# **FUTURA**

# Standard Remote Futura

## Product specification

Standard Remote Futura is designed for smaller vessels where the available head space is often limited to a small footprint. It incorporates a slim, light-weight pre-amplifier making it ideal for small bioreactors with as low as 100ml working volume. The main Futura housing can be mounted away from the bioreactor vessel. (Up to a maximum of 1 metre).

For recommendations on suitable products for your application, please contact sales@aberinstruments.com

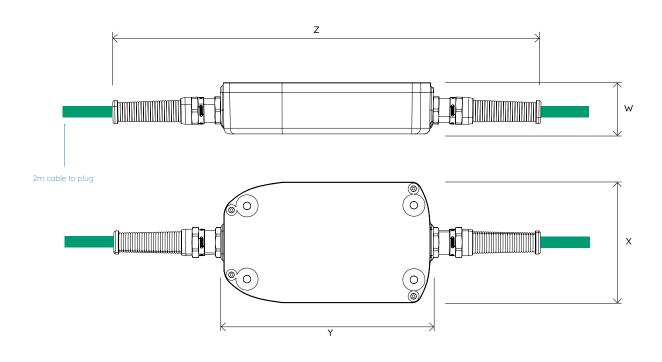




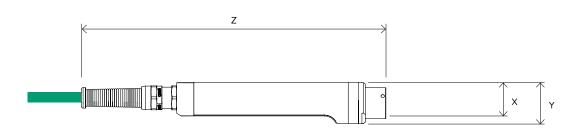
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Part Number	Description	on Dimensions (mm)			
		W	×	Y	Z
2343-00	Standard Remote Futura (Main enclosure)	27	62	110	221



Part Number	Description	Dimensions (mm)			
		W	×	Y	Z
2343-00	Standard Remote Futura (Remote enclosure)	-	19	24	110

The dimensions from the top plate of a vessel and a (top mounted) motor should be such that the motor is higher than 118 mm from the plate and more than 7.4 mm from the centre line of the port holding the ABER probe.



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### Technical specification

Frequency Range:	50KHz to 20MHz	
Measuring Ranges:	Capacitance: 0.0 to 400 pF/cm	
	Conductivity: 1.0 to 40 mS/cm	
	(Higher ranges available with compatible probes)	
Cell Concentration Range:	Depends on cell sizes but typically:	
	Yeast (6 µm): 10 <sup>6</sup> Cells/ml to 10 <sup>10</sup> Cells/ml	
	Bacteria (1 µm): 10° Cells/ml to 10 <sup>13</sup> Cells/ml	
	Animal Cell (12 µm): 10 <sup>5</sup> Cells/ml to 10 <sup>9</sup> Cells/ml	
	Plant Cell (50 µm): 10 <sup>3</sup> Cells/ml to 10 <sup>7</sup> Cells/ml	
Resolution:	Resolution: 0.1 pF/cm.	
	Bacteria typically 2g/L dry weight or 2x10° Cells/ml for E. Coli.	
	Yeast or Animal Cells 0.05g/L or 1 x10⁵ Cells/ml	
	The relationship of these capacitance values to biomass levels depends upon the	
	cell type and cell line.	
Accuracy:	Better than ± 3% or ± 2% of the reading	
Stability:	Better than ± 0.2 pF/cm at constant temperature with standard conductivity solution	
	of ~12 mS/cm	
Linearity:	Better than ± 1% over 100 pF/cm	
Precision:	< ±0.5 pF/cm, no filter active	
Power Supply:	24V DC typically supplied by an Aber CONNECT Hub running on 110V AC to 240V	
	AC mains.	
Environmental:	IP65 rated; Reccommended ambient operating temperature range: 5°C to 40°C	
Weight:	Main enclosure: 211g ; Remote enclosure: 203g	

