

LSAIM03 AI module

LS communication Analog inputs : 8 1 to 5 V/0 to 5 V

■ Summary



- * Number of inputs : 8 (Channel individual isolation)
- * Input range : 1 to 5 V/0 to 5 V (Selectable)
- * Absolute precision : $\pm 0.1\%$ FS @25°C
- * Temperature drift : ± 100 ppm/°C or less
- * Module ambient temperature : -5 to 60°C
- * Insulation method : Photocoupler insulation

LAIMO3 AI module

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■ Specifications

| ITEM | | SPECIFICATION |
|---------------------------|----------------------------|--|
| Input | Number of channels | 8 (Channel individual isolation) |
| | Range | 1 to 5 V* ¹ / 0 to 5 V (Selectable for communication setting) (Full Scale) |
| | Internal impedance | 320 kΩ or more |
| | Resolution | 16 bits |
| Absolute accuracy | @25°C | ±0.1% FS |
| Temperature drift | @-5 to 60°C | ±100 ppm/°C or less (relative to full-scale) |
| CMRR | | 100 dB or more attenuation |
| NMRR | | About 11 dB attenuation (When the first-order lag filter is set to 10 ms or more, attenuation by 20 dB or more) |
| Data refresh cycle | | 10 ms |
| Input filter | | Software digital filter (Channel individual) |
| Dielectric strength | | AC 500 V input terminal - between PE Between input channels |
| Communication with IOA | Communication method | LVDS |
| | Communication speed | 100 Mbps |
| Self-diagnostic functions | | Power voltage check (24 V, 3.3 V, 1.2 V) Clock check (FPGA-MCU for diagnosis, MCU for diagnosis -FPGA) Heartbeat check (FPGA-MCU for diagnosis, MCU for diagnosis -FPGA) CRC check (FPGA) AI communication error check |
| Detective | | ADC abnormal check I/O signal range check (Overrange, Underrange) |
| Protection | (Power supply protection) | Overvoltage protection Overcurrent protection |
| Indicator | Display LED | 4: RUN(Run) / STS(Status) / NSA(Network status A) / NSB(Network status B) |
| Insulation method | | Photocoupler insulation |
| Hot swap | | Possible |
| Power supply | | DC 24 V ±20% (The voltage supplied from the backplane) |
| Environmental conditions | Module ambient temperature | (Operating) -5 to 60°C (Storage) -40 to 85°C |
| | Module ambient humidity | (Operating / Storage) 10 to 95% RH (No condensation) |
| Vibration | | 3.5 mm @5 to 8.4 Hz 1 G @8.4 to 150 Hz |
| Shock | | 15 G 11 ms |
| Rated Current | | 68 mA |
| Weight | | 0.10 kg |
| Dimensions | | 62 mm (D) x 94 mm (H) x 46 mm (W) (Except projection) |
| Standard/Directive | | EN 61131-2:2007, RoHS |

About compliant module type

For compliant modules of this product, please refer to "Compliant backplane list (CGS-S9901-E-XX)".

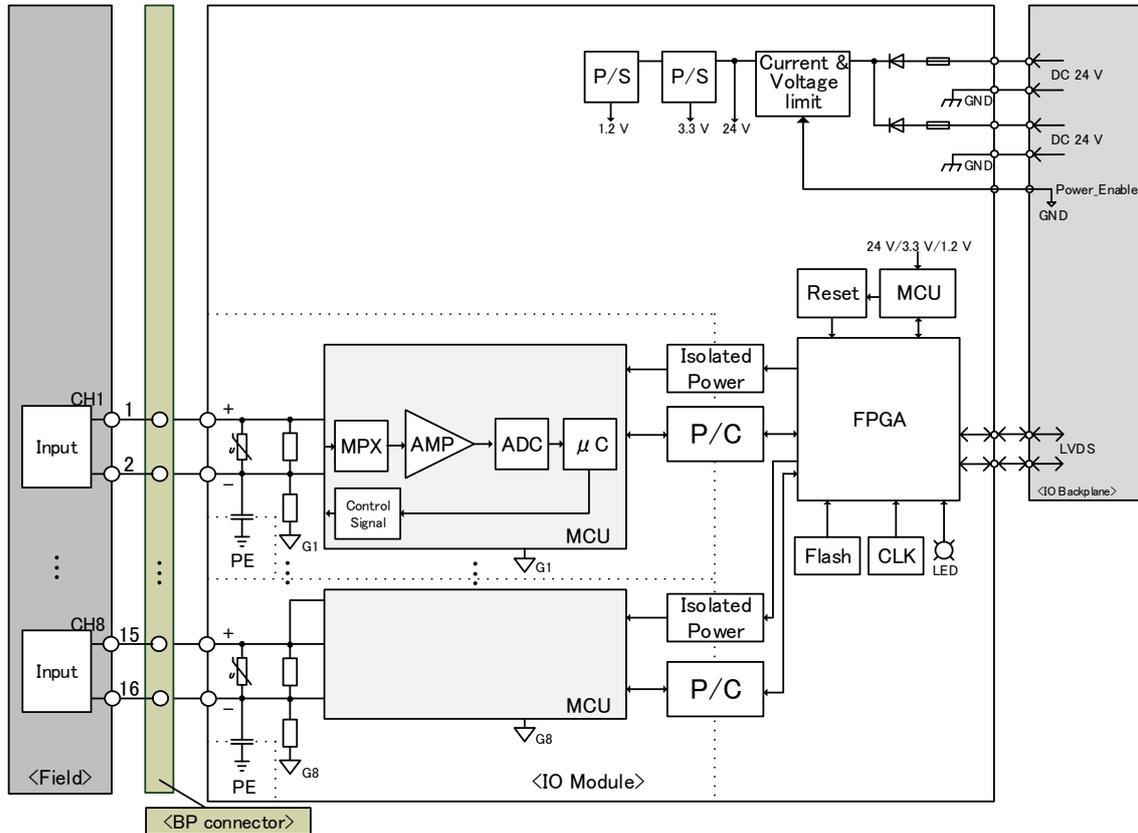
For compliant modules of this product, please refer to "Compliant accessory connector list (CGS-S9902-E-XX)".

*¹ : It is not possible to convert 4-20 mA to 1-5 V via 250 Ω.

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■ Block diagram



| | | |
|---|---|------------------------------------|
| P/S | : | Power supply |
| MPX | : | Multiplexer |
| AMP | : | Amplifier |
| ADC | : | Analog digital converter |
| μC | : | Micro controller |
| CLK | : | Clock |
| FPGA | : | Field programmable gate array |
| LED | : | Light emitting diode |
| MCU | : | Micro control unit |
| GND,G1 to G8 | : | Ground |
| IOA | : | I/O adapter |
| LVDS | : | Low Voltage Differential Signaling |
| BP | : | Backplane |
| PE | : | Protective Earth |
| P/C | : | Photocoupler |
|  | : | Varistor |
|  | : | Resistor |
|  | : | Fuse |
|  | : | Diode |
|  | : | Capacitor |

When using, please read the instruction manual attached to the product carefully and use it properly.

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