

SPECIFICATION PR18081

Item Description Precision Thermometry Bridge: 2 off Channel scanner for use with precision thermometer bridge: 5 off	
Key Features & Capabilities Precision thermometry reading is required as part of the MWS blackbody project. Up to 10 sensors need to be concurrently read into a logging system with an accuracy and resolution of 0.01mK.	
<u>1x Precision Thermometry Bridge</u> <ul style="list-style-type: none"> • Input Types: SPRT/PRT, Thermistor and Thermocouple • Three Channel: Expandable to 90 • Measurements: Vdc, Ohms, Ratio Rt/Rs, °C, °F, K • Internal Standard Resistors: 1, 10, 25, 100 and 400Ω • Ratio Accuracy: 0.5ppm (for the whole temperature range -200°C to 950°C) • Thermocouple Uncertainty: 250nV at 20mV (Equivalent to 0.01°C for Gold/Platinum thermocouples at 1000°C) • Fully Adjustable Sensor currents: 100μA to 10mA • Colour Display with Touch Screen Operation • Logging > 4 years • Internal Data Storage • USB Port: For Data Logging and Export, Keyboard / Mouse Operation • RS232 and IEEE-488 Interfaces • Input connectors: Gold Plated Tellurium Copper Cable Pod to accept 4mm plugs, spades or wire ends • Electrical supply: 88 to 264Vac / 47–63Hz • Includes UKAS Calibration Certificate or equivalent 	
<u>3x channel scanner for use with above precision thermometer bridge:</u> <ul style="list-style-type: none"> • 10 channel scanner for use with precision thermometer with up to 9 expansion units supported. • Inputs from Thermocouple, PRT and Thermistor • Individual keep warm currents for PRT probes up to 10mA • RS232 Serial interface • Plug and play operation • Electrical supply: 88-264V 47-63Hz 	
Installation	None required
User Training On Site	None required beyond provision of user manuals
Service Maintenance and Support	UK (at STFC RAL Space), France (INTESPACE, Toulouse), where the systems will be used at international test facilities. It is expected that this will be in the form of phone or email contact should there be a failure.
User and Service Manuals	These must be provided upon installation and be in English language
Software requirements	LabVIEW 2016/2017 compatible Requirement of end user due to the hardware in current use
Power Requirements	As indicated in key features section above.

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Operational Requirements	<p>The purchasing organisation shall expect the proposed system be fully compliant with the following usage assumptions.</p> <p>The precision thermometry bridge is designed to work in normal ambient lab & cleanroom conditions (ISO-5 standard or equivalent).</p> <p>Continuous running of the system for:</p> <p>52 weeks a year 7 days a week 24 hours a day</p>
Relevant Standards	<p>All devices listed must meet relevant British/European or equivalent standard – in particular CE-markings. Documentation providing proof of compliance should be provided</p>
Warranty	<p>Equipment and device parts listed must have a minimum 2 year parts and labour warranty. Warranty will begin upon full receipt and acceptance of all requested items.</p>
Delivery	<p>Equipment and Accessories will be delivered to:</p> <p>Mohammad Iranmanesh R100 2.42 STFC Rutherford Appleton Laboratory Harwell, Didcot Oxford OX11 0QX By no later than 15th June 2018</p>
OEM	<p>If the vendor is not the Original Equipment Manufacturer (OEM) the vendor MUST provide, in writing a recently dated (i.e., within the past year) and signed letter from the OEM recognizing them as the fully authorized and qualified vendor of the products and accessories</p>