

## ◆ Technical Data:

**Model:EXM-12DC-DA-RT-GWIFI**

### GENERAL SPECIFICATIONS

Timers : 512

Counters : 512

SMS Message input: 32

SMS Message output: 64

SMS Message input output: 12

Function Blocks: 512

Operation temp.: -20°C-55°C

Storage:-40°C-70°C

Protection: IP20(Non-waterproof)

RTC accuracy : MAX ±2S/day

RTC Backup at 25 °C: 20 days

Program and settings Backup :10 years

Data Power-off retentivity: 10 years

Modify parameters via keypad LCD: yes

Dimensions: 95\*90\*67 (Unit: mm)

Certificate: CE

Installation: 35-DIN rail or screw for installation

Expansion capacity: 8 modules (EXM-E-8)

Password protection : 4-digit number password protection or disable program upload function

Communication interface : 1 RS232 port /TTL. The extension port can be worked as RS485 port,  
if no IO extension used with CPU.

Communication protocol : Modbus RTU/ASCII



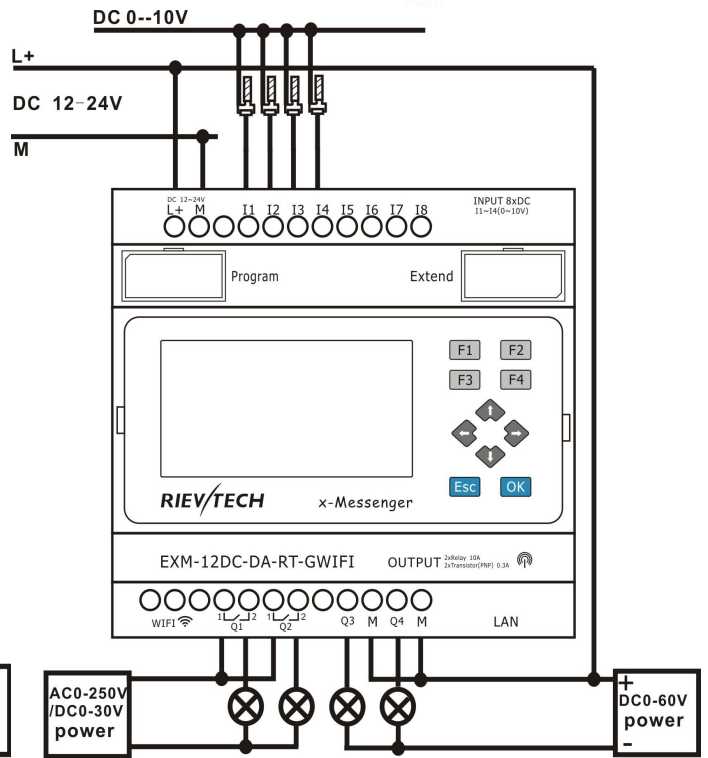
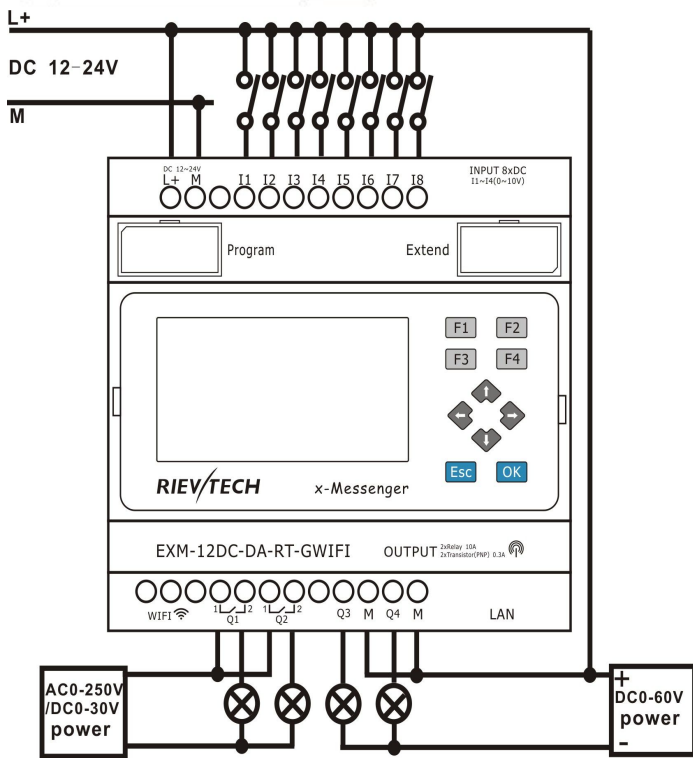
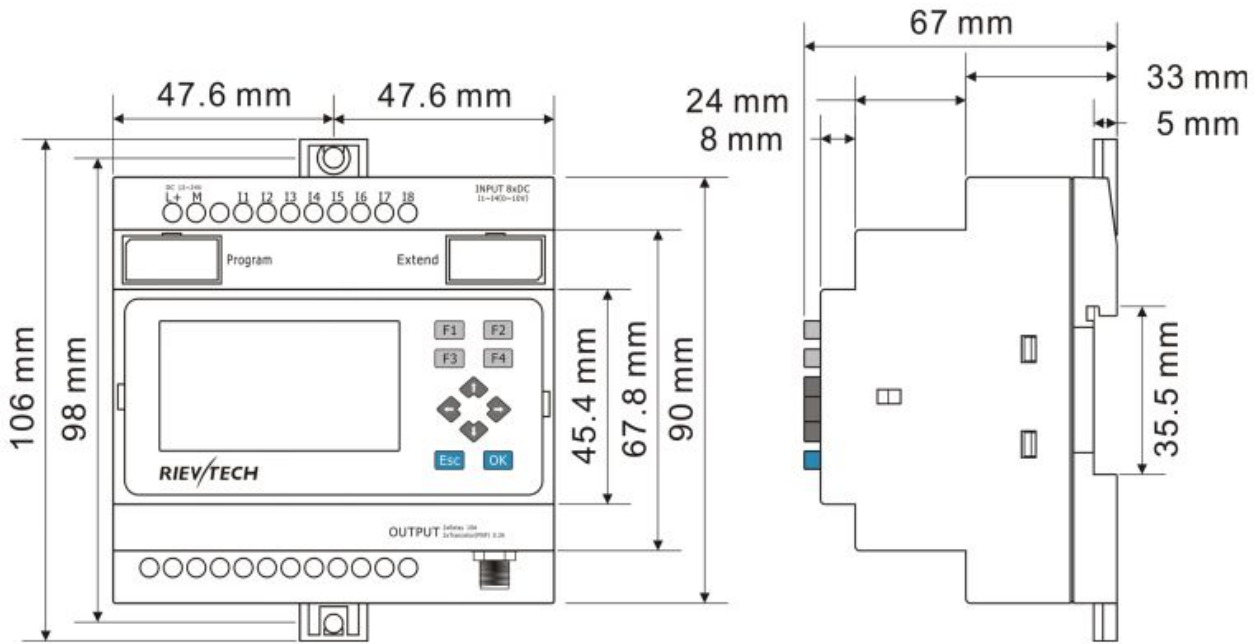
### Technical Index

