

SuperRelay



SUPERRELAY, THE PERFECT ALTERNATIVE TO LOW COST PLCs AND BASIC RELAYS

xLogic SuperRelay is a compact and expandable CPU replacing mini PLCs, multiple timers, relays and counters.

The xLogic SuperRelay perfectly fits in the space between timing relays and low-end PLCs.

Each CPU incorporates not only a real-time clock and calendar, but also provides support for optional expansion I/O modules to enhance control and monitoring applications.

The xLogic SuperRelay is the ideal solution for relay / PLC replacement, or simple control applications as building and parking lot lighting, access control, watering systems, pump control, ventilation systems, home automation and a wide field of applications demanding low cost to be a primary design issue.



IN THIS BROCHURE:

- ❖ ELC 18 Standard Models
- ❖ ELC 18 Economy Models
- ❖ ELC 12 Standard Models
- ❖ ELC 18 Expansion Modules
- ❖ ELC SMS Module
- ❖ ELC Ethernet Module
- ❖ ELC xLogicSoft configuration tool





❖ *Powerful build-in HMI-display features....and more...!*

ELC-18 Series

With Build in HMI features

- ❖ Customizable Start-up page / screen
- ❖ 4 line, 10 character backlight display
- ❖ Various values / settings and parameters can be viewed and adjusted directly through the HMI display.
- ❖ Various blocks' different parameters can be displayed on one screen / page simultaneously
- ❖ Randomly specify a specific page to display the IO status of the ELC 18 or expansion module attached
- ❖ Alarm page can record and display the exact alarm occurrence time
- ❖ Programmable up to 32 (user defined) screens / pages
- ❖ Optional metal mounting plate offers mounting to the rear of the control panel door.
- ❖ Unit Size allows for DIN-rail mounting together with commonly used breakers in building automation applications.
- ❖ Programming done as with any regular HMI (not just via key pad as most similar products).
- ❖ Retentive memory capability standard feature on the ELC-18 model.
- ❖ 10 BITS Analog input resolution.
- ❖ CE-approved



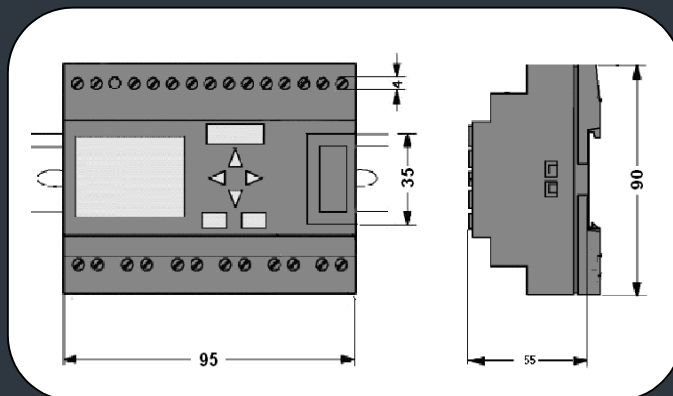
- ❖ Connect optional expansion modules.
- ❖ Connect optional SMS / GSM message module.
- ❖ Connect optional Ethernet module.
- ❖ Connect HMI / Operator Panel using Modbus.

ELC-18 Series

<u>MODEL</u>	<u>POWER SUPPLY</u>	<u>INPUTS</u>	<u>OUTPUTS</u>	<u>RTC</u>	<u>PWM</u>
ELC-18AC-R	AC 110~240V	12 Digital	6 Relays	Yes	No
ELC-18AC-L-R	AC 110~240V	12 Digital	6 Relays	Yes	No
ELC-18DC-D-R	DC12V – DC24V	12 Digital	6 Relays	Yes	No
ELC-18DC-D-TN	DC12V – DC24V	12 Digital	6 Transistors	Yes	2 Ch.
ELC-18DC-D-TP	DC12V – DC24V	12 Digital	6 Transistors	Yes	2 Ch.
ELC-18DC-DA-R	DC12V – DC24V	8 Digital / Analog + 4 Digital	6 Relays	Yes	No
ELC-18DC-DA-TN	DC12V – DC24V	8 Digital / Analog + 4 Digital	6 Transistors	Yes	2 Ch.
ELC- 18DC-DA-TP	DC12V – DC24V	8 Digital / Analog + 4 Digital	6 Transistors	Yes	2 Ch.

