



Installation Quick Start Guide

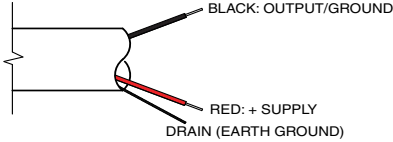


Thank you for your purchase of quality pressure measurement instruments by KELLER. They are designed to be robust and should provide years of reliable service. However, as with any precision instrument, mishandling of these transmitters can lead to premature failure. Should any question(s) arise during the installation process, STOP and call (toll-free) 877-253-5537. For reference, the transmitter range, output, and connection information are laser-engraved on the body of each transmitter. Scan the QR code or visit <https://www.us.keller-pressure.com/quickstart> to be directed to KELLER's quickstart page for more information on installation of KELLER transmitters.

Wiring - Cable

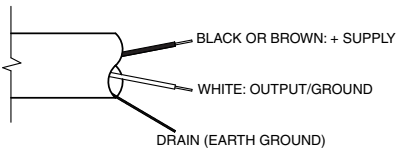
4-20 mA - IS-Approved

Applies only to Valueline, Levelgage, and LevelRat transmitters approved for use in hazardous areas



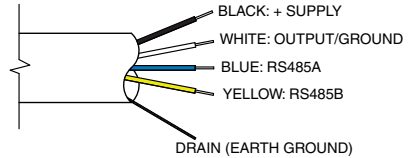
Standard 4-20mA

Applies Econoline, Valueline, and Levelgage transmitters



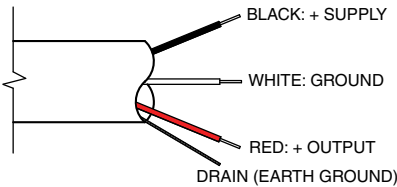
4-20mA + RS485

Applies to Preciseline, Acculevel, Microlevel, Nanolevel and LevelRat (non-IS) transmitters.



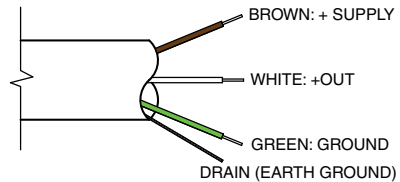
Standard VDC

Applies to Valueline, and Levelgage transmitters



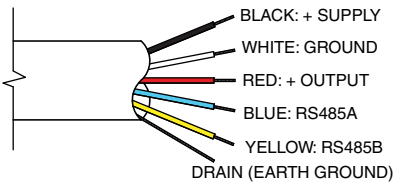
Ratiometric VDC

Applies to Econoline transmitters



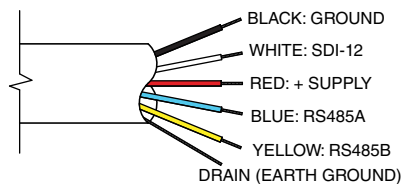
VDC + RS485

Applies to Acculevel and Preciseline transmitters

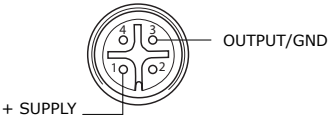
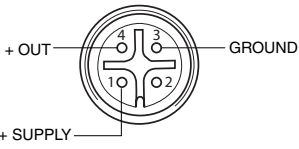
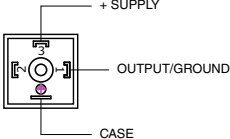
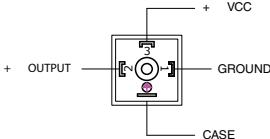
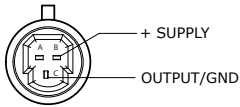
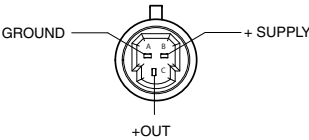
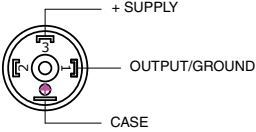
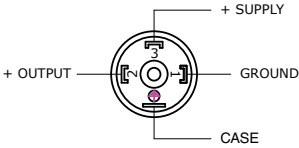
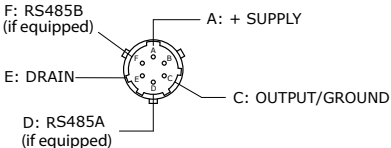
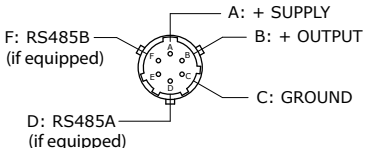
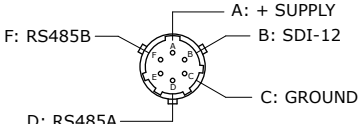


SDI-12 + RS485

Applies to Preciseline SDI and Acculevel SDI transmitters.

