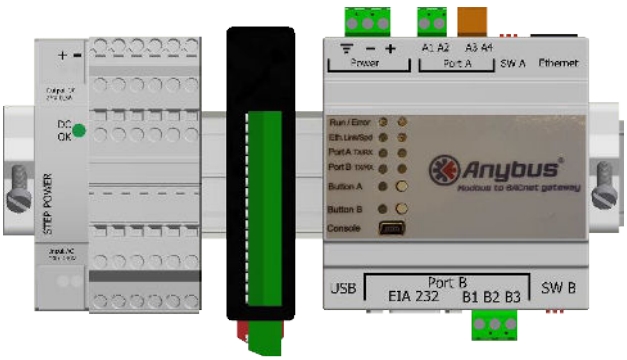
Tillägg för elpanna med:

Supplement for electric boiler with:

4810 - Bacnet EP 67 - 300
4811 - Modbus EP 67 - 300
4812 - Bacnet EP 31 - 63
4813 - Modbus EP 31 - 63
4814 - Bacnet EP 350
4815 - Modbus EP 350
4816 - Bacnet EP 450 - 750
4817 - Modbus EP 450 - 750
4818 - Bacnet EP 900 - 1500
4819 - Modbus EP 900 - 1500

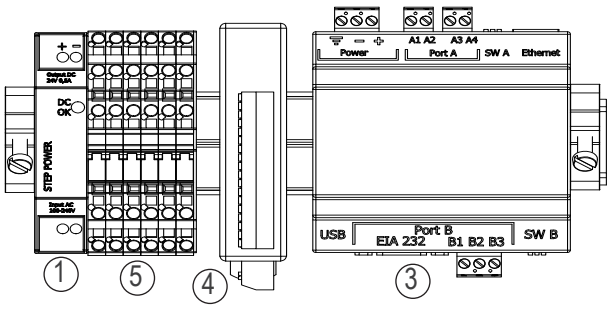
Används tillsammans med panntypens allmänna anvisning!

Used in conjunction with the boiler types general instructions!



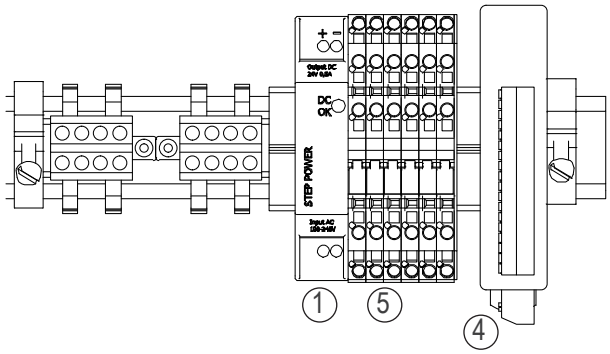
Modbus/Bacnet modulen är placerad på pannans montageplåt för elkomponenter
The Modbus / Bacnet module is located on the boiler's mounting plate for electrical components

4812 - Bacnet EP 31 - 63, komplett/complete



Komponenter			**antal**
1	218004	Nätdel	1
2	219997	Mikrokontroller, programmerad till pannans styrelektronik	1
3	440500	Modbus till BACnet gateway	1
4	440501	Netbiter IOX-DAIO	1
5	440510	Radklämma, 230Vac med relä	6

4813 - Modbus EP 31 - 63, komplett/complete



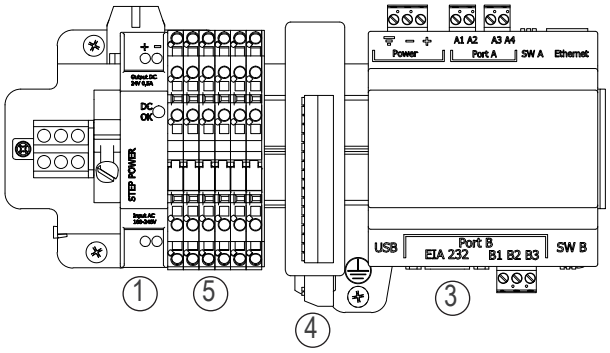
Components			***pcs.***
1	*218004*	*Power supply*	*1*
2	*219997*	*Microcontroler, programed to the boiler control electronics*	*1*
3	*440500*	*Modbus till BACnet gateway*	*1*
4	*440501*	*Netbiter IOX-DAIO*	*1*
5	*440510*	*Relay terminal block, 230Vac*	*6*

