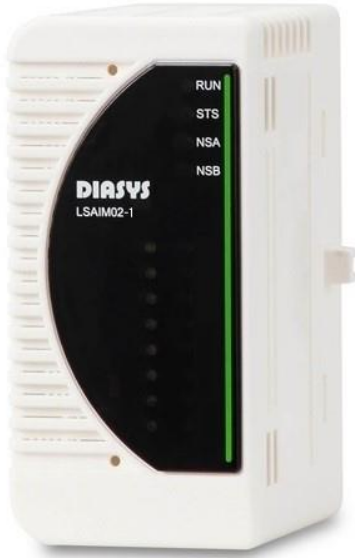


# LSAIM02-1 AI module

LS communication Transmitter inputs : 8 4 to 20 mA

## ■ Summary



- \* Number of inputs : 8 / Transmitter input,  
DC 24 V distributed type  
(Channel individual isolation)
- \* Input range : 4 to 20 mA
- \* Absolute precision :  $\pm 0.1\%$  FS @25°C
- \* Including temperature drift : Less than  $\pm 100$  ppm/°C
- \* Module ambient temperature : -5 to 60°C
- \* Insulation method : Transformer insulation

# LSAIM02-1 AI module

LS communication Transmitter inputs : 8 4 to 20 mA

## ■ Specifications

ITEM		SPECIFICATION
Input	Number of channels	8 (Transmitter input, DC 24 V distributed type <sup>(*)</sup> , Individual isolation)
	Range	4 to 20 mA (Full Scale)
	Resolution	16 bits
Absolute precision	@25°C	±0.1% FS
Temperature drift	@-5 to 60°C	Less than ±100 ppm/°C (relative to full-scale)
CMRR		100 dB or more attenuation
NMRR		About 2 dB attenuation (When the first-order lag filter is set to 30 ms or more, attenuation by 20 dB or more)
Data refresh cycle		5 ms /All channels
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
HART communication compliant Between actuators Communication specification	Communication method	HART communication (superimposed on 4 to 20 mA signal)
	Communication speed	1200 bps
Self-diagnostic functions		Power voltage check (24 V, 3.3 V, 2.5 V, 1.8 V, 1.0 V) Clock check (FPGA-MCU for diagnosis, MCU for diagnosis -FPGA) Heartbeat check (FPGA-MCU, FPGA-MCU for diagnosis, MCU for diagnosis -FPGA) CRC check (FPGA) AI communication error check Tuning check
Detective		ADC abnormal check I/O signal range check (Overrange, Underrange)
When disconnected		Detect 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		Transformer 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) Less than 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
Current consumption		356 mA
Weight		0.13 kg
Dimensions		62 mm (D) x 94 mm (H) x 46 mm (W) (Except projection)
Standard/Directive		EN 61131-2:2007, RoHS

\* The maximum voltage between terminals is 33 V when there is no load (disconnection).

About compliant module type

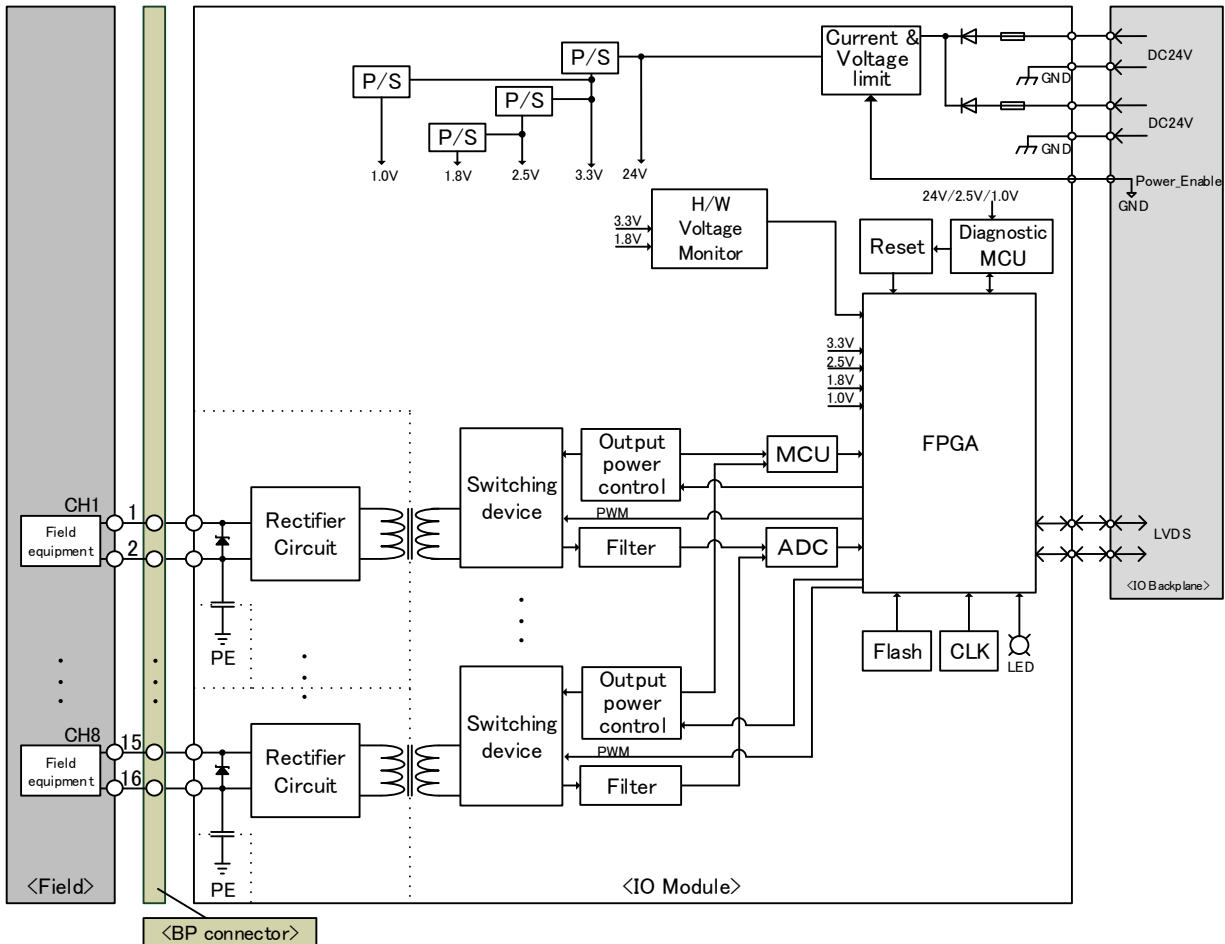
For compliant modules of this product, please refer to "Compliant backplane list (CGS-S9901-E-XX)".






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

# LSAIM02-1 AI module

LS communication Transmitter inputs : 8 4 to 20 mA

## Block diagram



- P/S : Power supply
- PWM : Pulse width modulation
- ADC : Analog digital converter
- CLK : Clock
- FPGA : Field programmable gate array
- MCU : Micro control unit
- GND : Ground
- IOA : I/O adapter
- LVDS : Low Voltage Differential Signaling
- BP : Backplane
- PE : Protective Earth
-  : Zener diode
-  : Fuse
-  : Diode
-  : Capacitor
-  : Transformer

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

This catalog may not be distributed or reproduced in whole or in part without permission.

Please be aware that due to product improvements and modifications, the product description in this catalog may differ in certain respects from the actual product.

DIASYS Netmation/DIASYS Netmation4S is a registered trademark of Mitsubishi Heavy Industries, Ltd.

The service names and product names of other companies described in this catalog are the trademarks or registered trademarks of each company.