



Model Number

EASY 412-DC-TC

Control relay

Features

- 8 digital inputs of which 2 can be used in analogue mode
- 4 transistor outputs
- 4-line LCD display
- Control panel/keys
- Real-time clock/time relay
- Interface for transfer to memory card or PC

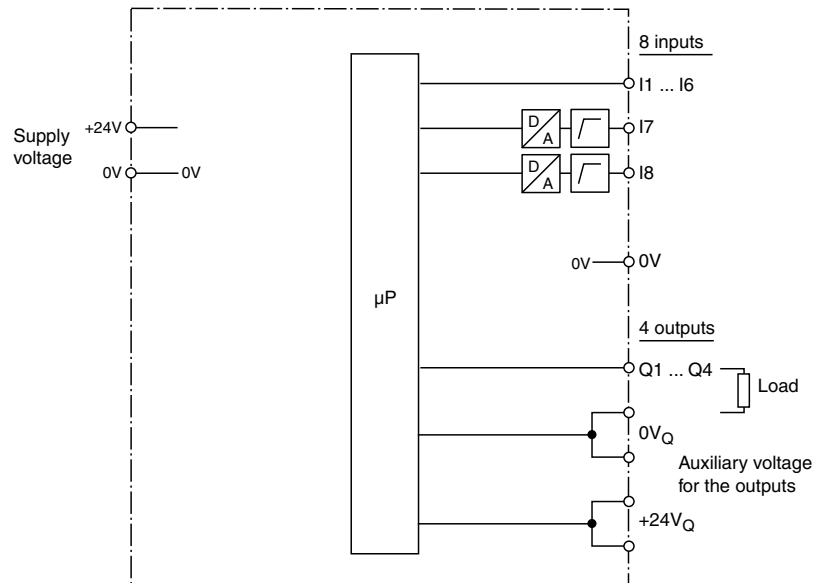
Function

EASY 412-DC-TC is a electronic control relay with logic-, time-, counting and switch clock functions. It is designed for small, convenient control tasks, e. g. in machine and plant engineering. The circuit diagram is "wired" in the ladder diagram technique and directly given in the in the display.

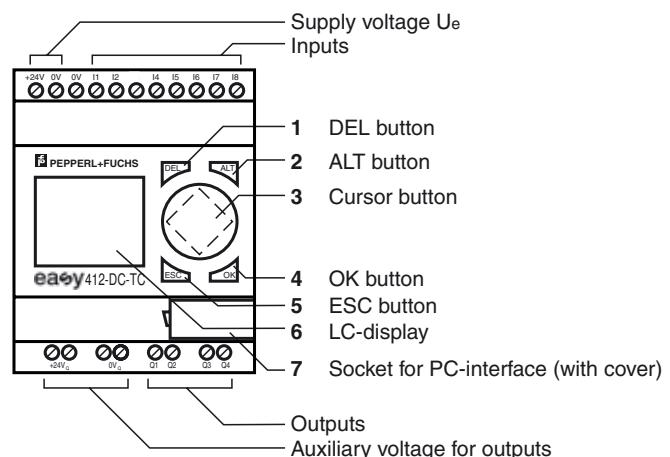
Documentation

The documentation includes manuals in German and English. It is available on the Internet and in printed form as a CD-ROM on request.

Electrical connection



Indicating / Operating means



Technical data

Electrical specifications

Rated operational voltage	U_e	20,4 ... 28,8 V DC
Rated operational current	I_e	approx. 80 mA at 24 V DC
Power loss		approx. 2 W at 24 V DC

Input

Number/Type	8 Digital inputs 2 inputs (I7, I8) as analogue inputs usable
Input current	at state 1: I1-I6: 3.3 mA (at 24 V DC) I7, I8: 2.2 mA (at 24 V DC)
Switching point	state 0: < 5.0 V DC (I1-I8) state 1: > 15.0 V DC (I1-I6) state 1: > 8.0 V DC (I7, I8)
Signal delay	Standard adjustment: 0.2 ÷ 0.4 ms Time delay can be set to 20 ms to debounce input signals

Input 1

Number/Type	2 analogue inputs (I7 and I8 alternative)
Signal voltage	0 ... 10 V DC
Resolution	0,1 V
Impedance	11,2 kOhm

Output

Number/Type	4 electronic outputs, short-circuit and reverse polarity protected
Short circuit protection/overload	Evaluation takes place with diagnostic input I15, I16
Current	at state 0: 9 .. 16 mA at state 1: 12 ... 22 mA
Voltage	20.4 V DC ... 28.8 V DC
Electrical isolation	
Input/Output	safe electrical isolation per EN 50178
Output/Power supply	available
Ambient conditions	
Ambient temperature	-25 ... 55 °C (248 ... 328 K)
Storage temperature	-40 ... 70 °C (233 ... 343 K)
Mechanical specifications	
Core cross-section	one wire 0.2 ... 4 mm ²
Protection degree	IP20 according to EN 60529
Mass	200 g
Mounting	DIN rail

Notes

For operating the device you can use the front keys with following functions:

- 1 DEL button: Deletion of contacts / relays / connections / empty current path
- 2 ALT button: Indicate connections /
changeover switch: Contact = N.O. or N.C. / insert current path
- 3 Cursor button: right, left, top, down
select menu item
Contacts, relays, select number
P key on: Input P1 left-cursor
Input P2 top-cursor
Input P3 right-cursor
Input P4 down-cursor
- 4 OK button: Step forward in menu, accept entry
- 5 ESC button: Take one step back in menu
Menu, exit parameter function relay
Exit without saving
- 6 LC-display: Inputs/outputs status indication
Operating status
Circuit diagram
Display time
- 7 Socket for PC-interface (with cover)

Documentation

EASY-MAN-D

Manual, german

EASY-MAN-E

Manual, english

Training Guide EASY

Manual, english

Kurzanleitung EASY

Manual, german

Accessories

EASY-SOFT

Programming software

EASY-M-8K

flash memory

EASY-PC-CAB

cable