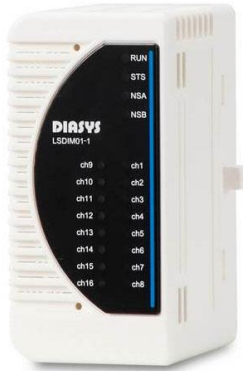


# LSDIM01-1 DI module

LS communication    Digital inputs : 16    2count/pulse

## ■ Summary



\* Number of inputs                    : 16 (16 ch common isolation)

\* Module ambient temperature    : -5 to 60°C

\* Isolation                                : Digital isolation  
Transformer insulation

\* Count                                    : 2 count/pulse

# LSDIM01-1 DI module

LS communication Digital inputs : 16 2count/pulse

## ■ Specifications

ITEM		SPECIFICATION	
Input	Number of channels	16 (16 ch common isolation)	
	Range	ON current	More than 2 mA *Selectable power for sense current: +24 V/-24 V/+48 V/-48 V
		OFF current	Less than 1.0 mA
		Disconnection	Setting disconnection detection ON: Less than 0.5 mA
Data refresh cycle		0.3 ms/All channels	
Input filter		Software digital filter (Channel individual)	
Dielectric strength		AC 1500 V Between input terminal and PE	
Communication with IOA	Communication method	LVDS	
	Communication speed	100 Mbps	
Self-diagnostic functions		Power voltage check (24 V, 3.3 V, 2.5 V, 1.8 V, 1.0 V, VIO) 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) Sense voltage/current check (MCU) MCU power check (MCU)	
Event DI function(EDI)		Event DI module: 16 Event signal input: Settable by software (EMS) Time resolution: 1 msec	
Pulse input function(PI)		Pulse input module: 16 Input pulse rate: 0 to 500 Hz (Both ON, OFF times shall be more than 0.5 msec.) Count: OFF → ON, ON → OFF (2count/pulse)	
Detective		Disconnection detection	
Protection	IO circuit Protection	Overvoltage protection	
	Power supply Protection	Overcurrent protection	
Indicator	Display LED	4: RUN (Run)/STS (Status)/NSA (Network status A)/NSB (Network status B)	
	Channel status LED	16: Each I/O channels status	
Isolation		Digital isolation (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) 10 to 95% RH or less (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 251 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	

About compliant module type

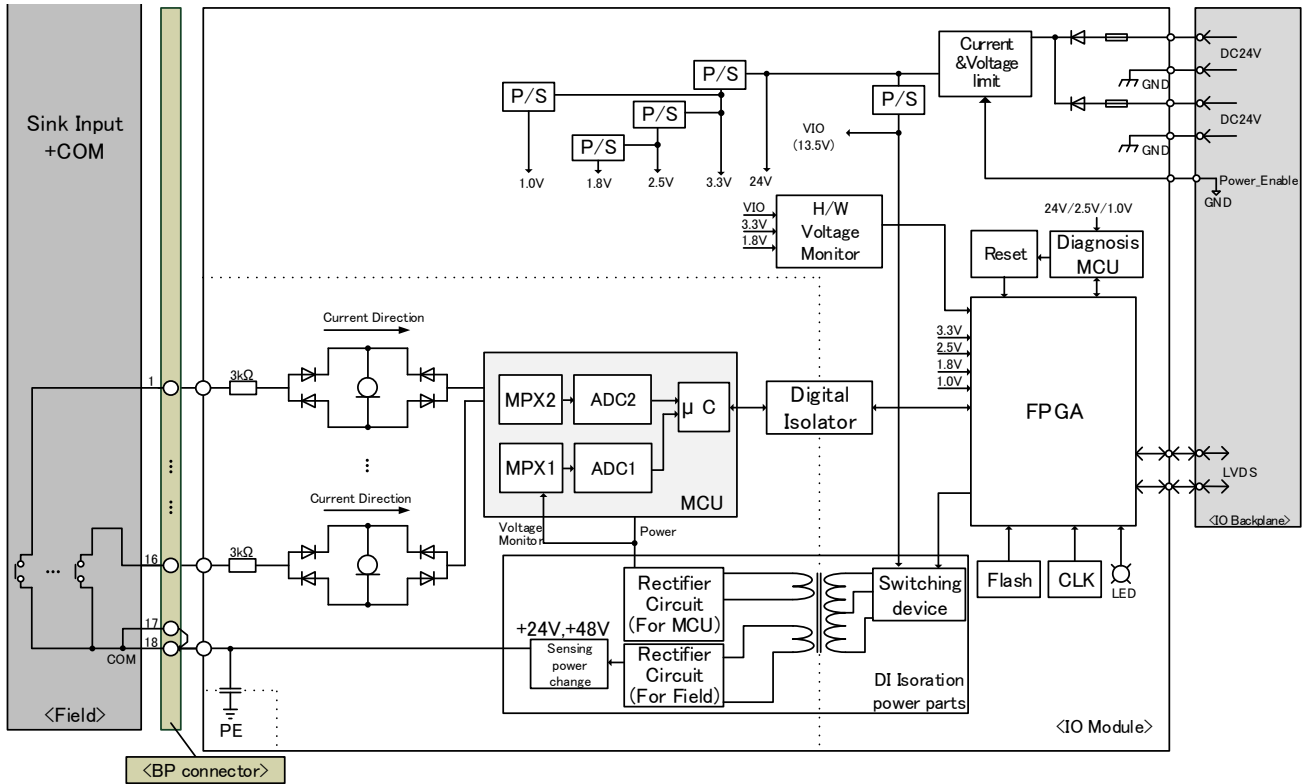
For compliant backplanes of this product, please refer to “ Compliant backplane list (CGS-S9901-E-XX) ”.








