

# Enervent MD KNX

- FIN** Asennusohje
- SWE** Installationsanvisning
- ENG** Installation instruction



**enervent**

## KNX väyläsovittimen ohjeet

Lue tämä ohje huolella ennen kun otat järjestelmän käyttöön ja säilytä ohje tulevia tarpeita varten. KNX väyläsovittinta EI saa kytkeä ilmanvaihtolaitteen emokorttiin ennen kuin ohjelmointi on tehty!

### MD EIB/KNX väylä asetukset

Kytkentä RS485

Baud rate 19200

EIB Fyysinen osoite 1.1.255

Slave adress 1

### Viikkokelloohjelman käyttö eib/knx väylästä

Viikkokellon ajat asetetaan eAir ohjainpaneelilta. eAir-ohjainpaneelilta valitaan viikkokellotoiminnolle aika sekä päivät jolloin ohjelma on käynnissä. Kaikkiin 20 viikkokello-ohjelmiin voidaan esiohjelmoida omat halutut ajat eri toiminnoille.

Toiminnoilla (poissa, pitkään poissa jne.) on omat numerot jotka vastaavat kyseistä toimintoa. Toimintoja vastaavat numerot näkyvät tässä ohjeessa olevassa taulukossa. Tominta valitaan EIB väylästä jolloin kyseinen viikkokello aktivoituu.

### Esimerkki:

eAir-ohjainpaneelilta on valittu Viikkokelloohjelma 1 päälle: 11:00-20:00, Ma Ti Ke. EIB/KNX väylältä valitaan Viikkokelloohjelma 1:lle numero 1 (=Poissa) (P/I/S 15/7/38). Nyt laite on Poissa tilassa maanantaista - keskiviikkoon, klo 11:00 ja 20:00 välillä.

Jos kyseistä viikkokelloohjelmaa ei haluta käyttää muutetaan EIB/KNX väylältä Viikkokelloohjelma 1:lle numero 0 (P/I/S 15/7/38).

## Instruktioner för KNX bus

Läs denna anvisning noggrant innan du installerar aggregatet och spara anvisningen för framtida behov. Koppla inte KNX till ventilationsaggregatets moderkort innan DUC är färdigt programmerad.

### MD EIB/KNX BUS inställningar

Connection RS485

Baud rate 19200

EIB Physical Address 1.1.255

Slave adress 1

### Användning av veckouret via EIB/KNX BUS

Tidsinställningarna för veckouret görs i eAir-styrpanelen. Välj tid och dagar då veckouret är aktivt. Förprogrammeringar kan göras för alla 20 tids-program som finns tillgängliga i veckouret. Varje funktion (borta, länge borta osv.) har ett eget nummer. Numren för funktionerna finns i tabellen i denna anvisning. Funktionen väljs i EIB bus och veckouret i fråga aktiveras.

### Exempel:

Veckour 1 har aktiverats via eAir-styrpanelen: 11:00 - 20:00, Må Ti On. Nummer 1 (=borta) (P/I/S 15/7/38) för Veckour 1 väljs från EIB/KNX bus. Aggregatet går nu i Borta läge från måndag till onsdag, kl 11:00-20:00.

När man inte längre vill använda programmeringen ifråga ändrar man nummer 1 till 0 i EIB/KNX bus (P/I/S 15/7/38).

## Instructions for KNX bus

Before installing and operating this unit, please read this manual thoroughly, and retain it for further reference. Do not connect the KNX bus to the ventilation unit motherboard before the BMS is programmed.

### MD EIB/KNX BUS settings

Connection RS485

Baud rate 19200

EIB Physical Address 1.1.255

Slave address 1

### USING THE WEEKLY TIMER VIA EIB/KNX BUS

Weektimer time settings are made through eAir control panel. Choose the time and days for the weektimer to be active. You can pre-program all 20 weektimers with desired times for different functions (ie. away, long away). The functions have their own numbers corresponding to the function. The function corresponding numbers are presented in the table in this instruction. Choose the function through EIB bus whereby the weektimer in question becomes active.