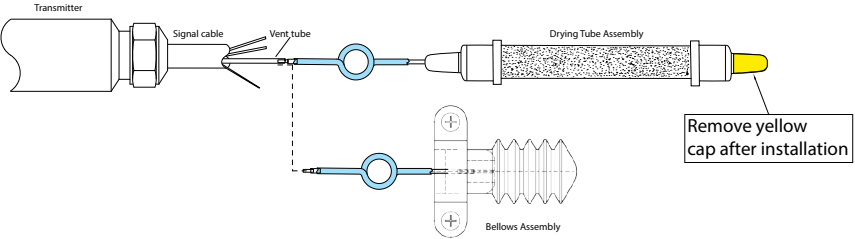


Wiring - Connectors

<p><u>M12 Connector - 4-20mA</u> Applies to Econoline transmitters</p> 	<p><u>M12 Connector - VDC</u> Applies to Econoline transmitters</p> 
<p><u>mPm393 Connector - 4-20 mA</u> EN 175301-803 Form C 9.4mm Applies to Econoline and Valueline transmitters</p> 	<p><u>mPm393 Connector - VDC</u> EN 175301-803 Form C 9.4mm Applies to Econoline and Valueline transmitters</p> 
<p><u>Aptiv Packard Connector - 4-20mA</u> Applies to Econoline transmitters</p> 	<p><u>Aptiv Packard Connector - VDC</u> Applies to Econoline transmitters</p> 
<p><u>DIN43650 Connector - 4-20mA</u> EN 175301-803 Form A 18mm Applies to Valueline transmitters</p> 	<p><u>DIN43650 Connector - VDC</u> EN 175301-803 Form A 18mm Applies to Valueline transmitters</p> 
<p><u>MIL-DTL-26482 Connector - 4-20mA</u> Applies to Valueline and Preciseline transmitters</p> 	<p><u>MIL-DTL-26482 Connector - VDC</u> Applies to Valueline and Preciseline transmitters</p> 
<p><u>MIL-DTL-26482 Connector - SDI-12</u> Applies to Preciseline SDI transmitters</p> 	

Reference Tube

The hollow tube in the center of the cable attached to vented transmitters is an atmospheric vent for the level sensor, in order that normal changes in local barometric pressure do not affect the level transmitter accuracy. This tube should be terminated in a clean, dry area that is vented to atmosphere. Better yet, it should be connected to a desiccant dryer or to an aneroid bellows as shown. Does not apply to sealed or absolute units.



Supply Voltage

	Supply _i	Current	Load resistance
4-20mA - IS Approved	11...30 VDC	3.2-22 mA	<(Supply-11V)/0.022A
4-20mA with lightning protection	11...30 VDC	3.2-22 mA	<(Supply-11V)/0.022A
4-20mA w/o lightning protection	8...32 VDC	3.2-22 mA	<(Supply-8V)/0.022A
4-20 mA + RS485	8...32 VDC	3.2-22 mA	<(Supply-8V)/0.022A
0-5 VDC + RS485	8...32 VDC	< 8 mA	>5k ohm
0-10 VDC + RS485	13...32 VDC	< 8 mA	>5k ohm
SDI-12 + RS485	6...32 VDC	<0.1mA (Sleep) < 5.5 mA (active) < 5 ms (interface ready)	
Start-up time	250 ms		
1. Nominal values may be higher depending upon cable length. Internal lightning protection increases the minimum-required supply voltage from 8VDC to 11VDC, due to internal resistance of the surge protectors.			
In addition, cable loop resistance (~76Ω / 1000ft) adds to the supply requirement. In order to ensure proper system operation, calculate the minimum required supply voltage (at the source) as follows:			
For internal only protector (standard with 4-20mA output): MINIMUM SUPPLY VOLTAGE = 11 + 0.022 (CABLE LENGTH x 0.076) VDC			
For two-part (internal+external) system (recommended): MINIMUM SUPPLY VOLTAGE = 11.6 + 0.022 (CABLE LENGTH x 0.076) VDC			

Warranty

Level and pressure transmitters from KELLER are warrantied for a period of 2 years from date of manufacture against defects in materials and workmanship.

For full details visit <https://www.us.keller-pressure.com/quickstart>

