



Model: PFXLM4B01DDK PFXLM4B01DDC

PFXLM4B01DAK PFXLM4B01DAC



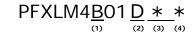
Notice to our valued customers who use LT4000M series (analog model) : You may experience instances when analog signals are output while the LT4000M is starting up. Measures :

LT4000M Rear module

External equipment connected to analog output terminals should be design so powering up occurs only after the LT4000M has started up.

Considering the above, if the LT4000M and external equipment have different power supplies, please design your system with momentary power interruptions in mind.

Model Name Indication



	(1)	(2)		
В	Rear module	D	DC24V	
	(3)		(4)	
D	(3) Digital I/O	K	(4) Sink Output Type	

Display Specifications

Display Specifications			LT-4000M R	Rear module	
			DIO	AIO and DIO	
Models			PFXLM4B01DDK : Sink Output Type PFXLM4B01DDC : Source Output Type	PFXLM4B01DAK : Sink Output Type PFXLM401DAC : Source Output Type	
Virtua	Resolution	(pixels)	320 x 240	D (QVGA)	
Lai	nguage Fon	ts *1	Japanese, ASCII, Chinese (Simplified), Ch	ninese (Traditional), Korean, Cyrillic, Thai	
(Character si	zes	8 x 8, 8 x 16, 16 x 16 a	and 32 x 32 pixel fonts	
	Font sizes	6	Width can be expanded 1 to 8 times. Heigh	ht can be expanded 1/2 and 1 to 8 times.	
	8 x 8 pixe	ls	40 characters per row x 30 rows		
	8 x 16 pixe	ls	40 characters pe	er row x 15 rows	
	16 x 16 pix	els	20 characters pe	er row x 15 rows	
:	32 x 32 pix	els	10 characters p	er row x 7 rows	
	Application	n memory *2	FLASH EPR (includes screen editing program		
Mamanu	Logic pro	ogram area	FLASH EPROM 132 KB *3 (e	equivalent to 15,000 steps)	
Memory	Fon	it area	FLASH EPROM 8 MB (when limit exe	· · · · · · · · · · · · · · · · · · ·	
	Data	backup	nvSRAM 128 KB (rechargeable l	ithium battery for data backup)	
	Varia	ble area	nvSRAM 64 KB (rechargeable lit		
Touch		уре	Resistive Fil	lm (analog)	
Panel	Lif	etime	1 million touc RS-232C/I		
	Serial (COM1		RS-232C (Connector type: RJ45, Isolation: None, Maximu Maximum length: 15 m (49 ft), 5 Vd RS-485 (Connector type: RJ45, Isolation: None, Maximu Maximum length: 200 m (656 ft), Polarization: Setting is re the "GP-Pro EX Device/ PLC Manual" for the set	Ic power supply for RS-232C: None) Im baud rate: 115,200 bps, Cable Type: Shielded, Cable equired via software when connecting Multiple LTs. Refer to	
	CANope	n (master)	CAN-CIA (ISO 11898-2:2002 Pa	rt 2), Connector: D-sub9 (plug)	
	Ethernet		IEEE802.3 compliant Ethernet x 1 (Connector type: RJ45, Driver: 10 M half duplex (auto negotiation)/100 M full duplex (auto negotiation), Cable typ Shielded, Automatic cross-over detection: Yes)		
Interface	USB (Type A)		(Power Supply Voltage: 5Vdc +/-5%, Maximum Current Sup	USB 2.0 (Type A) x 1 %, Maximum Current Supplied: 500mA, Maximum Transmission Distance: 5m (16.4 ft.))	
	USB (mini B)	USB 2.0 (N	· · · · · · · · · · · · · · · · · · ·	
	Control	DIO (Sink Type)	20 Points Standard Input (including 2 Points for Fast Input) 10 Points Standard Output, 2 Points for Fast Output	12 Points Standard Input (including 2 Points for Fast Input) 6 Points Standard Output , 2 Points Fast Output	
		DIO (Source Type)	20 Points Standard Input (including 2 Points for Fast Input) 10 Points Standard Output and 2 Points Fast Output	12 Points Standard Input (including 2 Points for Fast Input) 6 Points Standard Output and 2 Points Fast Output	
		AIO	_	2 ch analog inputs (13-bit) and 2 ch analog inputs (16-bit) for Thermocouple 2 ch analog outputs (12-bit)	

