

[18050]



Category: Room automation



Room automation station

14 multi-functional inputs, 4 relay outputs,
4 analogue outputs, 2 TRIAC outputs

DIGICONTROL **ems2.R4D1B**

Application

The ems2.R4D1B is a freely programmable compact controller that can be enhanced with I/O modules as well as interface modules of the ems4 series.
As a freely programmable universal controller for accommodating individual room automation concepts.

Can be used as a BACnet® building controller (B-BC) according to the BACnet® standardized device profile in accordance with Annex L of the ANSI ASHRAE Standard 135-2001 and DIN EN 16484-5. Communication via BACnet/IP or BACnet MS/TP.



Item number: ems2.R4D1B

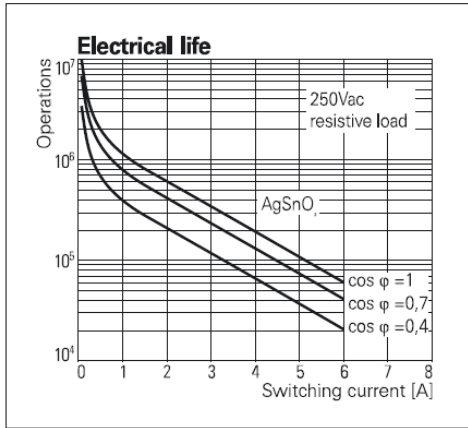
Specifications

Inputs	14 multi-functional inputs, freely configurable as: <ul style="list-style-type: none"> • PT/Ni1000, 12-bit resolution • 0 to 10 VDC, 12-bit resolution • Digital inputs 24 VDC
Outputs	4 analogue outputs, 0 to 10 VDC, 10-bit resolution, 3 mA 4 relay outputs 230 V / 6 A, floating make contact 2 TRIAC outputs for 24 VAC (10 to 800 mA)
Power consumption	5,3 W
Microprocessor system	Coldfire CPU, MCF 5329, 240 MHz, 16 MB FLASH, 16 MB SDRAM, 4 MB SRAM
RTC	Integrated hardware clock with date and time
Buffering	For SRAM and RTC via CR2032 battery (buffering 1-3 years) The controller monitors the charge status
Supply voltage	24 VDC \pm 10%, alternative "Power over Ethernet" (PoE)
Interfaces	2 x CAN bus for a maximum of 1 Mbit/s, bus connection via sliding switch 1 x LIN bus interface 1 x Ethernet interface, 10 Mbit, RJ45 on the underside of the housing link LED (Yellow) and communication LED (green) 2 x RS232 / RS485, of which one RS232 (COM-B) is used with DCD-, DSR- and DTR-signal for modem operation, bus connection for RS485 via sliding switch
Status indicators	24 V LED (green), RUN LED (green), ST LED (red)
Terminals	2.5 mm ² terminal screws, system signals (24 V system supply voltage, GND, CAN, LIN) on H-BUS bus connector
Housing	DIN rail housing for electrical sub-distributor
Degree of protection	Degree of protection (DIN 40050), IP20 housing/terminals
Temperature	+5 to +40 °C
Relative humidity	5 to 85 %
CE conformity	EN55011, EN55022, EN55024, EN61326-1: 2006, EN 61000-4-2, EN 61000-4-3, EN 610004-4, EN 61000-4-5, EN 61000-4-6

