

INDUSTRIAL PLC TRAINER / SCADA /DCS TRAINER (Model : XPO-PLC)



SALIENT FEATURES

- ◆ Can learn about different aspects of application trainers like Industrial PLC, SCADA, DCS etc. using simulated building blocks / replaceable static application panels (SAPs).
- ◆ Analog I/O channel (Optional) with potentiometer for AI simulation.
- ◆ Connection through sturdy 4mm Banana sockets & Patch cords.
- ◆ Students workbook & Instructor's Guide provided with each unit.

Technical Specifications

Model	XPO - PLC Trainer
Make	LG master J120S series
CPU (DIO)	<ul style="list-style-type: none"> • K7M DR 30uE (18DI+12O) - (Default) • K7M DR (T) 20u(12DI+4R+4T) (required for stepper motor) • K7M-DR20uE(12DI+8R) (for Electro Pneumatic) • K7M DR 40uE (24DI+16O)(for Higher DIO Capacity)
Memory	2K step (EEPROM) 0.4usec per instruction
DIO modules (Optional)	a) DIO 10: G7E DR10A (6DI + 4R) (additional DIO module for expansion if needed)
AIO modules* (Optional)	a) AIO3 : G7F ADHA - (2AI+1AO) / b) AIO4 : G7F ADHB - (2AI+2AO) AIO : 0 - 5 V / 10 V settable range, 12 Bit resolution.
RTC (Optional)	G7E - RTCA Real Time Clock Module to display the clock using SCADA Software.
Software	KGLWIN supports ladder programming & monitoring / troubleshooting & instruction set.
Communication Ports	RS232C for Ladder Programming, RS485 with LG protocol for Multidrop Networking.
Operating voltage	110/220Vac \pm 20% 50/60 Hz
Mechanical Specification	Tabletop Aluminum profile rack of 4 x 2 matrix consisting of (5+2) panels inclusive of converter cum distribution panel (CDP) and simulation cum extension panel (SEPs) to provide necessary switches, lamps, pots and application panels. Dimensions : 500 (H) x 910 (L) x 300 (D) mm. Net Wt. 8 Kg

Converter cum Distribution Panel / CDP	<ul style="list-style-type: none"> Total 64 No. of 4 mm Banana Sockets, 24 for Digital Inputs, 16 for Digital Outputs, 4 for Analog I/O & 16 for +24V Supply & GND. Facilitates easy replacement / maintenance.
Simulation cum Extension Panel / SEP	<p>a) For Digital Outputs :</p> <ul style="list-style-type: none"> 8 No. of LED Indicator, 8 No. of Relay Panel with coil rating 24V. and contact rating of 220V AC / 1 Amp. (Resistive). <p>b) For Digital Inputs :</p> <ul style="list-style-type: none"> 8 No. of Digital Input. (4 toggle switches + 4 push buttons) <p>c) For AIO : (Supplied only if AIO modules ordered)</p> <ul style="list-style-type: none"> 6 No. of Potentiometer to simulate inputs to AI Channels. 2 No. of Analog Output Channels.
Power Supply Panel	<ul style="list-style-type: none"> 24V / 2 Amp. SMPS type Supply, 16 No. of 4mm Banana Sockets for extension, Power ON indicator / Switch.
Application Panel & SAPS (Select 1 or more)	<p>a) Common Base Board for Static Application Panel : consisting of 38 LEDs, with 10 LED Bar Graph for AO & 32 sockets, RTD signal conditioning circuit for temperature sensor.</p> <p>b) Replaceable 19 Nos. of Static Application Panel which may be inserted into common baseboard panel :- 1) Door Bell Operation, 2) Switching Of lights, 3) Silo Control, 4) 7-Segment Display, 5) Starter Control, 6) Sequential Control of Motors, 7) Star Delta Control, 8) Resistance Welding, 9) Tank Level Control*, 10) Traffic Light Control, 11) Bottling Plant*, 12) Drink Dispenses, 13) Reaction Vessel*, 14) Oven*, 15) Parking Garage, 16) Combination Lock, 17) Elevator Simulator, 18) Process Control Trainer*, 19) Washing Machine (*Needs analog AIO module)</p> <p>c) Stepper motor panel P25 : (Optional) * . ❖12V - 7.5⁰C step stepper motor ❖Dir. & speed control. (Needs CPU with transisterised digital outputs.</p>
Mechatorics Applications (Optional)	<p>1) Rotary transfer unit : Table Top Unit of size (200mm x 300mm x 200mm) Consists of two geared bi-directional DC motor (3V) namely, a) Turn table motor with 5IR emitter detector pairs to signal turn table position to controller & needs 2 O/P from controller to select FWD/REV rotation. b) Dispensing motor with 2 IR leds to detect presence and colors of rings loaded in two tube holders, needs 2 O/Ps from controller to dispense ring from either of the holding tube. 4 fault switches, connects to controller using 15 pin D (F) connector. Supply 220VAC/230VAC, 50Hz.</p> <p>2) Conveyor belt : Table Top Unit of size (100mm x 150mm x 75mm) Light table mounted conveyor with of PVC belt of 1.2m length, Rollers, 24Vdc geared motor, 3nos of spring return single acting cylinders, 3 nos of retro reflective sensors to detect presence, colour & height of transported metal cylinders, 3 beans to segregate cylinders as per their physical property. Size {500(L)X150X75mm} using 30X30 aluminum profile & level adjustment.</p>
SCADA Trainer (Optional)	<ul style="list-style-type: none"> SCADA software development suite supplied on installable CD. Supports 25 tags, with USB hardware lock provided, 19 projects for 19 SAPs P4/XP needed but PC not in scope of supply. Interfaces with PLC through RS232C comport
DCS Trainer (Optional)	<ul style="list-style-type: none"> DCS Trainer consists of 2 Nos of above XPO-PLC Trainer networked over RS485 with Multi Drop SCADA software (supplied on installable CD) with Modbus capability (150 tags), USB hardware Lock, 19 projects for 19 SAPs supplied and connected to PC through comport using RS232C to RS485 converter. User can control from PC as well as from PLC. P4/XP needed but it is not in scope of supply.