*1: Please refer to the GP-Pro EX Reference Manual for details on font types and character codes.
 *2: Capacity available for user application.
 *3: Up to 60,000 steps can be converted in software. However, this reduces application memory capacity (for screen data) by 1 MB.
 *4: 2-wire connection is available for RS-485. When a Device/PLC supports 2-wire connection, 4 wires (RXD+, TXD+, RXD-, and TXD-) can be short-circuited to be 2 wires (RXD+ and TXD + = D1, RXD- and TXD = D0). For details on the connection, refer to the connection manual.

General Specifications

	LT-4000M F	Rear module
	DIO	AIO and DIO
Supported Standards and Regulations		
Rated Input Voltage	24	Vdc
Input Voltage Limits	20 to 28.8 Vd	
Acceptable Voltage Drop	10 ms or less	s at 20.4 Vdc
Power Consumption	10 W or less	13 W or less
In-Rush Current	30 A or less at 28.8 Vdc	
Voltage Endurance between power terminal and frame ground (FG)	500 Vdc for 1 minute	
Insulation Resistance between power terminal and FG	10 MΩ or higher at 500 Vdc	

Environmental Specifications

·		LT-4000M R	Rear module
		DIO	AIO and DIO
Standard compliance		IEC61131-2	
Ambient operating	Horizontal installation	0 to 50°C (32 to 122°F)	
temperature	Vertical installation	0 to 40°C (3	32 to 104°F)
Storage	e temperature	- 20 to 60°C (- 4 to 140°F)	
Stora	ige altitude	0 to 10,000 m ((0 to 32,808 ft)
Opera	ting altitude	0 to 2,000 m ((0 to 6,560 ft)
Surrounding Air and Storage Humidity 5 to 85% w/o condensation (non-condensing, wet bulb temperature 39		wet bulb temperature 39°C (102.2°F) or less)	
Degree of pollution	IEC60664	2	2
Degree of protection	IEC61131-2	IP20 with protection	•
Corro	osive gases	Free of corr	<u>v</u>
	Dust	≤0.1 mg/m ³ (10 ⁻⁷ oz/ft ³)	(non-conductive levels)
Atmospheric p (Operating Al		800 to 1,114 hPa (2000	0 m (6,561 ft) or lower)
Vibration resistance	Mounted on a DIN rail	3.5 mm (0.138 in.) fixed a 9.8 m/s² (1 gn) fixed accele	
Mechanical shock resistance	Mounted on a DIN rail	147 m/s ² (15 gn) for	a duration of 11 ms
Electrostatic discharge	IEC/EN61000-4-2	8 kV (air d 6 kV (contac	
Radiated radio frequency electromagne tic fields	IEC/EN61000-4-3	10 V/m (80 MHz to 3 GHz)	
Fast transients / Burst noise	IEC/EN61000-4-4	Power lines: 2 kV Digital I/O: 1 kV Relay outputs: 2 kV Ethernet line: 1 kV COM line: 1 kV	
Surge immunity	IEC/EN61000-4-5	CAN line: 1 kV Power supply: CM: 1 kV; DM: 0.5 kV Digital I/O: CM: 1 kV; DM: 0.5 kV Shielded cable: 1 kV CM = line-earth	
Conducted disturbances induced by radio- frequency fields	IEC/EN61000-4-6	DM = line-line 10 Veff (0.15 to 80 MHz)	
Mains		150 to 500 kHz, qu	uasi peak 79 dBµV
terminal disturbance voltage	EN55011 (IEC/CISPR11)	150 to 500 kHz, quasi peak 79 dBμV 500 kHz to 30 MHz, quasi peak 73 dBμV	
Electric field	EN55011	30 to 230 MHz, quasi peak 10 m @40 dBµV/m	
strength (IEC/CISPR11) 230 MHz to 1 GHz, quasi peak 10 m @47 dBµV/m		peak 10 m @47 dBµV/m	
Vibration immunity (operating)		IEC61131-2	
Protection structure		NEMA TYPE 4X (indoors, with panel embedded)	
Protection		IP20 - (IEC60529)	
Shock imm	unity (operating)	IEC61131-2	15gn 11ms
Cooli	ing method	Natural air	circulation
	Weight	include Rear module installation adapter: 509g(17.96 oz) / only Rear module : 353g(12.46 oz)	include Rear module installation adapter : 544g (19.19 oz) / only Rear module : 388g (13.69 oz)
	Color	Rear module	e: RAL 7032
N	Naterial		
Material		Rear module: PC/PBT	

