LX Series

Integrated and Ultra-compact PLC platform

LX Series

the smart way to automation

EBG - Control & Automation Business Unit
LARSEN & TOUBRO LIMITED

delivering value

LX Series

LX series is a family of modular programmable controllers from L&T. It delivers power and flexibility with a wide range of communication configurations, user features and memory options. The LX series offers a breadth of world class PLC for controllers for a wide variety of applications. This ensures you will find a world class PLC that fits your application. This flexible and ultra compact PLC series is equipped with advance control functions and are available in a range of 10 to 1600 I/O's. In addition, the LX series products have built-in real time clocks and user defined communication functions, satisfying the diverse needs of applications.

All members of LX series share a common architecture and use the same programming software *LX-Soft.* With the LX series controllers, you can finally have ideal blend of functionality and compact size. The LX7 is an all-in one micro PLC suitable for compact machinery, offering task specific dedicated control. LX70 is a modular, small PLC designed to handle an extensive range of applications, expansion I/O up to 384 digital points and a wide range of optional I/O modules. The LX700 is an ideal mid range PLC equipped to handle I/O's up to 1600 points using its expansion feature. It comes with remote I/O handling ability for wide area based applications.

LX7

It's the perfect controller for small applications and small budgets. This little powerhouse is both compact and inexpensive, but big on performance. Small footprints make it suitable for applications with space constraints.

Hardware features:

- Control 10, 14, 20, 28, 40, 48 digital I/O points.
- Basic control from 28 and 48 points up to 104 digital I/O points.
- 2 serial ports (RS232C/RS485 with Modbus RTU/User defined protocol) with baud rate up to 38400 bps.
- Built-in High-Speed Counter (HSC), Pulse catch, Pulse output (for TR output module).
- Built-in Real-time Clock (RTC), PID function (8 loop).
- DIN rail or Panel mounting.
- Available in both DC IN/ Relay output and DC IN/ TR (sink) Output.
- Comes in 24V DC or AC100/220 supply power.

Performance features:

- Program memory up to 9K words and built-in backup flash memory.
- Internal data memory 2K.
- 28 basic and 139 advanced instructions.

LX70

Whatever your control needs are, you will find an answer with the LX70 series. The LX70 is filled with features and options designed to handle an extensive range of applications. It provides flexible back plane options and wide range of modules, which will help you to optimize your system as per exact application requirements.

Hardware features:

- Control up to 384 Digital I/O points.
- Flexible and specialty I/O modules.
- Range of I/O base options (from 2 to 12 slots)
- Built-in Real Time Clock (RTC) & 8 loop PID function.
- 2 serial ports (RS232C/RS485 with Modbus RTU/User defined protocol) with baud rate up to 38400 bps.

Performance features:

- Fast, powerful processors. High speed basic instruction execution 0.2 micro-sec.
- Program memory up to 20K words with built-in flash EEPROM which retains all ladder logic.
- Data memory up to 4K words.
- 28 basic and 147 advanced instructions.

LX700

The LX700 series give you the capability to control a medium scale system with ease. With Its remote I/O and various networking configurations, it is best suited for applications combining multiple devices spread over a wide geographical area.

Hardware Features:

