A general features description of the device EasyHomePLC-5.2E housing "DIN-9":

1) This product is a programmable logic controller with ethernet, embedded 32 inputs and 34 outputs (including 9 power switch relays).
2) Overview:
- consists of Board I/O and CPU Board
- Board I/O provides 32 channels of inputs and 34 channels of outputs, the power supply system for sensors, isolation and protectionof sections, the ports 2xRS232 2xRS485with isolated power supply.
- The CPU Board consists of the Texas Instruments or Espressif processor, Ethernet port, Flash memory, and pin connectors with multifunctional ports.
- Expansion built-in modules are in designing: WiFi, IR gateway, AudioMultiRoom, analog outputs 0-10V, ZigBee modem, GSM modem, extra Flash memory.

3) Inputs and outputs:
3.1) 16 inputs DI - digital input: binary signal range 0..2v is logical "0" , binary signal range 9..60V logic "1".
- for connection of switches, motion sensors, leakage detectors and other contact detectors.
3.2) 16 inputs ADI - analog and binary input: have additionally a function of measuring voltage 0..10V
- for connecting sensors temperature, light, humidity, pressure, etc.
3.3) 9 outputs DO - digital output, power bistable relays with load capacity 16A 250V.
3.4) 18 outputs DO - digital output signals to the connector X4 and X5 from the transistor switches "open collector"
- for connection to the two blocks of additional relays "Ext9Relay" or other loads with current up to 0.2A in a potential group "PowerSupply 18..27V DO".
3.5) 6 outputs of isolated group LED dimmers - for connection of loads powered by voltages of 5..32V with a current up to 1.4A. These outputs can regulate LED strips and similar adjustable loads or works in DO mode. It uses LSS-PWM (intelligent Low Side Switches with Pulse-Width Modulation).
3.6) 1 output low side switch for connection of GSM modem powered by voltages of 5..32V with a current up to 0.2A in a potential group "PowerSupply 18..27V DO".

4) Internal structure:
4.1) On-Board I/O there are 5 REGISTER 8xDI (including the identity) and 5 REGISTER 8xDO (to control bistable relays and external loads), two chips 8ch ADC 12bit resolution for ADI.
4.2) As the data bus between the REGISTERS, ADC, and processor Board uses isolated communication lines SPI signal amplitude 5V.
4.3) The Outputs of the block 6 intelligent adjustable keys (LED dimmers) are controlled directly from the processor, through the optoisolation.
4.4) To control the data bus and for detecting interference and errors when sending/receiving data using the diagnostic mechanism - reverse reading of transmitted information, or reread the information received on channels Diag DO, Diag DI, Diag AI. On the end of the data bus on Board I/O are connected chip terminators.
4.5) To enable autodetection of the model in the software of the processor is used 1st REGISTERS DI "Model ID Selector" with 7 soldered/unsoldered chip-resistors.

5) Expected assembly outputs:
5.1) "EasyHomePLC5.2" - Ethernet, 9 built-in relays DO, 6 channels LED dimmers, 2xRS232 and 2xRS485 ports, 1 modem Power,
16 channel DI , 16 channels ADI, 18 DO for 2 of Block 9 relay.
5.2) "Block 9 relay" - Module 9 additional relays "Ext9Relay".
5.3) "EasyHomePLC5.2E" - Ethernet, 9 built-in relays DO, 6 channels LED dimmers OR 1xRS232 and 2xRS485 ports, 1 modem Power,
16 channel DI , 16 channels ADI, 18 DO for 2 of Block 9 relay.

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Взам. инв. N	
Подпись и дата	
Инв. N подл.	

Изм.	Кол.	Лист	№док.	Подпись	Дата
Разраб.		Забоев			07.06.22
Проверил					
Утвердил					
ГИП					

EasyHomePLC

Санкт-Петербург

EasyHomePLC-5.2x

Стадия	Лист	Листов
РП	0	

Description

ООО"Новый Дом"