Digital Input Characteristics

		LT-4000M Rear module	
Rated Current		5 mA	
	Voltage	30 Vdc	
Inrush Values	Current	6.29 mA max.	
Input im	pedance	4.9 kΩ	
Input	t type	Sink/Source	
Rated	voltage	24 Vdc	
Maximum Allo	wable Voltage	28.8 Vdc	
	ON Voltage	15 Vdc or more (15 to 28.8 Vdc)	
Input limit	OFF Voltage	5 Vdc or less (0 to 5 Vdc)	
values	ON Current	2.5 mA or more	
	OFF Current	1.0 mA or less	
	Method	Photocoupler Isolation	
Isolation	Between internal logic	500 Vdc	
Filte	ering	0.5 ms x N (N is 0 to 63)	
IEC61131-2 @	edition 3 type	Туре 1	
Compa	atibility	Supports 2 wire and 3 wire sensors	
Cable type and length		Shielded: Maximum 100 m (328 ft) Non-shielded: 50 m (164 ft)	
Terminal blocks		Type: 3.5 mm (0.137 in.) pitch Terminal blocks are removable	
Input pa	ralleling	No	

High Speed Counter Input Characteristics

Image: Section of the sectin of the section of the section	ngn opeea eeantei n				
Rated Current Current 7.83 mA Inrush values Voltage 30 Vdc Input Impedance 3.0 Vdc 30 Vdc Input Impedance 3.2 kΩ 3.2 kΩ Input Impedance 3.2 kΩ 3.2 kΩ Input Impedance 3.2 kΩ 3.2 kΩ Maximum Allowable Voltage 2.4 Vdc Maximum Allowable Voltage 2.8 Vdc ON Voltage 5 Vdc or more ON Voltage 5 Vdc or less ON Current 5 mA or more OFF Current 1.5 mA or less Between 500 Vdc Filtering None, 4 µs, 40 µs Filtering None, 4 µs, 40 µs Compatibility Supports 2 wire and 3 wire sensors Cable Input input is the maximum frequency for Single-phase - 100 kHz is the maximum frequency for Single-phase - 100 kHz is the maximum frequency for 2-phase - 100 kHz is the maximum frequency for 2-phase - 2 Phase x2 - 2 Phase x4 - 2 Phase x4 - 2 Phase x4 - 2 Phase x4 - 2 Phase x4 Reverse - 2 Phase x4			LT-4000M R	lear module	
Current 7.83 mA Inrush values Qurrent 30 Vdc Input impedance 3.2 kQ Input impedance 3.2 kQ Rated ∪ tage 3.2 kQ Maximum Allowable Voltage 2.4 Vdc Maximum Allowable Voltage 2.8 Vdc Maximum Allowable Voltage 2.8 Vdc ON Current 5 Ma or more ON Current 5 Ma or more OFF Voltage 5 Vdc or less ON Current 5 mA or more OFF Current 1.5 m A or less Method Photo coupler Isolation Between 500 Vdc Filtering None, 4 Lts, 40 μs IEC61131-2 edition 3 type 500 Vdc Grametibiogic Type 1 Computibility Supports 2 wire and 3 wire sensors Cable Type Input tocks Type 3 Maximum 10 m (33 ft) Type 3 Maximum Fequency for Single-phase - 100 kHz Is the maximum frequency for Single-phase - 100 kHz Is the maximum frequency for Single-phase - 2 Phase x2 - 2 P	Voltage		24	Vdc	
Inrush values Current 9.99 mA Input Impe dance 3.2 kQ Input type Sink/Source Rated voltage 24 Vdc Maximum Allowable Voltage 28.8 Vdc ON Outage 15 Vdc or more OFF Voltage 5 Vdc or less ON Current 5 mA or more OFF Current 1.5 mA or less Method Photo coupler Isolation Between channels logic 500 Vdc Filtering None, 4 µ5, 40 µ5 IEC61131-2 edition 3 type Type 1 Compatibility Supports 2 wire and 3 wire sensors Cable Type Maximum Iveruency 500 kHz is the maximum frequency for Single-phase · 100 kHz is the maximum frequency for 2-phase · 2 Phase x4 · 2 Phase x4 · 2 Phase x4 · 2 Phase x4 · 2 Phase x4 · 2 Phase x4 Reverse · 2 Phase x4 · 2 Phase x4 Reverse · 2 Phase x4 Reverse · 2 Phase x4 Reverse · 2 Phase x4 Reverse · 2 Phase x4 Reverse · 2 Phase x4 Reverse · 2 Phase x4 Reverse	Rated Current	Current	7.83	mA	