Modbus to BACnet Gateway ingår inte om pannan endast levererats med Modbus Netbiter IO Extender modul!

The *Modbus to BACnet Gateway is not included if the boiler is only delivered with Modbus Netbiter IO Extender Module!*

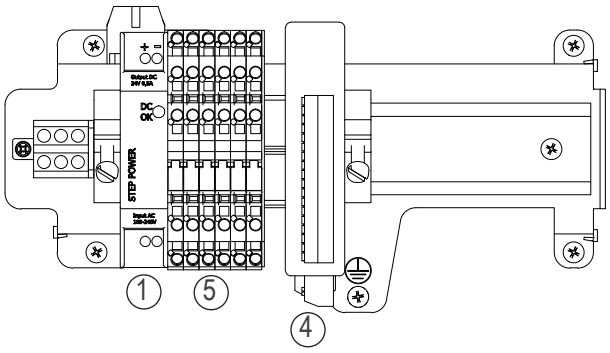
Modbus/Bacnet modulen är placerad på pannans montageplåt för elkomponenter
The Modbus / Bacnet module is located on the boiler's mounting plate for electrical components

4810 - Bacnet EP 67 - 350, komplett/complete
4817 - Bacnet EP 450 - 750, komplett/complete
4818 - Bacnet EP 900 - 1500, komplett/complete



Komponenter			**antal**
1	218004	Nätdel	1
2	219997	Mikrokontroller, programmerad till pannans styrelektronik	1
3	440500	Modbus till BACnet gateway	1
4	440501	Netbiter IOX-DAIO	1
5	440510	Radklämma, 230Vac med relä	6

4811 - Modbus EP 67 - 350, komplett/complete
4817 - Modbus EP 450 - 750, komplett/complete
4819 - Modbus EP 900 - 1500, komplett/complete



