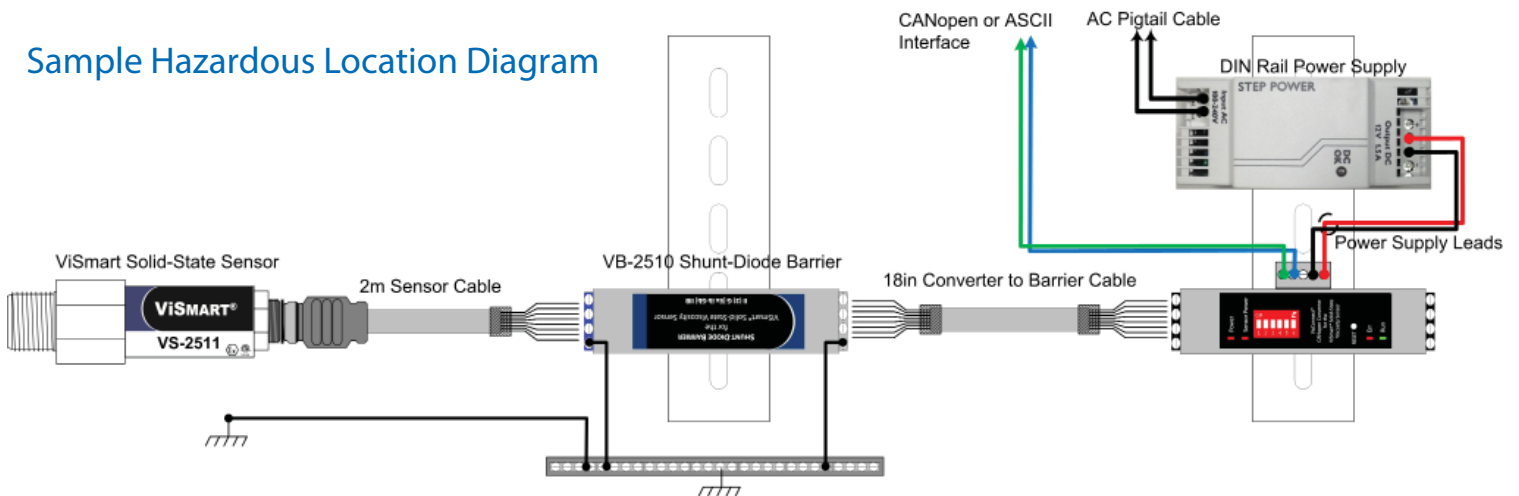
1. Select a Starter Kit according to your specific application.
2. Select a power plug from the Accessories - AC Power Supply Plugs section.
3. Select any additional accessories from the Accessories - General sections.

## System Block Diagrams

### Sample Non-Hazardous Location Diagram



### Sample Hazardous Location Diagram



#### DISCLAIMER

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