GENERAL SPECIFICATIONS

Timers	: 256
Counters	: 256
Function Blocks	: 256
Operation temp.	: 0 -55
Storage	:-40 -70
Protection	: IP20
RTC accuracy	: MAX ±5S/day
RTC time intervals	: 256
RTC Backup at 25 °C:	10 hours
Power-off retentivity	: yes
Storage capacity	: 128K
Dimensions	: 95*90*55 (Unit: mm)
Certificate	: CE
Installation	: DIN rail or screw for installation
Expansion capacity	: 9 analog PCS modules or up to 31 Non-analog modules (ELC-E-16, CAN BUS)



ELC-18AC-R

Power supply

Rated voltage: AC 100-240V
 AC220V consumption: 3W
 Main voltage operation range: AC85-256V
 Allowable main frequency: 47-63Hz

Digital input

Signal 0: AC 0-40V
 Signal 1: AC79-240V
 Input current: < 0.03mA
 Input current: >0.08mA

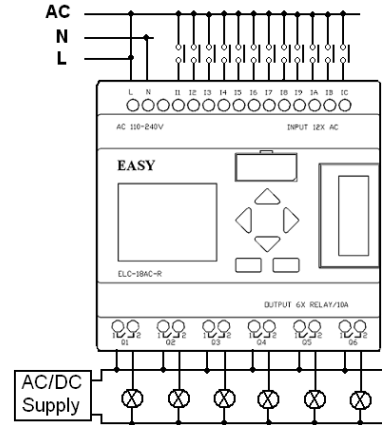
High-speed counting: IB, IC (Max.99k Hz)

Digital output

Output type: relay output
 continuous current max value: MAX. 10A

Switch frequency

Mechanism: 10Hz
 Resistor load: 2Hz
 Inductive load: 0.5Hz



ELC-18DC-D-R

Power supply

Rated voltage: DC12-24V
 (Output full-load): Typical 3W
 Main voltage operation range: 10V-28V

Digital input

Signal 0: DC 0-3V
 Signal 1: DC 8-24V
 Input current: < 1.0mA
 Input current: >1.5mA

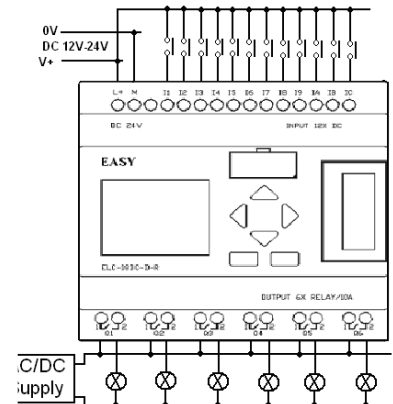
High-speed counting: IB, IC (Max.99k Hz)

Digital output

Output type: relay output
 continuous current max value: MAX. 10A

Switch frequency

Mechanism: 10Hz
 Resistor load: 2Hz
 Inductive load: 0.5Hz



ELC-18DC-DA-R

Power supply

Rated voltage: DC12-24V
 (Output full-load): Typical 3W
 Main voltage operation range: 10V-28V

Digital input

Signal 0: DC 0-3V
 Signal 1: DC 8-24V
 Input current: < 1.0mA
 Input current: >1.5mA

High-speed counting: IB, IC (Max.99k Hz)

