

SPEC SHEET

Plug-in Type Digital Indicating Conductivity Meter

WIL-102- ECH (High Concentration)

- DIN rail mounted type
- Various settings, calibration operable via software communication (RS-485)
- 24 V power supply available (user-specified)
- Transmission output 1 and 2 (optional)



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Model	<table><tr><td>W I L - 1 0</td><td>2</td><td>-EC</td><td>H</td><td></td><td>,</td><td> </td><td></td></tr><tr><td>Input points</td><td>2</td><td></td><td></td><td></td><td></td><td></td><td>2 points</td></tr><tr><td colspan="2" rowspan="2">Input</td><td rowspan="2">EC</td><td rowspan="2"></td><td rowspan="2"></td><td rowspan="2"></td><td rowspan="2"></td><td>4-electrode conductivity sensor (Temperature element: Pt100) (*1)</td></tr><tr><td>4-electrode conductivity sensor (Temperature element: Pt1000) (*1)</td></tr><tr><td colspan="3">Concentration</td><td>H</td><td></td><td></td><td></td><td>High concentration</td></tr><tr><td colspan="4" rowspan="2">Power supply voltage</td><td></td><td></td><td></td><td>100 to 240 V AC (standard)</td></tr><tr><td>1</td><td></td><td></td><td>24 V AC/DC (*2)</td></tr><tr><td colspan="5" rowspan="3">Option</td><td>EVT</td><td></td><td>2-points Contact output</td></tr><tr><td>TA</td><td></td><td></td><td>1-point Transmission output 1-point Contact output</td></tr><tr><td>TA2</td><td></td><td></td><td>2-points Transmission output</td></tr></table> (*1) This input temperature specification was specified at the time of ordering. (*2) Supply voltage 100 to 240 V AC is standard. When ordering 24 V AC/DC, enter 1 in Power supply voltage, after 'ECH'. Accessories sold separately: Socket: ASK-001-1 (Finger-safe, Ring terminals unusable)							W I L - 1 0	2	-EC	H		,			Input points	2						2 points	Input		EC					4-electrode conductivity sensor (Temperature element: Pt100) (*1)	4-electrode conductivity sensor (Temperature element: Pt1000) (*1)	Concentration			H				High concentration	Power supply voltage							100 to 240 V AC (standard)	1			24 V AC/DC (*2)	Option					EVT		2-points Contact output	TA			1-point Transmission output 1-point Contact output	TA2			2-points Transmission output																																					
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Measurement range (Rated scale)	<table><tr><th colspan="3">Input</th><th colspan="2">Scale Range</th><th colspan="2">Resolution</th></tr><tr><td rowspan="20">Conductivity</td><td rowspan="20">Conductivity</td><td rowspan="20">Cell constant 1.0/cm</td><td colspan="2">0.00 to 20.00 mS/cm</td><td colspan="2">0.01 mS/cm</td></tr><tr><td colspan="2">0.0 to 200.0 mS/cm</td><td colspan="2">0.1 mS/cm</td></tr><tr><td colspan="2">0.0 to 500.0 mS/cm</td><td colspan="2">0.1 mS/cm</td></tr><tr><td colspan="2">0 to 500 mS/cm</td><td colspan="2">1 mS/cm</td></tr><tr><td colspan="2">0.000 to 2.000 mS/cm</td><td colspan="2">0.001 mS/cm</td></tr><tr><td colspan="2">0.000 to 5.000 mS/cm</td><td colspan="2">0.001 mS/cm</td></tr><tr><td colspan="2">0.00 to 50.00 mS/cm</td><td colspan="2">0.01 mS/cm</td></tr><tr><td colspan="2">0 to 2000 μS/cm</td><td colspan="2">1 μS/cm</td></tr><tr><td colspan="2">0 to 5000 μS/cm</td><td colspan="2">1 μS/cm</td></tr><tr><td colspan="2">0.000 to 2.000 S/m</td><td colspan="2">0.001 S/m</td></tr><tr><td colspan="2">0.00 to 20.00 S/m</td><td colspan="2">0.01 S/m</td></tr><tr><td colspan="2">0.00 to 50.00 S/m</td><td colspan="2">0.01 S/m</td></tr><tr><td colspan="2">0.0 to 50.0 S/m</td><td colspan="2">0.1 S/m</td></tr><tr><td colspan="2">0 to 2000 mS/m</td><td colspan="2">1 mS/m</td></tr><tr><td colspan="2">0.000 to 5.000 S/m</td><td colspan="2">0.001 S/m</td></tr><tr><td colspan="2">0.0 to 200.0 mS/m</td><td colspan="2">0.1 mS/m</td></tr><tr><td colspan="2">0.0 to 500.0 mS/m</td><td colspan="2">0.1 mS/m</td></tr><tr><td colspan="2">0.0 to 20.0 g/L</td><td colspan="2">0.1 g/L</td></tr><tr><td colspan="2">0 to 200 g/L</td><td colspan="2">1 g/L</td></tr><tr><td colspan="2">0 to 500 g/L</td><td colspan="2">1 g/L</td></tr><tr><td colspan="2">0 to 2000 mg/L</td><td colspan="2">1 mg/L</td></tr><tr><td colspan="2">0 to 5000 mg/L</td><td colspan="2">1 mg/L</td></tr></table>							Input			Scale Range		Resolution		Conductivity	Conductivity	Cell constant 1.0/cm	0.00 to 20.00 mS/cm		0.01 mS/cm		0.0 to 200.0 mS/cm		0.1 mS/cm		0.0 to 500.0 mS/cm		0.1 mS/cm		0 to 500 mS/cm		1 mS/cm		0.000 to 2.000 mS/cm		0.001 mS/cm		0.000 to 5.000 mS/cm		0.001 mS/cm		0.00 to 50.00 mS/cm		0.01 mS/cm		0 to 2000 μS/cm		1 μS/cm		0 to 5000 μS/cm		1 μS/cm		0.000 to 2.000 S/m		0.001 S/m		0.00 to 20.00 S/m		0.01 S/m		0.00 to 50.00 S/m		0.01 S/m		0.0 to 50.0 S/m		0.1 S/m		0 to 2000 mS/m		1 mS/m		0.000 to 5.000 S/m		0.001 S/m		0.0 to 200.0 mS/m		0.1 mS/m		0.0 to 500.0 mS/m		0.1 mS/m		0.0 to 20.0 g/L		0.1 g/L		0 to 200 g/L		1 g/L		0 to 500 g/L		1 g/L		0 to 2000 mg/L		1 mg/L		0 to 5000 mg/L		1 mg/L	
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Repeatability	Conductivity: ±0.5% of input span Salinity conversion: ±1% of input span TDS conversion: ±1.5% of input span																																									
Linearity	Conductivity: ±0.5% of input span Salinity conversion: ±1% of input span TDS conversion: ±1.5% of input span																																									
Conductivity adjustment	Conductivity Zero adjustment: Zero adjustment value range: -10% of input span to 10% of input span Conductivity Span adjustment: Span adjustment value range: 0.700 to 1.300																																									
Temperature adjustment	Adjustment range: -10.0 to 10.0℃																																									
Self-diagnosis	The CPU is monitored by a watchdog timer, and if an abnormal status occurs, the instrument is switched to warm-up status.																																									
Temperature compensation element	4-electrode conductivity sensor (Temperature element: Pt100) 4-electrode conductivity sensor (Temperature element: Pt1000)																																									
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Ambient temperature	0 to 50℃ (32 to 122℉)																																									
Ambient humidity	35 to 85 %RH (Non-condensing)																																									
Power supply (user-specified)	WIL-102-ECH: 100 to 240 V AC 50/60 Hz Allowable fluctuation range: 85 to 264 V AC WIL-102-ECH 1: 24 V AC/DC 50/60 Hz Allowable fluctuation range: 20 to 28 V AC/DC																																									
Structure	DIN rail mounted Case: Flame-resistant resin, Color: Light gray Front panel: Membrane sheet																																									
Protection structure	Overvoltage category II, Pollution degree 2 (IEC61010-1)																																									
Safety standards	RoHS directive compliant																																									
Dimensions	W30 x H88 x D108 mm (including socket)																																									
Weight	Approx. 200 g (including socket)																																									
Contact output (EVT option)	Relay contact 1a (Bit reading via 2 status flags for 1 output in Serial communication) 2-points Contact output, Control capacity: 3 A 250 V AC (Resistive load), 1 A 250 V AC (Inductive load, cosφ=0.4), Electrical life: 100,000 cycles, Control action: ON/OFF control																																									
Transmission output 1 (TA option)	Converting pH or temperature to analog signal every input sampling period, outputs the value in current. (Factory default: Conductivity) If Transmission output 1 high limit and low limit are set to the same value, Transmission output 1 will be fixed at 4 mA DC. Resolution: 12000, Current: 4 to 20 mA DC (Load resistance: Max 550 Ω) Output accuracy: Within ±0.3% of Transmission output 1 span 1-point Contact output: See 'Contact output (EVT option)'.																																									
Transmission output 2 (TA2 option)	Converting pH or temperature to analog signal every input sampling period, outputs the value in current. (Factory default: Transmission output 1: Conductivity, Transmission output 2: Temperature) If Transmission output 2 high limit and low limit are set to the same value, Transmission output 2 will be fixed at 4 mA DC. Resolution: 12000, Current: 4 to 20 mA DC (Load resistance: Max 550 Ω) Output accuracy: Within ±0.3% of Transmission output 2 span																																									

