

POWER

ON

OFF

DC24V

24V

0V

INPUT

OUTPUT

00

08

16

00

01

09

17

01

02

10

18

02

03

11

19

03

04

12

20

04

05

13

21

05

06

14

22

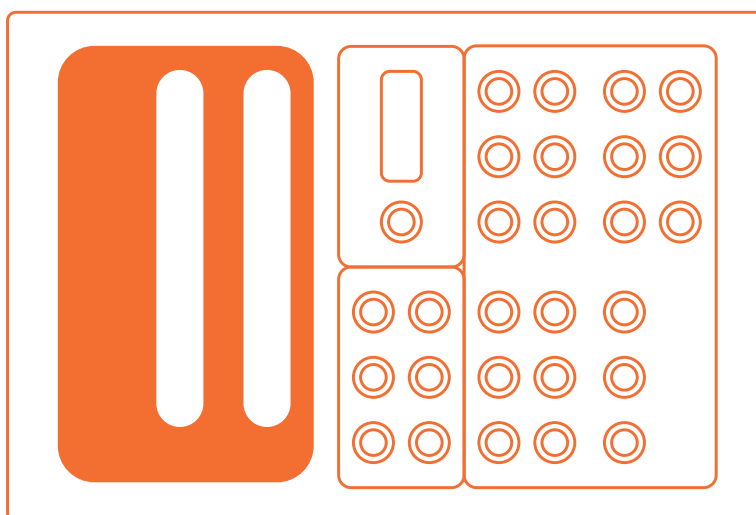
06

07

15

23

07



CHAPTER

04

PLC TRAINER

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PLC TRAINER



Allen-Bradley



Basic Level



23151



23152



23060



41115

Advanced Level



23155



23052



23003



23167



23055



23021



23027

Application Module



23028



23029



23030



23035



23019



23046



23047



23070



23071



23072



26013



Touch panel

Introduction

The FESTECH PLC trainer is produced specifically to meet customer needs. All of the PLC trainers use 4mm sockets and can be wired easily.

The application modules can be selected and combined to meet training goals. (e.g.: analog module, position control module, PID control module etc.)

The trainer is compatible with all components (pneumatics, hydraulics, motor control, process control, etc.), and any type of PLC can be selected.



FPLC-T060

04



Block type PLC(A)

Module type (16/16)

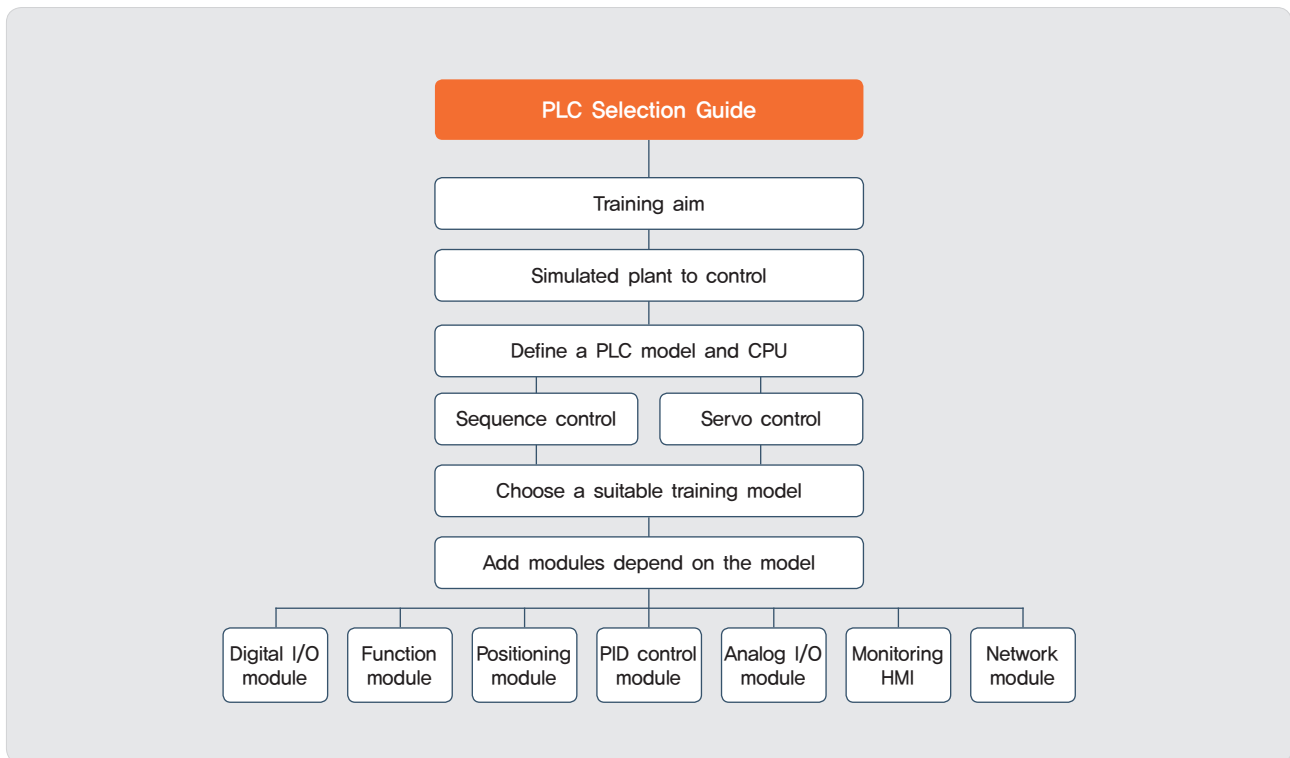
Module type : (32/32)