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

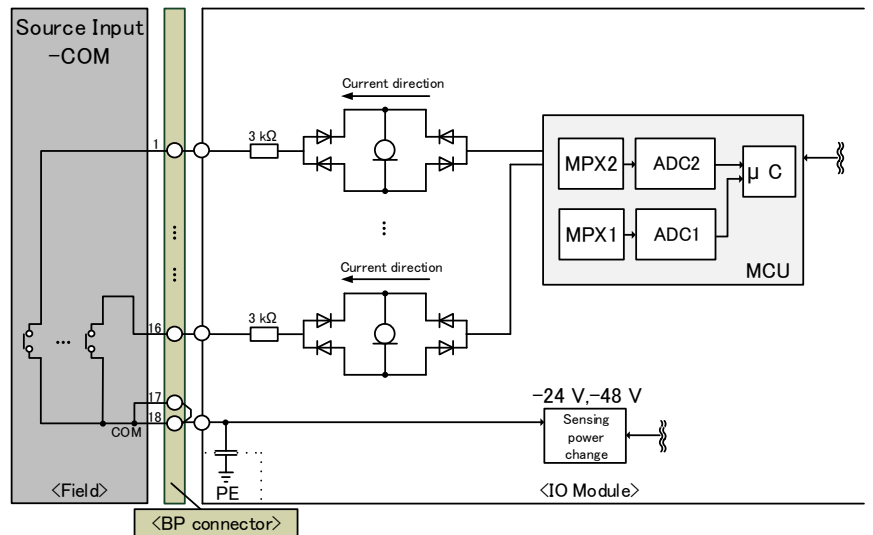
# LSDIM01-1 DI module

LS communication Digital inputs : 16 2count/pulse

## Block diagram



- |   |   |                                    |
|---|---|------------------------------------|
| P/S   | : | Power supply                       |
| MPX   | : | Multiplexer                        |
| ADC   | : | Analog digital converter           |
| μC  | : | Micro controller                   |
| CLK   | : | Clock                              |
| FPGA  | : | Field programmable gate array      |
| LED   | : | Light emitting diode               |
| MCU   | : | Micro control unit                 |
| GND   | : | Ground                             |
| COM   | : | Common                             |
| IOA   | : | I/O adapter                        |
| LVDS  | : | Low Voltage Differential Signaling |
| EMS   | : | Engineering Management System      |
| BP  | : | Backplane                          |
| PE  | : | Protective Earth                   |
|  | : | Resistor                           |
|  | : | Fuse                               |
|  | : | Diode                              |
|  | : | Capacitor                          |
|  | : | Switch                             |
|  | : | Transformer                        |
|  | : | Constant current circuit           |



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