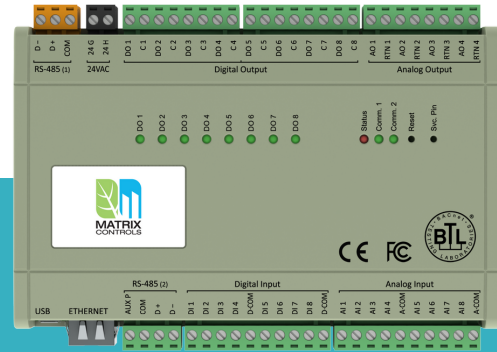




# MGP1612S



## HIGH ACCURACY IP CONTROLLER, DEVICE BRIDGE GATEWAY

### PRODUCT DEFINATION

The MGP S Series of Controller as mini network controller which have 2 RS485 field bus and 1 ethernet port for machine-to-machine or to HMI communication. This controller capable to act as Modbus Master or BACnet Master for the RS485 port. Featuring with Sedona, Modbus (RS-485, TCP/IP) and BACnet® (RS-485, IP and Ethernet) protocols plus a built-in Web server for easy configuration.

### FEATURES

#### Open Communication Protocols

Multiple open protocols Modbus IP, Sedona and BACnet® IP promote the simplicity and flexible way it can be communicate. Completing with RS-485 port that allows connection of various devices that support BACnet MS/TP, Modbus RTU, or Modbus ASCII.

#### High Accuracy Measurement

High speed 16-bits (MGP1612S) or 24-bits (MGP1612S+) A/D converter with programmable gain amplified yields a high resolution and accuracy reading on analog input points that complies to Singapore Green Mark standard. 12-bits D/A provides more accurate analog output control.

#### Real-Time Engineering Work

Controller allows real-time program update upon changes of control application arises. No hassle of stopping equipment's which on-going operate

#### High Speed Data Rate

Multiple serial communication (RS-485) speed selection from 9.6kbps to 115.2kbps. Supports Ethernet 10Base-T/100Base-T interface, half or full duplex.

#### Build in Web Server

Simplified Built-in Web server enables configuration with popular web browser over an Ethernet connection. I/O status can be monitored over the Internet connection. Live monitoring

#### Installation Friendly

All input and output points termination are designed via field removable terminal block connectors given separate wiring sockets for quick exchange without rewiring. Controller casing fits standard DIN rail mounting ease to mount and unmount the controller to designated location

#### Network Security

All configurations changes are protected via password setting, eitherthrough standard network protocol access (BACnet®) or web browser.

#### Programmable / Standalone Functionality

The controller can be configured to operate as standalone device. Over 40 types of programmable functions are available, typically thermostat, PID, scheduler, conversion, timer, utilities, totaliser and etc.



[sales@matrix-controls.net](mailto:sales@matrix-controls.net)

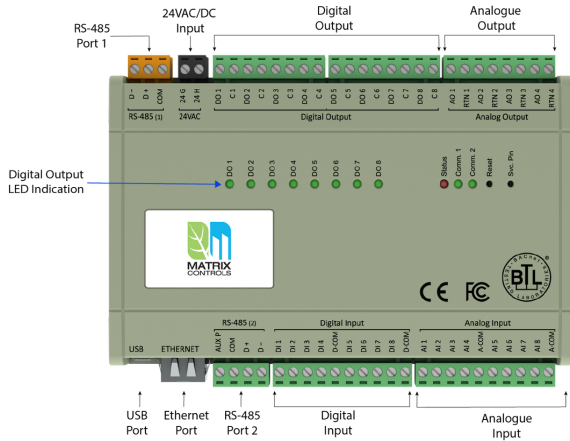


[www.matrix-controls.net](http://www.matrix-controls.net)