Module type : (32/32/4ch/2ch)

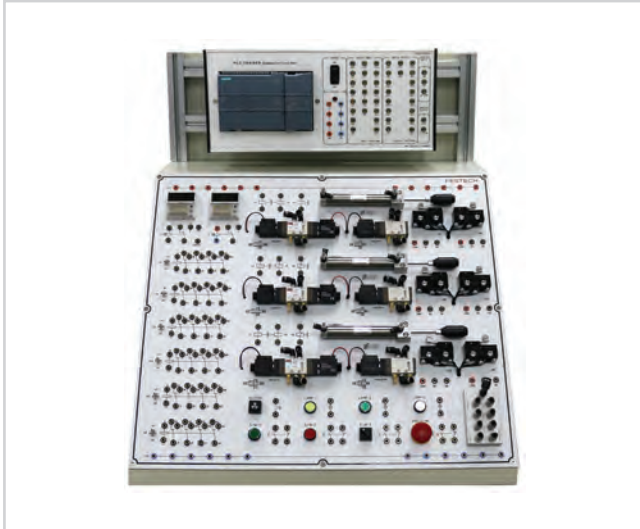
Adaptable plc



SIEMENS	LOGO, S7-200, S7-300, S7-400, S7-1200
MITSUBISHI	FX Series, Melsec-Q
LS	MK, GM, XGT
ALLEN-BRADELY	Micro Logix, Compact Logix, Control Logix
ETC	OMRON



PLC trainer (FPLC-T050)



Order number : 23050

Features

- Electro-pneumatic control with PLC
- Possible to use a PLC standard trainer
- Availability in narrow space
- Various exercise work sheets
- Any kind of PLC is possible

Training contents

- Basic pneumatic control
- Pneumatic sequence control circuit
- Various condition-auto/manual selection circuit, emergency circuit
- Error finding in pneumatic system
- Safety of pneumatic system
- Usage of an electro-pneumatic parts
- Relay control circuit
- Electric self-holding circuit
- Electric sequence control circuit
- Electro-pneumatic system
- PLC-pneumatic control
- PLC program control

Component

No.	Component	Qty.
1	Service unit	1
2	Manifold	1
3	Double acting cylinder(flow control)	3
4	5/2-WAY single solenoid valve	3
5	5/2-WAY double solenoid valve	3
6	Electrical limit switch left	3
7	Electrical limit switch right	3
8	Time relay	1
9	Counter	1

No.	Component	Qty.
10	Push-button switch	2
11	Emergency switch	1
12	Buzzer	1
13	Lamp	3
14	Electric relay	6
15	PLC unit	1
16	Plastic hose(1m)	10
17	Select switch	1
18	Cable set	1

Recommended PLC type



16DI / 16DO / 2AI / 1AO all brands of PLC are possible

PLC trainer (FPLC-T051)



Order number : 23051

Features

- User can save the training space.
- PLC and other modules are combined.
- 4mm socket wiring
- User can choose various PLC, IO, module specs