Analog input

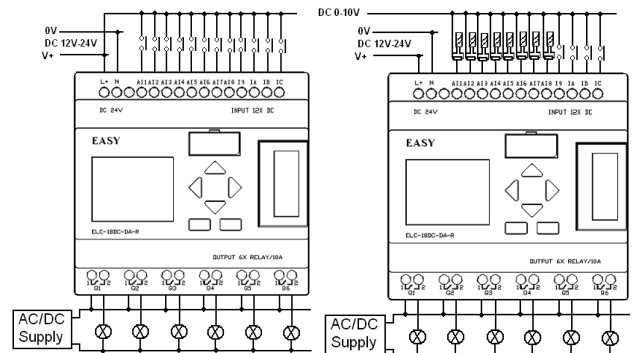
Signal: DC 0-10V

Digital output

Output type: relay output
 continuous current max value: MAX. 10A

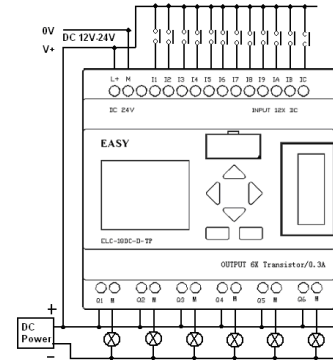
Switch frequency

Mechanism: 10Hz
 Resistor load: 2Hz
 Inductive load: 0.5Hz



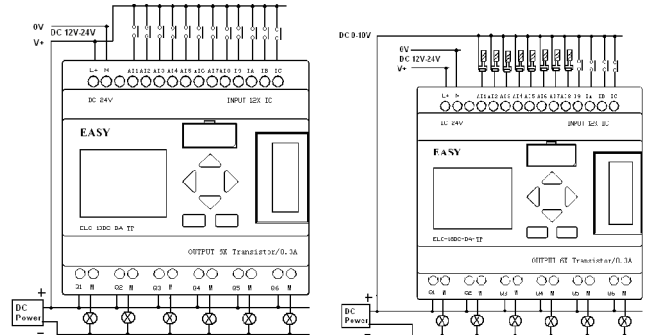
ELC-18DC-D-TP

- Power supply**
 Rated voltage: DC12-24V
 (Output full-load): Typical 3W
 Main voltage operation range: 10V-28V
- Digital input**
 Signal 0:DC 0-3V
 Signal 1:DC 8-24V
 Input current: < 1.0mA
 Input current: >1.5mA
- High-speed counting:** IB, IC (Max.99k Hz)
- Digital output**
 Output type: transistor (PNP type)
 continuous current max value: MAX.0.3A
- PWM:** 2 channels (Q5, Q6)



ELC-18DC-DA-TP

- Power supply**
 Rated voltage: DC12-24V
 (Output full-load): Typical 3W
 Main voltage operation range: 10V-28V
- Digital input**
 Signal 0:DC 0-3V
 Signal 1:DC 8-24V
 Input current: < 1.0mA
 Input current: >1.5mA
- High-speed counting:** AI8 (Max.99k Hz)
- Analog input**
 Signal: DC 0-10V
- Digital output**
 Output type: transistor (PNP type)
 continuous current max value: MAX. 0.3A
- PWM:** 2 channels (Q5, Q6)



Consult our website

For the latest updated information

www.super-relay.com



- ❖ Connect optional SMS / GSM message module.
- ❖ Connect HMI / Operator Panel using Modbus.

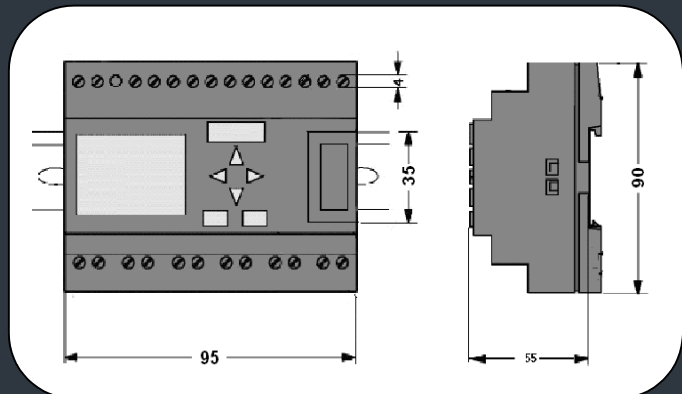
ELC-18 Economy

<u>MODEL</u>	<u>POWER SUPPLY</u>	<u>INPUTS</u>	<u>OUTPUTS</u>	<u>RTC</u>	<u>PWM</u>	<u>HSC*</u>
ELC-18AC-R-E	AC 110~240V	12 Digital	6 Relays	Yes	No	No
ELC-18AC-L-R-E	AC 110~240V	12 Digital	6 Relays	Yes	No	No
ELC-18DC-D-R-E	DC12V – DC24V	12 Digital	6 Relays	Yes	No	No
ELC-18DC-D-TN-E	DC12V – DC24V	12 Digital	6 Transistors	Yes	No	No
ELC-18DC-D-TP-E	DC12V – DC24V	12 Digital	6 Transistors	Yes	No	No
ELC-18DC-DA-R-E	DC12V – DC24V	8 Digital / Analog + 4 Digital	6 Relays	Yes	No	No
ELC-18DC-DA-TN-E	DC12V – DC24V	8 Digital / Analog + 4 Digital	6 Transistors	Yes	No	No
ELC-18DC-DA-TP-E	DC12V – DC24V	8 Digital / Analog + 4 Digital	6 Transistors	Yes	No	No

