

# LSDIM01A-1-R DI module

LS communication Digital inputs : 16 1count/pulse

## ■ Summary



- \* Number of inputs : 16 (16 ch common isolation)
- \* Module ambient temperature : 0 to 55°C
- \* Isolation : Digital isolation  
Transformer insulation
- \* Count : 1Count/pulse
- \* Supported FXtoLS adapter : LSRLTS-DI01, LSRLTS-DI11



This module is dedicated to compact retrofit terminal blocks.  
Dedicated lock pins are attached to the bottom.

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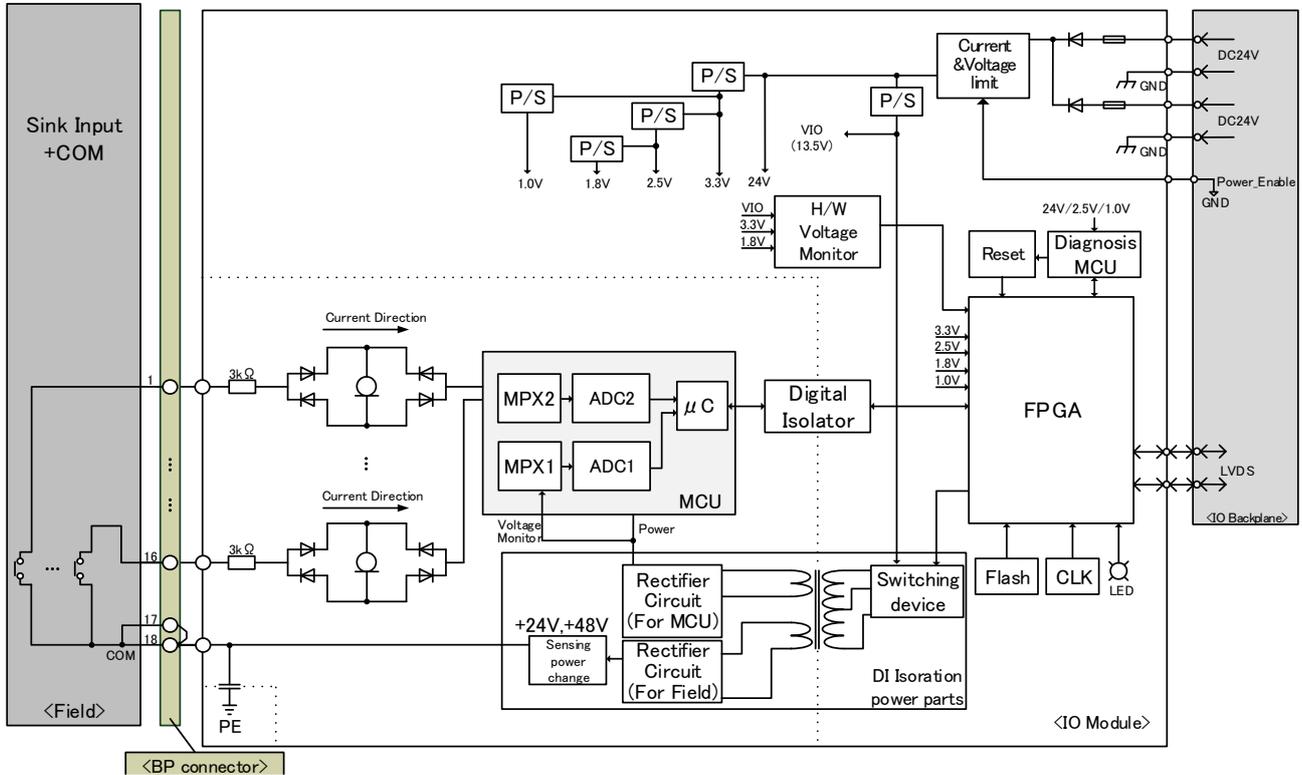
## ■ Specifications

ITEM		SPECIFICATION	
Input	Number of channels	16 (16 ch common isolation)	
	Range	ON current	2 mA or more *Selectable power for sense current: +24 V/-24 V/+48 V/-48 V
		OFF current	1.0 mA or less
		When disconnected	When disconnection detection function is set: 0.5 mA or less
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 0.5 msec or longer.) Count: OFF → ON (1count/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: Ch 1 to Ch 16	
Insulation method		Digital isolator (Transformer insulation)	
Hot swap		Possible	
Power supply		DC 24 V ±20% (The voltage supplied from the backplane)	
Environmental conditions	Module ambient temperature	(Operating) 0 to 55°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		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	

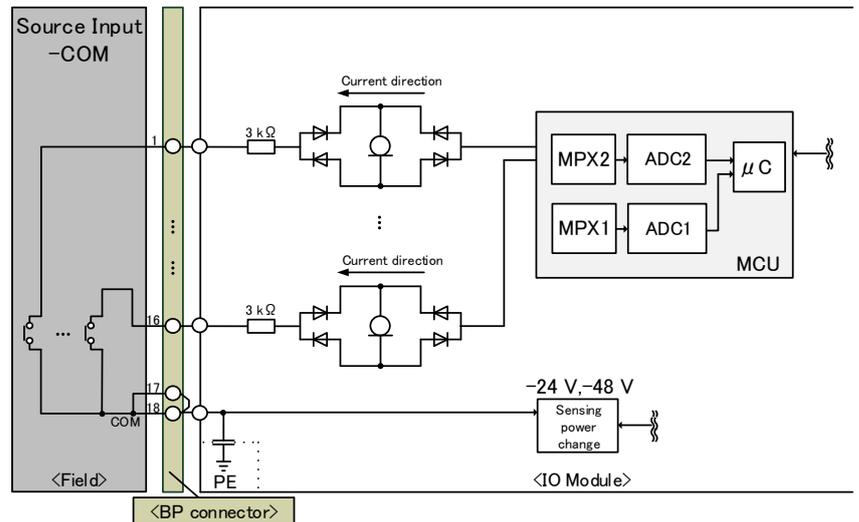
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## Block diagram



- 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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