Training contents

- PLC program control
- Digital input / output
- Counter / timer usage
- Special function usage
- Various condition
- Buzzer and lamp usage
- Principle and feature of sensors
- Sensor application
- DC geared motor control
- Motor speed check
- Principle and application of encoder
- AD/DA module exercise

Component

No.	Component	Qty.
1	Push-button switch (lamp included)	5
2	Toggle switch	5
3	LED lamp	8
4	Buzzer	1
5	Digital counter relay	1
6	Volt meter	1
7	Volt generator	1

No.	Component	Qty.
8	Inductive sensor	1
9	Capacitive sensor	1
10	Optical sensor	1
11	Motor speed controller	1
12	Rotary plate	1
13	GM4 PLC (Optional)	

Recommended PLC type



16DI / 16DO / 2AI / 1AO all brands of PLC are possible

PLC trainer (FPLC-T052)



Order number : 23052

Features

- User can save the training space.
- PLC and other modules are combined.
- 4mm socket wiring

Training contents

- PLC program control
- Digital input / output (switch, lamp module)
- Digital switch and 7-segment usage
- Analog input/output (A/D, D/A) control
- Special function usage
- Various condition
- Buzzer and lamp usage
- DC geared motor control
- Motor speed check
- Principle and application of encoder

Component

No.	Component	Qty.
1	Switch module	1
2	Lamp module	1
3	Digital module	1
4	Analog module	1

No.	Component	Qty.
5	Analog display module	1
6	DC motor module	1
7	Power supply module	1
8	SIEMENS PLC (Optional)	

Recommended PLC type



16DI / 16DO / 2AI / 1AO all brands of PLC are possible

PLC trainer (FPLC-T053)



Features

- User can save the training space.
- PLC and other modules are combined.
- 4mm socket wiring

Training contents

- PLC program control
- Buzzer and lamp operating
- Digital counter
- Various condition
- DC geared motor control
- Motor speed check
- Principle and exercise of encoder
- Cylinder control using solenoid valve

Order number : 23053

Component

No.	Component	Qty.
1	Push-button switch	6
2	Push-button switch (locking type)	2
3	Emergency switch	1
4	LED lamp	8
5	Buzzer	1
6	Digital counter relay	1
7	Double-acting cylinder	1
8	5/2-WAY single solenoid valve	1
9	5/2-WAY double solenoid valve	1

No.	Component	Qty.
10	Electric limit switch (left)	1
11	Electric limit switch (right)	1
12	Inductive sensor	1
13	Capacitive sensor	1
14	Optical sensor	1
15	Motor speed controller	1
16	Rotary plate	1
17	MASTER-K PLC (Optional)	
18	Toggle switch	4

Recommended PLC type



DI16 / 16DO all brands of PLC are possible

PLC trainer (FPLC-T060)



Order number : 23060

Features

- User can have training in narrow space.
- PLC and other modules are combined.
- 4mm socket wiring
- User can choose various PLC, IO, module specs

Training contents

- Digital input/ output signal
- Special function usage
- Various conditions
- PLC program control

Component

No.	Component	Qty.
1	Input switch module	
1-1	Push-button switch	4
1-2	Select switch	2
1-3	Emergency switch	1
1-4	Toggle switch	8
1-5	Digital switch (25pin D-SUB connector)	1
2	Output display module	
2-1	Lamp	2
2-2	LED lamp	8
2-3	Buzzer	1
2-4	7 segment (25pin D-SUB connector)	1

No.	Component	Qty.
3	Motor control module	
3-1	DC motor	1
3-2	Rotary plate	1
3-3	Photo sensor	2
3-4	Stepping motor	1
3-5	CW/CCW rotary DC motor	1
3-6	Limit switch	4
3-7	GM4 PLC (Optional)	

Recommended PLC type



24DI / 16DO / 2AI / 1AO all brands of PLC are possible

PLC trainer (FPLC-T070)



Order number : 23061

Features

- User can have training in narrow space.
- PLC and other modules are combined.
- 4mm socket wiring
- User can choose various PLC, IO, module specs
- Need : interface IO module (20P connector type)