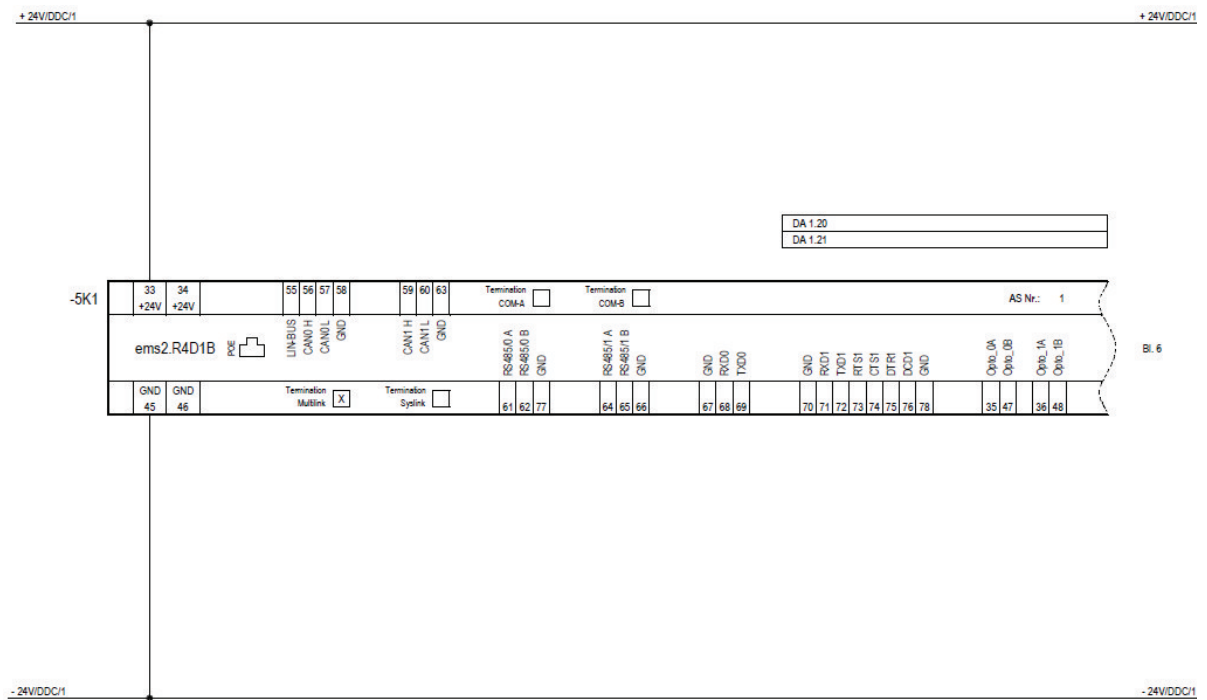


Other

4-pin DIP switch for hardware configuration



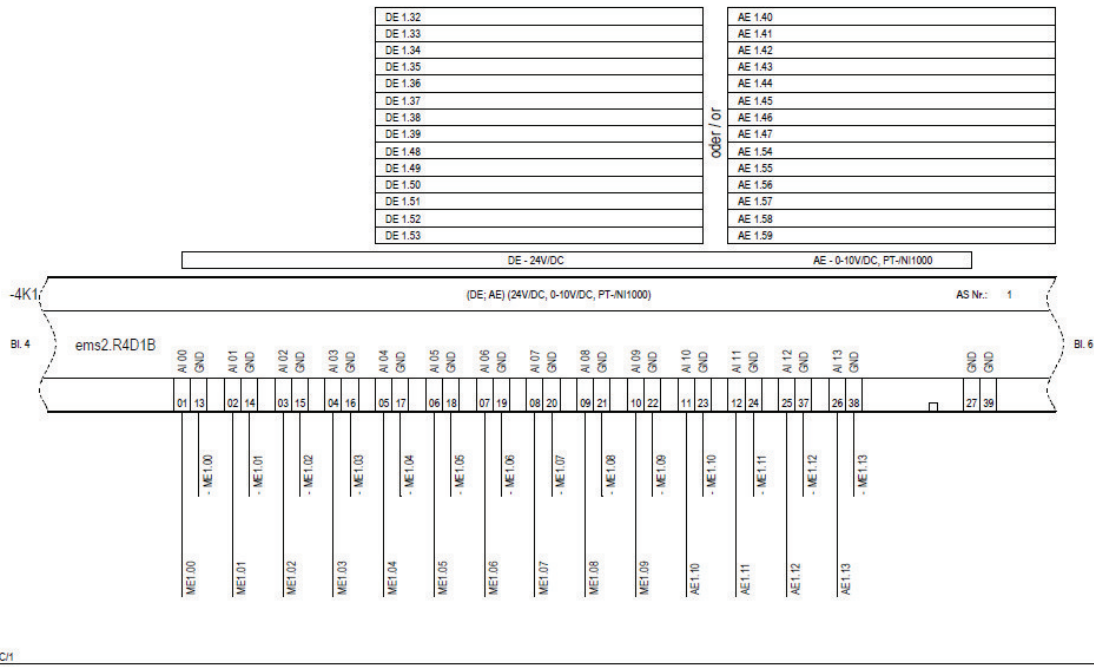
Connection





+24V/DC/1

+24V/DC/1