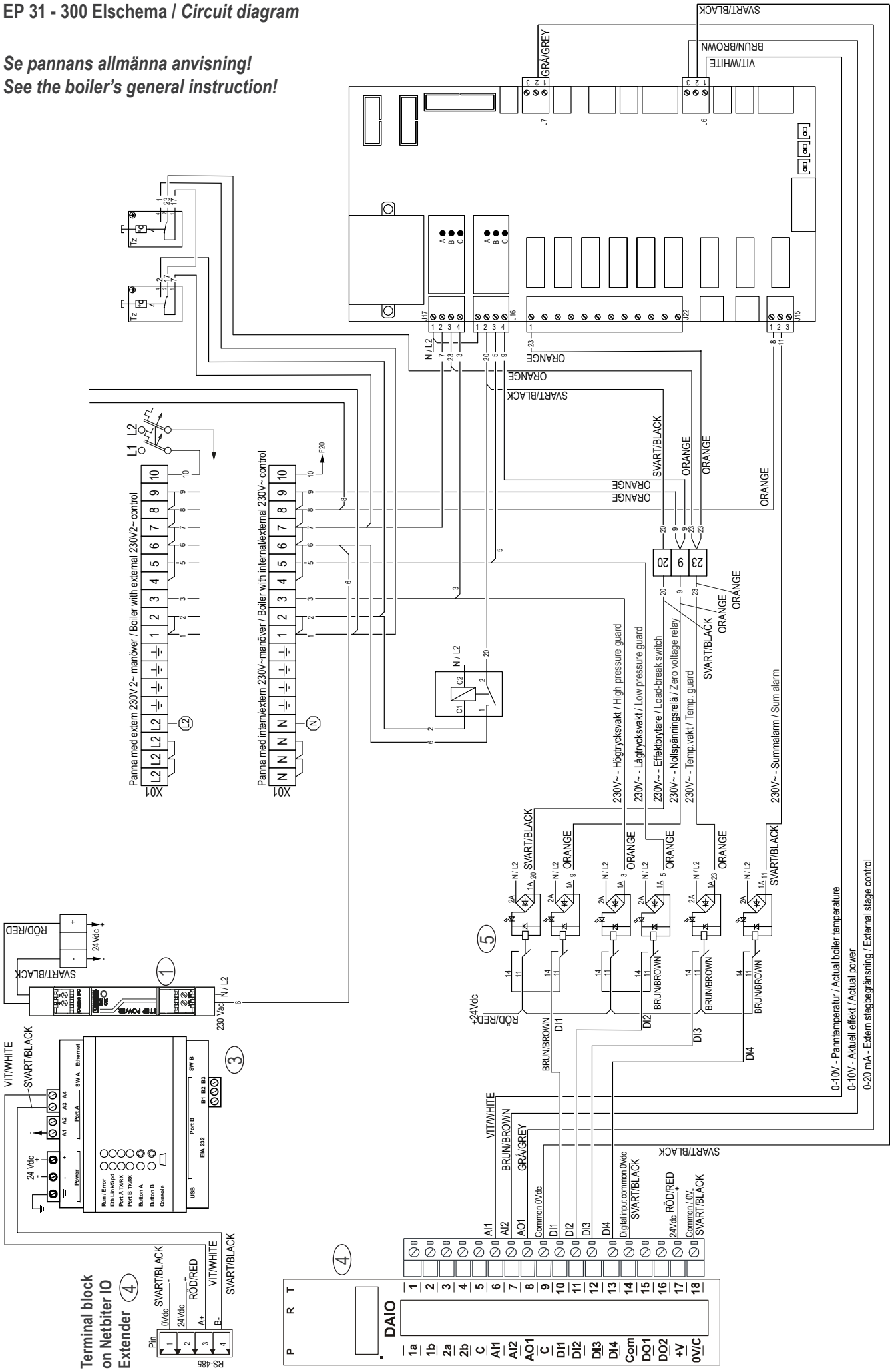
Components			***pcs.***
1	*218004*	*Power supply*	*1*
2	*219997*	*Microcontroler, programed to the boiler control electronics*	*1*
3	*440500*	*Modbus till BACnet gateway*	*1*
4	*440501*	*Netbiter IOX-DAIO*	*1*
5	*440510*	*Relay terminal block, 230Vac*	*6*

Modbus to BACnet Gateway ingår inte om pannan endast levererats med Modbus Netbiter IO Extender modul!

The *Modbus to BACnet Gateway is not included if the boiler is only delivered with Modbus Netbiter IO Extender Module!*