- Control up to 1600 Digital I/O points.
- Flexible and specialty I/O modules
- Range of I/O base options (from 2 to 12 slots)
- Built-in Real Time Clock (RTC). & 8 loop PID control.
- Up to 96 slave nodes can be connected using Remote I/O Master and Remote I/O slave.
- Peer -Peer communications for data sharing and remote programming possible with MW-LINK module.
- Serial Communication Unit (SCU) comes with 2 serial ports for additional communication requirements.
- 2 serial ports (RS232C/RS485 with Modbus RTU/User defined protocol) with baud rate up to 38400 bps.
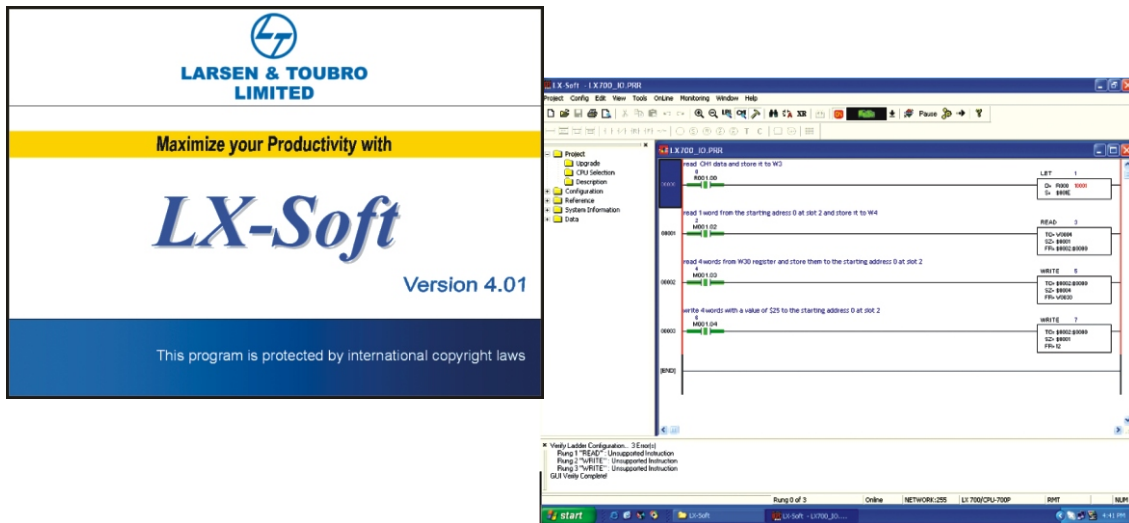
Performance features:

- Fast, powerful processors. High-speed basic instruction execution 0.2 micro-sec.
- Program memory of 20K with built-in flash EEPROM backup.
- Data memory of 7K.
- Built-in PID control.

General Specifications for LX series PLCs

ITEM SPECIFICATIONS	
Temperature (Operating) (Storage)	0 to 55 degree C -20 to 70 degree C
Humidity (Operating)	10 to 90 % RH (Non-condensing)
Withstand voltage	1500 V ac for 1 min between external terminal(ac) & FG 500 V ac for 1 min between external terminal (ac) & FG
Allowed momentary power failure	20 ms or less
Noise Immunity	1500 Vp-p pulse width 50 ns,1 microsec (by noise gen.)
Insulation resistance	10 M ohm
Vibration immunity	10 to 55 Hz/min,amplitude 0.75mm,each direction of X,Y,Z for 10 min
Dust conduction	No conductive dust
Chemicals	No cutting oil and organic solvents
Corrosive gas	No corrosive gases
Shock immunity	98 m/S2 or more,4 times X,Y,Z each direction
Grounding	Class 3 grounding (100 ohm or less)
Case material	PC/ABS
Cooling method	Natural air cooling
Environment	IP20

Family Comparison

Type	LX7s	LX7	LX70	LX700
Digital I/O	10/14/20/28/40/48	28/48/56/76/84/104	~384 Points	Local : ~1600 Points
Memory Cap.	2.0 K Words	9.0 K Words	9.6 ~ 20K Words	20K Words
Memory Backup	Flash Rom	Flash Rom, Battery	Flash Rom, Battery	Flash Rom, Battery
Comm. Port	1 RS232C/ 1 RS485	2 RS232C/485	1 or 2 RS232C/485	2 RS232C/485
Protocol			Modbus, UDP	
Special Func.	HSC, PULSE Out(TR)	PID, RTC HSC, PULSE	PID, RTC,	PID, RTC,
Special Module	TBD	Analog 4I/2O	Analog, TC, RTD, HSC, Pulse, Position, SCU, MW Link,	Remote I/O, CCU
I/O Types	Basic Type	28/48, 2 Expansion.	DI 16/32P, DO 8/16/32P Mix 16/32P	DI 16/32/64P, DO 16/32/64P

LX-Soft: Programming and monitoring with ease!

The *LX-Soft* is a powerful and user-friendly programming tool for LX series. It enables online monitoring and editing of ladder logic. It comes with an in-built simulator to test the ladder program. It provides a project management window with a versatile toolbar for drag and drop operation of instructions with editing buttons. It also supports error and status check-up, network status check-up, I/O mapping. Baud rate selection is done automatically by software, which saves start up time.