

U-50 Series Specifications

		U-51	U-52	U-52G	U-53	U-53G	U-54	U-54G	
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		Approx. 70 hours (without backlight)		
	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							
	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 mS/cm		1.00 to 9.99 mS/cm: 0.01 mS/cm		10.0 to 99.9 mS/cm: 0.1 mS/cm			
	Repeatability	±0.05% F.S.							
	Accuracy	*±1% F.S. (Median of two-point calibration)							
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.							
	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							
	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		LED light source and 90° scattering method			
	Range	0 to 800 NTU		0 to 1000 NTU		0 to 1000 NTU			
	Resolution	0 to 99.9 NTU: 0.1 NTU 100 to 800 NTU: 1 NTU		0 to 9.99 NTU: 0.01 NTU 10 to 99.9 NTU: 0.1 NTU 100 to 1000 NTU: 1 NTU		0 to 0.99 NTU: 0.01 NTU 1 to 99.9 NTU: 0.1 NTU 100 to 1000 NTU: 1 NTU			
	Repeatability	*±5% (Reading) or ± 0.5 NTU whichever is greater		±3% (Reading) or ±0.1 NTU whichever is greater		±5% (Reading) or ± 0.5 NTU whichever is greater			
Water depth	Measurement principle	—		Pressure method		Pressure method, only 10m and 30m product			
	Range	—		0 to 30 m		—			
	Resolution	—		0.05 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).