Training contents

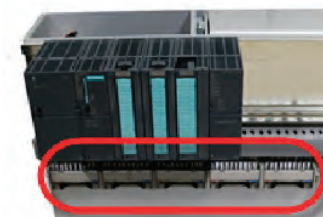
- PLC program control
- Digital input/ output (switch, lamp, buzzer etc)
- Digital switch and 7-segment usage
- Analog input/ output (A/D, D/A) control
- Special function usage
- Various conditions

Component

No.	Component	Qty.
1	IO Module (16/16)	6
2	Digital & Analog module	2
2-1	Toggle switch	1
2-2	LED lamp	8
2-3	7 segment (4digits)	1

No.	Component	Qty.
2-4	Digital switch (4digits)	1
2-5	Analog input display	1
2-6	Analog output generator	1
3	Analog input/output module	1
4	Touch panel (7")	1

Recommended PLC type



24DI / 16DO / 2AI / 1AO all brands of PLC (connector type) are possible

Portable PLC trainer (FPLC-T501)



Order number : 23079

Features

- Portable type equipment
- PLC input / output control exercise
- Various PLC training (basic to advanced)
- User can have training in narrow space
- PLC exercise
- 4mm safety socket
- User can choose various PLC, IO, module specs

04

Component

No.	Component	Qty.
1	PLC Unit	1
2	Double-acting cylinder (flow control valve attached)	3
3	5/2-WAY single solenoid valve	3
4	5/2-WAY double solenoid valve	3
5	Electric limit switch(left)	3
6	Electric limit switch(right)	3
7	Push-button switch	4

No.	Component	Qty.
8	Select switch	1
9	Emergency switch	1
10	Toggle switch	2
11	BUZZER	1
12	4 digit LED	1
13	Plastic hose	10
14	Cable set	1

Recommended PLC type



14DI / 10DO all brands of block PLC are possible

Portable PLC communication trainer (FPLC-T502)



Features

- Portable type equipment
- PLC input / output control exercise
- Various PLC training (basic to advanced)
- User can have training in narrow space
- PLC exercise
- 4mm safety socket
- User can choose various PLC, IO, module specs

Order number : 23078

Component

No.	Component	Qty.
1	PLC Unit	2
2	Touch panel (7")	1
3	Conveyor module	2
4	Solenoid coil	3
5	Optical fiber sensor	3
6	Capacitive sensor	1
7	Optical sensor	1

No.	Component	Qty.
8	Inductive sensor	1
9	Push-button switch	2
10	Select switch	1
11	Emergency switch	1
12	Relay	2
13	Case	1
14	Cable set	1

Recommended PLC type

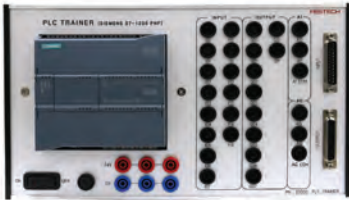


16DI / 16DO all brands of PLC are possible

SIEMENS PLC

Block type (14DI / 10DO)

Order number : 23151



- Digital input : 14 channel
- Digital output : 10 channel (Relay)
- Analog input : 2 channel
- Analog output : 2 channel
- HSC included (1 channel)
- EtherNet communication
- 4mm socket
- Power supply included
- ※ PC-Adapter, software not included

Module type (16DI / 16DO)

Order number : 23152



- Digital input : 16 channel
- Digital output : 16 channel (relay or TR)
- 4mm socket
- Power supply included
- PROFIBUS-DP communication (Optional)
- ※ PC-Adapter, software not included

Module type (32DI / 32DO)

Order number : 23155



- Digital input : 32 channel
- Digital output : 32 channel (TR)
- 4mm socket
- Power supply included
- ※ PC-Adapter, software not included

Module type (24DI / 16DO / 4AI / 2AO)

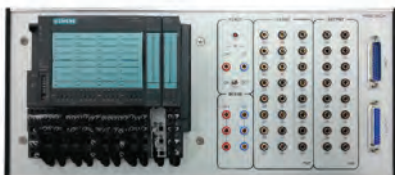
Order number : 23157



- Digital input : 24 channel
- Digital output : 16 channel (TR)
- Analog input : 4 channel
- Analog output : 2 channel
- 4mm socket
- Power supply included
- ※ PC-Adapter, software not included

Optional module

Order number : 23159



- Position control card (1axes, 2axes)
- Communication module
 - RS-232, RS-485, EtherNet, CC-Link
- Remote IO module
 - PROFIBUS
 - Modbus TCP

