

Controllers with integrated display and operation; 5.7-inch displays with advanced functions and expandability

LT-3300S/LT-3300L/LT-3301L

LT-3300S 5.7inch QVGA DC24V

Model	Display Type	Ethernet	Internal I/O
LT3300-S1-D24-K	STN Color LCD	○	Input:16-points
LT3300-S1-D24-C			Output:16-points

LT-3300L 5.7inch QVGA DC24V

Model	Display Type	Ethernet	Internal I/O
LT3300-L1-D24-K	Monochrome LCD	○	Input:16-points
LT3300-L1-D24-C			Output:16-points

LT-3301L 5.7inch QVGA DC24V

Model	Display Type	Ethernet	Internal I/O
LT3301-L1-D24-K	Monochrome LCD	—	Input:16-points
LT3301-L1-D24-C			Output:16-points

LT3300-S1-D24-K		
Ethernet 0: LAN 1: without LAN	Display Type S: STN Colors L: Monochrome LCD	Method K: Sink Output C: Source Output



32-points I/O equipped **Expansion I/O unit x 3** **USB** **Ethernet** **Serial**



*The above picture shows the LT-3300S model.

Equipment Control, Operation and Display in a Single Unit

Control + **Operation** + **Display**

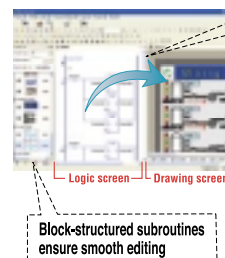
The LT-3300S/L models manage to combine control, operation and display functions in compact bodies. By eliminating the need for a PLC, they enable cost and space-saving configurations. 32 built-in I/O connections are provided as a standard feature, 4 of which can be used as special I/O for advanced control applications.



Cost and space-saving configurations

Use of Single Software Application Reduces Development Time

Drawing and ladder programs are provided by a single software application (GP-Pro EX). You can also use existing logic programs created with GP-Pro/PBIII C-Package software.



Create programs easily with drag-and-drop operation

Reduces cost

Block-structured subroutines ensure smooth editing

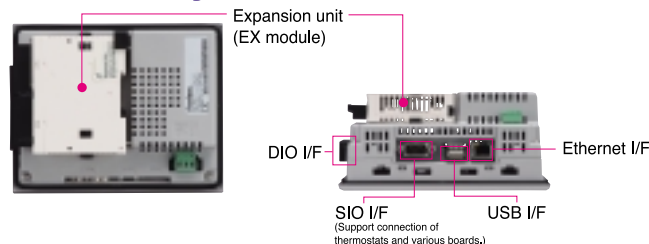
I/O Expansion Unit for Expanded I/O

The LT-3300S/L models can be expanded with up to three EX modules to enable combinations supporting up to 80 I/O connections. Flexible future expansion is supported just by adding EX modules.



Adds to equipment value

A Wide Variety of Connection Interfaces!



The above picture shows the LT-3300S/L model.

Performance Specifications

Model		LT3300-S1-D24	LT3300-L1-D24	LT3301-L1-D24
Display Type		STN Color LCD		
Display Colors		Monochrome LCD		
		4,096 Colors		
		Black and White (16 Shades)		
Backlight		White LED (When the backlight needs to be replaced , please contact your local distributor.)		
Display Resolution		W320 x H240pixels		
Effective Display Area		W117.2mm [4.61in] x H88.4mm [3.48in]		
Memory	Application	6MB FLASH EPROM *1		
	Data Backup	SRAM 128KB *2		
Touch Panel	Type	Resistive Film (analog)		
	Resolution	1024 x 1024		
Control Memory	Variable Area	64KB SRAM (uses lithium battery) *2		
	Program Area	132KB FLASH EPROM (enough for 15,000 program steps) *3		
Interface	AUX Interface / Expansion Unit	Interface for external additional unit only (Such as communication equipment)		
	EX Module	Interface for Pro-face's EX Modules (Up to three EX modules can be connected)		
	USB	USB1.1 Host I/F x 1, USB TYPE-A connector		
	DIO	The interface to external I/O equipment Input/Output points: 16-point inputs, 16-point outputs Connector: 38 pins		
	Serial	COM1: RS232C/RS422/RS485 Asynchronous Transmission / Data Length: 7 bit/8 bit Parity: none, Odd or Even Stop Bit: 1bit/2bit Data transmission Speed: 2400bps to 115.2Kbps Connector: DSUB-9pin plug		
	Ethernet	IEEE802.3u, 10BASE-T/100BASE-TX		—

*1 It is user active capacity.