#### Example:

Following settings have been made for Weektimer 1, On time, through eAir control panel: 11:00 - 20:00, Mo Tu We. Through EIB/KNX bus you choose number 1 (=away) for Weektimer 1 program (P/I/S 15/7/38). Now the unit is in Away state from Monday to Wednesday between 11:00 and 20:00.

If you wish not to use the weektimer anymore, you change the number for Weektimer 1 to 0, through EIB/KNX bus (P/I/S 15/7/38).

# MD Modbus EIB/KNX points

## Coils

Modbus	Name	Info
1x0000	Stop	Unit run / stop
1x0001	Away	Away function on / off
1x0003	Overpressure	Overpressure function on / off
1x0004	Cooker hood	Cooker hood indication active / not active
1x0005	Central vacuum cleaner	Central vacuum cleaner indication active / not active
1x0010	Manual boost	Manual boost mode on / off
1x0012	Summernight cooling	Summernight cooling function on / off
1x0040	eco mode	eco mode on / off
1x0041	Alarm A	A alarm indication
1x0042	Alarm B	B alarm indication
1x0047	Silent mode	Silent mode on / off

## Holding registers

Modbus	Name	Info
3x0003	Supply air fan speed	Current supply air fan speed
3x0004	Extract air fan speed	Current extract air fan speed
3x0006	Outside air temperature	Outside air temperature measurement. Register value = temperature measurement * 10!
3x0007	HRC Supply air temperature	Supply air temperature measurement after HRC. Register value = temperature measurement * 10!
3x0008	Supply air temperature	Supply air temperature measurement. Register value = temperature measurement * 10!
3x0009	Exhaust air temperature	Exhaust air temperature measurement. Register value = temperature measurement * 10!
3x0010	Extract air temperature	Extract air temperature measurement. Register value = temperature measurement * 10!
3x0011	HRC Extract air temperature	Extract air temperature measurement before to HRC. Register value = temperature measurement * 10!
3x0012	Returnwater temperature	Returnwater temperature measurement. Register value = temperature measurement * 10!
3x0013	Extract air humidity	Extract air humidity measurement.
3x0029	HRC supply efficiency	HRC efficiency at supply side.
3x0030	HRC exhaust efficiency	HRC efficiency at extract side.
3x0035	48h humidity average	Humidity measurement average over past 48h
3x0036	Abs humidity	Absolute humidity on twt units = measurement * 10!
3x0044	Mode	Current unit running status / mode. Enumeration explained below (MD MODE)
3x0045	Temperature step	Current temperature control step active, 0=None ventilation only, 1=Cooling, 2=Heat recovery only, 4=Heating, 6=Summer night cooling, 7=Starting up
3x0049	Controller output	Current supply air temperature controller output. -100 - 0=Cooling, 0 - 100=HRC, 100 - 200=Heating, 200 - 300=Heating step 2
3x0135	Temperature setpoint	The desired temperature setpoint for the controller set by user
3x0215	Week timer program 1/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0221	Week timer program 2/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0227	Week timer program 3/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0233	Week timer program 4/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0239	Week timer program 5/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0245	Week timer program 6/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0251	Week timer program 7/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0257	Week timer program 8/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0263	Week timer program 9/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0269	Week timer program 10/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0275	Week timer program 11/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0281	Week timer program 12/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0287	Week timer program 13/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0293	Week timer program 14/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0299	Week timer program 15/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0305	Week timer program 16/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0311	Week timer program 17/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0317	Week timer program 18/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0323	Week timer program 19/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)
3x0329	Week timer program 20/20 function	Week timer 1 timeprogram function, 0=No function, 1=Away function, 2=Heating blocked, 3=Cooling blocked, 4=Temperature drop, 5=Max heating, 6=Max cooling, 7=DO time relay, 16=Manual boost mode, 30=Run time (only office mode units)

