

# LSAOM01-1 AO module

LS communication Analog outputs : 8 4 to 20 mA/0 to 20 mA

## ■ Summary



- \* Number of outputs : 8 (Channel individual isolation )
- \* Output range : 4 to 20 mA/0 to 20 mA (Selectable)
- \* Resolution : 16 bits
- \* Module ambient temperature : -5 to 60°C
- \* Isolation : Trans isolation

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## ■ Specifications

ITEM		SPECIFICATION
Output	Number of channels	8 (Channel individual isolation )
	Range	4 to 20 mA/0 to 20 mA (Switchable by EMS setting)(Full Scale)
	Resolution	16 bits
	Minimum external impedance	24.9 Ω
	Maximum external impedance	750 Ω
	Switching time of the redundant configuration	2 ms
Data refresh cycle		5 ms /All channels
Operation cycle usable in DPS		10 msec or more
Absolute accuracy	@25°C	±0.1% FS
Temperature drift	@5 to 60°C	Less than ±100 ppm/°C (relative to full-scale)
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, 1.2 V) Clock check (FPGA-MCU for diagnosis, MCU for diagnosis -FPGA) Read-back error check (Presence or absence can be set by configuration) CRC check (FPGA) Tuning check ADC abnormal check
Detective		I/O signal range check (Range over, Range under) Disconnection detection (Settable of possible/none by the configuration)
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		Less than 288 mA
Weight		0.11 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

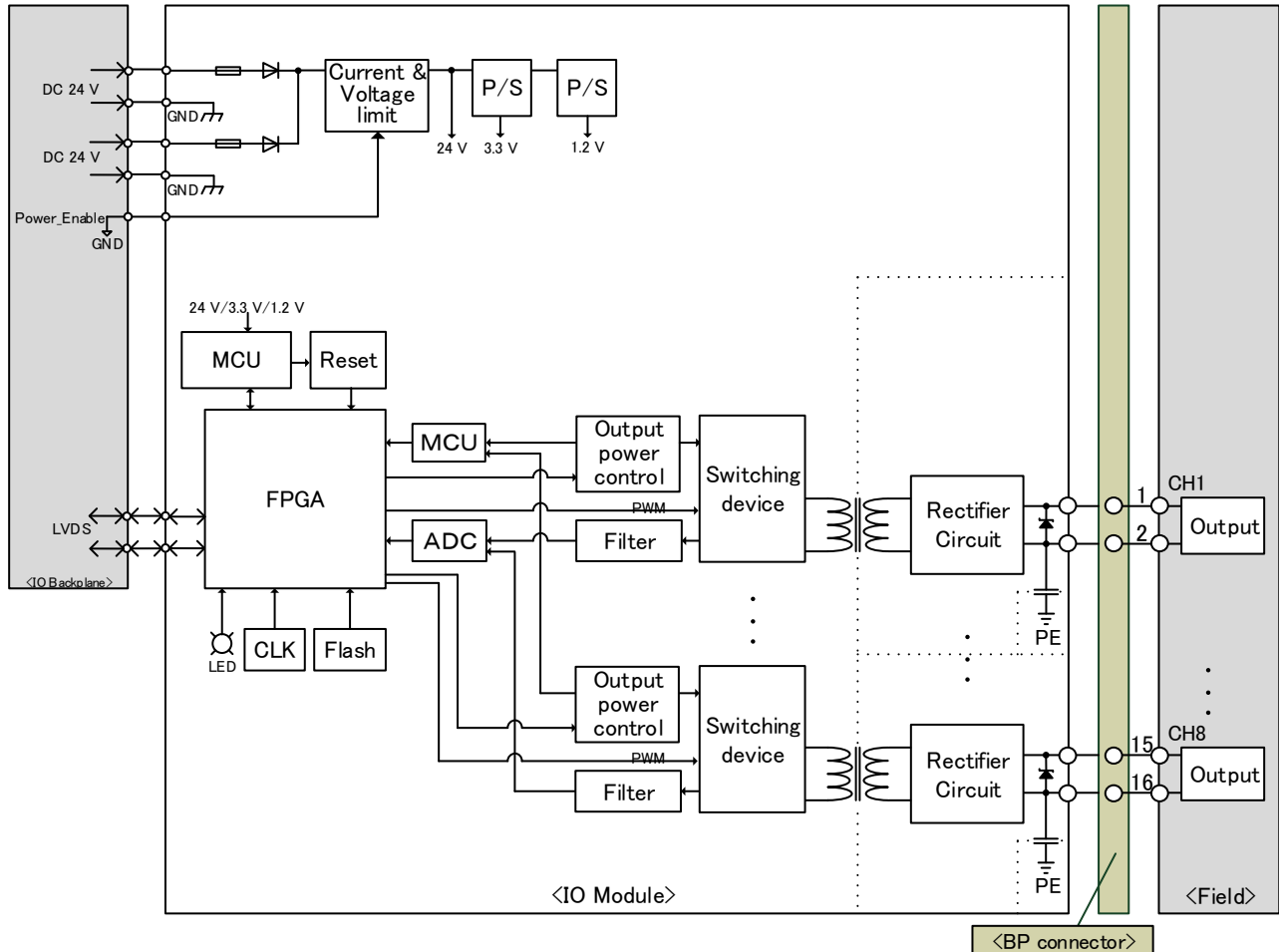
For compliant modules of this product, please refer to “Compliant backplane list (CGS-S9901-E-XX)”.






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

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## Block diagram



P/S	:	Power supply
PWM	:	Pulse width modulation
ADC	:	Analog digital converter
CLK	:	Clock
FPGA	:	Field programmable gate array
LED	:	Light emitting diode
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.

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