

Chapter XII

Orion Star Series Specifications

Environmental Operating Conditions	
Portable and Benchtop Meters	
Ambient Operating Temperature	5 to 45 °C
Relative Humidity	5 to 85%, Non-Condensing
Storage Temperature	- 20 to + 60 °C
Storage Humidity	5 to 85%, Non-Condensing
Pollution	Degree 2
Overvoltage	Category II
Altitude	up to 2000 m
Weight	Portable: 0.45 kg Benchtop: 0.91 kg
Size	Portable: 4.8 cm (H) x 9.7 cm (W) x 21.3 cm (D) Benchtop: 9.4 cm (H) x 17.0 cm (W) x 22.4 cm (D)
AC powered Meters	Indoors Use Only
Battery operated meters	Indoors/Outdoors
Wall Adapter Environmental Conditions	
Ambient Operating Temperature	0 to 40 °C
Relative Humidity	20 to 90%, Non-Condensing
Storage Temperature	- 20 to 85 °C
Storage Humidity	20 to 90%, Non-Condensing
Pollution	Degree 2
Overvoltage	Category II
Operating Altitude	up to 2000 m
Storage Altitude	up to 3000 m
Benchtop Meters	Indoors Use Only

Orion Star Series Specifications (cont'd)

Regulatory and Safety
CE, CSA, TÜV, UL, FCC Class limits
Case Material
ABS
Shock and Vibration
Vibration, Shipping/Handling Per ISTA #1A Shock, Drop Test in Packaging Per ISTA #1A
Enclosure (designed to meet)
IP67 (Portable Meter) IP54 (Benchtop Meter)

Note: *If the products described in this manual are used in a manner that is not specified by Thermo Electron the protection provided by the equipment maybe impaired. ▲*

4-Star Meter Specifications (Benchtop & Portable)

4-Star pH/ISE		
pH	Range	- 2.000 to 19.999
	Resolution	0.1/0.01/0.001
	Relative accuracy	± 0.002
ISE	Concentration Range	0.0 to 19,900.0
	Units	M, mg/L, %, ppb, none
	Resolution	1, 2, or 3 sig. Digits
	Relative Accuracy	± 0.2 mV or 0.05%, whichever is greater
	mV/RmV	± 1999.9
ORP	mV/RmV/Eh Range	± 1999.9
	Resolution	± 0.1
	Relative accuracy	± 0.2 mV or 0.5%, whichever is greater
4-Star pH/DO		
pH	Range	- 2.000 to 19.999
	Resolution	0.1/0.01/0.001
	Relative accuracy	± 0.002
DO	Concentration	0.000 to 90.00 mg/L
	Relative Accuracy	0.2 mg/L
	% Saturation	0.0 to 600
	Salinity factor	0 to 45 ppt
	Barometric pressure	450 - 850 mm Hg
ORP	mV/RmV/Eh Range	± 1999.9
	Resolution	± 0.1
	Relative accuracy	± 0.2 mV or 0.5%, whichever is greater

4-Star pH/Conductivity		
pH	Range	- 2.000 to 19.999
	Resolution	0.1/0.01/0.001
	Relative accuracy	± 0.002
Conductivity	Range	0 - 5000 mS/cm cell constant dependent See probe specification for the cell constant
	Resistivity	0.0001 to 100 Megohms
	Salinity	0.01 to 80.0 ppt NaCl
	TDS	0.0 to 19.999.0 mg/L
	Cell Constant	0.001 to 199.9
	Reference temperature	15 °C, 20 °C or 25 °C (default), autoranging
ORP	mV/RmV/Eh Range	± 1999.9
	Resolution	± 0.1
	Relative accuracy	± 0.2 mV or 0.5%, whichever is greater