- HSC = High Speed Count

GENERAL SPECIFICATIONS

Timers	: 256
Counters	: 256
Function Blocks	: 256
Operation temp.	: 0 -55
Storage	:-40 -70
Protection	: IP20
RTC accuracy	: MAX ±5S/day
RTC time intervals	: 256
RTC Backup at 25 °C:	10 hours
Power-off retentivity	: yes
Storage capacity	: 128K
Dimensions	: 95*90*55 (Unit: mm)
Certificate	: CE
Installation	: DIN rail or screw for installation
Expansion capacity	: 31 modules (ELC-E-16, CAN BUS)



ELC-18AC-R-E

Power supply

Rated voltage: AC 100-240V
 AC220V consumption: 3W
 Main voltage operation range: AC85-256V
 Allowable main frequency: 47-63Hz

Digital input

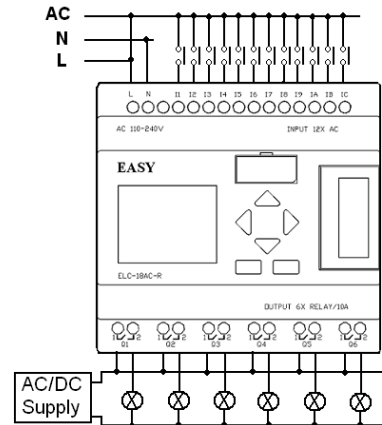
Signal 0: AC 0-40V
 Signal 1: AC79-240V
 Input current: < 0.03mA
 Input current: >0.08mA

Digital output

Output type: relay output
 continuous current max value: MAX. 10A

Switch frequency

Mechanism: 10Hz
 Resistor load: 2Hz
 Inductive load: 0.5Hz



ELC-18DC-D-R-E

Power supply

Rated voltage: DC12-24V
 (Output full-load): Typical 3W
 Main voltage operation range: 10V-28V

Digital input

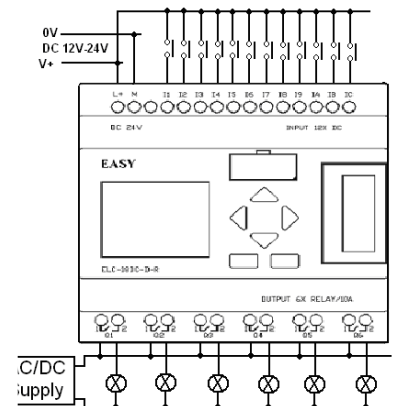
Signal 0: DC 0-3V
 Signal 1: DC 8-24V
 Input current: < 1.0mA
 Input current: >1.5mA

Digital output

Output type: relay output
 continuous current max value: MAX. 10A

Switch frequency

Mechanism: 10Hz
 Resistor load: 2Hz
 Inductive load: 0.5Hz



ELC-18DC-DA-R-E

Power supply

Rated voltage: DC12-24V
 (Output full-load): Typical 3W
 Main voltage operation range: 10V-28V

Digital input

Signal 0: DC 0-3V
 Signal 1: DC 8-24V
 Input current: < 1.0mA
 Input current: >1.5mA

Analog input

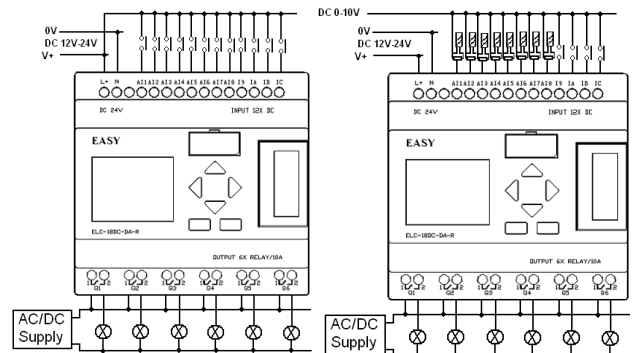
Signal: DC 0-10V

Digital output

Output type: relay output
 continuous current max value: MAX. 10A

Switch frequency

Mechanism: 10Hz
 Resistor load: 2Hz
 Inductive load: 0.5Hz



ELC-18DC-D-TP-E

Power supply

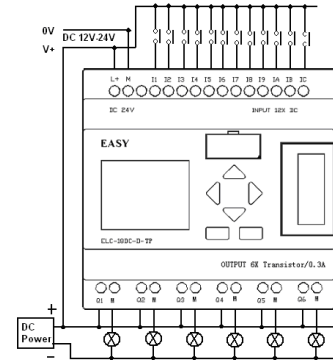
Rated voltage: DC12-24V
 (Output full-load): Typical 3W
 Main voltage operation range: 10V-28V

