

TWS

# TestMate® Water Sensor for BioDiesel



The TWS-C-E is a water and temperature sensor for the continuous monitoring of ester based fuels (like biodiesel) - accurately, continuously and on line. It measures the water content relative to the saturation concentration (saturation point) and outputs the degree of saturation (saturation level) in the range of 0 to 100% as a 4-20 mA signal. A reading of 0% would indicate the absence of water, while a reading of 100% would indicate that a fluid is saturated with water.

## Specifications

<b>Measuring Range (Saturation level):</b>	0 to 100%
<b>Operating pressure:</b>	Max. 725 psi, / max. 50 bar
<b>Overload pressure:</b>	Max. 9135 psi / max. 630 bar
<b>Parts in contact with media:</b>	stainless steel, seal viton or EPDM, ceramic with evaporated metal
<b>Output signal:</b>	4 to 20 mA
<b>Calibrated accuracy:</b>	± 2 % FS max.
<b>Accuracy in media measurements:</b>	± 3% FS typ.
<b>Pressure-dependent:</b>	+ 0.02% FS/bar
<b>Output signal:</b>	4 to 20 mA
<b>Accuracy:</b>	* ± 2% FS max.
<b>Nominal temperature range:</b>	32° to 194° F (0° to 90°C)
<b>Ambient Temperature:</b>	-40° to 212° F (-40° to 100°C)
<b>Fluid temperature range:</b>	-40° to 257° F (-40° to 100° C)
<b>Viscosity range:</b>	32 to 23175 SUS
<b>Flow velocity:</b>	< 16 ft/s
<b>Media tolerance:</b>	mineral oil based fluids, natural and synthetic esters
<b>CE mark:</b>	EN 50081-1, EN 50081-2, EN 50082-1, EN 61000-6-2
<b>Type of Protection acc. DIN 40050:</b>	IP 67
<b>Supply voltage:</b>	12 to 32 V DC
<b>Residual ripple supply voltage:</b>	≤ 5%
<b>Mechanical connection:</b>	G3/8A DIN 3852
<b>Torque rating:</b>	18.5 ft-lbs.
<b>Electrical connection:</b>	M12x1, 5 pole (DIN VDE 0627)
	Pin 1: +Ub Pin 2: Signal saturation level Pin 3: OV / GND Pin 4: Signal temperature Pin 5: not connected

## Model Code

### How to Build a Valid Model Number for a Schroeder TWS:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
TWS				

**Example:** NOTE: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	
TWS	C	E	0	0	= TWSCE00

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
<b>Model</b>	<b>Serial</b>	<b>Medium</b>	<b>Signal Technology</b>	<b>Signal Technology</b>
TWS	C series C	M Mineral oil E Esters	Analog output 1 0 saturation level signal 4 to 20 mA	Analog output 1 0 temperature signal 4 to 20 mA