Mitsubishi PLC

Block type (16DI / 16DO)

Order number : 23161



- Digital input : 16 channel
- Digital output : 16 channel (Relay)
- 4mm socket
- Power supply included
- Communication(option) : RS-232, RS-422, RS-485

※ Communication cable sold separately

Module type (16DI / 16DO)

Order number : 23162



- Digital input : 16 channel
- Digital output : 16 channel (Relay/TR selection)
- Communication : USB, RS-232
- 4mm socket
- Power supply included

Module type (32DI / 32DO)

Order number : 23165



- Digital input : 32 channel
- Digital output : 32 channel (TR)
- 4mm socket
- Power supply included

Module type (32DI / 32DO / 4AI / 2AO)

Order number : 23167



- Digital input : 32 channel
- Digital output : 32 channel (TR)
- Analog input : 4 channel
- Analog output : 2 channel
- 4mm socket
- Power supply included

Optional module

Order number : 23169

- Position control card (1axes, 2axes)
- Communication module
 - RS-232, RS-485, EtherNet, CC-Link
- Remote IO module
 - PROFIBUS
 - Modbus TCP

LS PLC

Block type (18DI / 12DO)

Order number : 23001



- Digital input : 18 channel
- Digital output : 12 channel (Relay)
- HSC included
- 2axes position control
- 4mm socket
- Power supply included

Module type (16DI / 16DO)

Order number : 23002



- Digital input : 16 channel
- Digital output : 16 channel (Relay or TR)
- 4mm socket
- Power supply included

Module type (32DI / 32DO)

Order number : 23005



- Digital input : 32 channel
- Digital output : 32 channel (Relay or TR)
- 4mm socket
- Power supply included

Module type (32DI / 32DO / 4AI / 2AO)

Order number : 23007



- Digital input : 32 channel
- Digital output : 32 channel (Relay or TR)
- Analog input : 4 channel
- Analog output : 2 channel
- 4mm socket
- Power supply included

Optional module

Order number : 23077

- Position control card (1axes, 2axes)
- Communication module
 - RS-232, RS-485, Ethernet, CC-Link
- Remote IO
 - PROFIBUS
 - DeviceNet
 - Modbus

Allen-Bradley PLC

Block type (16DI / 16DO)

Order number : 23171



- Digital input : 16 channel
- Digital output : 16 channel (Relay)
- 4mm socket
- Power supply included

Module type (16DI / 16DO)

Order number : 23172



- Digital input : 16 channel
- Digital output : 16 channel (Relay or TR)
- 4mm socket
- Power supply included

※ Software is not included

Module type (32DI / 32DO)

Order number : 23175



- Digital input : 32 channel
- Digital output : 32 channel (TR)
- 4mm socket
- Power supply included

※ Software is not included

Module type (32DI / 32DO / 4AI / 2AO)

Order number : 23177



- Digital input : 24 channel
- Digital output : 16 channel (TR)
- Analog input : 4 channel
- Analog output : 2 channel
- 4mm socket
- Power supply included

※ Software is not included

Optional module

Order number : 23179

- Position control cart (1axes, 2axes)
- Communication module
 - RS-232, RS-485, Ethernet, CC-Link
- Remote IO
 - PROFIBUS
 - DeviceNet
 - Modbus

PLC training modules

Input switch module Order number : 23028



- Push-button switch
- Select switch
- Emergency switch
- Toggle switch
- 4 Digits digital switch
- 4mm socket

Output display module Order number : 23029



- Lamp
- LED lamp
- Buzzer
- 4 Digits 7 FND
- 4mm socket

Motor control module Order number : 23030



- DC Geared Motor
- Stepping Motor
- Position control module with rack & pinion
- Photo interrupter sensor
- Limit switch (position control)
- 4mm socket

Relay control module Order number : 23034



- 4C relay : 3EA
- Relay pilot lamp
- 4mm socket

Input / Output module Order number : 23073



- Toggle switch
- Select switch
- Push-button switch
- Emergency switch
- Toggle switch
- Buzzer
- DC motor
- Relay
- 4mm socket