Digital input

Signal 0:DC 0-3V
 Signal 1:DC 8-24V
 Input current: < 1.0mA
 Input current: >1.5mA

Digital output

Output type: transistor (PNP type)
 continuous current max value: MAX.0.3A



ELC-18DC-DA-TP-E

Power supply

Rated voltage: DC12-24V
 (Output full-load): Typical 3W
 Main voltage operation range: 10V-28V

Digital input

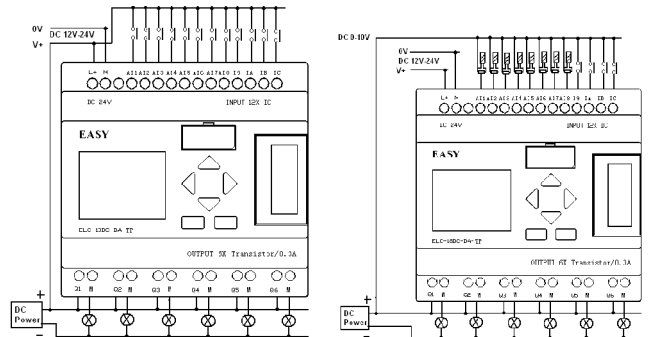
Signal 0:DC 0-3V
 Signal 1:DC 8-24V
 Input current: < 1.0mA
 Input current: >1.5mA

Analog input

Signal: DC 0-10V

Digital output

Output type: transistor (PNP type)
 continuous current max value: MAX. 0.3A



Consult our website

For the latest updated information

www.super-relay.com



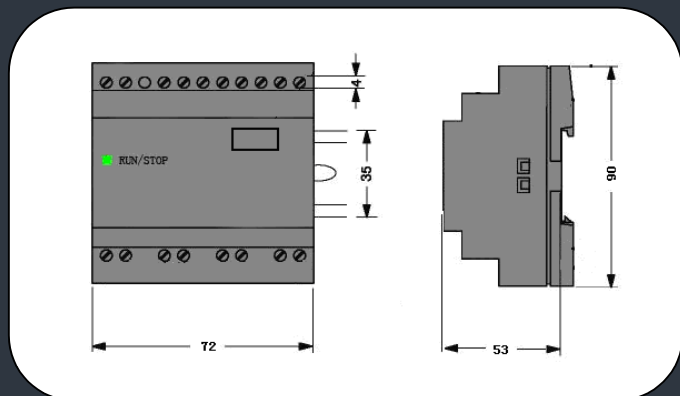
- ❖ *Rugged, low cost model.*
- ❖ *DIN Rail or Wall mounted.*
- ❖ *Connect optional Ethernet module.*
- ❖ *Connect HMI / Operator Panel using Modbus.*
- ❖ *1 route High Speed Counting on all units*

ELC-12 Series

<u>MODEL</u>	<u>POWER SUPPLY</u>	<u>INPUTS</u>	<u>OUTPUTS</u>	<u>RTC</u>	<u>PWM</u>	<u>HSC</u>
ELC-12AC-R	AC 110~240V	8 Digital	4 Relays	Yes	No	Yes
ELC-12DC-D-R	DC12V – DC24V	8 Digital	4 Relays	Yes	No	Yes
ELC-12DC-D-TN	DC12V – DC24V	8 Digital	4 Transistors	Yes	1 Ch.	Yes
ELC-12DC-D-TP	DC12V – DC24V	8 Digital	4 Transistors	Yes	1 Ch.	Yes
ELC-12DC-DA-R	DC12V – DC24V	8 Digital / Analog	4 Relays	Yes	No	Yes
ELC-12DC-DA-TN	DC12V – DC24V	8 Digital / Analog	4 Transistors	Yes	1 Ch.	Yes
ELC-12DC-DA-TP	DC12V – DC24V	8 Digital / Analog	4 Transistors	Yes	1 Ch.	Yes

GENERAL SPECIFICATIONS

- Timers : 130
- Counters : 130
- Function Blocks : 130
- Operation temp. : 0 -55
- Storage : -40 -70
- Protection : IP20
- RTC accuracy : MAX ±5S/day
- RTC time intervals : 130
- RTC Backup at 25 °C: 72 hours
- Power-off retentivity : No
- Storage capacity : 128K
- Dimensions : 72*90*53 (Unit, mm)
- Certificate : CE
- Installation : DIN rail or screw for installation
- Expansion capacity : No



