

## Control Unit Module

# Sigma MOD LED

Product code: PW-033-A



**Reliability**



**Integrity**





**Innovations**



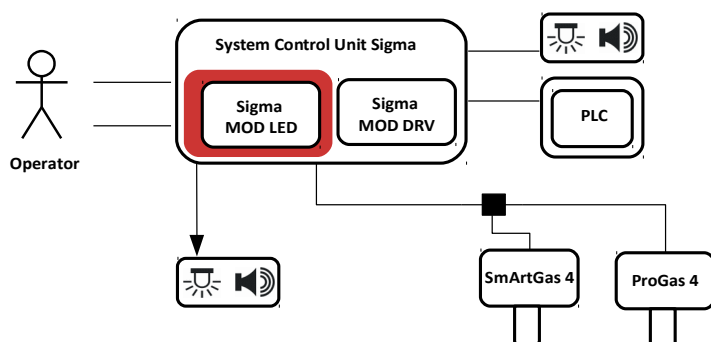
## Information about the product

The Control Unit Module, Sigma MOD LED, is a component of the Gas Safety System Sigma Gas. The module's functions include: communication with gas detectors, control of visual and sound indicators by means of contact outputs, transmission of the status of the gas monitoring network to other external systems via both its RS-485 digital link and contact outputs, display of system status to the operator by means of visual indicators and an integrated buzzer, and operator inputs for the control of the gas monitoring network, including, binary inputs and the RS-485 digital link.

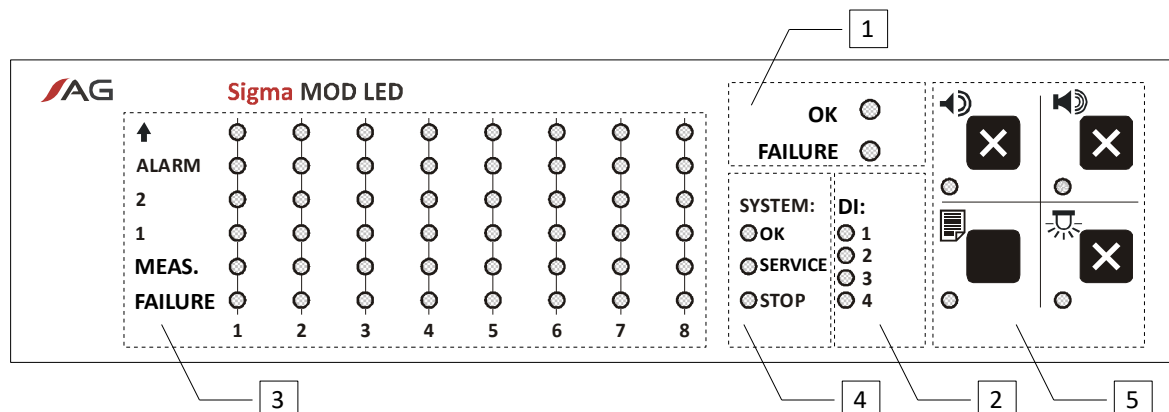
Basic functionalists:

-  handling up to 32 detectors,
-  8 relays outputs,
-  4 binary input,
-  presentation of historical states,
-  presentation of the gas detectors status (operation, exceeding the thresholds, its special conditions and diagnostic status),
-  control of the entire system operation.

## Location and role of the device in Gas Safety System



## User interface

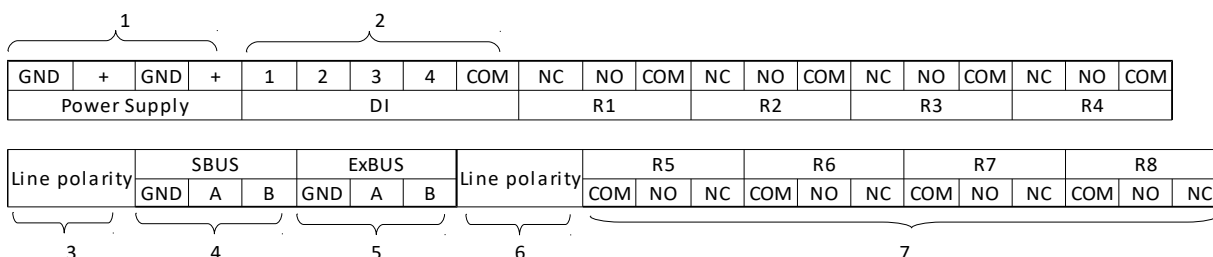


Front panel of Control Unit Module Sigma MOD LED consist of the following areas:

1. device status area,
2. status area for digital inputs DI,
3. status area for gas detectors,
4. system status (information exchange mode for the Sigma Bus),
5. keypad area.

Detailed information on marking the hardware configuration to determine the product code can be found in the User's Manual.