*2 Service life of lithium batteries is 10 years or more at a battery ambient temperature of 40°C or less, 4.1 years or more at 50°C or less, and 1.5 years at 60°C or less. The backup period is about 100 days after the initial charge (fully charged), and about 6 days up to the end of battery life.

*3 Using Pro-face's calculation method

General Specifications

Model	LT3300-S1-D24	LT3300-L1-D24	LT3301-L1-D24
Conforming to Standards	UL508, ANSI/ISA-12.12.01-2007, CSA-22.2 No.142-M1987, CSA-22.2 No.213-M1987, CE marking EN55011, EN61000-6-2		
Rated Voltage	DC19.2V to DC28.8V		
Allowable Voltage Drop	3ms (max.)		
Power Consumption	27W (max.)		
Voltage Endurance	AC1000V 20mA for 1min. (between charging and FG terminals)		
Insulation Resistance	DC500V 10MΩ (min.) (between charging and FG terminals)		
Surrounding Air Temperature	0°C to +50°C *4		
Storage Temperature	-20°C to +60°C		
Ambient Humidity	10%RH to 90%RH (Wet bulb temperature: 39°C max. - no condensation.)		
Storage Humidity	10%RH to 90%RH (Wet bulb temperature: 39°C max. - no condensation.)		
Pollution Degree	Pollution Degree 2		
Corrosive Gasses	Free of corrosive gasses		
Atmospheric Endurance(LT Operation Altitude)	800hPa to 1114hPa (sea level of 2000 meters or lower)		
Vibration Resistance	IEC61131-2 (JIS B 3502) compliant, 5 to 9Hz Single amplitude 3.5mm 9 to 150Hz Fixed acceleration 9.8m/s², X, Y, Z directions for 10times (100min.)		
Noise Immunity (Via Noise Simulator)	Noise voltage : 1000Vp-p, Pulse Duration : 1μs, Arise time : 1ns *5		
Electrostatic Discharge Immunity	6kV (complies with EN 61000-4-2 Level 3)		
Grounding	Grounding resistance of 100Ω 2mm² or thicker wire, or your country's applicable standard. (Same for FG and SG terminals)		
Rating	Equivalent to IP65f NEMA#250TYPE4X/13 (Front surface at panel embedding) Feature size : All-in-one Installation configuration : Panel embedding *6		
Weight	1.0kg [2.2lb] or less (unit only)		
Cooling Method	Natural air circulation		

*4 Extended use in environments where surrounding air temperature is 40°C or higher may degrade the display quality and result in decreased contrast.

*5 According to a noise simulator

*6 We have confirmed compatibility under applicable conditions, but this does not guarantee compatibility in all environments.

Input Specifications

Rated Voltage	DC24V
Maximum Allowable Voltage	DC28.8V
Input Method	Sink / Source Input
Rated Current	6.5mA (DC24V) (IN0, IN2, IN4, IN6), 4.1mA (DC24V) (Other inputs)
Input Resistance	Approx. 3.7kΩ (IN0, IN2, IN4, IN6), Approx. 5.9kΩ (Other inputs)
Insulation Method	Photocoupler Isolation
External Connection	38-pin connector (used with Output section)
External Power Supply	For Signal : DC24V



Output Specifications

Output Terminal	OUT0 to OUT3	OUT4 to OUT15
Rated Voltage	DC24V	
Allowable Voltage Range	DC20.4V to DC28.8V	
Output Method	LT330*-1-D24-K	Sink Output
	LT330*-1-D24-C	Source Output
Maximum Load Current	0.2A / point, 1.6A / common	
Output Voltage Drop	DC 0.5V or less	
Output Delay Time	OFF to ON	5μs or less (with output DC 24V, 200mA) 0.5ms or less (with output DC 24V, 200mA)
	ON to OFF	5μs or less (with output DC 24V, 200mA) 0.5ms or less (with output DC 24V, 200mA)
Type of Output	Transistor Output	
Internal Fuse	3.5A, 125V Chip fuse x 2 (not replaceable)	
Surge Control Circuit	Zener diode	
Isolation Method	Photocoupler Isolation	
External Connection	38-pin connector (also used for Input)	
External Power Supply	For Signal : DC24V	

Caution: Before operating any of these products, please be sure to read all related manuals thoroughly.

- All product names used in this document are trademarks or registered trademarks of their respective companies.
- All information contained in this document is subject to change without notice.