Input Impedance 9.99 mA Input Impedance 3.2 kΩ Input Impedance Sink/Source Rated voltage 24 Vdc Maximum Allowable Voltage 28.8 Vdc ON Voltage 15 Vdc or more ON Voltage 5 mA or more OFF Voltage 5 mA or more OFF Current 1.5 mA or less OFF Current 5.00 Vdc Isolation Between channels logic Isolation Rethod Photo coupler Isolation 500 Vdc Filtering None, 4 µs, 40 µs Cable Type Values None, 4 µs, 40 µs Icot in 3 type Type 1 Cable Type Imput Impu	Innichvoluoc	Voltage	30	Vdc	
Input type Sink/Source Rated voltage 24 Vdc Maximum Allowable Voltage 28.8 Vdc Input limit ON Voltage 15 Vdc or more ON Voltage 5 Vdc or less OF F Voltage 5 Vdc or less OFF Current 5 mA or more OFF Current 5 mA or more OFF Current 5 mA or less Method Photo coupler Isolation Between 500 Vdc channels logic 500 Vdc FIECe1131.2 edition 3 type Type 1 Compatibility Supports 2 wire and 3 wire sensors Cable Inguth Maximum 10 m (33 ft) Terminal blocks Type: 3.5 mm (0.137 in.) pitch Terminal blocks Terminal blocks are removable Maximum requency for 5.90 kHz is the maximum frequency for 5.90 kHz . 100 kHz is the maximum frequency for 2.phase · 100 kHz is the maximum frequency for 2.phase . 2 Phase x2 · 2 Phase x4 . 2 Phase x4 · 2 Phase x4 Reverse . 2 Phase x4 Reverse · 2 Phase x4 Reverse . 2 Phase x4 Reverse · 2 Phase x4 R	musnvalues	Current			
Rated voltage 24 Vdc Maximum Allowable Voltage 28.8 Vdc Input limit values OFF Voltage 15 Vdc or more OFF Voltage 5 Vdc or less ON Current 5 mA or more OFF Contrant 1.5 mA or more Isolation Between channels logic 500 Vdc Filtering None, 4 µS, 40 µS IEC61131-2 edition 3 type Type 1 Compatibility Supports 2 wire and a wire sensors Cable Irget Terminal blocks Type: 3.5 mm (0.137 in.) pitch Terminal blocks are removable Maximum Frequency -100 kHz is the maximum frequency for Single-phase - 0.100 kHz is the maximum frequency for 2-phase - 2 Phase x4 - 2 Phase x4 - 2 Phase x4 - 2 Phase x4 Reverse - 2 Phase x4 Reverse - 2 Phase x4 Reverse - 2 Phase x4 Reverse - 2 Phase x4 Reverse - 2 Phase x4 Reverse - 2 Phase x4 Reverse - 2 Phase x4 Reverse - 2 Phase x4 Reverse - 2 Phase x4 Reverse - 2 Phase x4 Reverse - 2 Phase x4 Reverse - 2 Phase x4 Reverse - 2 Phase	Input im	pedance	3.2		
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Input limit values ON Voltage 15 Vdc or more OFF Voltage 5 Vdc or less ON Current 5 Vdc or less ON F Current 5 MA or more OFF Current 1.5 mA or less Between chanels logic 500 Vdc Filtering None, 4 µs, 40 µs IEC61131-2 etition 3 type Type 1 Compatibility Supports 2 wire and 3 wire sensors Cable Type IEc61131-2 etition 3 type Supports 2 wire and 3 wire sensors Cable Type Variance Type: 3.5 mm (0.137 in.) pitch Terminal blocks are removable Maximum Frequency Single phase · 100 kHz is the maximum frequency for 2-phase · 2 Phase x2 · 2 Phase x2 · 2 Phase x4 · 2 Phase x4 · 2 Phase x4 Reverse · 2 Phase x4 Reverse <td< td=""><td></td><td></td><td></td><td></td></td<>					
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channels logic 500 Vdc None, 4 µs, 40 µs IEC61131-2 edition 3 type Ocenarization of type Comparization of type Cable Type Supports 2 wire and 3 wire sensors Cable Type Cable Type Cable Type Terminal blocks are removable Terminal blocks are removable Other Kating Mode Naximum Frequency for Single-phase Single phase Single phase Single phase Single phase Single phase x2 Phase x4 Reverse Phase x4 Reverse Support to ms			Photo coupl	er Isolation	