ELC-12AC-R

Power supply

Rated voltage: AC 110-240V
 AC220V consumption: 3W
 Main voltage operation range: AC85-256V
 Allowable main frequency: 47-63Hz

Digital input

Signal 0: AC 0-40V
 Signal 1: AC79-240V
 Input current: < 0.03mA
 Input current: >0.08mA

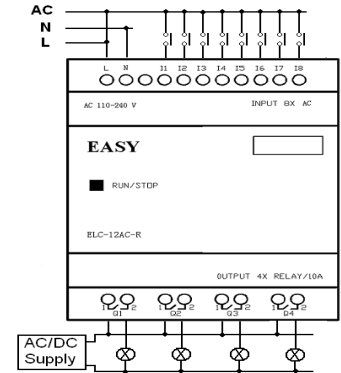
High-speed counting: I8 (Max.99k Hz)

Digital output

Output type: relay output
 continuous current max value: MAX. 10A

Switch frequency

Mechanism: 10Hz
 Resistor load: 2Hz
 Inductive load: 0.5Hz



ELC-12DC-D-R

Power supply

Rated voltage: DC12-24V
 (Output full-load) : Typical 3W
 Main voltage operation range: 10V-28V

Digital input

Signal 0: DC 0-3V
 Signal 1: DC 8-24V
 Input current: < 1.0mA
 Input current: >1.5mA

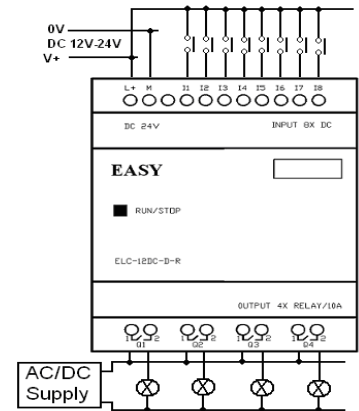
High-speed counting: I8 (Max.99k Hz)

Digital output

Output type: relay output
 continuous current max value: MAX. 10A

Switch frequency

Mechanism: 10Hz
 Resistor load: 2Hz
 Inductive load: 0.5Hz



ELC-12DC-DA-R

Power supply

Rated voltage: DC12-24V
 (Output full-load) : Typical 3W
 Main voltage operation range: 10V-28V

Digital input

Signal 0: DC 0-3V
 Signal 1: DC 8-24V
 Input current: < 1.0mA
 Input current: >1.5mA

High-speed counting: AI8 (Max.99k Hz)

Analog input

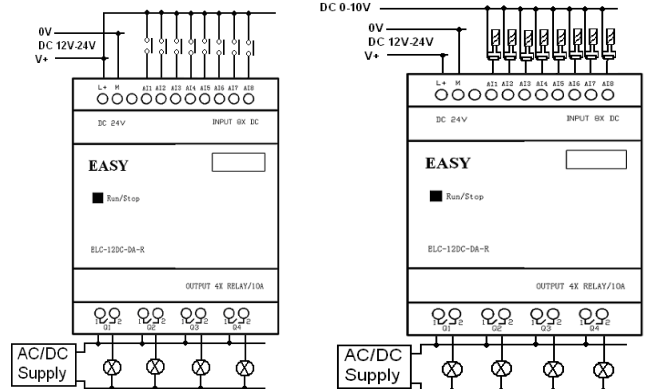
Signal: DC 0-10V

Digital output

Output type: relay output
 continuous current max value: MAX. 10A

Switch frequency

Mechanism: 10Hz
 Resistor load: 2Hz
 Inductive load: 0.5Hz



ELC-12DC-D-TP

Power supply

Rated voltage: DC12-24V
 (Output full-load) : Typical 3W
 Main voltage operation range: 10V-28V

Digital input

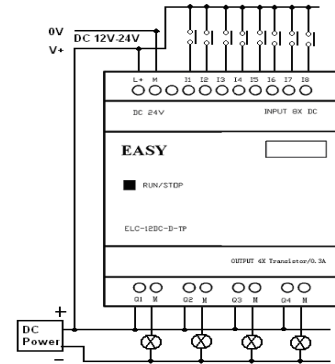
Signal 0:DC 0-3V
 Signal 1:DC 8-24V
 Input current: < 1.0mA
 Input current: >1.5mA

