Pro-face
Your HMI and Industrial PC Authority

Datasheet

EX I/O Expansion Modules - Quick Disconnect Analog and Discrete I/O Modules

Input/Output Mixed Modules

EX Modules

Models: Compatible with LT3000 Models

Up To 16 Inputs

Input/Output/Analog

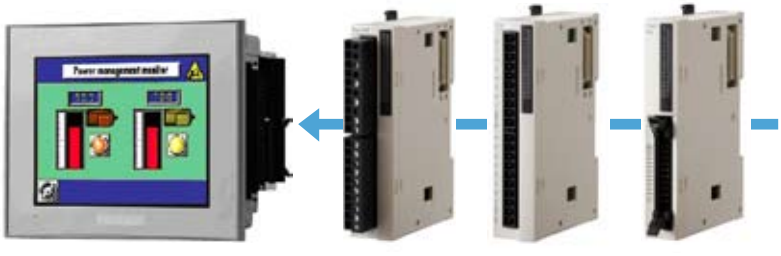
Multiple Combinations | Mix and Match | GP-Pro EX Compatible

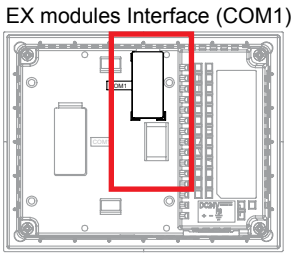
LISTED

Features:

- Compatible with LT3000 models
- Mix and match any combination to meet your application requirements
- Multiple combinations for on/off, start/stop, pump and flow control
- Multi-channel thermocouple, RTD, 4-20mA DC current, DC voltage modules
- Compatible with GP-PRO EX Software version 2.0 or higher

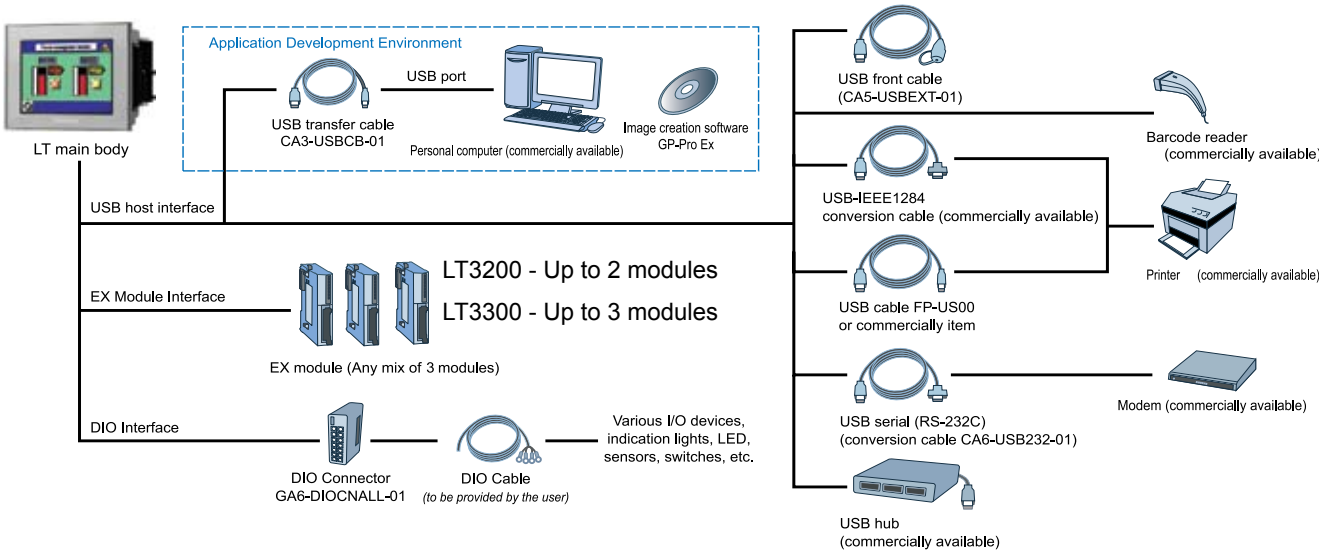
Order Number	Description
EXM-DDI8DT	8-point sink/source shared I/O Unit, DC24V input signal can be connected
EXM-DDI16DT	16-point sink/source shared I/O Unit, DC24V input signal can be connected
EXM-DRA8RT	8-point relay output with 2 commons I/O Unit
EXM-DRA16RT	16-point relay output with 2 commons I/O Unit
EXM-DDO8UT	8-point transistor output sink I/O Unit
EXM-DDO16UK	16-point transistor output sink I/O Unit
EXM-DDO8TT	8-point transistor output source I/O Unit
EXM-DDO16TK	16-point transistor output source type I/O unit
EXM-DMM8DRT	4-point input sink-source, 4-point relay output with single common
EXM-AMI2HT	2-point analog input type
EXM-ALM3LT	2-point thermocouple input / 1-point analog type
EXM-AMM3HT	2-point analog input / 1-point analog output type
EXM-AMO1HT	1-point analog output type





Up to three EX modules can be combine with LT Series to expand I/O requirements

System Configuration Chart



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Input module

	EXM-DDI8DT	EXM-DDI16DT
Input Specifications		
Input Points	8points (sink/source type-dual use)	16points (sink/source type-dual use)
External Connection	10-Pin terminal connector	
Rated Voltage	DC24V	
Rated Input Current	7.3mA/DC24V	
Input Impedance	3.3kΩ	
Isolation Method	Between input terminals and internal circuit: photocoupler isolated Between input terminals: not isolated	
Input Delay Time	OFF-ON:4ms ON-OFF:4ms	
Status LED	LED is lighting when input is ON	
Power Consumption	0.17W or less	0.27W or less
Mass	85g (0.19lb)	100g (0.2lb)

