



Scan the QR code to access:

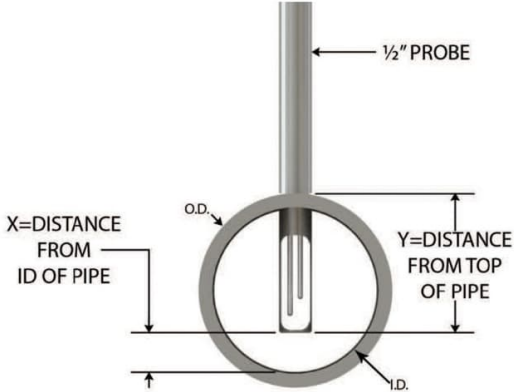
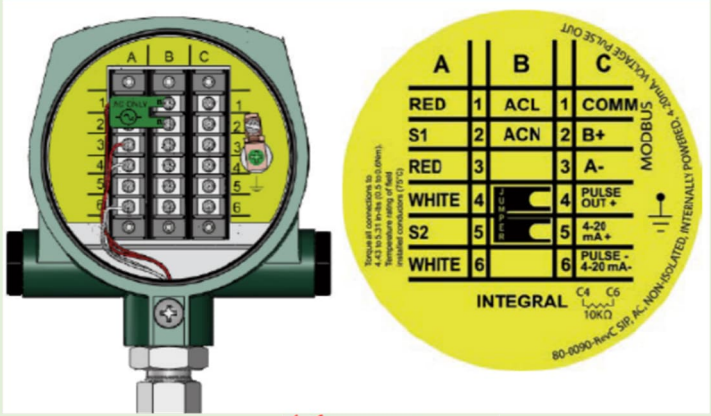
- Wiring diagrams
- User manuals
- Communication guides
- Other technical documentation on sagemetering.com

Technical Docs



Step	Description	Installation Diagrams																										
1	<p>PACKAGE CONTENTS:</p> <p>Confirm that your order has all equipment and accessories referenced in the packing list.</p>																											
2	<p>INSERTION-STYLE FLOW METER DIAMETER CHECK:</p> <p>Check that the internal pipe diameter (ID) matches the pipe ID shown on the Certificate of Conformance.</p>	 <p align="center">PRODUCT QUALITY CERTIFICATE OF CONFORMANCE Product Inspection & Quality Statement</p> <p>All individual parts and components which make up the product being provided have been inspected and approved for manufacture. In addition, subassemblies have been inspected, tested, and accepted for final assembly. Each completed assembly has been final tested and approved for shipment.</p> <p align="center">Conformance Statement</p> <p>SAGE Metering Incorporated certifies this instrument was tested in compliance with ANSI/NCSS Z540 and ISO/IEC 17025 requirements. SAGE Metering, Inc. calibration services are derived from MIL-STD-45662A. All Sage Meters are Met Labs approved and Met Labs is a Nationally Recognized Testing Laboratory (NRTL) which is recognized by OSHA. The tests are performed using measuring & test equipment with certified NIST traceability. (Applicable NIST numbers are available upon request). Reproduction of the complete certificate is allowed. Parts of the certificate may only be reproduced after written permission is granted by SAGE Metering, Inc.</p>																										
3	<p>FLOW DIRECTION:</p> <p>Verify the straight-run requirements based upon pipe ID and meter style.</p>	<table border="1"> <thead> <tr> <th colspan="3" data-bbox="764 1318 1442 1381">IMPORTANCE OF FLOW CONDITIONING Recommended Pipe Diameters Upstream</th> </tr> <tr> <th data-bbox="764 1381 1000 1503" rowspan="2">DISTURBANCE</th> <th data-bbox="1000 1381 1224 1503">Without Flow Conditioning</th> <th data-bbox="1224 1381 1442 1503">With Flow Conditioning¹</th> </tr> <tr> <th data-bbox="1000 1503 1224 1503">Minimum Industry Recommendation</th> <th data-bbox="1224 1503 1442 1503">Sage Recommendation</th> </tr> </thead> <tbody> <tr> <td data-bbox="764 1503 1000 1549">One 90° Elbow</td> <td data-bbox="1000 1503 1224 1549">25</td> <td data-bbox="1224 1503 1442 1549">3</td> </tr> <tr> <td data-bbox="764 1549 1000 1596">Two 90° Elbows in the Same Plane</td> <td data-bbox="1000 1549 1224 1596">36</td> <td data-bbox="1224 1549 1442 1596">5</td> </tr> <tr> <td data-bbox="764 1596 1000 1642">Two 90° Elbows in Different Planes</td> <td data-bbox="1000 1596 1224 1642">62</td> <td data-bbox="1224 1596 1442 1642">9</td> </tr> <tr> <td data-bbox="764 1642 1000 1688">4:1 Area Reduction</td> <td data-bbox="1000 1642 1224 1688">18</td> <td data-bbox="1224 1642 1442 1688">3</td> </tr> <tr> <td data-bbox="764 1688 1000 1734">4:1 Area Expansion</td> <td data-bbox="1000 1688 1224 1734">84</td> <td data-bbox="1224 1688 1442 1734">10</td> </tr> <tr> <td data-bbox="764 1734 1000 1780">Multiple Disturbance</td> <td data-bbox="1000 1734 1224 1780">TBD</td> <td data-bbox="1224 1734 1442 1780">TBD</td> </tr> </tbody> </table> <p>¹ This column applies to in-line flow meters, which come standard with built-in flow conditioners, as well as insertion meters, when installed with upstream Captive Flow Conditioners.</p>	IMPORTANCE OF FLOW CONDITIONING Recommended Pipe Diameters Upstream			DISTURBANCE	Without Flow Conditioning	With Flow Conditioning ¹	Minimum Industry Recommendation	Sage Recommendation	One 90° Elbow	25	3	Two 90° Elbows in the Same Plane	36	5	Two 90° Elbows in Different Planes	62	9	4:1 Area Reduction	18	3	4:1 Area Expansion	84	10	Multiple Disturbance	TBD	TBD
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200-300 Quick Start Guide

