MITSUBISHI POWER

LSDIM01A-1-R DI module

LS communication   Digital inputs : 16   1count/pulse

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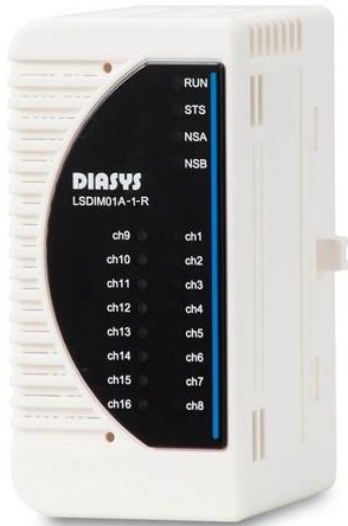
✱Number of inputs	:	16 (16 ch common isolation)
✱Module ambient temperature	:	0 to 55℃
✱Isolation	:	Digital isolation
		Transformer insulation
✱Count		1Count/pulse
✱Supported FXtoLS adapter	:	LSRLTS-DI01, LSRLTS-DI11

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

LSDIM01A-1-R DI module
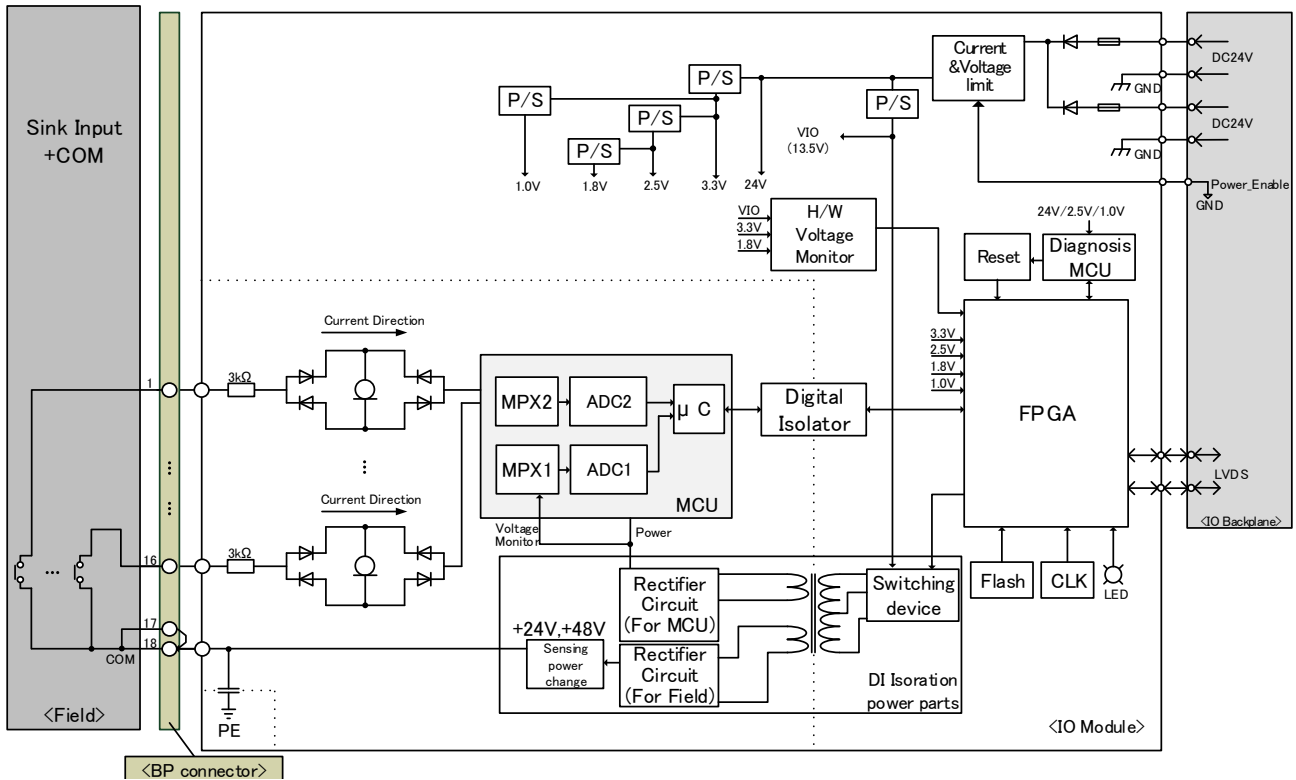
**LS communication　Digital inputs : 16　1count/pulse**

■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
		OFFcurrent	Less than 1.0 mA
		When disconnected	When disconnection detection function is set: 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	Communicaton 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 (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℃ (Storage) −40 to 85℃
	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

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LSDIMO1A-1-R DI module

LS communication　Digital inputs : 16　1count/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
⌐o⌐	:	Switch
⧈	:	Transformer
⊞	:	Constant current circuit
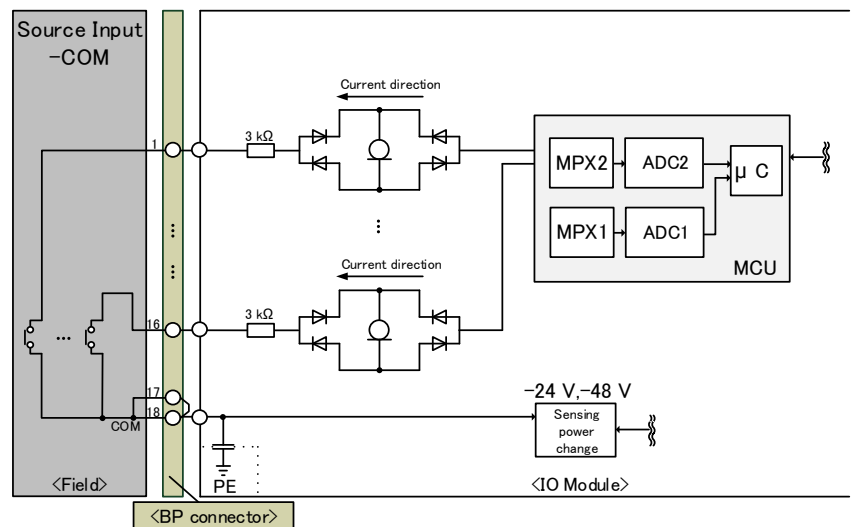
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