Type	Read	Write	Min/Max	EIB / KNX Group (P/I/S)
Coil	R	W	0 / 1	15/7/1
Coil	R	W	0 / 1	15/7/2
Coil	R	W	0 / 1	15/7/3
Coil	R		0 / 1	15/7/4
Coil	R		0 / 1	15/7/5
Coil	R	W	0 / 1	15/7/6
Coil	R	W	0 / 1	15/7/7
Coil	R	W	0 / 1	15/7/8
Coil	R		0 / 1	15/7/9
Coil	R		0 / 1	15/7/10
Coil	R	W	0 / 1	15/7/11

Type	Read	Write	Min/Max	EIB / KNX Group (P/I/S)
Holding register	R		0-20%	15/7/20
Holding register	R		0-20%	15/7/21
Holding register	R		-40 - 50° C	15/7/22
Holding register	R		-40 - 50° C	15/7/23
Holding register	R		-40 - 50° C	15/7/24
Holding register	R		-40 - 50° C	15/7/25
Holding register	R		-40 - 50° C	15/7/26
Holding register	R		-40 - 50° C	15/7/27
Holding register	R		-40 - 50° C	15/7/28
Holding register	R		0 - 100%	15/7/29
Holding register	R		0 - 100%	15/7/30
Holding register	R		0 - 100%	15/7/31
Holding register	R		0 - 100%	15/7/32
Holding register	R		0 - 20g	15/7/33
Holding register	R		enum	15/7/34
Holding register	R		enum	15/7/35
Holding register	R	W	-100 - 300	15/7/36
Holding register	R	W	0 - 500	15/7/37
Holding register	R	W	0 - 100	15/7/38
Holding register	R	W	0 - 100	15/7/39
Holding register	R	W	0 - 100	15/7/40
Holding register	R	W	0 - 100	15/7/41
Holding register	R	W	0 - 100	15/7/42
Holding register	R	W	0 - 100	15/7/43
Holding register	R	W	0 - 100	15/7/44
Holding register	R	W	0 - 100	15/7/45
Holding register	R	W	0 - 100	15/7/46
Holding register	R	W	0 - 100	15/7/47
Holding register	R	W	0 - 100	15/7/48
Holding register	R	W	0 - 100	15/7/49
Holding register	R	W	0 - 100	15/7/50
Holding register	R	W	0 - 100	15/7/51
Holding register	R	W	0 - 100	15/7/52
Holding register	R	W	0 - 100	15/7/53
Holding register	R	W	0 - 100	15/7/54
Holding register	R	W	0 - 100	15/7/55
Holding register	R	W	0 - 100	15/7/56
Holding register	R	W	0 - 100	15/7/57