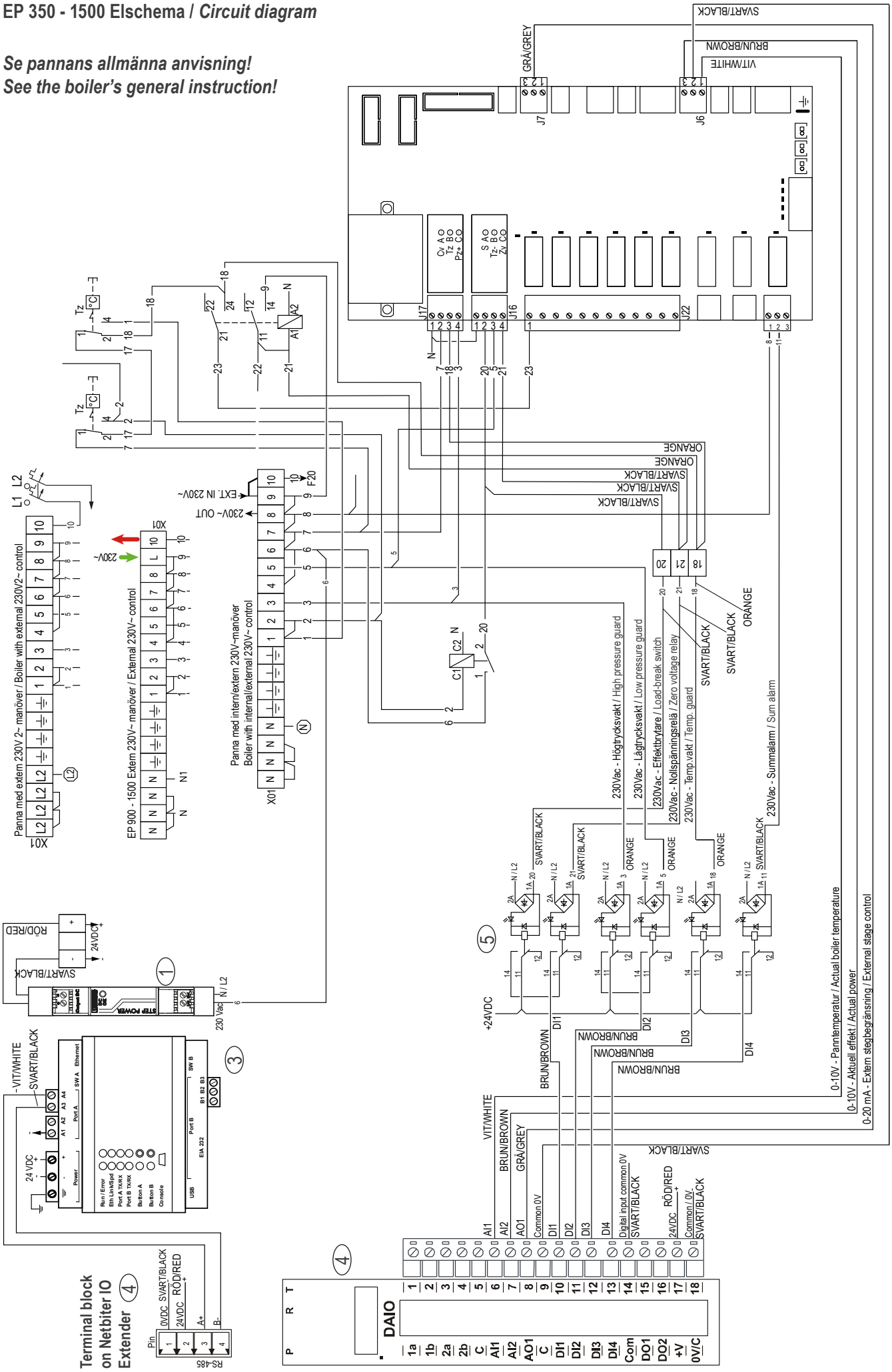
EP 31 - 300 Elschema / *Circuit diagram*

Se pannans allmänna anvisning!
See the boiler's general instruction!



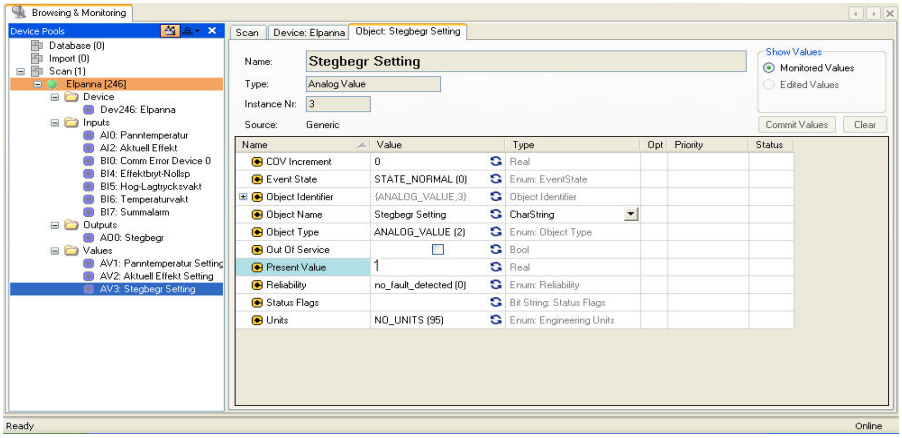
EP 350 - 1500 Elschema / *Circuit diagram*

