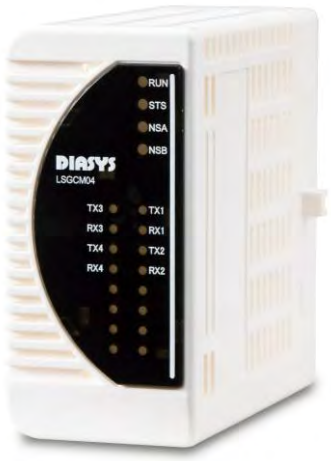
MITSUBISHI POWER

LSGCM04 ModbusRTU (RS485) Communication module

LS communication ModbusRTU (RS485) : 4 ch

■Summary



✱Communication port : 4 (Individual Insulation)

✱Module ambient temperature : -5 to 60°C

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CGS-S7704-E-13 (2025.10.31)
SL : 1 ECT : N/A

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■Specifications

ITEM		SPECIFICATION
Communication port	Number of channels	4 (Individual isolation)
	Communication speed	1200, 2400, 4800, 9600, 19200, 38400 bps
	Communication size	Maximum communication total 12 Kbyte
	Communication method	Asynchronous type
	Data length	8
	Stop bit	1, 2
	Parity bit	even, odd, none
	Transmission mode	RTU mode only
	Operating mode	Supports both master mode and slave mode (can be used together)
	Function code	Supports the following function codes 1:Coil Reading DO 2:Input status Reading DI 3:Holding register Reading AO 4:Input register Reading AI 5:Coil Write 1 point to DO 6:Holding register Write 1 point to AO 15:Multiple coils Batch writing to DO 16:Multiple holding register Batch writing to AO
	Number of registered commands	Max50 pieces / Channel *1
	Duplication correspondence	Possible (Two units installed, Select data in CPU Application Logic) *2
Terminating resistance		Required for external line connection terminal block side
Signal level		-30 mV or more: 1 / -20 mV or less: 0
Dielectric voltage		DC 500 V
Communication with IOA	Communicaton method	LVDS
	Communication speed	100 Mbps
Self-diagnostic functions		Power voltage check (24 V, 3.3 V, 1.2 V) Clock abnormal check (FPGA-MCU for diagnosis, MCU for diagnosis -FPGA) Heartbeat check (FPGA=>MCU for diagnosis, MCU for diagnosis=>FPGA, FPGA=>MCU for communication) CRC check (FPGA) Exception interrupt check (MCU for communication) Check communication setting file (MCU for communication) Connection check with host computer (DPS, MPS, etc.) (MCU for communication) MODBUS communication check (MCU for communication)
Protection	(Power supply protection)	Overvoltage protection Overcurrent protection
Indicator	Status indication LED	4: RUN(Run) / STS(Status) / NSA(Network status A) / NSB(Network status B)
	Communicaton LED	8: TXD (CH 1-4 TXD Status) /RXD (CH 1-4 RXD Status)
Insulation type		iCoupler(Analog devices) *3
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 (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		150 mA
Weight		0.124 kg
Dimensions		97 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) ".

*1 Depending on the system environment, adjustment such as slowing down the communication cycle is required.
*2 It can be used as a redundant by installing two of this module, establishing two independent communication lines, and then selecting the data in the upper application logic.
*3 iCoupler is an analog technology company's isolation technology.
By combining high-speed CMOS and monolithic air core transformer, it has excellent performance characteristics.

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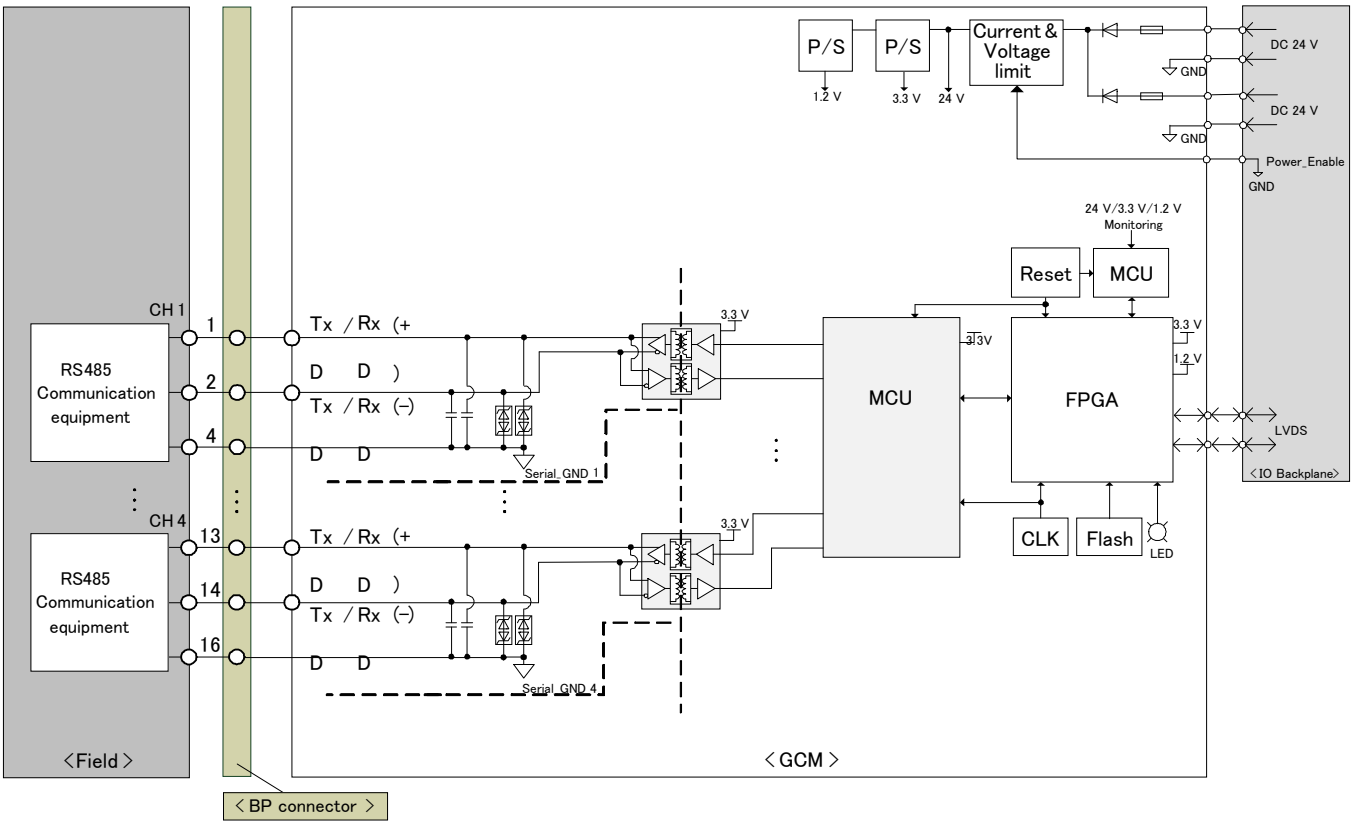
■Block diagram



P/S	:	Power supply
CLK	:	Clock
FPGA	:	Field programmable gate array
LED		Light emitting diode
MCU	:	Micro control unit
GND	:	Ground
Serial GNDx	:	Isolation ground
LVDS	:	Low Voltage Differential Signaling
BP	:	BackPlane
	:	fuse
	:	diode
	:	TVS diode arrays
	:	capacitor

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