High-speed Counter / Pulse Catch Input Specifications

Input *	Counter		Pulse catch
	DC24V Open collector		DC24V Open collector
Input Points	Single phase (4points) CT0 (IN0) CT1 (IN2) CT2 (IN4) CT3 (IN6)	Double phase (1point or 2points) CT0 (IN0), CT1 (IN2) (used as pair) CT0: A Phase CT1: B Phase CT2 (IN4), CT3 (IN6) (used as pair) CT2: A Phase CT3: B Phase	IN0, IN2 IN4, IN6
Minimum Pulse Width (Pulse Input)			Input signals on width Sus or more 
Count Speed (Rise, Fall Time)	t = 1μs or less (100Kpps)		—
Phase	1phase	90 degree phase differential 2-phase signal / 1-phase + directional signal	—
High Speed Count Frequency	100Kpps	50Kpps	—
Count Edge Designation	Available	Not available	—
Count Register	32-bit UP / DOWN counter		—
Counter Mode Charge	Set through software		—
Upper / Lower Limit Settings	Not available		—
Preload / Prestrobe	Available		—
Marker Input (Clear Counter Value)	None	IN3, IN7	—

*7 Input / output No. is different by a combination for exclusive specifications.

Pulse / PWM Output Specifications

Output Points *	Pulse output	PWM output
Output Method	PLS0 to PLS3 (OUT0 to OUT3) defined by user	PWM to PWM3 (OUT0 to OUT3) defined by user
Load Voltage	DC24V	
Minimum Load Current	1mA	
Maximum Output Frequency	Up to 65kHz possible per point (set through software)	
Pulse Acceleration Deceleration Speed	Available	Not available

*8 Input / output No. is different by a combination for exclusive specifications.

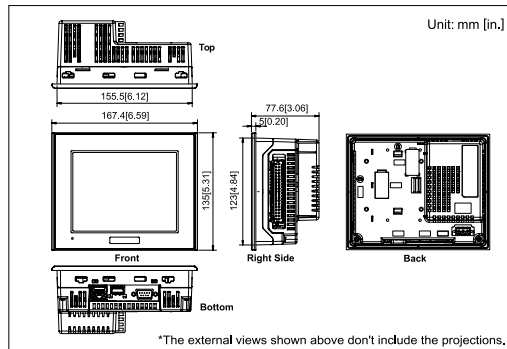
Optional Items

	Product name	Model No.
Software	GP-Pro EX Ver.2.1	EX-ED-V21
	GP-Pro EX Editor License*9	EX-ED-LICENSE-V21
	Pro-Server EX Ver.1.2 Developer *10	EX-SDV-V12
EX module	8-Point Input Module	EXM-DDI8DT
	16-Point Input Module	EXM-DDI16DT
	8-Point Relay Output Module	EXM-DRA8RT
	16-Point Relay Output Module	EXM-DRA16RT
	8-Point Sink Output Module	EXM-DDO8UT
	16-Point Sink Output Module	EXM-DDO16UK
	8-Point Source Output Module	EXM-DDO8TT
	16-Point Source Output Module	EXM-DDO16TK
	4-Point Input / 4-Point Output Module	EXM-DMM8DRT
	2-ch Analog Input Module	EXM-AMI2HT
	2-ch temperature Input / 1-ch analogue Output Module	EXM-ALM3LT
	2-ch Analog Input / 1-ch Analog Output Module	EXM-AMM3HT
Cable	1-ch Analog Output Module	EXM-AMO1HT
	USB Transfer Cable (2m)	CA3-USBCB-01
	USB Cable (5m)	FP-US00
	USB Front Cable (1m)	CA5-USBEXT-01
	USB Serial (RS-232C) Conversion Cable (0.5m)	CA6-USB232-01
	RS-232C Cable (5m)	CA3-CBL232/5M-01
Adapter	RS-422 Cable (5m)*11	CA3-CBL422/5M-01
	RS-422 Cable (5m)*11	CA3-CBL422-01
	RS232C Isolation Unit	CA3-ISO232-01
	COM Port Conversion Adapter	CA3-ADPCOM-01
	Terminal Block Conversion Adapter	CA3-ADPTRM-01
	Screen Protection Sheet	CA3-DFS6-01

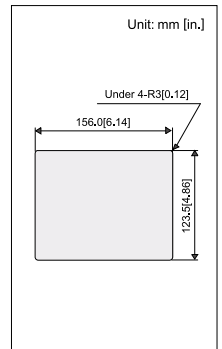
*9 Purchase when installing GP-Pro EX in two or more PCs. A separate license is required for each PC. *10 Only for units with Ethernet.

*11 Only for connecting devices with a terminal resistance value of 100Ω.

LT-3300 Series External Dimensions



Panel Cut Dimensions



For more information

ACCESS

www.pro-face.com

Pro-face
Human Machine Interface