

MCA Multi-Channel Gas Detector Control Unit



For use with remote mounted fixed gas detectors



DESCRIPTION

The MSA MCA multi-channel controllers, powered by Neutronics Technology, are designed to accept from one, up to 16 inputs. Primarily used with gas detector heads, the MCA controllers will also accept individual inputs from various types of monitoring instruments or transducers. A backlit LED display is provided to show the status of each channel, display graphs, and enable configuration of the unit (set alarm levels, program the output relay voting, etc.). The MCA can be programmed on-site by the user using the password protected configuration program. Each monitoring channel provides relay contact outputs along with 4-20mA and voltage outputs. Data logging of each channel is provided as standard. For applications where intrinsically safe gas detector heads are installed in a potentially explosive atmosphere, a safety barrier must be fitted to each individual channel to limit the maximum voltage and current under a fault condition (short circuit) and prevent an incendive spark.

Input Formats

Current loop 4-20mA,
internal or external 24V (source)

Current loop 4-20mA, internal or external (sink)

3-wire pellistor

Voltage input

3 DPCO voltage free relay contacts per channel

Output Formats

4-20mA current source proportional detected signal

4-20mA current sink proportional detected signal

0-5V voltage output proportional to detected signal

Features

Large LCD backlit full-graphics display for 1 to 16 channels

Internal data-logging with 3 months of data storage per channel

Built-in audible and visual alarms

External push-button calibration and configuration

Internal standby battery with up to 17 hours of standby power

Description	Part Number
MCA, One channel control unit, excluding barriers	7-01-4000-05-0
MCA, Two channel control unit, excluding barriers	7-01-4000-05-1
MCA, Three channel control unit, excluding barriers	7-01-4000-05-2
MCA, Four channel control unit, excluding barriers	7-01-4000-05-3
MCA, Five channel control unit, excluding barriers	7-01-4000-05-4
MCA, Six channel control unit, excluding barriers	7-01-4000-05-5
MCA, Seven channel control unit, excluding barriers	7-01-4000-05-6
MCA, Eight channel control unit, excluding barriers	7-01-4000-05-7
MCA4 16 channel control unit	
MCA4 16 channel enclosure only	
Internal safety barrier, for sensors installed in hazardous area	2-06-2002-36-0



MORE INFORMATION:

Scan the QR code to learn more about the MCA Multi-channel Control Unit and other MSA products.

MCA Multi-Channel Gas Detector Control Unit



Specifications	Description
Enclosure type	Wall mount
Material	Steel enclosure with lockable door
Dimensions	MCA: 475 x 300 x 208mm (18.7 x 11.8 x 8.19in), MCA4: 475mm x 538 x 208 (18.7 x 21.2 x 8.2)
Weights (approx.)	MCA: 16 kg (35.27 lbs.), MCA4: 30kg (66 lbs.)
Batteries	Sealed lead acid type, 2 x 12V 1.2Ahr
Display	Backlit alphanumeric LCD display
Operating temperature	-10 to +50°C (14°F to +122°F)
Storage temperature	-20 to +50°C (-4°F to +122°F)
Humidity range, oxygen	0 to 99% RH non-condensing
Input voltage	24VDC or 120/230VAC 50/60Hz, tolerance ±10%
Environmental rating	MCA: IP65, MCA4: IP66
Display	Backlit 240 x 64 dot LCD
Keyboard	MCA: 8 button multifunction keypad, MCA4: 2 x 8 button multi-function keypad
LED indications	Red (alarm condition), Green (power on, flashes when on standby), Yellow (fault condition)
Number of channels	1 to 16 maximum depending on unit type
Signal inputs	4-20mA current loop from 24V source, 4-20mA current loop sink to 0V, 3-wire pellistor systems, DC voltage input
Analog output	4-20mA current source proportional to detected signal, 4-20mA current sink proportional to detected signal, 1-5V voltage output proportional to detected signal
Relays	Three total – one relay assigned to each alarm level (low, medium, high)
Two common outputs	Output one for external audible alarm (200mA maximum), Output two for external visual alarm (200mA maximum)
External reset	Connection for normally open switch contacts (5V max present at terminals)
Four common relays	One relay assigned to each alarm level (low, medium, high), One relay designated as fault relay
Relay contact type	Double pole changeover dry contacts (voltage free), Relay contact ratings 8A 240VAC
Note: For compliance with UL3101-1 and CSA22.2 No. 1010.1, the following environmental conditions apply --	
Indoor use	Altitude up to 2000m
Temperature	0 to 40°C (32°F to 104°F)
Maximum relative humidity	80% decreasing linearly to 50% relative humidity at 40°C
Installation category	II (over-voltage category)
Pollution degree	2

Specifications are subject to change without notice.

Note: This Bulletin contains only a general description of the products shown. While product uses and performance capabilities are generally described, the products shall not, under any circumstances, be used by untrained or unqualified individuals. The products shall not be used until the product instructions/user manual, which contains detailed information concerning the proper use and care of the products, including any warnings or cautions, have been thoroughly read and understood. Specifications are subject to change without prior notice. MSA is a registered trademark of MSA Technology, LLC in the US, Europe, and other Countries. For all other trademarks visit <https://us.msasafety.com/Trademarks>.

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