Output module

		EXM-DRA8RT	EXM-DRA16RT	EXM-DDO8UT	EXM-DDO8TT	EXM-DDO16UK	EXM-DDO16TK
Output Specifications							
Output Points		8-point relay (a-connect)	16-point relay (a-connect)	8-point transistor (Sink)	8-point transistor (Source)	16-point transistor (Sink)	16-point transistor (Source)
Rated Output Voltage		-		DC24V			
External Connection		11-pin terminal connector	10-pin terminal connector	10-pin terminal connector		MIL connector	
Common Design		4points/1common		8points/1common		16points/1common	
Maximum Load Voltage	1 point	2A or less		0.3A or less		0.1A or less	
	1 common	7A or less	8A or less	3A or less		1A or less	
Maximum Load Voltage		0.1m/A DC0.1V (reference volue)		-			
Electrical Life		100,000 operations or more (rated resistive load 1,800 operations/h)		-			
Mechanical Life		20 million operations or more (no load 18,000operations/h)		-			
Isolation Method		-		Between output terminals and internal circuit: photocoupler isolated Between output terminals: not isolated			
Output Delay Time	ON	6ms or less		300μs or less			
	OFF	10ms or less		300μs or less			
Voltage Leakage (When OFF)		-		0.1mA or less			
Status LED		LED is lighting when output is ON					
Power Consumption		1.16W or less	2.10W or less	0.55W or less		1.03W or less	
Mass		110g (0.24lb)	145g (0.32lb)	85g (0.19lb)		70g (0.15lb)	

Input/output mixed module

		EXM-DMM8DRT
Input Specifications		
Input Points		4points (sink/source type-dual use)
Rated Input Voltage		DC24V
Rated Input Current		7.3mA/DC24V
Input Impedance		3.3kΩ
Isolation Method		Between intput terminals and internal circuit: photocoupler isolated Between input terminals: not isolated
Input Delay Time		OFF-ON:4ms ON-OFF:4ms
Output Specifications		
Output Points		4-point relay (a-connect)
Common Design		4points/1common
Maximum Load Current	Per Channel	2A or less
	Per Common	7A or less
Min. Open/Close Load		0.1mA/DC 0.1V
Electrical Life		100,000 operations or more (rated resistive load 1,800 operations/h)
Mechanical Life		20 million operations or more (no load 18,000operations/h)
Output Delay Time	ON	6ms or less
	OFF	10ms or less
Common Specifications		
External Connection		11-pin terminal connector
Status LED		LED is lighting when input is ON
Power Consumption		0.65W or less
Mass		95g (0.21lb)

Analog module

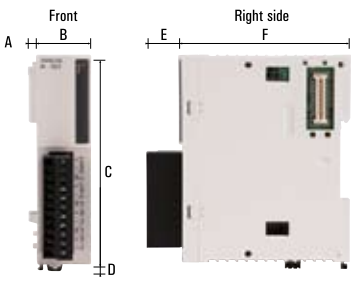
	EXM-AMI2HT	EXM-AMM3HT	EXM-ALM3LT	EXM-AMO1HT
Input Specifications				
Input Points	2points			-
External Connection	11-pin terminal connector			
Input Type	Single-ended(Voltage Input),Differential(Current Input)		Thermocouple, temperature Probes *1	-
Resolution	12bit			-
Input Value of LSB	2.5mV(voltage input), 4μA(current input)		0.15°C(Temperature Probes) *1 Type K:0.325°C(Thermocouple) Type J:0.300°C(Thermocouple) Type T:0.100°C(Thermocouple)	-
Input Impedance	1MΩ min.(voltage input), 10Ω(current input)		1MΩ or min.	-
Isolation Method	Photocoupler Isolation between input and internal circuit			-
Sampling Time	20ms or less			-
Maximum Error	±1% of full scale			-
Output Specification				
Output Points	-	1point		
Rated Output Voltage Range	-	Voltage(0 to 10V), current(4 to 20mA)		
Resolution	-	12bits		
Output Value of LSB	-	2.5mV(voltage output), 4μA(current output)		
Output Impedance	-	2kΩ or less (voltage output), 300Ω or less (current output)		
Isolation Method	-	Photocoupler Isolation between output and internal circuit		
Total Output System Transfer Time	-	50ms+1scan time	130ms+1scan time	50ms+1scan time
Maximum Error	-	±1% of full scale		
Common Specifications				
External Connection	11-pin terminal connector			
Power Consumption	0.34W or less			
Mass	85g (0.19lb)			

External view and sizes of various parts

*1 Pt100

	A	B	C	D	E	F
EXM-DDI16DT	3.8 [0.15]	23.5 [0.93]	90 [3.54]	4.5 *2 [0.18]	14.6 [0.57]	70 [2.76]
EXM-DDI8DT						
EXM-DRA8RT						
EXM-DRA16RT						
EXM-DDO8UT						
EXM-DDO8TT						
EXM-DMM8DRT						
EXM-AMI2HT						
EXM-ALM3LT						
EXM-AMM3HT						
EXM-AMO1HT						
EXM-DDO16UK		17.6 [0.69]			11.3 [0.44]	
EXM-DDO16TK						

*2 The length of the pulled out hook is 8.5mm [0.33in.].



Unit: mm [in.]

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