## MD EIB/KNX bus settings

Connection RS485

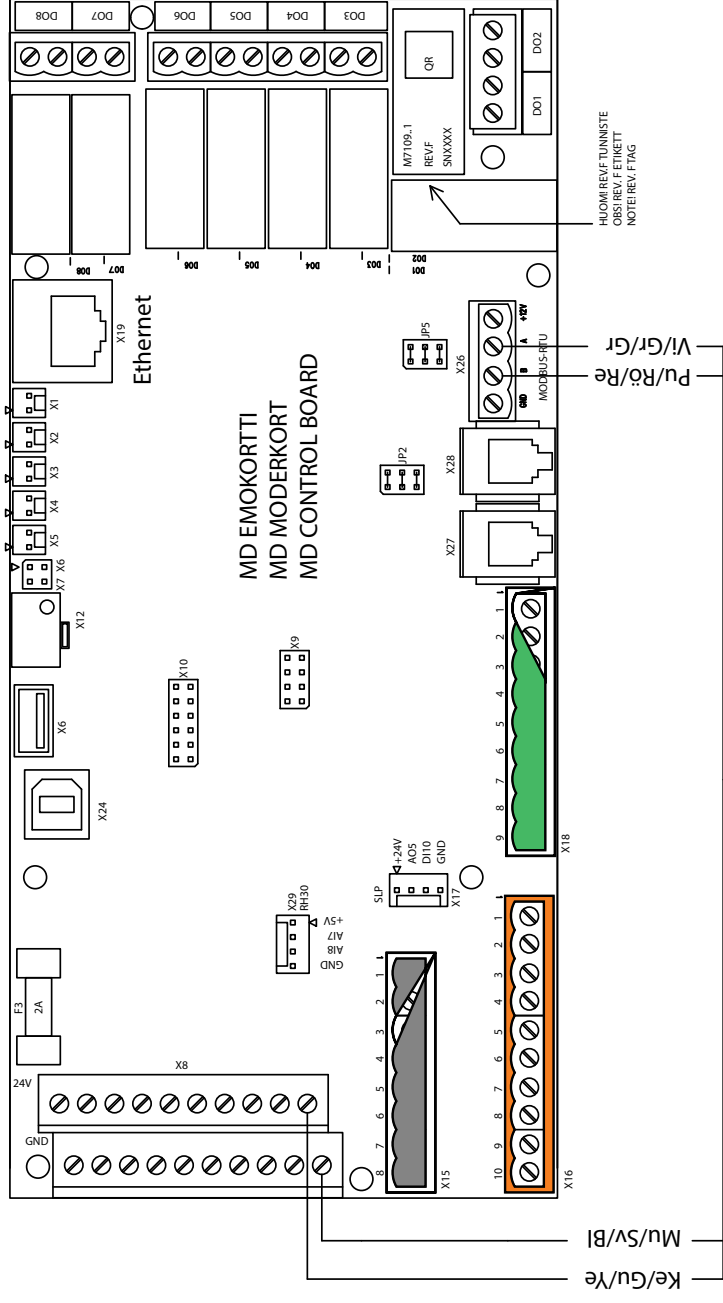
Baud rate 19200

EIB Physical Address 1.1.255

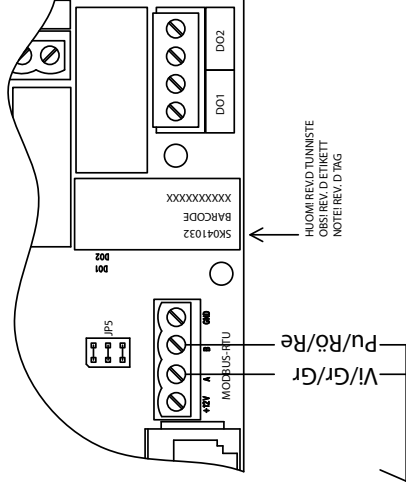
Slave address 1

### Enumerations

MD MODE	
Home mode	0
Max. cooling	1
Max. heating	2
Alarm A	4
Stop mode	8
Away mode	16
Temperature boost	64
CO <sub>2</sub> boosting	128
%RH boosting	256
Manual boost	512
Overpressure mode	1024
Cooker hood on	2048
Central vacuum cleaner on	4096
Electrical heater cool off in Stop mode	8192
Summer night cooling	16384
Defrosting	32768



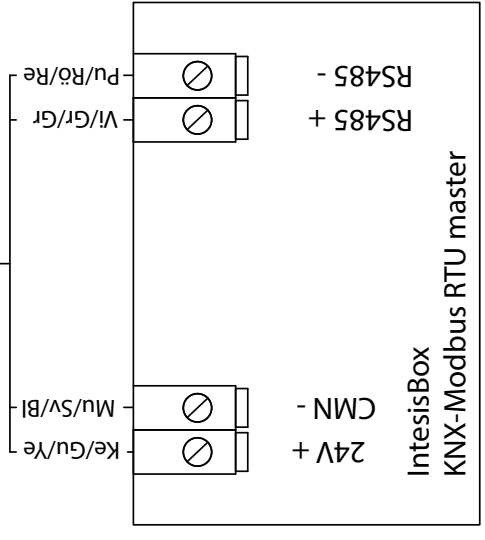
VANHA REV.D KORTTIVERSIO  
 GAMMAL REV. D KORTVERSION  
 OLD REV. D BOARD VERSION



