

U-50 Series Specifications



		U-51	U-52	U-52G	U-53	U-53G
Sensor Probe	Measurement temperature				-10 to 55°C	
	Maximum sensor diameter	Approx. 96 mm				
	Probe length	Approx. 340 mm				
	Cable length	Standard: 2 m, option: 10, 30 m				
	Mass	Approx. 1,800 g (Approx. 3.97 lbs)				
	Automatic calibration (uses pH4)	●		●		●
	Turbidity wiper	—	—		●	●
	Measurement depth	Max. 30 m				
	Liquid contact part material (liquid end material)	PPS, glass, SUS316L, SUS304, FKM, PEEK,Q, titanium, FEP membrane, POM				
	Water resistance	JIS protection level 8				
Control Unit	Outer dimensions	115 (W) x 66 (D) x 283 (H) mm				
	Mass	Approx. 800 g (Approx. 1.76 lbs)				
	LCD	320 x 240 liquid crystal display with backlight (black and white)				
	Data memory	10,000				
	Communication	USB				
	Battery	C batteries x 4				
	Water resistance	JIS protection level 7 (when sensor cable is fitted)				
	Battery Life	Approx. 70 hours (without backlight)		Approx. 500 measurements		
	Storage temperature	-10 to 60°C				
	Ambient temperature	-5 to 45°C				
pH ●Two-point calibration ●Automatic temperature	Measurement principle	Glass electrode method				
	Range	pH0 to 14				
	Resolution	0.01pH				
	Repeatability	±0.05pH				
	Accuracy	±0.1pH				
Oxidation Reduction Potential (ORP)	Measurement principle	Platinum electrode method				
	Range	-2000 mV to +2000 mV				
	Resolution	1 mV				
	Repeatability	±5 mV				
	Accuracy	±15 mV				
Dissolved Oxygen (DO) ●Salinity conversion (0 to 70 PPT/automatic) ●Automatic temperature compensation	Measurement principle	Polarographic method				
	Range	0 to 50.0 mg/L				
	Resolution	0.01 mg/L				
	Repeatability	±0.1 mg/L				
	Accuracy	0 to 20 mg/L: ±0.2 mg/L 20 to 50 mg/L: ±0.5 mg/L				
Conductivity (COND) ●Auto range ●Automatic temperature conversion (25°C)	Measurement principle	4 AC electrode method				
	Range	0 to 10 S/m (0 to 100 mS/cm)				
	Resolution	0.000 to 0.999 mS/cm: 0.001	1.00 to 9.99 mS/cm: 0.01	10.0 to 99.9 mS/cm: 0.1		
	Repeatability	0.0 to 99.9 mS/m: 0.1 0.100 to 0.999 S/m: 0.001 1.00 to 9.99 S/m : 0.01				
	Accuracy	±0.05% F.S.				
Salinity	Measurement principle	Conductivity conversion				
	Range	0 to 70 PPT (permillage)				
	Resolution	0.1 PPT				
	Repeatability	±1 PPT				
	Accuracy	±3 PPT				
Total Dissolved Solid (TDS) ●Conversion factor setting	Measurement principle	Conductivity conversion				
	Range	0 to 100 g/L				
	Resolution	0.1% F.S.				
	Repeatability	±2 g/L				
	Accuracy	±5 g/L				
Seawater specific gravity ●Display σ_t , σ_0 , σ_{15}	Measurement principle	Conductivity conversion				
	Range	0 to 50 σ_t				
	Resolution	0.1 σ_t				
	Repeatability	±2 σ_t				
	Accuracy	±5 σ_t				
Temperature	Measurement principle	Thermistor method				
	Range	-10 to 55°C				
	Resolution	0.01°C				
	Repeatability	*±0.10°C (at calibration point)				
	Accuracy	JIS class B platinum thermometer sensor (±0.3+0.005 t)				
Turbidity (TURB)	Measurement principle	LED light source and 30° scattering method		Tungsten lamp source and 90° scattering method		
	Range	0 to 800 NTU		0 to 1000 NTU		
	Resolution	0.1 NTU		0.01 NTU		
	Repeatability	*±5% (Reading) or ± 0.5 NTU whichever is greater		±3% (Reading) or ±0.1 NTU whichever is greater		
	Accuracy	±5% (Reading) or ±1 NTU whichever is greater		0 to 10 NTU: ±0.5 NTU 10 to 1000 NTU: 3% (Reading) or ±1 NTU whichever is greater		
Water depth	Measurement principle	Pressure method				
	Range	0 to 30 m				
	Resolution	0.5 m				
	Repeatability	±1% F.S.				
	Accuracy	±0.3 m				
GPS	12 channel parallel	—	—	●	—	●

Note:

- * Battery life based on continuous operation using alkaline C dry batteries when the monitor temperature is over 20°C and the backlight OFF.
- * Accuracy is measured by calibrating 4 points for turbidity and electrical conductivity and 2 points for all other measurements against standard solution.
- * Repeatability is measured by the ability to reproduce the results against the standard solution (at 25°C normal pressure condition).