<b>Power supply:</b>	
Nominal voltage	DC 12-24V
Operating limits	DC 10.8-28.8V
Immunity from micro power cuts	Typ.5 ms
Max. Startup current	Max. 0.25A
Max. absorbed power	3.5 W (10.8V dc) ; 4 W (28.8V dc)
Protection against polarity inversions	Yes
<b>Input parameters:</b>	
Input No	8 ( I1-I8 )
Digital input	8 ( I1-I8 )
Analogue input	4 ( I1-I4)(0..10V DC)
<b>Digital inputs( I5-I8 )</b>	
Input voltage	DC0-28.8V
Input signal0	< 5V DC; <1mA
Input signal1	> 8 V DC;>1.7mA
Input current	2.3mA @ 10.8V dc 2.6mA @ 12.0 V dc

	5.2 mA @ 24 V dc 6.3 mA @ 28.8 V dc
Response time	0 to 1 : <1 ms ; 1 to 0 : <1 ms
Maximum counting frequency	60k Hz(I7--I8)
Sensor type	Contact or 3-wire PNP
Input type	Resistive
Isolation between power supply and inputs	None
Isolation between inputs	None
<b>Inputs used as digital inputs( I1-I4 )</b>	
Input voltage	DC0-28.8V
Input signal0	< 5V DC;<0.1mA
Input signal1	> 8 V DC;>0.3mA
Input current	0.4mA @ 10.8V dc 0.5mA @ 12.0 V dc 1.2mA @ 24 V dc 1.5mA @ 28.8 V dc
Response time	0 to 1 : Typ. 1.5 ms ; 1 to 0 : Typ. 1.5 ms
Maximum counting frequency	Typ.: 4 HZ
Sensor type	Contact or 3-wire PNP
Input type	Resistive
Isolation between power supply and inputs	None
Isolation between inputs	None
<b>Inputs used as analog inputs( I1-I4 )</b>	
Measurement range	DC 0---10V
Input impedance	Min, 24K $\Omega$ ; Max. 72K $\Omega$
Input voltage	28.8 V DC max
Resolution	10bit ,0.01V
Accuracy at 25 °C	$\pm$ (Max.0.02)V
Accuracy at 55 °C	$\pm$ (Max.0.04)V
Isolation between analog channel and power supply	None
Cable length	10 m max. shielded and twisted
<b>Output parameters:</b>	
Output No.	4 (Q1-Q4)
Output type	2Relay output +2 Transistor(PNP) output
Continuous current	(Q1-Q2)Resistive load 10A/Inductive load 2A (Q3-Q4) Max. 0.3 A per channel
Max. breaking voltage	(Q1-Q2) AC 250 V DC 30 V (Q3-Q4) $\leq$ Supply voltage
Max. Allowable Power Force	(Q1-Q2)1250VA 300W (Q3-Q4) 9 W
Electrical durability Expectancy	10 <sup>5</sup> Operations at Rated Resistive Load
Mechanical life	10 <sup>7</sup> Operations at No Load condition
Response time	Operate Time : 15 mSec. Max. Release Time : 10 mSec. Max.
Built-in protections	Against overloads and short-circuits: No Against overvoltages (*): No
Galvanic isolation	None