PLC training modules

Solenoid valve module 1

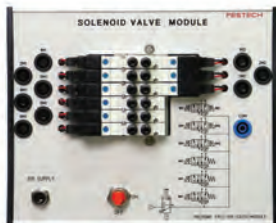
Order number : 23031



- 5/2-WAY single solenoid valve : 2ea
- 5/2-WAY double solenoid valve : 2ea
- Pressure gauge
- Regulator
- Shut-off valve
- 4mm socket

Solenoid valve module 2

Order number : 23046



- 5/2-WAY single solenoid valve : 3ea
- 5/2-WAY double solenoid valve : 3ea
- Pneumatic symbol
- Shut-off valve
- Solenoid valve COM
- 4mm socket

Cylinder control module 1

Order number : 23032



- Double-acting cylinder : 2ea
- Reed switch for detecting movement
- Pneumatic symbol
- Plastic cam
- 4mm socket

Cylinder control module 2

Order number : 23047



- Double-acting cylinder : 3ea
- Reed switch for detecting movement
- Pneumatic symbol
- Plastic cam
- Reed switch COM
- 4mm socket

A/D, D/A module

Order number : 23038



- Signal Generator : 0~10V
- Signal Display : 0~10V
- Digital Display Unit

PLC training modules

Regulated power supply

Order number : 23037



- Digital voltage display
- Range : DC 0~24V, 5A
- Power : AC 220V
- CV, CC

AUTO DOOR module

Order number : 23070



- DOOR sensor
- LED
- Buzzer
- INPUT/OUTPUT : D-SUB connector terminal
- Auto / manual mode
- Manual switch

※ Interface I/O terminal or PLC connector is needed

CONVEYOR & SENSOR module

Order number : 23071



- Conveyor belt : DC 24V
- Capacitive sensor
- Optical sensor
- LED
- Buzzer
- Auto / manual mode
- Manual switch
- INPUT/OUTPUT terminal

※ Interface I/O terminal or PLC connector is needed

Inverter module

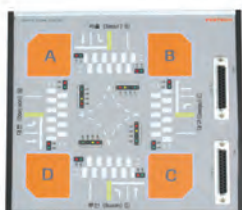
Order number : 24011



- DC 24V power
- Push-button switch
- SIEMENS inverter
- AC 3phase motor
- Inverter magnet included
- 4mm, 2mm socket

Traffic signal module

Order number : 23072



- High-brightness LED
- INPUT/OUTPUT terminal

※ Interface I/O terminal or PLC connector is needed

PLC training modules

Signal controller module

Order number : 26013



- Input : 0~20mA, -10 ~ 10V
- Output signal : 0 ~ 10V, -10 ~ 10V
- Setting Input, output using toggle switch
- Able to have training with 4mm socket or terminal block
- Power : DC24V

Analog display module

Order number : 21015



- Power : DC24V
- Voltage measurement range : 0~10V
- Current measurement range : 0~20mA
- Voltage measurement display square LED
- Current measurement display rotary LED

Electro-pneumatics and PLC training panel

Order number : 23106



- Power : DC24V
- Size : 740mm X 340mm
- Able to attach in profile panel
- Double-acting cylinder
- Limit switch
- Solenoid valve
- Pneumatic regulator
- DC motor
- CW/CCW rotary circuit training relay
- Photo sensor (PNP/NPN)
- Stepping motor

REMOTE I/O

Order number : 23077



- Communication : PROFIBUS
- Input : 24 channel
- Output : 16 channel
- Input Connector : D-Sub 25p
- Output Connector : D-Sub 25p
- One-touch clamp type
- Need Profibus cable

PLC training modules

Touch panel

Order number : 27456



- Display : 7", LCD Color
- Power : DC24V
- Resolution : 600*480
- Communication : USB, RS232, ETHERNET
- Aluminum case and one-touch mounting

Cable set

Order number : 13080



- Color : red, blue, black
- Length : 1500mm, 1000mm, 600mm, 300mm, 100mm
- High elasticity and special coating

Cable set (Safety socket)

Order number : 113080



- Color : red, blue, black
- Length : 1500mm, 1000mm, 600mm, 300mm, 100mm
- Safety socket type

Cable hanger

Order number : 13091



- Round plate diameter : 400mm
- Height : 1100 ~ 1800mm adjustable type
- Castor : 5 ea
- Cable hanger : 16 groove

PLC trainer manual

Order number : 42040



- PLC control manual
- PLC control exercise