**HUOMI: ÄLÄ KYTKE KNX VÄYLÄÄ SOVITTIMEEN ENNEN VAKIIN VALMIKSI OHJELMOINTIA**

**OBS! KOPPLA INTE KNX BUS INNAN DUC ÄR FÄRDIGT PROGRAMMERAD**

**NOTE! DO NOT CONNECT THE KNX BUS BEFORE BMS IS PROGRAMMED**



Piirit	Tark	Hyv	File	Sivu
JP			KNX systema	1

Enervent Oy Kipratie 1   FIN-06150 PORVOO TEL +358 207 528 800   enervent@enervent.com		Nimitys WIRING DIAGRAM		Paino kg
KNX-Modbus RTU connection				Muutos A
				Lehti

<b>MD MODE</b>	
0	Home mode
1	Max. cooling
2	Max. heating
4	Alarm A
8	Stop mode
16	Away mode
64	Temperature boost
128	CO <sub>2</sub> boosting
256	%RH boosting
512	Manual boost
1024	Overpressure mode
2048	Cooker hood on
4096	Central vacuum cleaner on
8192	Electrical heater cool off in Stop mode
16384	Summer night cooling
32768	Defrosting

## Enumerations

**MD EIB/KNX bus settings**  
 Connection RS485  
 Baud rate 19200  
 EIB Physical Address 1.1.255  
 Slave address 1

Type	Read	Write	Min/Max	EIB / KNX Group (P/I/S)
Holding register	R		0-20%	15/7/20
Holding register	R		0-20%	15/7/21
Holding register	R		0-20%	15/7/22
Holding register	R		-40 - 50 C	15/7/23
Holding register	R		-40 - 50 C	15/7/24
Holding register	R		-40 - 50 C	15/7/25
Holding register	R		-40 - 50 C	15/7/26
Holding register	R		-40 - 50 C	15/7/27
Holding register	R		-40 - 50 C	15/7/28
Holding register	R		0 - 100%	15/7/29
Holding register	R		0 - 100%	15/7/30
Holding register	R		0 - 100%	15/7/31
Holding register	R		0 - 100%	15/7/32
Holding register	R		0 - 20g	15/7/33
Holding register	R		enum	15/7/34
Holding register	R		enum	15/7/35
Holding register	R		-100 - 300	15/7/36
Holding register	R		0 - 500	15/7/37
Holding register	R		0 - 100	15/7/38
Holding register	R		0 - 100	15/7/39
Holding register	R		0 - 100	15/7/40
Holding register	R		0 - 100	15/7/41
Holding register	R		0 - 100	15/7/42
Holding register	R		0 - 100	15/7/43
Holding register	R		0 - 100	15/7/44
Holding register	R		0 - 100	15/7/45
Holding register	R		0 - 100	15/7/46
Holding register	R		0 - 100	15/7/47
Holding register	R		0 - 100	15/7/48
Holding register	R		0 - 100	15/7/49
Holding register	R		0 - 100	15/7/50
Holding register	R		0 - 100	15/7/51
Holding register	R		0 - 100	15/7/52
Holding register	R		0 - 100	15/7/53
Holding register	R		0 - 100	15/7/54
Holding register	R		0 - 100	15/7/55
Holding register	R		0 - 100	15/7/56
Holding register	R		0 - 100	15/7/57

