

WLM2-xFS MOD-Bus manual

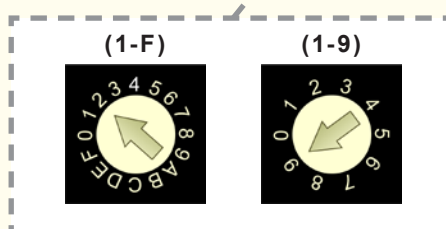
MOD-BUS registre for WLM2-xFS sw. Versjon 2.0.

**MOD-BUS Slave kommunikasjons-
instilling:** 38,4Kbit/s, 1 start, 8 data,
1 stopp -bit ingen paritet)

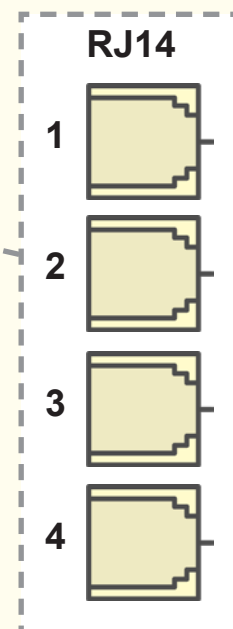
Protokoll: Standard RTU MOD-Bus.

**Instilling av WLM2 for MOD-Bus
kommunikasjon:** Inne i WLM2 masteren
finnes to kanalvelgere som må stilles inn i
henhold til den ønsket konfigurasjon.

▼ Plassering av kanalvelgere og RJ14
kontakter inne i WLM2:



▲ ID: roterende kanalvelgere for å
stille inn kommunikasjonsadressen.



WLM2 MOD-ID adressen er alltid definert som VENSTRE kanalvelger*10 + HØYRE kanalvelger.

Kanalvelgere		WLM2 MOD-ID	Konfigurasjon
VENSTRE	HØYRE	Adresse	
0	1...9	1...9	Frittstående master (MOD-Bus tilkobling i RJ14 kontakt 1 eller 2).
1...9	0	10,20,30...90	Nettverksmaster (MOD-Bus tilkobling i RJ14 kontakt 3 eller 4). (Tilkobling til WLM2 nettverk foretas via RJ14 kontakt 1 eller 2). Nettverksmasteren WLM2 vil fungere som et transparent grensesnitt til alle WLM2 slavemasterene i nettverket.
1...F	1..9	11,12,13...159	Nettverk slavemaster (MOD-Bus kommunikasjon til nettverksslaver foretas via nettverksmasteren). Nettverkstilkoblingen mellom mastere foretas via RJ14 kontakt 1 og 2.

WLM2-xFS MOD-Bus manual

Coil Stat Bits

Protocol = Standard MOD-Bus (RTU).

0x01: Read

0x05: Write Single Coil (NOTE: ON=> output value = 0xFF00)

0x0F: Write Multiple Coils

Register	Function	Description
0	Setback input BMS override	Forces the master into setback mode from BMS (0= no override, 1 = override).
1	Supply temp override allowed	Allows the master to simulate the supply water temp (0= no override).
2	App temp override allowed	Allows the master to simulate the app temp (0= no override).
3	Outdoor temp override allowed	Allows the master to simulate the outdoor temp (0= no override).
4	DEW point override allowed	Forces the master to override the dew point calculation (0= no override).
5	Boiler Relay override allowed	Allows the boiler relay to be forced to ON or OFF (0= no override, 1=override).
6	Boiler Relay override value	Override value on boiler output relay 0=OFF, 1=ON.
7	X-Relay override allowed	Allows the x-relay to be forced to ON or OFF (0=no override, 1=override).
8	X-Relay override value	Override value on x-relay output 0=OFF, 1=ON.
9	Pump Relay override allowed	Allows the pump relay to be forced to ON or OFF (0=no override, 1=override).
10	Pump Relay override value	Override value on pump output relay 0=OFF, 1=ON.
11	N.U. (0)	
12	N.U. (0)	
13	N.U. (0)	
14	N.U. (0)	
15	N.U. (0)	
16	N.U. (0)	
17	N.U. (0)	
18	N.U. (0)	
19	N.U. (0)	
n*10+10	CH_n Relay override allowed	Allows the Channel n output relay to be forced to ON or OFF (0=no override, 1=override).
n*10+11	CH_nRelay override value	Override value on Channel n output relay 0=OFF, 1=ON.
n*10+12	N.U. (0)	
n*10+13	N.U. (0)	
n*10+14	N.U. (0)	
n*10+15	N.U. (0)	
n*10+16	N.U. (0)	
n*10+17	N.U. (0)	
n*10+18	N.U. (0)	
n*10+19	N.U. (0)	

n = Channel = 1...14

WLM2-xFS MOD-Bus manual

InputStat Bits

Protocol = Standard MOD-Bus (RTU).