Type 1 Type 1 Compatibility Supports 2 wire and 3 wire sensors Shielded Cable Type Length Maximum 10 m (33 ft) Terminal blocks Terminal blocks Maximum frequency Maximum frequency Maximum frequency Phase Count Marker Phase x2 Reverse Amage dolspan="2">Amage dolspan="2">Amage dolspan="2">Amage dolspan="2">Amage dolspan="2">Amage dolspan="2">Amage dolspan="2">Amage dolspan="2">Type 1 Response time Marker Image dolspan="2">Marker Image dolspan="2">Marker Image dolspan="2">Surphone in dolspan="2">Image dolspan="2" Surphroniza	Isolation		500	Vdc	
Competibility Supports 2 wire and 3 wire sensors Type Type Cable Type Length Maximum 10 m (33 ft) Terminal blocks Type: 3.5 mm (0.137 in.) pitch Terminal blocks are removable Maximum Frequency · 100 kHz is the maximum frequency for Single-phase · 50 kHz is the maximum frequency for 2-phase · 50 kHz is the maximum frequency for 2-phase · Duty Rate: 45 to 55% Phase Counting Mode · Single phase · 2 Phase x4 Marker 1 ms Preload 1 ms Preload 1 ms Support za 1 ms	Filte	ring	None, 4	us, 40 μs	
Type Shielded Length Maximum 10 m (33 ft) Terminal blocks Type: 3.5 mm (0.137 in.) pitch Terminal blocks are removable Maximum Frequency · 100 kHz is the maximum frequency for Single-phase · 50 kHz is the maximum frequency for 2-phase · Duty Rate: 45 to 55% Phase Counting Mode · Single phase · 2 Phase x2 Marker · 2 Phase x4 · 2 Phase x4 Reverse · 2 Phase x4 Reverse Preload 1 ms Prestrobet 1 ms Surperstroited 1 ms	IEC61131-2 e	edition 3 type	Тур	be 1	
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Length Maximum 10 m (33 ft) Type: 3.5 mm (0.137 in.) pitch Terminal blocks are removable Maximum Frequency 50* Single-phase Maximum frequency for Single-phase Maximum frequency for 2-phase Single phase 2 Phase x2 Phase Course Marker 1 ms Prestrobet Prestrobet 1 ms Surphroniza	Cable	Туре	Shielded		
Iterminal blocks Terminal blocks are removable Maximum frequency · 100 kHz is the maximum frequency for Single-phase · 50 kHz is the maximum frequency for 2-phase · 50 kHz is the maximum frequency for 2-phase · 100 kHz is the maximum frequency for 2-phase · 50 kHz is the maximum frequency for 2-phase · 100 kHz is the maximum frequency for 2-phase · 50 kHz is the maximum frequency for 2-phase · 100 kHz is the maximum frequency for 2-phase · 50 kHz · 2 Phase x2 · 2 Phase x2 · 2 Phase x2 · 2 Phase x4 · 2 Phase x2 Reverse · 2 Phase x2 Reverse · 2 Phase x4 Reverse · 2 Phase x4 Reverse · 2 Phase x4 Reverse · 2 Phase x4 Reverse · 2 Phase x4 Reverse · 2 Phase x4 Reverse · 2 Phase x4 Reverse · 2 Phase x4 Reverse · 2 Phase x4 Reverse · 2 Phase x4 Reverse · 2 Phase x4 Reverse · 2 Phase x4 Reverse	Cable	Length			
Maximum frequency 50 kHz is the maximum frequency for 2-phase Duty Rate: 45 to 55% Duty Rate: 45 to 55% Phase Counting Mode Single phase Marker 2 Phase x2 Marker 1 ms Prestrobet 1 ms Synchroniza	Termina	Iblocks			
Phase Courting Mode - Single phase - 2 Phase x2 - 2 Phase x4 - 2 Phase x4 - 2 Phase x2 Reverse - 2 Phase x4 Reverse	Maximum	frequency	 100 kHz is the maximum frequency for Single-phase 50 kHz is the maximum frequency for 2-phase 		
Preload 1 ms Prestrobet 1 ms Synchronize 1	Phase Cour	nting Mode	· 2 Pha · 2 Pha · 2 Phase >	ise x2 ise x4 i2 Reverse	
Response time Prestrobet 1 ms		Marker	1 r	ns	
Synchronize		Preload	1 r	ns	
Synchronize	Response time	Prestrobet	1 r	ns	
output 2 ms		Synchronize output	2 r	ns	
Min. Pulse Width(Pulse input) Counter: Pulse Catch Input signal ON width	Min. Pulse Width(Pulse input)		10 µs	Input signal ON width	
Input paralleling No	Input paralleling		No		