High-speed counting: I8 (Max.99k Hz)

Digital output

Output type: transistor(PNP type) output
 continuous current max value: MAX.0.3A

PWM: 1 channel (Q4)



ELC-12DC-DA-TP

Power supply

Rated voltage: DC12-24V
 (Output full-load): Typical 3W
 Main voltage operation range: 10V-28V

Digital input

Signal 0:DC 0-3V
 Signal 1:DC 8-24V
 Input current: < 1.0mA
 Input current: >1.5mA

High-speed counting: AI8 (Max.99k Hz)

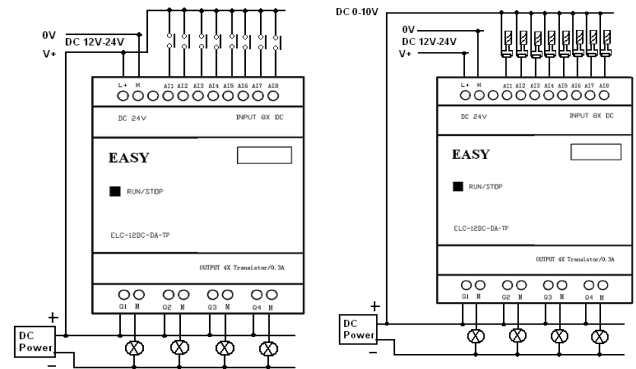
Analog input

Signal: DC 0-10V

Digital output

Output type: transistor(PNP type) output
 continuous current max value: MAX. 0.3A

PWM: 1 channel (Q4)



Consult our website

For the latest updated information

www.super-relay.com

Expansion Module



- ❖ *Connect to the STANDARD ELC-18 Series Module.*
- ❖ *Connect up to 31 modules.*

ELC-E-16AC-R

POWER

AC 110-240V

INPUTS

8 AC Digital

OUTPUTS

4 Relays (10A)

4 Relays (3A)

DIGITAL INPUTS

Signal 0: AC 0-40V Input current: <0.03mA

Signal 1: AC 0-40V Input current: <0.03mA

DIGITAL OUTPUTS

Output Type: Relay output.

Continuous Max. Current Value:

Q1 – Q4: Max 3A

Q5 – Q8: Max 10A



ELC-E-16DC-D-R

POWER

DC12V – DC24V

INPUTS

8 DC Digital

OUTPUTS

4 Relays (10A)

4 Relays (3A)

DIGITAL INPUTS

Signal 0: DC 0-3V Input current: <1.0mA

Signal 1: DC 8-24V Input current: <1.5mA

DIGITAL OUTPUTS

Output Type: Relay output.

Continuous Max. Current Value:

Q1 – Q4: Max 3A

Q5 – Q8: Max 10A



ELC-E-16DC-DA-R

POWER

DC12V – DC24V

INPUTS

6 DC Digital & 2 Analog / Digital

OUTPUTS

4 Relays (10A)

4 Relays (3A)

DIGITAL INPUTS

Signal 0: DC 0-3V Input current: <1.0mA

Signal 1: DC 8-24V Input current: <1.5mA

ANALOG OUTPUTS

Signal: DC 0-10V

DIGITAL OUTPUTS

Output Type: Relay output.

Continuous Max. Current Value:

Q1 – Q4: Max 3A

Q5 – Q8: Max 10A

SMS Module



- ❖ *Remote control the ELC 18 SuperRelay via SMS.*
- ❖ *Remote monitoring via SMS messages (Alarms, Status, etc).*
- ❖ *Easy configuration with free of charge xLogicSoft software.*

ELC-SMS-D-R

Incorporating the ELC-SMS-D-R module into a system allows the user full remote monitoring as well as remote control of the application via SMS (Short Message Service) on any GSM phone or PDA.

Worldwide availability, low operating cost, easy installation and integration in combination with high reliability makes SMS remote control and monitoring a desirable option in hard to reach, distant or hazardous environments.



GSM Network support:

The ELC-SMS-D-R is equipped with a Quad-band GSM module offering seamless functionality on 850Mhz, 900Mhz, 1800Mhz, 1900Mhz.

- Consult the SMS user manual for complete technical and installation details.



Ethernet Module

- ❖ Add the ELC-Ethernet module and provide Ethernet capability to your ELC SuperRelay.