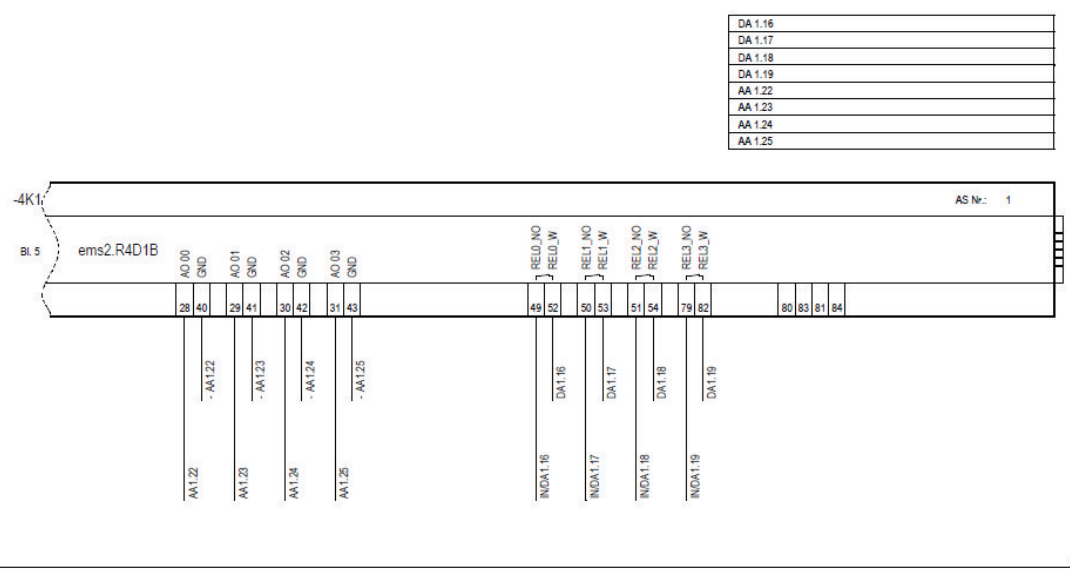


-24V/DC/1

-24V/DC/1

+24V/DC/1

+24V/DC/1



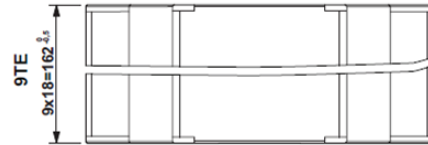
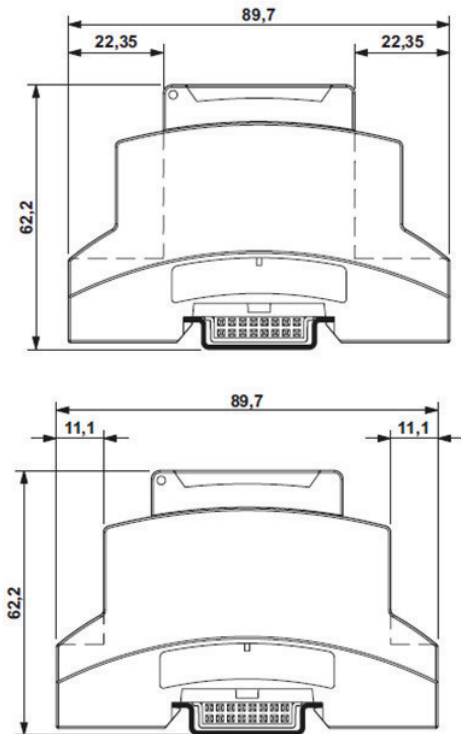
-24V/DC/1