Transistor Output Characteristics

LT-4000M Rear module		LT-4000M Rear module	
Rated V	Voltage	24Vdc	
Output	t range	19.2 to 28.8 Vdc	
Outpu	it type	Sink/Source	
Rated	current	DIO: 0.3 A/point, 3.0 A/common AIO and DIO: 0.3 A/point, 1.8 A/common	
Residua	lvoltage	1.5 Vdc or less for I= 0.1A	
Delay		Off to on (0.3 A load): 1.1ms On to off (0.3 A load): 2ms	
		NOTE: The delay is not including the cable delay.	
	Method	Photocoupler Isolation	
Isolation	Between internal logic	500 Vdc	
Minimum re	esistor load	80 Ω at 24 Vdc	
Cable length		Non-shielded: 150 m (492 ft)	
Protection against short circuit		No	
Terminal blocks		Type: 3.5 mm (0.137 in.) pitch Terminal blocks are removable	

NOTE: Refer to LT4201TM/4301TM Hardware Manual about Protecting Outputs from Inductive Load Damage for additional information on this topic.

Pulse Output/PWM Output/High-speed Counter (Synchronize Output) Characteristics

		LT-4000M Rear module	
Output type		Sink/Source	
Rated v	voltage	24 Vdc	
Power supply	input range	19.2 to 28.8 Vdc	
Power supply rev	verse protection	Yes	
Pulse Output/PW	V output current	50 mA/point, 10	00 mA/common
Response time f	or original input	2 r	ms
	Between fast outputs and internal logic	10 MΩ (or more
Isolation resistance	Between power supply port and protective earth ground (PE) = 500 Vdc	10 MΩ or more	
Residual voltage	for I = 0, 1 A	1.5 Vdc or less	
		Off to on (50 mA load): 1.1ms	
De	lay	On to off (50 mA load): 1.1ms	
		NOTE: The delay is not including the cable delay.	
Minimum Ioa	d impedance	80 Ω	
Maximum Pulse o	utput frequency	50 KHz	
Maximum Pulse o	utput frequency	65	kHz
	Frequency	Accuracy	Duty
A Dulas	10~100Hz	0.1%	0 to 100%
Accuracy Pulse Output/ PWM	101~1000Hz	1%	1 to 99%
Output	1.001~20kHz	5%	5 to 95%
output	20.001~45kHz	10%	10 to 90%
45.001~65kHz		15%	15 to 85%
Duty rat	e range		99%
Cable	Туре	Shielded, including 2	24 Vdc power supply
Cable	Length	Maximum	5 m (16 ft)
Terminal blocks		Type: 3.5 mm (0.137 in.) pitch Terminal blocks are removable	

NOTE: When using the acceleration/deceleration pulse output, there is a 1% maximum error for the frequency.

Analog Input Characteristics

		LT-4000M Rear module		
		AIO and DIO		
Charact	eristics	Voltage input	Current input	
Number of ma	aximum input	2	2	
Input	type	Single	ended	
