

ControlMaster CM30 and CM50 Universal process controllers, 1/4 and 1/2 DIN



The Company

We are an established world force in the design and manufacture of instrumentation for industrial process control, flow measurement, gas and liquid analysis and environmental applications.

As a part of ABB, a world leader in process automation technology, we offer customers application expertise, service and support worldwide.

We are committed to teamwork, high quality manufacturing, advanced technology and unrivalled service and support.

The quality, accuracy and performance of the Company's products result from over 100 years experience, combined with a continuous program of innovative design and development to incorporate the latest technology.

Outputs

Controls / retransmission outputs

Number	2 (1 standard, 1 optional)
Type	Configurable as analog or digital pulse
Isolation	Galvanically isolated from the rest of the circuitry, 500 V for 1 minute
Analog range	0 to 20 mA Programmable
Load	750 W Max.
Accuracy	0.25 % of output or +/- 10 µVA

Relays

Number	CM30: 4 (1 standard, 3 optional) CM50: 4 (2 standard, 2 optional)
Type	CM30: Standard with changeover contacts. Optional contacts selectable as N/O or N/C (by jumper) CM50: Selectable as N/O or N/C (by jumper)
Contact ratings	5 A, 240 V
Update rate	125 ms

Digital input / output

Number	CM30: 6 (2 standard, 4 optional) CM50: 6 (2 standard, 4 optional)
Type	User-programmable as input or output Minimum input pulse duration – 125 ms ■ Input – volt-free or 24 V DC – 1-signal: 15 to 30 V – 0-signal: –3 to 5 V – Conforms to IEC 61131-2 ■ Output – Open collector output – 30 V, 100 mA max. – Conforms to IEC 61131-2
Update rate	125 ms

2-Wire transmitter power supply

Voltage	24 V DC
Number	2 (1 standard, 1 optional)
Drive	2 Loops for each transmitter PSU, 45 mA max.

Communications

For MODBUS and Ethernet communications see separate User Guide (IM/CM/C–EN).

Infrared port

Baud rate	up to 115 kBaud
Distance	up to 1 m
Functions	firmware upgrade, configuration upload / download

EMC

Emissions & immunity

Meets requirements of IEC61326 for an Industrial Environment

Environmental

Operating temperature range

–0 to 55 °C (32 to 131 °F)

Operating humidity range

5 to 95 %RH (non-condensing)

Storage temperature range

–20 to 70 °C (–4 to 158 °F)

Enclosure sealing

Front face	IP66 / NEMA 4X
Rest of enclosure	IP20

Vibration

Conforms to EN60068-2-6

Safety

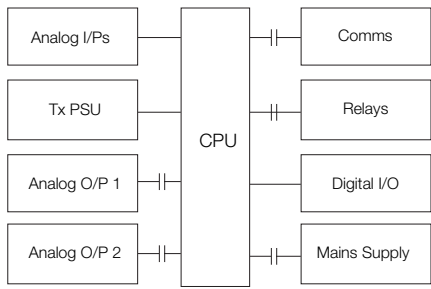
Approvals and certifications

EN61010-1
cULus

General safety

Pollution category 2
Insulation category 2

Isolation (to inputs)



Key
—||— = Isolation

Physical

Size

CM30	97 x 97 x 141 mm (3.8 x 3.8 x 5.5 in.)
CM50	144 x 76 x 146 mm (5.6 x 3.0 x 5.7 in.)

Weight

CM30	0.5 kg (1.1 lb) approx. (unpacked)
CM50	0.57 kg (1.27 lb) approx. (unpacked)

Panel cutout

CM30	92 x 92 mm (3.6 x 3.6 in.), 121 mm (4.8 in.) behind panel
CM50	138 x 68 mm (5.4 x 2.7 in.), 123 mm (4.9 in.) behind panel

Case material

Glass-filled polycarbonate

DS/CM30–EN Rev. H
DS/CM50–EN Rev. G

Electrical

Supply ranges

100 to 240 V AC ±10 %
(90 V min. to 265 V max.) 50 / 60 Hz
10 to 36 V DC (optional)

Power consumption

10 W max.

Power interruption protection

No effect for interrupts of up to 60 ms