-24V/DC/1



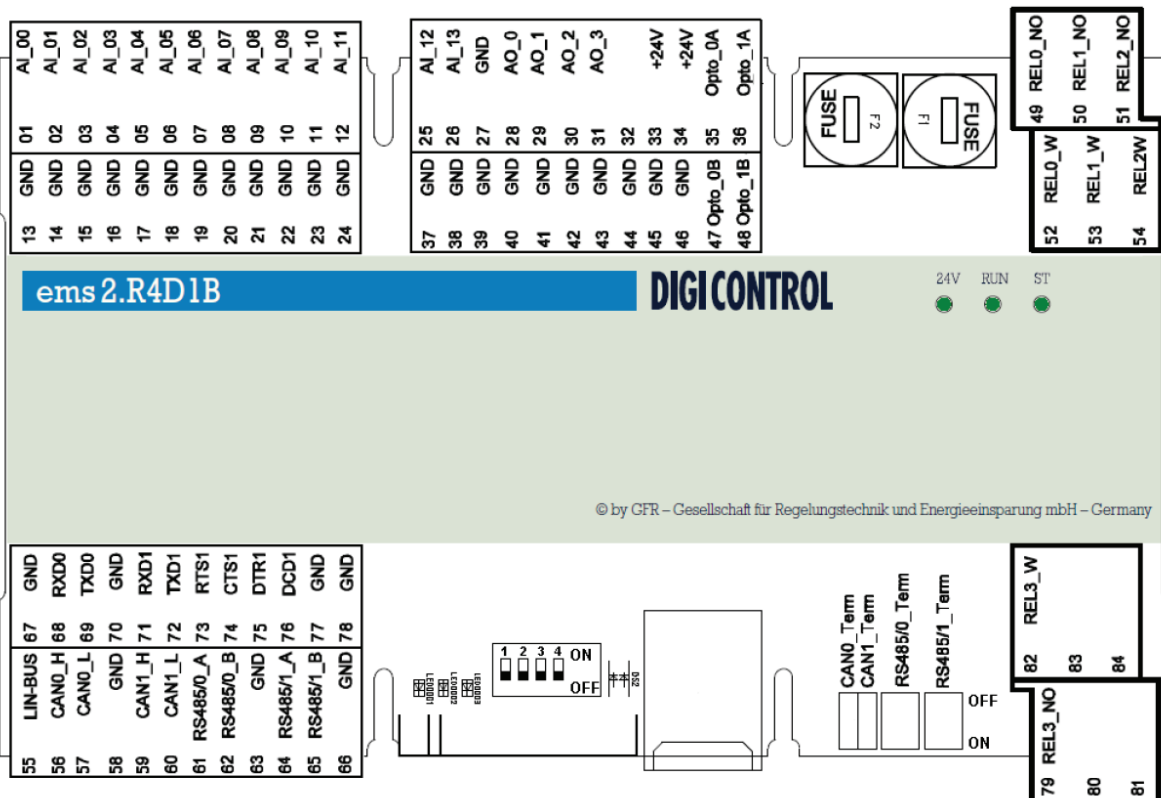
Dimension drawing of housing

Housing plan view



Dimensions and tolerance specifications according to DIN 43880

Terminal assignment





Terminal number	Description
1	Multi-functional input 0 (24 V DC, 0 to 10 V DC, PT1000/NI1000)
2	Multi-functional input 1 (24 V DC, 0 to 10 V DC, PT1000/NI1000)
3	Multi-functional input 2 (24 V DC, 0 to 10 V DC, PT1000/NI1000)
4	Multi-functional input 3 (24 V DC, 0 to 10 V DC, PT1000/NI1000)
5	Multi-functional input 4 (24 V DC, 0 to 10 V DC, PT1000/NI1000)
6	Multi-functional input 5 (24 V DC, 0 to 10 V DC, PT1000/NI1000)
7	Multi-functional input 6 (24 V DC, 0 to 10 V DC, PT1000/NI1000)
8	Multi-functional input 7 (24 V DC, 0 to 10 V DC, PT1000/NI1000)
9	Multi-functional input 8 (24 V DC, 0 to 10 V DC, PT1000/NI1000)
10	Multi-functional input 9 (24 V DC, 0 to 10 V DC, PT1000/NI1000)
11	Multi-functional input 10 (24 V DC, 0 to 10 V DC, PT1000/NI1000)
12	Multi-functional input 11 (24 V DC, 0 to 10 V DC, PT1000/NI1000)
13	GND (multi-functional input 0)
14	GND (multi-functional input 1)
15	GND (multi-functional input 2)
16	GND (multi-functional input 3)
17	GND (multi-functional input 4)
18	GND (multi-functional input 5)
19	GND (multi-functional input 6)
20	GND (multi-functional input 7)
21	GND (multi-functional input 8)
22	GND (multi-functional input 9)
23	GND (multi-functional input 10)
24	GND (multi-functional input 11)
25	Multi-functional input 12 (24 V DC, 0 to 10 V DC, PT1000/NI1000)
26	Multi-functional input 13 (24 V DC, 0 to 10 V DC, PT1000/NI1000)
27	GND
28	Analogue output 0 (0 to 10 V DC)
29	Analogue output 1 (0 to 10 V DC)
30	Analogue output 2 (0 to 10 V DC)
31	Analogue output 3 (0 to 10 V DC)
