neoplas control
solutions for your operations in gases and plasmas

Q-MACS Basic CW

The Q-MACS Basic CW is a compact high performance laser controller including TEC and laser current driver. The laser controller is applied to drive a single continuous wave (CW) laser with grounded cathode. The setup of the laser controller is realized via a RS232 interface allowing the configuration of the controller before using it with a laser. Adjustments of PID parameters, NTC beta value, TEC current limits, temperature guard values and custom commands are available via this communication interface. For autonomous operation and replacement in the field, all configuration parameters could be stored in an internal EEPROM.

With its outstanding features the Q-MACS Basic CW became the fundamental component in various laser-based systems designed for the exclusive application of CW laser sources. It is a versatile laser driver system for various infrared absorption spectroscopic applications. Its robustness and compactness makes it the ideal choice for the integration as an OEM module into industrial products.

general

description	compact high performance single CW laser controller incl. current and TEC driver
dimensions	125mm x 61mm x 105mm (LxHxD) without connectors
weight	<500 g
supply voltage	24 VDC <60 W @D-SUB7W5 male
laser connector	D-SUB9W7 female
thermal management	two fans in continious mode

communication interface

RS232	+/-12V, 57600baud @D-SUB7W5 male
TTL enable input	12V @D-SUB7W5 male
analog current setpoint	0V to 3,25V @SMA female transfer funktion 2,5V/A

operating and storage conditions

operating temperature	-15 ℃ to 40 ℃
operating humidity	15 % to 75 % (rel.)
storage temperature	-55 ℃ to 70 ℃
storage humidity	10 % to 100 % (rel.)

current driver

max. current	1.1 A
max. compliance voltage	20V (to be defined prior shipment)
avg. noise density	<2nA/Hz1/2@1 kHz to 100kHz
RMS noise	<1 µARMS
modulation bandwidth	12 kHz

TEC driver and temperature controller

max. TEC voltage	15 V
max. TEC current	±3 A
control loop	configurable software PID

scope of delivery

- controller board
- housing incl. fans
- connector cable for power supply and RS232
- basic PC software package for setup and operation