Input		-10 to 10 Vdc/0 to 10 Vdc	0 to 20 mA/4 to 20 mA	
Input im		1 MΩ or more	250 ± 0.11% Ω	
Sample du	ration time	10 ms per chann		
Total input syste		20 ms + 1	scan time	
Input tolerance Maximum deviation at 25°C (77°F) without electromagnetic disturbance		e full scale		
	Maximum deviation	± 2.5% of the full scale		
Digital re	solution	13 bits		
Tempera		± 0.06% of the full scale		
Common mode		80 db		
Cross		60 db		
Non-Iir			f full scale	
Input valu	ue of LSB	5 mV	10 µA	
Maximum allowed overload (no damages)		± 30 Vdc (less than 5 minutes) ± 15 Vdc (No damage)	± 30 mA dc	
Protection type		Photo coupler between input and internal circuit		
Cable	Туре	Shielded		
Cable	Length	Must be less than 3 m for IEC61131-2 conform	ance. Maximum transmission distance is 10m.	
Terminal blocks		Type: 3.5 mm (0.137 in.) pitch Terminal blocks are removable		
	External input	Photo-coupl	lerisolation	
Isolation	Between channels	Non-isolated		

Temperature Input (Temperature Probes) Characteristics

	· · ·	-	
		LT-4000M Rear module	
		AIO and DIO	
Input ser	isor type	Pt100/Pt1000/Ni100/Ni1000	
Input temper	rature range	Pt100/Pt1000: -200 to 600°C (-328 to 1112°F) Ni100/Ni1000: -20 to 200°C (-4 to 392°F)	
Measuring	Pt100/Ni100	1.12 mA ± 3.5%	
current	Pt1000/Ni1000	$0.242 \ \mu A \ \pm \ 3.5\%.$	
Input im	pedance	Typically 10 MΩ	
Sample du	ration time	10 ms+1 cycle time	
Wiring	g type	2-wire or 3-wire connection configured by software for all inputs	
Conversi	on mode	Sigma delta type	
Input	filter	Low pass	
Resolution tem	perature value	0.1°C (0.18°F)	
Detecti	on type	Open circuit (detection on each channel)	
Input tolerance *1	Maximum deviation at 25°C (77°F) without electromagnetic disturbance	± 5°C (41°F)	
	Maximum deviation at 25 to 50°C (77 to 122°F)	Pt type: ± 5.6°C (42.08°F) Ni type: ± 5.2°C (41.36°F)	
Tempera	ture drift	30 ppm/°C	
Digital re	solution	16 bits	
Rejection in differential mode	50/60 Hz	Typically 60 dB	
Common mode rejection		Typically 80 dB	
Isolation Method		Photocoupler Isolation	
Permitted input signal		± 5 Vdc max.	
Cable length	Pt100/Ni100	200以下	
cable length	Pt1000/Ni1000	200Ω以下	
Termina	Iblocks	Type: 3.5 mm (0.137 in.) pitch Terminal blocks are removable	
Noise resista	ance - cable	Shielded cable is necessary	
1: Excluding errors caused by the wiring			