Se pannans allmänna anvisning!
See the boiler's general instruction!



Modbus / BACnet

IP-adress / *IP-address* 192.168.0.10
Namn / *Name* Elpanna
Lösen / *Password* 1975



I det övergripande systemet ska följande inställningar göras:
In the overall system, the following settings must be made:

AV1: Panntempsetting = 5 *(Boiler temperature setting)*
AV2: Aktuell effekt setting = 5 *(Actual power setting)*
AV3: Stegbegr setting = 1 *(Power limit setting)*

Digital in ***Digital in*** **230V~**	**DI1**	Effektbrytare Nollspänningsrelä	*Load-break switch* *Zero voltage relay*	Effektbrytaren ger även summalarm *Load break swich gives a sum-alarm*
	DI2	Lågtrycksvakt Högtrycksvakt	*Low pressure guard* *High pressure guard*	Effektbrytare trippar vid utlöst tryckvakt, ger summalarm *Load-break switch is tripping at triggered pressure guard, giving a sum-alarm*
	DI3	Temperaturvakt	*Temperature guard*	Effektbrytare trippar vid utlöst temperatur-vakt, ger summalarm *Load-break switch is tripping at triggered temperature guard, giving a sum-alarm*
	DI4	**Summa larm** Pt100 panntemperaturgivare J1 Pt100 temperaturgivare J2 Panntemperaturgivare J12 Temperaturgivare J14+9/3+4 Temperaturgivare fläkt J13 Utetemperaturgivare J3 Temperaturgivare, kraftkretskort Temperaturgivare, panelkretskort Högt PEC-värde Hög temperatur, kraftkretskort Hög temperatur, panelkretskort Låg vattennivå Effektbrytare i O-läge	***Sum alarm*** *Pt100 boiler temperature sensor J1* *Pt100 temperature sensor J2* *Boiler temperature sensor J12* *Temperature sensor, J14+J9/3+4* *Temperature sensor cooling fan J13* *Outdoor temperature sensor J3* *Temperature sensor, power circuit board* *Temperature sensor, panel circuit board* *High PEC value* *High temperature, power circuit board* *High temperature, panel circuit board* *Low water level* *Load-break switch in "0"*	Orsak visas i pannas teckenfönster *Cause is displayed in the boiler's display*
Analog ut ***Analog out*** **0 - 20 mA**	**AO1**	Extern stegbegränsning	*External stage control*	Installerad effekt i pannans meny, 0-100 % *Installed power in boiler menu, 0 - 100%*
Analog in ***Analog in*** **0 - 10Vdc**	**AI1**	Panntemperatur	*Boiler temperature*	0 - 170°C
	AI2	Aktuell effekt	*Current power*	Installerad effekt i pannans meny, 0-100 % *Installed power in boiler menu, 0 - 100%*

3.5 DIP Switches

DIP Switch Functions

Switch	Function
1–7	Modbus Node ID See *Modbus Node ID Setting, p. 8*
8	Module specific settings.
9	
0	Baud rate: OFF = 9600, ON = programmed See *Communication Settings, p. 9*

The status of the DIP switches is stored in register 30100.

