SPEC SHEET

Plug-in Type Digital Indicating Conductivity Meter

WIL-102- ECL (Low 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)

Name

Plug-in type digital indicating conductivity meter

Model

WIL-10	2	-EC			, □□□	
Input points	2					2 points
Input		EC				2-electrode conductivity sensor (Temperature element: Pt100) (*1)
						2-electrode conductivity sensor (Temperature element: Pt1000) (*1)
Concentration			L			Low 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

(*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 'ECL'.

Accessories sold separately: Socket: ASK-001-1 (Finger-safe, Ring terminals unusable)

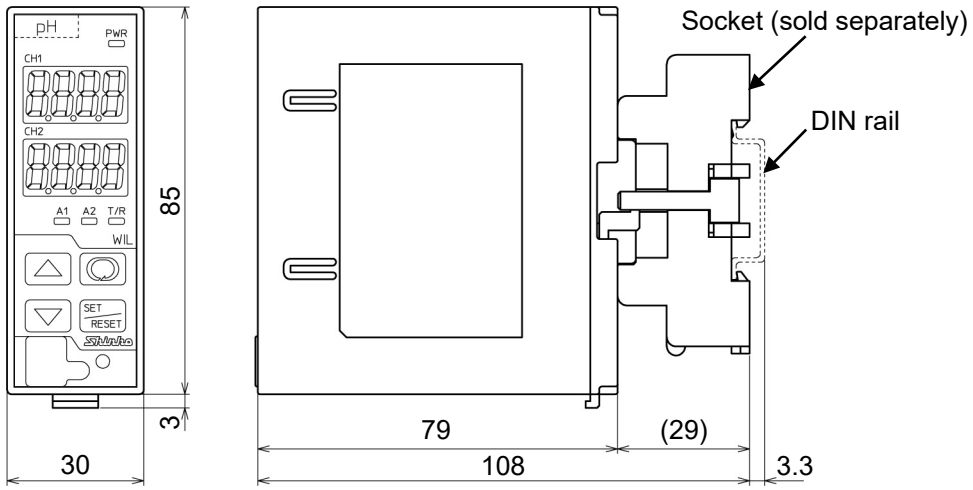
Measurement range (Rated scale)

Input	Cell constant	Scale Range	Resolution
Conductivity	Cell constant 0.01/cm	0.000 to 2.000 μS/cm	0.001 μS/cm
		0.00 to 20.00 μS/cm	0.01 μS/cm
		0.00 to 50.00 μS/cm	0.01 μS/cm
		0.000 to 0.200 mS/m	0.001 mS/m
		0.000 to 2.000 mS/m	0.001 mS/m
		0.000 to 5.000 mS/m	0.001 mS/m
		0.00 to 2.00 mg/L	0.01 mg/L
		0.0 to 20.0 mg/L	0.1 mg/L
		0.0 to 50.0 mg/L	0.1 mg/L
	Cell constant 0.1/cm	0.00 to 20.00 μS/cm	0.01 μS/cm
		0.00 to 50.00 μS/cm	0.01 μS/cm
		0.0 to 500.0 μS/cm	0.1 μS/cm
		0.000 to 2.000 mS/m	0.001 mS/m
		0.000 to 5.000 mS/m	0.001 mS/m
		0.00 to 50.00 mS/m	0.01 mS/m
		0.0 to 20.0 mg/L	0.1 mg/L
		0 to 200 mg/L	1 mg/L
		0 to 500 mg/L	1 mg/L
	Cell constant 1.0/cm	0.0 to 200.0 μS/cm	0.1 μS/cm
		0.00 to 20.00 mS/m	0.01 mS/m
		0 to 200 mg/L	1 mg/L
Temperature (Pt100 or Pt1000)		0.0 to 100.0℃	0.1℃

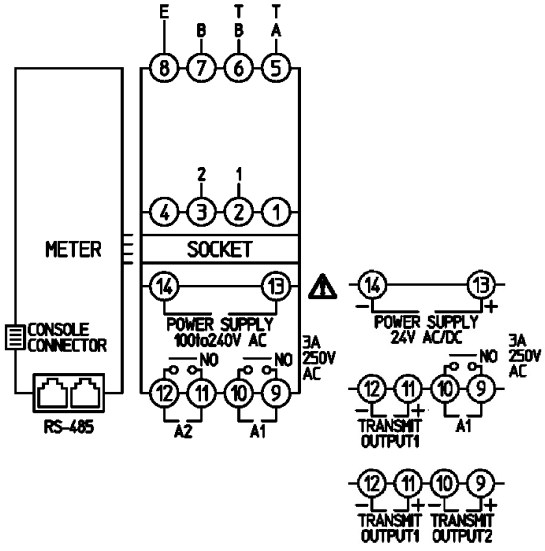
Decimal point place is selectable for temperature indication.

Repeatability	Conductivity: ±0.5% of input span TDS conversion: ±1.5% of input span
Linearity	Conductivity: ±0.5% of input span TDS conversion: ±1.5% of input span
Indication accuracy	Temperature: ±1℃
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℃
TDS conversion function	For Conductivity SI unit (mS/m): TDS(mg/L) = L(mS/m) × K × 10 For Conductivity older unit (μS/cm): TDS(mg/L) = L(μS/cm) × K K: TDS conversion factor, L: Conductivity
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 conductivity sensor (Temperature element: Pt100) 2-electrode conductivity sensor (Temperature element: Pt1000)
Temperature compensation range	0.0 to 100.0℃
Ambient temperature	0 to 50℃ (32 to 122℉)
Ambient humidity	35 to 85 %RH (Non-condensing)
Power supply (user-specified)	WIL-102-ECL: 100 to 240 V AC 50/60 Hz Allowable fluctuation range: 85 to 264 V AC WIL-102-ECL 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

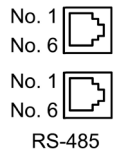
Dimensions
(Scale: mm)



Terminal
arrangement



Modular Jack Pin (WIL-102-ECL side arrangement)



No. 1	COM
No. 2	NC
No. 3	YB(+)
No. 4	YA(−)
No. 5	NC
No. 6	COM

1, 2: Conductivity sensor terminal (②-③)
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.