PWM frequency(Q3-Q4)	1K HZ
PWM cyclic ratio(Q3-Q4)	0 to 100 %
PWM accuracy at 120Hz(Q3-Q4)	< 0.5 % (20 % → 80 %) load at 10 mA
Max. Breaking current PWM(Q3-Q4)	50 mA
<b>Switch frequency:</b>	
Mechanism	10Hz
Resistor/light load	2Hz
Sensitive load	0.5Hz
<b>Built-in wireless parameters:</b>	
Support 802.11b/g/n wireless standards	
Support TCP/IP/UDP network protocols	
Support work as STA/AP mode	
Support Router/Bridge mode networking	
Support Transparent/Agreement Transmission Mode(Transparent used by EXM CPU)	
Support Friendly Web Configuration Page or configuration by eSmsconfig	
Outdoor 100m with 3dBi antenna and indoor 40m	
FCC /CE Certificated	
<b>GSM parameter</b>	
Type of mobile wireless service	SMS, GPRS
Operating frequency	850MHz,900MHz,1800MHz,1900MHz,
for GPRS transmission / with downlink / maximum	80 kbit/s
for GPRS transmission / with uplink / maximum	40 kbit/s
<b>Other parameters:</b>	
Ethernet port:	Built-In(10M/100M)
Xlogic<--->Xlogic(byWifit)	1 xlogic works as server can connect 32 client xlogics.
Xlogic<--->Etherne/Internet:	xlogic works as TCP server or TCP client
Weight	Approx.300g

## Installation Dimensions & Wiring Diagram



SYSTEM				FUNCTION BLOCKS		
Operating System requirements		Windows /2000/XP/WIN7/WIN8				
Programming languages		Function block				
Program Memory		512				
Execution Speed		<0.1ms per function				
LCD Display		4 lines x 16 characters				
Functions		Up to 70 function blocks				
BASIC						
Timers						
Maximum Number	512		a.On-delay; b.Off-delay etc. Up to 12 kind Timers			
Timing Ranges	10ms--99 h59m					
Counters						
Maximum Number	512		a.Up/down Counter b.Hours Counter c.Frequency Threshold Trigger			
Highest Count	99999999					
Resolution	1					
RTC						
Number available	512		a.Weekly Timer b.Yearly Timer			
Resolution	1 min					
Time span available	Week/year-month-day-hour-min					
Flags						
Digital flags	128		a.Digital Flag b.Analog Flag			
Analog flags	256					
PI Functions						
Number available	30		a.PI Controller			
Parameter Ranges	1-32767					
Analog Math						
Number available	512		a.Analog Math b.Analog Math Error detection			
Function	ADD, Subtract,Multiply, Divide					
Analog Ramp Function						
Number available	55		a. Analog Ramp			
Compare Function						
Number available	512		a.Analog compactor b.Comparison of 2 values			
Special Functions						
HMI Screens						
Number available	128		a.Message texts			
Display/Edit	Preset Current value and Free text					
SMS Functions (sms message input; sms message output; sms message input output)						
Number available	(32; 64; 12)					
Communication Functions						
Number available	512(Only CPU works as Master need these 2 blocks, slave does not need)		a.Modbus write b.Modbus read			
Word/bit data Conversion	Square Boot	Sin/Cos	RS latch relay			
Data-logger Function	Analog watchdog	Analog filter	Average value			
Pumps Management	Defrost function	Multiplexer	Pulse Relay			
Cam Control	Astronomical clock	Stop watch	Boolean function			
<p>Note: 1.Not all program functions are listed in this table i.e. AND,NAND,OR,NOT,NOR,XOR,SHIFT REGISTER,DATA LATCHING RELAY, COMPORT STATUS etc.</p>						