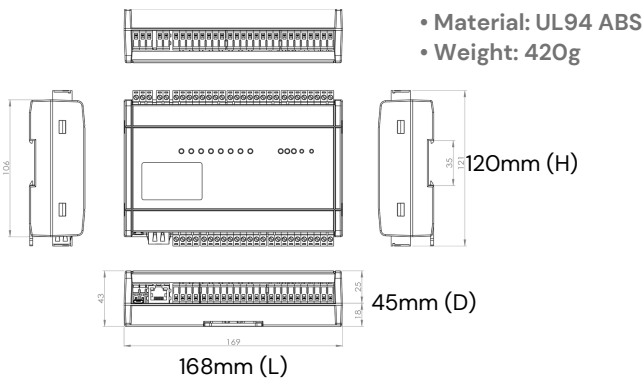


# MGP1612S

## SYSTEM CONTROLLER



## DIAMENSION



## ELECTRICAL SPECIFICATION

- Power Supply: 24VAC  $\pm$  5% or 24 VDC  $\pm$  5%
- Consumption: 3.6VA max or 300mA max
- Operating Temperature: 32° to 150° F (0° to 65° C)
- Storage Temperature: -4° to 150° F (-20° to 65° C)
- Operating Humidity: 10% to 95% HR (non-condensed)

## ORDERING CODE

High Performance IP base controller (16-bits ADC)	MGP1612S
High Accuracy IP base Controller (24-bist ADC)	MGP1612S+



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## Technical Specification

### Universal Input:

- 8 Channels
- o 16-bits (MGP1612S) or 24-bits (MGP1612S+) Resolution Specification
  - Voltage: 0 – 10V ( $\pm$  0.0007V), 0 – 5V ( $\pm$  0.00035V)
  - Current: 0 – 20mA ( $\pm$  0.0035mA), 4 – 20mA ( $\pm$  0.0035mA)
  - Resistance: 0 – 120k ( $\pm$  15 $\Omega$ ), 0 – 30k ( $\pm$  5 $\Omega$ ), 0 – 10k ( $\pm$  1.4 $\Omega$ ), 0 – 1.5k ( $\pm$  0.7 $\Omega$ )
  - Thermistor: 10k, 10k Shunt, 1k Balco, 1k Platinum (All  $\pm$  0.021°C)

### Analogue Output:

- 4 Channels (12-bits Resolution)
- o Voltage: 0 – 10V ( $\pm$  0.003V)
- o Current (up to 750 $\Omega$  load): 0 – 20mA, 4 – 20mA ( $\pm$  0.01mA)

### Digital Input:

- 8 Channels
- o Type: Voltage Free
- o Limit: +24V at 500 $\Omega$  maximum

### Digital Output:

- 8 Channels
- o Relay Contacts, SPST NO, Pilot Duty
  - Rating @ 250VAC/30VDC: 5A
  - Life expectancy Electrical: 200,000

### Communication

#### Physical Interface 1 (Port 1):

- EIA-485 Standard (Bus A, B) two-wire
- Half Duplex
- Data Bit: 8 bits
- Application Protocol:
  - o Modbus Slave
    - Baud Rate Speed: 9.6k, 19.2k, 38.4k, 57.6k, 115.2k bit/s
  - o BACnet® MSTP
    - Baud Rate Speed: 9.6k, 19.2k, 38.4k, 76.8k bit/s
  - o Sedona
- Multi-drop Capability: Yes (Hardware ID Setting)

#### Physical Interface 2 (Port 2):

- Ethernet 10/100 Base-T
- Ethernet Support: IP, TCP, UDP, ICMP, IGMP, FTP, HTTP
- Application Support: Modbus, BACnet® IP, BACnet® Ethernet, Sedona

#### Physical Interface 3 (Port 3):

- EIA-485 Standard (Bus A, B) two-wire
- Half Duplex
- Data Bit: 8 bits
- Application Protocol:
  - o Modbus Master
    - Baud Rate Speed: 9.6k, 19.2k, 38.4k, 57.6k, 115.2k bit/s

### Compliance

- EMC Directive 2004/108/EC
- FCC Part 15:2010, Subpart B, Class A
- BTL Certified (Revision 14)