Type	Read	Write	Min/Max	EIB / KNX Group (P/I/S)
Coil	R		0 / 1	15/7/1
Coil	R		0 / 1	15/7/2
Coil	R		0 / 1	15/7/3
Coil	R		0 / 1	15/7/4
Coil	R		0 / 1	15/7/5
Coil	R		0 / 1	15/7/6
Coil	R		0 / 1	15/7/7
Coil	R		0 / 1	15/7/8
Coil	R		0 / 1	15/7/9
Coil	R		0 / 1	15/7/10
Coil	R		0 / 1	15/7/11



MD Modbus EIB/KNX points

Modbus Name	Info
1x0000	Stop
1x0001	Unit run / stop
1x0003	Away function on / off
1x0004	Overpressure
1x0005	Overpressure function on / off
1x0006	Cooker hood
1x0007	Cooker hood indication active / not active
1x0008	Central vacuum cleaner
1x0009	Manual boost
1x0010	Manual boost mode on / off
1x0011	Manual boost mode on / off
1x0012	Summernight cooling function on / off
1x0040	eco mode on / off
1x0041	Alarm A
1x0042	Alarm B
1x0047	Silent mode
1x0048	Silent mode on / off
3x0003	Supply air fan speed
3x0004	Extract air fan speed
3x0005	Supply air fan speed
3x0006	Extract air fan speed
3x0007	HRC Supply air temperature
3x0008	Supply air temperature
3x0009	Exhaust air temperature
3x0010	Extract air temperature
3x0011	Extract air temperature
3x0012	Returnwater temperature
3x0013	Extract air humidity
3x0029	HRC supply efficiency
3x0030	HRC exhaust efficiency
3x0035	48h humidity average
3x0036	Abs humidity
3x0044	Mode
3x0045	Temperature step
3x0049	Temperature setpoint
3x0049	Controller output
3x0215	Week timer program 1/20 function
3x0221	Week timer program 2/20 function
3x0227	Week timer program 3/20 function
3x0233	Week timer program 4/20 function
3x0239	Week timer program 5/20 function
3x0245	Week timer program 6/20 function
3x0251	Week timer program 7/20 function
3x0257	Week timer program 8/20 function
3x0263	Week timer program 9/20 function
3x0269	Week timer program 10/20 function
3x0275	Week timer program 11/20 function
3x0281	Week timer program 12/20 function
3x0287	Week timer program 13/20 function
3x0293	Week timer program 14/20 function
3x0299	Week timer program 15/20 function
3x0305	Week timer program 16/20 function
3x0311	Week timer program 17/20 function
3x0317	Week timer program 18/20 function
3x0323	Week timer program 19/20 function
3x0329	Week timer program 20/20 function

holding



## Instruktioner för KNX bus

Läs denna anvisning noggrant innan du installerar aggregatet och spara anvisningen för framtida behov. Koppla inte KNX till ventilationsaggregatets moderkort innan DUC är färdigt programmerad.

### MD EIB/KNX BUS inställningar

Connection RS485  
Baud rate 19200  
EIB Physical Address 1.1.255  
Slave address 1

### Användning av veckouret via EIB/KNX BUS

Tidsinställningarna för veckouret görs i eAir-styrpanelen. Välj tid och dagar då veckouret är aktivt. Förprogrammeringar kan göras för alla 20 tids-program som finns tillgängliga i veckouret. Varje funktion (borta, länge borta osv.) har ett eget nummer. Numren för funktionerna finns i tabellen i denna anvisning. Funktionen väljs i EIB bus och veckouret i fråga aktiveras.

### Exempel:

Veckour 1 har aktiverats via eAir-styrpanelen: 1:00 - 20:00, Må Ti On. Nummer 1 (=borta) (P/I/S 15/7/38) för Veckour 1 väljs från EIB/KNX bus. Aggregatet går nu i Borta läge från måndag till onsdag, kl 11:00-20:00.

När man inte längre vill använda programmeringen ifråga ändrar man nummer 1 till 0 i EIB/KNX bus (P/I/S 15/7/38).

# exvent



Installationanvisning (NOR)

# Exvent MD KNX