



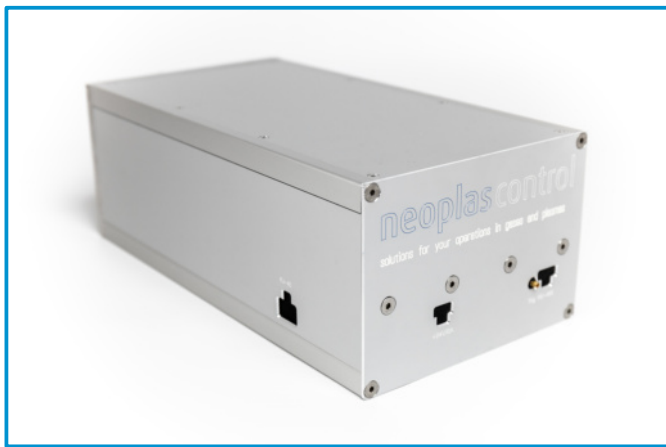
Q-MACS Process MC

The Q-MACS Process is a compact high performance, all inclusive measurement system for up to four laser sources in TO3-8 housing. The system includes four laserdrivers with associated TEC controller, as well as a detector. All optical components for guiding and shaping the laser beams are already integrated.

The control as well as the measured value display is carried out via a special, easy-to-use, intuitive software from our company.

The beam coupling and decoupling takes place via a KF40 flange as standard. The beam can be returned by a retroreflector or a long-path cell. Both versions are provided by us and are optimally matched to the Q-MACS Process MC due to their design. Further customer requests can be realized.

The properties of the Q-MACS Process MC make it easy for the customer to implement a wide range of process monitoring in the smallest of spaces.

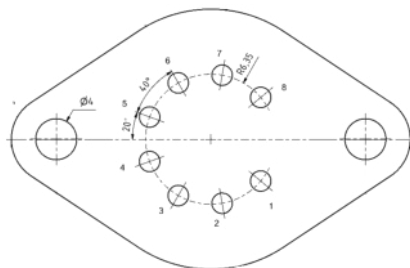


general

| | |
|--------------------------|--|
| description | up to four channel laser spectrometer with integrated data acquisition |
| dimensions | 330 mm x 170 mm x 120 mm (L x H x D) [without flange] |
| weight | 7 kg |
| supply voltage | 24 VDC @ max 150 W |
| thermal management | air |
| remote control interface | network (RJ-45), UART or SPI |
| data acquisition | 125 MS/s with 62 MHz bandwidth |

laser connector

TO3-8 socket



bottom view

- 1-TEC+
- 2-NTC
- 3-NTC
- 4-QCL-
- 5-QCL+
- 6-n.c.
- 7-n.c.
- 8-TEC-

current driver

| | |
|--------------------|--|
| number of drivers | 4 |
| cw current | up to 500 mA per channel |
| compliance voltage | max. 22 V (configurable) per channel |
| bandwidth | 500 kHz sine wave 100 kHz square wave |

temperature controller

| | |
|--------------------|----------------------|
| maximum voltage | ≤ 4.3 V |
| maximum current | ± 3 A |
| temperature sensor | NTC, 10 kOhm @ 25 °C |
| temperature range | -25 °C - 40 °C |

operating and storage conditions

| | |
|-----------------------|--------------------|
| operating temperature | 5 °C - 40 °C |
| operating humidity | 15 % - 75 % (rel.) |
| storage temperature | 5 °C - 70 °C |
| storage humidity | 10 % - 80 % (rel.) |