MSB						DIP Switch Status Register									LSB	Address
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
32768	16384	8192	4096	2048	1024	512	256	128	64	32	16	8	4	2	1	30100
—	—	—	—	—	—	0	9	8	7	6	5	4	3	2	1	
						DIP Switches										

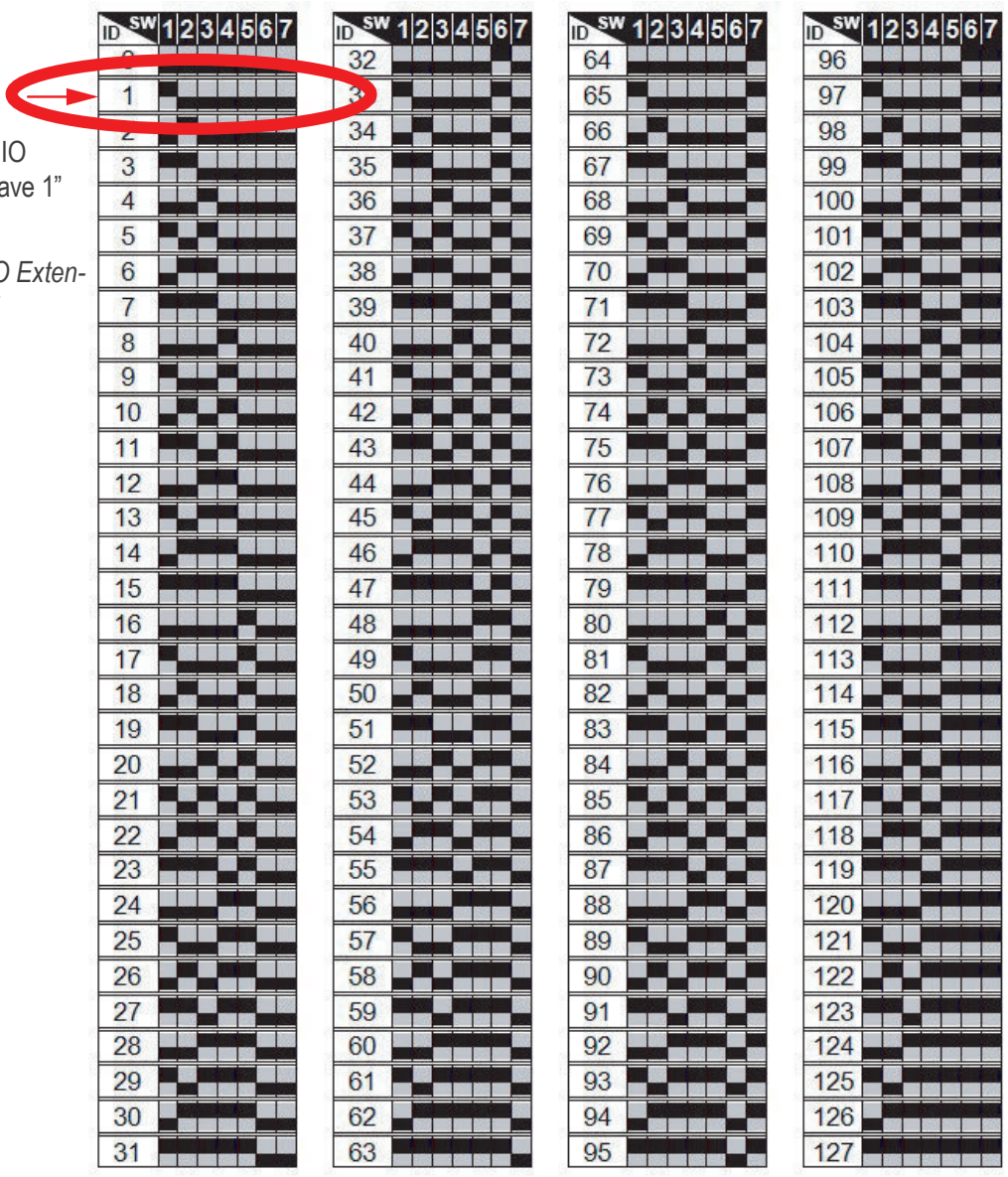
3.6 Modbus Node ID Setting

Switches 1 to 7 are used to set the Modbus Node ID as shown in this table.