Dimensions (Scale: mm)													
Terminal arrangement	Modular Jack Pin (WIL-102-ECH side arrangement) <table border="1"> <tbody> <tr> <td>No. 1</td><td>COM</td></tr> <tr> <td>No. 6</td><td>NC</td></tr> <tr> <td>No. 1</td><td>YB(+)</td></tr> <tr> <td>No. 6</td><td>YA(-)</td></tr> <tr> <td>No. 5</td><td>NC</td></tr> <tr> <td>No. 6</td><td>COM</td></tr> </tbody> </table> 1, 2, 3, 4: Conductivity sensor terminal 1, 2, 3, 4 (①-②-③-④) A, B: Temperature compensation sensor terminals (⑤-⑥) Pt100 (2-wire) or Pt1000 A, B, B: Temperature compensation sensor terminals (⑤-⑥-⑦) Pt100 (3-wire) E: Shield wire terminal (⑧) POWER SUPPLY: Power terminals (⑬-⑭) When EVT option is ordered: A1: A1 output terminals (⑨-⑩) A2: A2 output terminals (⑪-⑫) When TA option is ordered: A1: A1 output terminals (⑨-⑩) TRANSMIT OUTPUT1: Transmission output 1 terminals (⑪-⑫) When TA2 option is ordered: TRANSMIT OUTPUT2: Transmission output 2 terminals (⑨-⑩) TRANSMIT OUTPUT1: Transmission output 1 terminals (⑪-⑫) RS-485: Serial communication modular jack • When no option is ordered, A1, A2, TRANSMIT OUTPUT1 and TRANSMIT OUTPUT2 terminals are not equipped.	No. 1	COM	No. 6	NC	No. 1	YB(+)	No. 6	YA(-)	No. 5	NC	No. 6	COM
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