* 1: Excluding errors caused by the wiring

Temperature Input (Thermocouple) Characteristics

		LT-4000M Rear module
		AIO and DIO
Input sen	sor type	Thermocouple
Input type range *1		$ \begin{array}{c} J \ (-200 \ to \ 760^\circ C) \ (-328 \ to \ 1400^\circ F) \\ K \ (-240 \ to \ 1370^\circ C) \ (-400 \ to \ 2498^\circ F) \\ R \ (0 \ to \ 1600^\circ C) \ (32 \ to \ 2912^\circ F) \\ B \ (200 \ to \ 1800^\circ C) \ (32 \ to \ 2912^\circ F) \\ S \ (0^\circ C \ to \ 1600^\circ C) \ (32 \ to \ 2912^\circ F) \\ T \ (-200 \ to \ 400^\circ C) \ (-328 \ to \ 752^\circ F) \\ E \ (-200 \ to \ 900^\circ C) \ (-328 \ to \ 152^\circ F) \\ N \ (-200 \ to \ 1300^\circ C) \ (-328 \ to \ 2372^\circ F) \end{array} $
Input im		Typically 10 MΩ
Sample dur		10 ms+1 cycle time
Conversi		Sigma delta type
Digital re		16 bits
Input		Low pass
Resolution tem		0.1°C (0.18°F) (Type J)
Detectio		Open circuit (detection on each channel)
Input tolerance	Maximum deviation at 25°C (77°F) without electromagnetic disturbance	0.2 % of the full scale, plus standard point of compensation precision at +/- 6° C.
	Maximum deviation	0.28 % of full scale range
Temperat	ture drift	30 ppm/°C
Input toleran tempe comper	rature	± 5°C (41°F) after 10 min.
Cold junction compensation in the temperature range (0 to 50°C (122°F))		Internal cold junction error: +/- 6°C (42.8°F) after operating 45 minutes.
Rejection in differential mode		
Common mode rejection		
Isolation Method		Photocoupler Isolation
Permitted in	nput signal	± 5 Vdc max.
Warm u	p time	45 minutes
Termina	Iblocks	Type: 3.5 mm (0.137 in.) pitch Terminal blocks are removable
Noise resista	ance - cable	Shielded cable is necessary

*1: Temperature measurement on PCB at terminal block for cold junction compensation.

Analog Output Characteristics

		LT-4000M Rear module		
		AIO and DIO		
Charact	teristics	Voltage Output	Current Output	
Maximum num	ber of outputs		2	
Output	range	-10 to 10 Vdc/0 to 10 Vdc	0 to 20 mA / 4 to 20 mA	
Load im	pedance	2 kΩ or more	300 Ω or more	
Application	n load type	Resistive load		
Setting	0	10	-	
Total output syste	em transfer time	10 ms + 1	scan time	
Input tolerance	Maximum deviation at $25^{\circ}C (77^{\circ}F)$ without $\pm 1\%$ of the full scale		e full scale	
	Maximum deviation	± 2.5% of the full scale		
Digital re	esolution	12 bits		
Tempera	ture drift	± 0.06% of the full scale		
Output		±50		
Cross		60		
Non-lir		± 0.5% of		
Output val		6 mV	12 µA	
Protecti	on type	Photo coupler between input and internal circuit		
Output pr	rotection	Short circuit protection: Yes Open circuit protection: Yes		
Output behavior if input power supply is less than the power failed threshold		Set to 0		
Cabla	Туре	Shielded		
Cable	Length	Must be less than 3 m for IEC61131-2 conform	ance. Maximum transmission distance is 10m.	
Terminal blocks		Type: 3.5 mm (Terminal blocks	0.137 in.) pitch s are removable	
	External input	Photo-coupler isolation		
Isolation	Between channels	Non-isolated		

External Dimensions

