OXFORD INSTRUMENTS

The Business of Science®

MercuryiTC & iPS

Intelligent control of cryogenic and magnetic environments

MercuryiTC
Intelligent temperature controller

Accurate measurements

- Measures and controls temperatures to below 250 mK with a precision of 0.1 mK. (24 bit A to D resolution)

- Heater output up to 80 W per channel

- Configurable constant voltage or constant current excitation

- Supports all standard cryogenic sensors (ruthenium oxide, cernox, silicon diodes, platinum, thermocouple and RhFe)

- Base system includes a single temperature sensor input and 80W heater output for precise temperature PID control

MercuryiPS
Intelligent magnet power supply

Stable measurements

- Bi-polar, four quadrant magnet power supply

- ± 60 A and ± 10 V output

- Highly accurate and stable, better than 2.8 mA current stability at 120 A

- Low noise

- iSense intelligent magnet monitoring and quench protection. Auto-rundown allowing the **Mercury**iPS to be programmed to run magnet down safely in event of over temperature or low cryogen levels
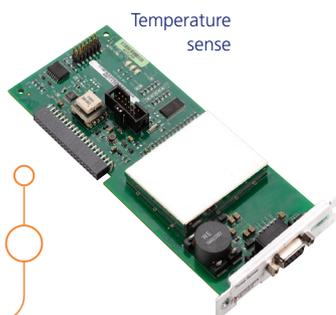
- Supports vector rotate magnets

MercuryiTC
## Intelligent temperature controller

Expandable

Customisation is possible through the addition of plug and play expansion cards. The controller features 9 expansion slots (8 multi-function slots and a dedicated GPIB slot) which can be used to extend its capability.

Temperature sense

Expansion cards include additional temperature sensor inputs and heater outputs, pressure transducer inputs, stepper motor drive allowing gas flow regulation and efficient use of liquid helium in flow cryostats and cryogen level metering of both helium and nitrogen.

Back panel of **Mercury**ITC
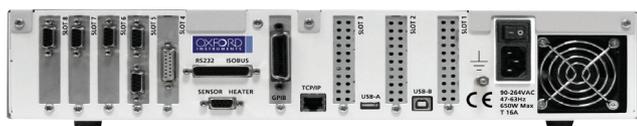
Front panel of **Mercury**ITC

* Base system includes thermometer and heater control as standard. Additional configuration to a maximum of 8 options can be installed.

System control

The intuitive touch screen user interface facilitates easy monitoring, control and configuration of your experimental system.

- Easy connection to your **Mercury** instrument via multiple remote interfaces: Ethernet, GPIB, serial or USB

- Easy integration within your data acquisition programs and direct and remote control of your cryogenic and superconducting magnet system

- The **Mercury**iTC has also a number of pre-configured control modes, e.g., Heliox control, Lambda Fridge control, rotator control, etc.

- Rear panel connections are consistent with previous units from us, for easy system upgrades

MercuryiPS
Intelligent magnet power supply

Configurable

- Design based on 60 A master and slave units

- Configurable in series or parallel combinations up to 600 A output. For example 180 A with ± 20 V output or 600 A with ± 10 V

Visit **www.nanoscience.oxinst.com/mercuryitc** or **www.nanoscience.oxinst.com/mercuryips** or email **nanoscience@oxinst.com**

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