

# SPEC SHEET

## Plug-in Type Digital Indicating Resistivity Meter

WIL-102-SE

- 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)



Name	Plug-in type digital indicating resistivity meter																													
Model	WIL-10 2 -SE , □□□																													
	Input points	2	2 points																											
	Input	SE	2-electrode resistivity sensor (Temperature element: Pt100) (*1)																											
			2-electrode resistivity sensor (Temperature element: Pt1000) (*1)																											
	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																												
(*1) This input temperature specification was specified at the time of ordering. (*2) Power supply voltage 100 to 240 V AC is standard. When ordering 24 V AC/DC, enter 1 in Power supply voltage, after 'SE'. Accessories sold separately: Socket: ASK-001-1 (Finger-safe, Ring terminals unusable)																														
Measurement range	<table border="1"> <thead> <tr> <th colspan="2">Input</th> <th>Scale Range</th> <th>Resolution</th> </tr> </thead> <tbody> <tr> <td rowspan="7">Resistivity (CH1)</td> <td rowspan="7">Cell constant 0.01/cm</td> <td>0.000 to 0.200 MΩ•cm</td> <td>0.001 MΩ•cm</td> </tr> <tr> <td>0.00 to 2.00 MΩ•cm</td> <td>0.01 MΩ•cm</td> </tr> <tr> <td>0.00 to 20.00 MΩ•cm</td> <td>0.01 MΩ•cm</td> </tr> <tr> <td>0.0 to 100.0 MΩ•cm</td> <td>0.1 MΩ•cm</td> </tr> <tr> <td>0.00 to 2.00 kΩ•m</td> <td>0.01 kΩ•m</td> </tr> <tr> <td>0.0 to 20.0 kΩ•m</td> <td>0.1 kΩ•m</td> </tr> <tr> <td>0.0 to 200.0 kΩ•m</td> <td>0.1 kΩ•m</td> </tr> <tr> <td rowspan="2">Temperature (CH2)</td> <td>Pt100</td> <td>0.0 to 100.0°C</td> <td>0.1°C</td> </tr> <tr> <td>Pt1000</td> <td>0.0 to 100.0°C</td> <td>0.1°C</td> </tr> </tbody> </table>			Input		Scale Range	Resolution	Resistivity (CH1)	Cell constant 0.01/cm	0.000 to 0.200 MΩ•cm	0.001 MΩ•cm	0.00 to 2.00 MΩ•cm	0.01 MΩ•cm	0.00 to 20.00 MΩ•cm	0.01 MΩ•cm	0.0 to 100.0 MΩ•cm	0.1 MΩ•cm	0.00 to 2.00 kΩ•m	0.01 kΩ•m	0.0 to 20.0 kΩ•m	0.1 kΩ•m	0.0 to 200.0 kΩ•m	0.1 kΩ•m	Temperature (CH2)	Pt100	0.0 to 100.0°C	0.1°C	Pt1000	0.0 to 100.0°C	0.1°C
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Temperature (CH2)	Pt100	0.0 to 100.0°C	0.1°C																											
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Decimal point place is selectable for Temperature (CH2) indication.																														
Repeatability	Resistivity: ±0.5% of input span																													
Linearity	Resistivity: ±0.5% of input span																													
Indication accuracy	Temperature input: ±1°C																													
Cell constant correction value (Span) adjustment	Adjustment range: 0.700 to 1.300																													
Temperature calibration	Calibration range: -10.0 to 10.0°C																													
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	2-electrode resistivity sensor (Temperature element: Pt100 or Pt1000)																													
Temperature compensation range	0.0 to 100.0°C																													
Ambient temperature	0 to 50°C (32 to 122°F)																													
Ambient humidity	35 to 85 %RH (Non-condensing)																													
Power supply (user-specified)	WIL-102-SE: 100 to 240 V AC 50/60 Hz Allowable fluctuation range: 85 to 264 V AC WIL-102-SE 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, $\cos\phi=0.4$ ) 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: Resistivity) 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 $\Omega$ ) Output accuracy: Within $\pm 0.3\%$ 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: Resistivity, 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 $\Omega$ ) Output accuracy: Within $\pm 0.3\%$ of Transmission output 2 span															
Dimensions (Scale: mm)																
Terminal arrangement	<p>1: Resistivity sensor terminal 1 (②) 2: Resistivity sensor terminal 2 (③) A, B (T, T): 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.</p> <table border="1"> <tr> <td colspan="2">Modular Jack Pin (WIL-102-SE side arrangement)</td> </tr> <tr> <td>No. 1 </td> <td>No. 1 COM</td> </tr> <tr> <td>No. 6 </td> <td>No. 2 NC</td> </tr> <tr> <td>No. 1 </td> <td>No. 3 YB(+)</td> </tr> <tr> <td>No. 6 </td> <td>No. 4 YA(-)</td> </tr> <tr> <td>RS-485</td> <td>No. 5 NC</td> </tr> <tr> <td></td> <td>No. 6 COM</td> </tr> </table>		Modular Jack Pin (WIL-102-SE side arrangement)		No. 1	No. 1 COM	No. 6	No. 2 NC	No. 1	No. 3 YB(+)	No. 6	No. 4 YA(-)	RS-485	No. 5 NC		No. 6 COM
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