32	
33	+24 V DC supply voltage
34	+24 V DC supply voltage
35	24 V AC supply voltage for TRIAC output 0 (only for EMS2.R4D1B)
36	24 V AC supply voltage for TRIAC output 1 (only for EMS2.R4D1B)
37	GND (multi-functional input 12)
38	GND (multi-functional input 13)
39	GND
40	GND (analogue output 0 (0 to 10 V DC))
41	GND (analogue output 1 (0 to 10 V DC))
42	GND (analogue output 2 (0 to 10 V DC))
43	GND (analogue output 3 (0 to 10 V DC))
44	GND (24 V DC supply voltage)
45	GND (24 V DC supply voltage)
46	GND (24 V DC supply voltage)
47	TRIAC output 0 switching output (only for EMS2.R4D1B)
48	TRIAC output 1 switching output (only for EMS2.R4D1B)
49	Relay 0 switching output

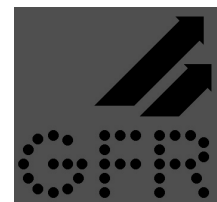


50	Relay 1 switching output
51	Relay 2 switching output
52	Relay 0 switching voltage
53	Relay 1 switching voltage
54	Relay 2 switching voltage
55	LIN bus
56	CAN0 H (MultiLink)
57	CAN0 L (MultiLink)
58	GND
59	CAN1 H (SysLink)
60	CAN1 L (SysLink)
61	RS485-0 (A)
62	RS485-0 (B)
63	GND
64	RS485-1 (A)
65	RS485-1 (B)
66	GND
67	GND
68	RXD-0
69	TXD-0
70	GND
71	RXD-1
72	TXD-1
73	RTS-1
74	CTS-1
75	DTR-1
76	DCD-1
77	GND
78	GND
79	Relay 3 switching output
80	Relay 4 switching output (only for EMS2.CP04D)
81	Relay 5 switching output (only for EMS2.CP04D)
82	Relay 3 switching voltage
83	Relay 4 switching voltage (only for EMS2.CP04D)
84	Relay 5 switching voltage (only for EMS2.CP04D)

GFR – Gesellschaft für Regelungstechnik
und Energieeinsparung mbH

Kapellenweg 42
D-33415 **Verl**
Phone: +49 (0) 5246 962-0
www.gfr.de / info.verl@gfr.de

Rudolstädter Straße 41
D-07745 **Jena**
Phone: +49 (0) 3641 4697-0
info.jena@gfr.de



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