All modules will respond to a default Node ID of 254.

Sätter Netbiter IO Extender till ”slave 1”

Sets Netbiter IO Extender to ”slave 1”



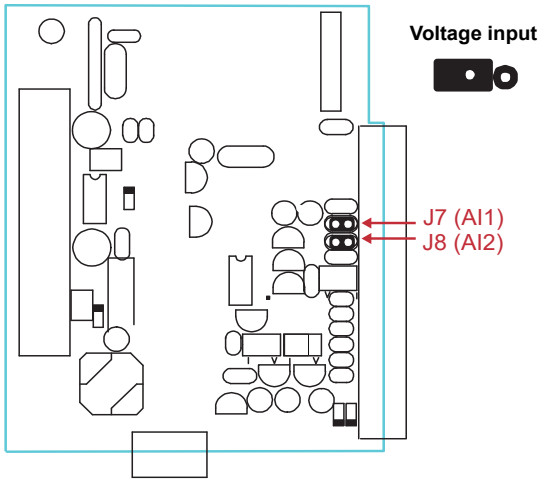
Node ID DIP switch chart

Netbiter IOX-DAIO

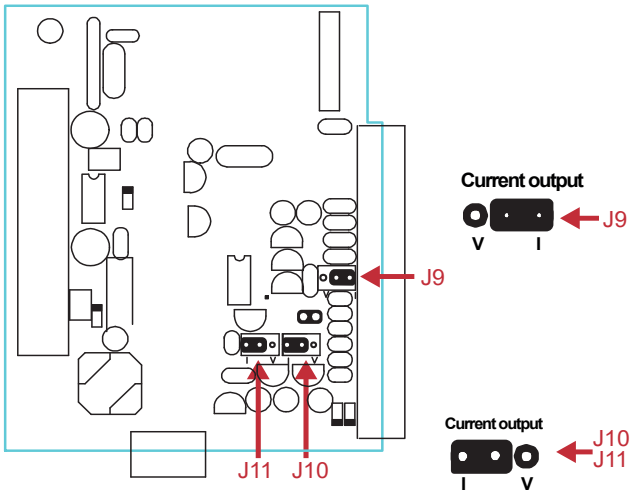
Det finns två olika utseenden på komponentplaceringen!
There are two different variations on component placement!

