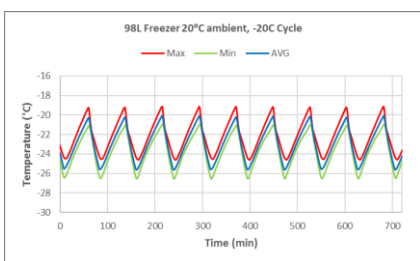
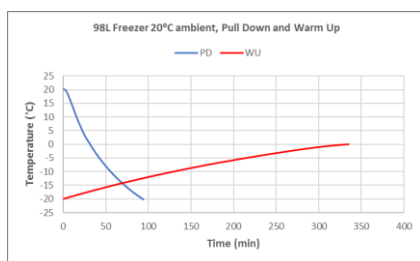
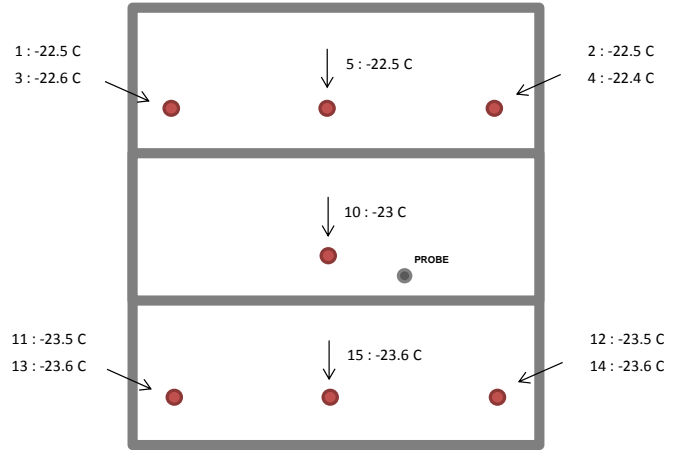
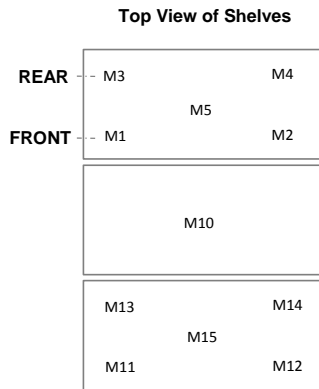


Specifications	Catalog/Model Number
	98F-AEW-TS
	Application, Rating and Electrical Data
Application	General Purpose Undercounter Lab Freezer (Non-Flammable)
Storage Volume	Gross (98L) / Net (84L)
Set Point / Temperature Range	-20°C / -18°C to -25°C
Electrical Power	220-240V, 50Hz
Instrument Rated Current	0.62 A
Building Supply Rating	Breaker 16 Amps / 230V±10%VOLT While Operating
Power Plug/Power Cord Length	13A EU Plug / 2M Long (Ships with UK Adapter)
Agency Listings	CE
Indoor/Outdoor Usage	Indoor Use Only
Application Environment	Non-Corrosive, Non-Flammable, Non-Explosive, Good Air Ventilation, 15°C - 32°C (59°F - 90°F)
Refrigeration Configuration	
Refrigeration System	Vapor Compression System
Compressor	(1) Hermetically Sealed Compressor
Evaporator Type	Aluminum Tube Serpentine Coil (Concealed)
Condenser Type	Stainless Steel Tube Serpentine Coil (Concealed)
Expansion Device	Capillary Tube
Defrost Method	Manual Defrost
Refrigerant (Charge)	R600a (58g) / Environmentally Safe / Flammable
Controller/Electrical System Configuration and Features	
Controller Level	Below Eye Level
Power Switch	No
Controller Type	3 DIGIT 17 mm X 9 mm LED with Keypad
Control Sensor	(1) NTC Air Sensor (Thermistor)
Compressor Safeguard	High Temp Cut-Out
Remote Alarm Terminals	Yes
Alarms	Yes, Audible and Visual (Temperature Range, Door Ajar)
Data Logger	No
Dimensions and Construction	
Interior Dimensions (W x D x H)	420 mm x 440 mm x 650 mm (STEP 420 mm x 275 mm x 210 mm)
Exterior Dimensions (W x D x H)	599 mm x 658 mm x 850 mm
Insulation	Polyurethane Foam (with Cyclopentane Blowing Agent)
Door Perimeter Heater	Compressor Discharge Tube as Door Frame Heater
Shelves	(3) Glass Shelves / Plastic Drawers
Leveling Feet	(4) Adjustable
Ship Weight	41.8 kg
Access port	Yes, 16 mm, Rear LH Corner
Typical Performance Characteristics	