ELC-Ethernet-DC module
ELC-Ethernet-AC module



Cable Modules

- ❖ Two standard communication and configuration interface cables are available: RS232 and USB.

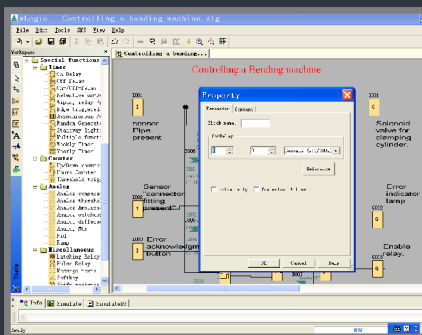


ELC-RS232
ELC-USB

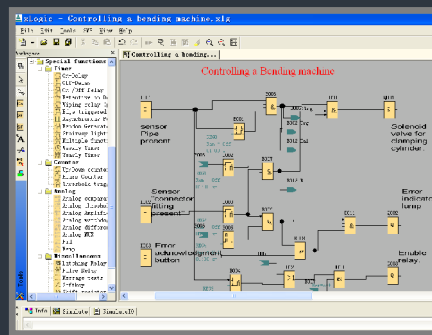


xLogicSoft

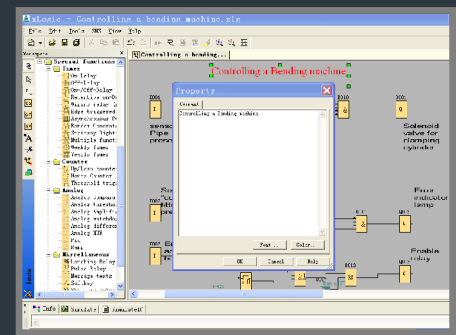
- ❖ Free of charge SuperRelay configuration software.
- ❖ Function Block / Ladder programming.
- ❖ Free upgrades for all future software versions.
- ❖ Library with pre-configured function blocks for ultra fast set-up.
- ❖ On-line Monitor & Off-line Simulation
- ❖ Free Personal Tutorials



Using the dialog boxes, function block parameter setup and modification is a quick and easy task to complete.



Link function blocks to complete your program. Set up as many as 256 (ELC-18) function blocks in one circuit program.



Use the "label tool" to write a comment, instruction or help note on the on the xLogic circuit program screen.



ETS PRODUCT SERVICE AG

ACCREDITED TEST HOUSE RECOGNIZED CERTIFICATION BODY

CERTIFICATE OF CONFORMITY

EU EMC - DIRECTIVE 2004/108/EC

This certifies that the following designated product

Programmable Logic Controller (PLC)

**Model No. : ELC-18
ELC-12
ELC-E**

.....
(Product identification)

complies with the essential protection requirements of Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

This certificate is awarded following tests carried out on samples of the product referred to above.

Assessment of compliance of the product with the requirements relating to electromagnetic compatibility was based on the following standards:

**EN 60730-1 :2000+A1 :2004
EN 60730-2-7 : 1991+A1 :1997
EN 61000-3-2 : 2006, EN 61000-3-3 : 1995 + A1 : 2001+A2 :2005**

.....
(Identification of regulations / standards)

This certificate is issued for

**Easy Electronic Co., Ltd.
3rd floor, Unit A, Qinhuai Science & Technology center
105-2 Daming Road, Qinhuai District
Nanjing, China**

.....
(Name / Address)

THE CERTIFICATION IS VALID ONLY IN ACCORDANCE WITH THE TEST REPORT NR. H4M20711-6011-E-11
THE CONFIRMATION IS VALID ONLY IF THE PRODUCT IS MANUFACTURED IN ACCORDANCE WITH THE TEST REPORT

GS LVD E/e-MARK FCC GSM UMTS CE-MARK SAR CB EMC DECT WLAN Bluetooth R&TTE Notified Body



H4M20711-6011

This is the result of tests carried out on those samples of the product referred to above which were submitted for testing, in accordance with the specification for the respective standards. The certificate holder has the right to fix the ETS PS-MARK which shows the EMC segment onto each individual product in the series to which the inspection sample belongs, provided that the product is manufactured in accordance with the test report.



January 08, 2008

.....
(Date)

Dr. Genz

.....
Dr. Genz

ETS PRODUCT SERVICE AG

STORKOWER STRASSE 38C, D-15526 REICHENWALDE B. BERLIN, GERMANY, TEL. + 49-33631-888 0 FAX + 49-33631-888 660