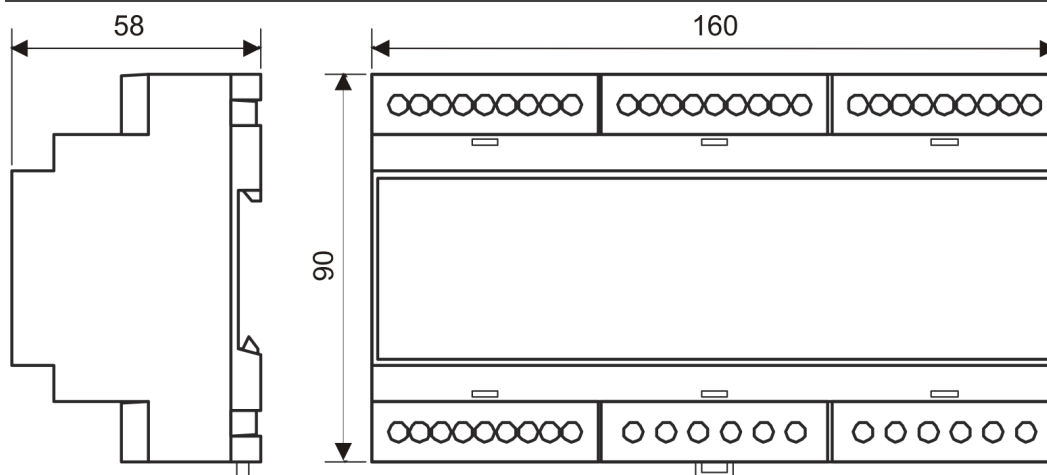
## Electrical interface



| No. | Name              | Pin   | Description   |
|-----|-------------------|---|---|
| 1   | Power Supply      | GND   | Negative. Both "GND" terminals are internally connected |
|     |                   | +   | Positive. Both "+" terminals are internally connected   |
| 2   | DI                | Binary inputs   |   |
|     |                   | 1-4   | External alarm input DI1 – DI4                          |
|     |                   | COM   | Common terminal of external alarm                       |
| 3   | Line polarization |   | Configuration of the polarisation of the SBUS port      |
| 4   | SBUS              | System communication port. Used for data exchange between devices in Sigma Gas System |   |
|     |                   | A   | Signal line A   |
|     |                   | B   | Signal line B   |
|     |                   | GND   | Negative supply pole                                    |

| No. | Name          | Pin           | Description   |
|-----|---------------|---------------|---|
| 5   | SBUS          | A             | Signal line A   |
|     |               | B             | Signal line B   |
|     |               | GND           | Negative. Both "GND" terminals are internally connected |
| 6   | Line polarity |               | Configuration jumpers for the ExBUS port                |
| 7   | R1 – R8       | Relay outputs |   |
|     |               | COM           | Common terminal of relay                                |
|     |               | NO            | Normally open contact of relay                          |
|     |               | NC            | Normally close contact of relay                         |

## Dimension



## Technical specification

|                              |  |
|------------------------------|--|
| Power supply                 | 10 – 34 V DC   |
| • Voltage Vcc                | 5 W  |
| • Power                      |  |
| Environment                  |  |
| • Ambient temperatures       | -10 – +50 °C   |
| • Humidity                   | 10 – 90% long term, without condensation   |
| Stopień IP                   | IP20   |
| Digital input parameters     |  |
| • R <sub>IN</sub>            | 10 kΩ  |
| • Inactive                   | 0 – 1 V  |
| • Active                     | 10 – 34 V  |
|                              | Any polarity   |
| Parameters of binary outputs |  |
| • Relay                      | Floating contacts, NO/NC<br>230 V AC / 3 A<br>230 V DC / 0.25 A<br>Not protected against overloading |

|   |  |
|---|--|
| Digital communication parameters          |  |
| • Port SBUS                               | RS - 485                               |
| • Electric standard                       | Sigma Bus                              |
| • Communication protocol                  |  |
| • Port ExBUS                              | RS - 485                               |
| • Electric standard                       | Modbus ASCII, 19200 b/s 7E1            |
| • Communication protocol                  | optional:<br>Modbus RTU, 19200 b/s 8N1 |
| Integrated signalling equipment (visual)  | LED controls                           |
| Integrated signalling equipment (audible) | 70 dB, 0,1 m distance                  |
| Protection class                          | III                                    |
| Cable glands (cable diameter range)       | 1 – 2 mm <sup>2</sup>                  |
| Enclosure material                        | Self – extinguishing PPO               |
| Weight                                    | 0.4 kg                                 |
| Mounting                                  | On DIN-35 / TS35                       |

## Product marking

| Product code | Device                            |
|--------------|-----------------------------------|
| PW-033-A     | Sigma MOD LED Control Unit Module |



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