Test Unit MSO Number:	20013-A-3-1
Cabinet Load:	Unloaded
Average Cabinet Temp at -20C Cycle (C):	-22.97
Average Uniformity (C):	1.47
Average Stability (C):	5.60
Peak Variation from Setpoint (C):	+0.87 / -6.53
1-min Door Opening Recovery (min):	20
Duty Cycle (%)	31
Cycle (ON/OFF) (min)	24 / 54
Energy Consumption (KW-hr/day):	0.40
Heat Rejection Rate (Btu/hr):	57.0
Pull Down Time (15C to -20C) (min):	85
Warm Up Time (-20C to 0C) (min):	339
Sound (dBA)	40

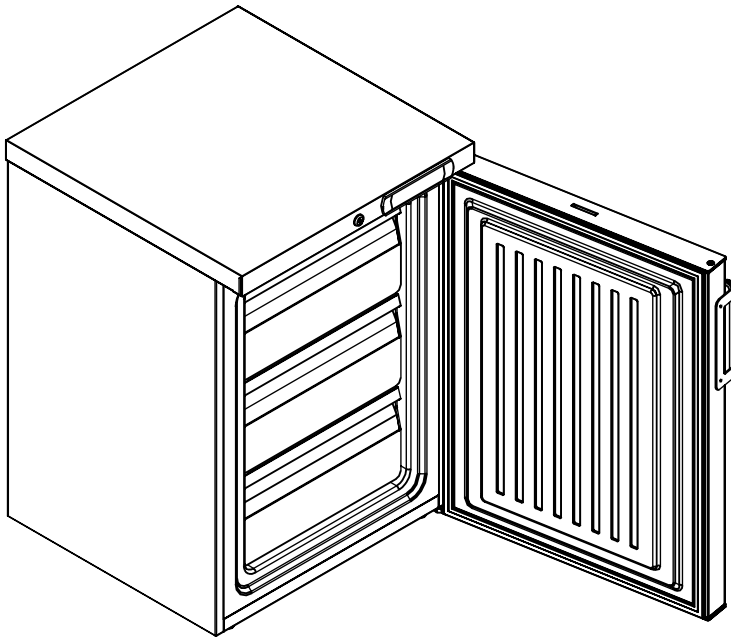
- 1) Performance is nominal and individual units may vary.
- 2) Freezer performance will differ due to product amount, product size and operating conditions.
- 3) Continuous product enhancements may, without notice, result in amendments or omissions to this specification. Thermo Scientific cannot accept responsibility for damage, injury, loss or expenses resulting from misapplication of the information herein.



