

Carbon potential calculator MCON Carbo 16 and 48



Special Features:

- Calculates C-level from the residual oxygen content of a gas or CO₂-content from the furnace atmosphere
- Various types of thermocouples, lambda-, O₂-probes and other gas sensors e.g. CO, CO₂
- C-level correction by foil tests
- Color-TFT-touch-screen display with additional keypad
- Multi-user access with usernames, pass-words and access levels
- Isolated analog inputs
- Current supply 115 or 220V 50/60Hz or 24V
- Optional: Profibus, Modbus and "MESA Legacy" protocols

Principle of Operation:

MCON Carbo 48 and 16 is a new and advanced calculator of carburizing processes in heat treatment plants. As a graphic recorder, the new calculator can record all measured values.

The unit processes the input signals and outputs the desired output variable as a voltage or current unit signal.

All commercial thermocouples, lambda- and oxygen probes as well as gas sensors, e.g. CO, CO₂, can be connected to the MCON Carbo 48 and 16.

There are up to 5 analog alarms. Each alarm can be configured to monitor analog input or calculated values and it can activate dedicated digital output for some error/unregularly values.

User accounts with password protection improve the safety in usage by locking access levels, parameters and functions depending on user privileges.

Advantages:

- **Compatible with all new MESA equipment**
- **Custom alarms**
- **Diagram display**
- **Isolated RS485 / 422 Modbus interface, "MESA Legacy"**
- **Data transfer and firmware update via USB interface**

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Technical Data

Degree of Protection:

IP54 according to IEC 60529

Dimensions:

MCon Carbo 16

96 x 96 x 111 mm (W x H x D)

MCon Carbo 48

296 x 256 x 118 mm (W x H x D)

Housing made of polystyrene

Power Supply:

AC 85VAC...265VAC, 50-60Hz

Power Consumption:

15VA

Display:

Color-TFT-touch-screen display, 320 x 240 pix
16bit, 3,5" with robust touch-screen

Communication Interface (Optional):

Isolated RS485/422, Profibus

Climate:

Storage: -10...+70 °C

Operation: 0...+50 °C

5...95 % relative humidity, non-condensing

Analog inputs:

AIN 1:

- Thermocouple, Type "K" or "S"

AIN 2:

- L-probe
- O₂ probe
- CO₂-Analyzer

AIN 3:

- CO-Analyzer

Analog outputs:

AOUT 1:

- Raw O₂ probe voltage
- Calculated O₂ probe mV from L-probe mV

AOUT 2:

C-level: 0...2,0 %C -> 0...20 mA or 0...10 V

AOUT 3:

Temperature: 0...1200 °C -> 0...10 V

AOUT 4:

mV O₂ corrected

C-Level Measuring Range:

0...2.0 %C

C-Level Measurements:

Sensors for measurement: O₂, lambda probes or CO₂ analyzer

Fixed or measured CO

Up to 5 Foil test correction points

Order number

700-0000

700-0050

Device name

MCon Carbo 16

MCon Carbo 48

Optional accessories

700-1100

Profibus DP V1 MCon Carbo

700-1101

Modbus RTU protocol MCon Carbo

700-1102

MESA Legacy protocol MCon Carbo