<p>4</p>	<p>VERIFY CORRECT PROBE DEPTH SETTING:</p> <p>1/2-Inch Probe</p> <p>Refer to section in user manual: <i>1/2" Probe Diameter Installation</i></p>																																				
<p>5</p>	<p>POWER SOURCE and 4-20mA WIRING:</p> <p>Remove the flow meter back cover to verify wiring connectivity for integral and in-line meters.</p> <p><i>Scan QR Code for Wiring Diagrams</i></p> <p>4-20mA & VDC PULSE OUT 24VDC 4-20mA & mA PULSE OUT 24VDC Isolated 4-20mA & VDC PULSE OUT 24VDC Isolated 4-20mA & mA PULSE OUT 24 VDC 4-20mA & VDC PULSE OUT 120/240 VAC Nominal 4-20mA & mA PULSE OUT 120/240 VAC Nominal</p>	 <table border="1" data-bbox="1089 768 1442 1129"> <thead> <tr> <th></th> <th>A</th> <th>B</th> <th>C</th> <th></th> </tr> </thead> <tbody> <tr> <td>RED</td> <td>1</td> <td>ACL</td> <td>1</td> <td>COMM</td> </tr> <tr> <td>S1</td> <td>2</td> <td>ACN</td> <td>2</td> <td>B+</td> </tr> <tr> <td>RED</td> <td>3</td> <td></td> <td>3</td> <td>A-</td> </tr> <tr> <td>WHITE</td> <td>4</td> <td></td> <td>4</td> <td>PULSE OUT +</td> </tr> <tr> <td>S2</td> <td>5</td> <td></td> <td>5</td> <td>4-20 mA +</td> </tr> <tr> <td>WHITE</td> <td>6</td> <td></td> <td>6</td> <td>PULSE - 4-20 mA-</td> </tr> </tbody> </table> <p>INTEGRAL</p> <p>80-0090-RevC-SP-AC, NON-ISOLATED, INTERNALLY POWERED, 2-WIRE VOLTAGE PULSE OUT</p> <p>MODBUS</p> <p>Remove all connections to 4-43 to 5-51 (Pulse) (P.S. 0.5 to 100mA) (Temperature sensing of flow)</p> <p>C4 C6 10KΩ</p>		A	B	C		RED	1	ACL	1	COMM	S1	2	ACN	2	B+	RED	3		3	A-	WHITE	4		4	PULSE OUT +	S2	5		5	4-20 mA +	WHITE	6		6	PULSE - 4-20 mA-
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<p>6</p>	<p>REMOTE-SENSOR WIRING:</p> <p>Remove the flow meter back cover and the remote sensor probe front cover to verify wiring connectivity.</p> <p>Refer to section in user manual: <i>Remote Cable Wiring</i></p> <p>FROM REMOTE SENSOR CABLE, CONNECT WIRE CONDUCTORS TO TERMINAL BLOCK A ON METER</p> <p>POS. 1 RED POS. 2 GREEN POS. 3 BLUE POS. 4 WHITE POS. 5 BLACK POS. 6 ORANGE</p>	