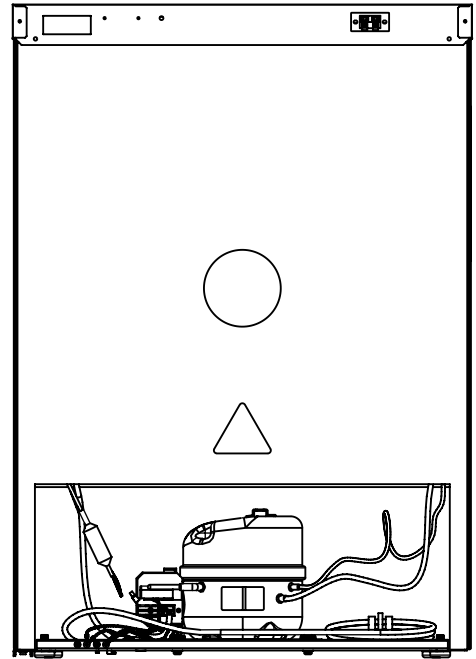
20013-A-3-1

**Cabinet Average** : -22.97°C  
**Probe Average** : -20.7°C  
**Peak Variation** : +0.87 / -6.53°C

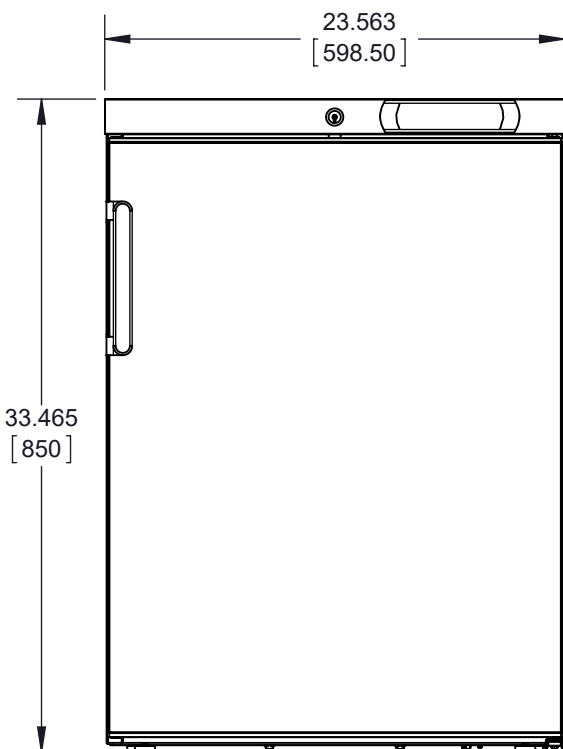
	M1	M2	M3	M4	M5	M10	M11	M12	M13	M14	M15
<b>Avg</b>	-22.5	-22.5	-22.6	-22.4	-22.5	-23.0	-23.5	-23.5	-23.6	-23.6	-23.6
<b>Max</b>	-19.3	-19.5	-19.2	-19.1	-19.3	-20.9	-20.6	-20.8	-20.7	-20.9	-20.7
<b>Min</b>	-25.1	-25.0	-25.5	-25.3	-25.3	-24.6	-26.3	-26.3	-26.3	-26.5	-26.5



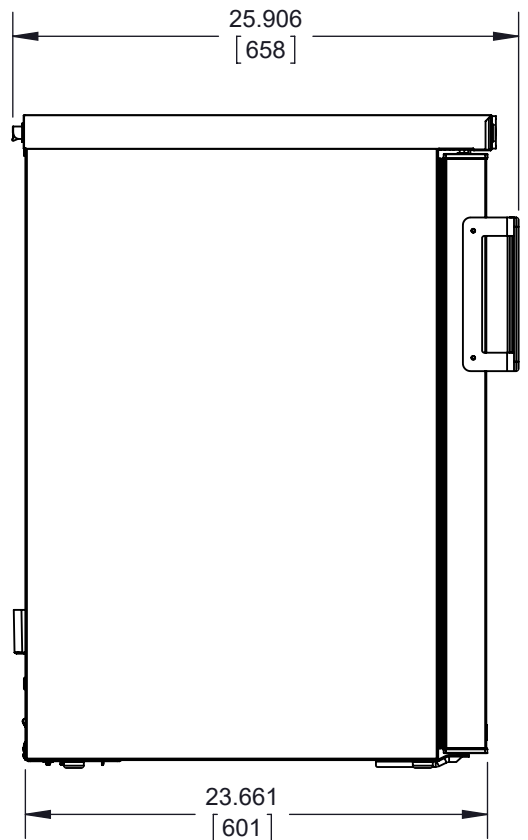
ISOMETRIC VIEW WITH DOOR OPEN



REAR VIEW



FRONT VIEW



SIDE VIEW