Alt.1

Analog **inputs** jumper setting

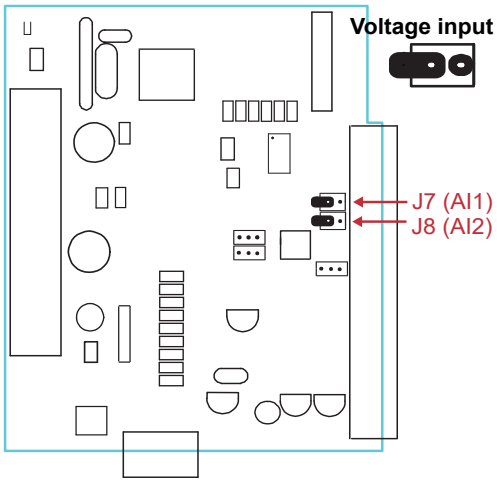


Analog **output** jumper setting

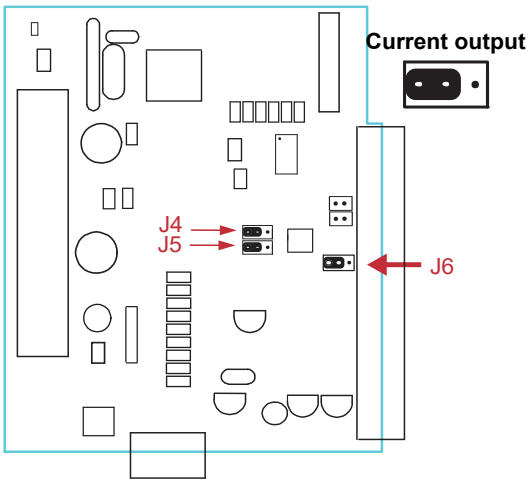


Alt.2

Analog **inputs** jumper setting



Analog **output** jumper setting



7.7 Data Registers

MODULE TYPE = 112

	Modbus Address	Register Name	Low Limit	High Limit	Access	Comments
Load break switch/Zero voltage relay	10001	Digital Input 1	0	1	R	Status of Digital Inputs
High-/low preassure guard	10002	Digital Input 2	0	1	R	
Temperature guard	10003	Digital Input 3	0	1	R	
Sum-alarm	10004	Digital Input 4	0	1	R	
	00017	Digital Output 1	0	1	R/W	Status of Digital Outputs
	00018	Digital Output 2	0	1	R/W	
	30001	S/W Version / Module Type	N/A	N/A	R	High Byte = Software Version Low byte = 102
	30002	Digital Inputs	N/A	N/A	R	Digital inputs in lower 8 bits. 8-1.
	40003	Digital Outputs	N/A	N/A	R/W	Digital outputs in lower 8 bits. 8-1.
	40004	RTD Input 1	–	–	R	For ranges, see *Technical Specifications, p. 25*.
	40005	RTD Input 2	–	–	R	
Boiler temperature	40006	Analog Input 1	0	4095	R	
Actual power	40007	Analog Input 2	0	4095	R	
External stage control	40008	Analog Output	0	4095	R/W	
	40009	Counter 1 MSB	0	65535	R/W	Counter MSB and LSB combine to give a 32-bit counter with range 0-4294967295.
	40010	Counter 1 LSB	0	65535	R/W	
	40011	Counter 2 MSB	0	65535	R/W	
	40012	Counter 2 LSB	0	65535	R/W	
	40013	Counter 3 MSB	0	65535	R/W	
	40014	Counter 3 LSB	0	65535	R/W	
	40015	Counter 4 MSB	0	65535	R/W	
	40016	Counter 4 LSB	0	65535	R/W	
	30100	DIP Switch	0	65535	R	Status of DIP Switch on Front Panel
	40101	Watchdog Timer	0	255	R/W	Timer in seconds. 0 = disabled. 1–255 = enabled.
	40102	Counter Mode	0	2	R/W	0 = Disable, 1 = Up Counting, 2 = Up/Down Count
	40103	Input Filter	0	65535	R/W	0 = Disable, >0 = Enable. (x10 ms)
	40104	RTD 1 Type	1	7	R/W	See *Technical Specifications, p. 25* 5 = 0-10 V, resolution 1 mV
	40105	RTD 2 Type	1	7	R/W	
Input type: 5 →	40106	AI 1 Type	1	8	R/W	
Input type: 5 →	40107	AI 2 Type	1	8	R/W	
Output type: 1 →	40108	AO Type	1	2	R/W	1 = 0–20 mA, 2 = 0–10 V
	40109	Line Frequency	50	60	R/W	Line frequency
	40110	Units Type	1	2	R/W	1 = °C, 2 = °F
	40121	Baud Rate	2400	11520	R/W	2400, 4800, 9600, 19200, 38400,57600,115200
	40122	Parity	0	2	R/W	0 = none, 1 = even, 2 = odd
	40123	Stop Bits	1	2	R/W	1 = 1 stop bit, 2 = 2 stop bits
	40124	Reply Delay	0	65535	R/W	0 = Disable, >0 = Enable. (x10 ms)

Ytterligare information finns på bifogat USB-minne

Further information can be found on the attached USB-stick

USER MANUAL
hms-hmsi-27-228

VÄRMEBARONEN
Värmebaronen AB
Arkelstorpsvägen 88
291 94 Kristianstad
Tel +46 44 22 63 20
www.varmebaronen.se
www.varmebaronen.com
info@varmebaronen.se