0x02: Read

Register	Function	Description
0	Heating/Cooling Mode	Current mode (0=heating, 1=cooling).
1	Timeswitch input	Current state of time switch input: 0=day temp (input shorted), 1=night temp (input open).
2	Pump output	Shows the status of the UFH pump relay (1=active, 0=not active).
3	Boiler output	Shows the status of the boiler relay (1=active, 0=not active).
4	X-Output	Shows the status of the x-output relay (1=active, 0=not active).
5	N.U. (0)	
6	N.U. (0)	
7	N.U. (0)	
8	N.U. (0)	
9	N.U. (0)	
10	N.U. (0)	
11	N.U. (0)	
12	N.U. (0)	
13	N.U. (0)	
14	N.U. (0)	
15	N.U. (0)	
16	N.U. (0)	
17	N.U. (0)	
18	N.U. (0)	
19	N.U. (0)	
n*10+10	*Ch_n_Channel output relay	Shows the current state of the channel output relay.
n*10+11	*Ch_n_Channel output relay 2	Shows the current state of the channel output relay 2 (2-stage only).
n*10+12	*Ch_n_Channel low battery	Shows if any unit on the channel is low on battery.
n*10+13	N.U. (0)	
n*10+14	N.U. (0)	
n*10+15	N.U. (0)	
n*10+16	N.U. (0)	
n*10+17	N.U. (0)	
n*10+18	N.U. (0)	
n*10+19	N.U. (0)	

n = Channel = 1...14

WLM2-xF MOD-Bus manual

Input Registers

Protocol = Standard MOD-Bus (RTU).

0x04: Read

Register	Function	Description	Range	Resolution	Unit
0	Software Ver	Software version of master.		0,1	
1	Total unitNum	Number of units (sensors/controllers etc.) on bus.	0...24	1	
2	Channel 0 UnitNum	Number of units on channel 0 (controllers) on bus.	0...24	1	
3	Channel 15 UnitNum	Number of units on channel 15 (sensors/controllers/humidity sensors/WLAC etc.) on bus.	0...24	1	
4	Total UnitErr	Number of units with error.	0...24	1	
5	Active Channels	Bitmap showing which output channels are used (Bit0 1=channel1 in use, Bit1=Channel2 in use...etc).		1	
6	System Error	Shows system errors like on the power LED.		1	
7	Number of Network slaves	Shows the number of slaves in a network.	0...160	1	
8	Number of Network slaves w. Err's	Shows the number of slaves in a network whit comm.error.	0...160	1	
9	Supply Temp	Current supply water temperature.	-4000...12500	0,01	°C
10	App Temp	Current temperature measured on the "App" sensor.	-4000...12500	0,01	°C
11	OutDoorTemp	Current outdoor temperature.	-4000...12500	0,01	°C
12	Mixing valve output effect	Shows the current mixing valve output effect - 0-100%. (0-10Vdc or 10-0Vdc depending on settings).	0-10000	0,01	%
13	Max Dew point	Shows the highest calculated dew point on the master (or the highest in the system if communicating with a network master).	-4000...12500	0,01	°C
14	Max Humidity	Shows the highest measured humidity on the master (or the highest in the system if communicating with a network master).	0-10000	0,01	%RH
15	PWM time	Show the current time of a full cycling sequence (PWM period).	0...2700	1	Sec
16	PWM timer	Show the current time state within the full cycling sequence (PWM period).	900...2700	1	Sec
17	N.U. (0)				
18	N.U. (0)				
19	N.U. (0)				
n*10+10	Ch n numberOfUnits	Shows how many room sensors/controllers is present on the channel.	0...24	1	
n*10+11	Ch n Channel type	Shows which type of unit is connected to the channel. 0 = Not in use. 1 = Room sensor (WLTx-xx). 2 = Room controller (WLCT2-xx). 3 = Hot water controller (WLCT2-xx/HW). 4 = Radiator controller (WLCT2-xx/R). 5 = 2 stage controller (WLCT2-xx/2).		1	
n*10+12	Ch n RoomTemp	Current room temperature.	-4000...12500	0,01	°C
n*10+13	Ch n RoomSet	Current room setpoint temperatur incl. offset.	-4000...12500	0,01	°C
n*10+14	Ch n ErrorNr	Shows channel error number (0 if none).		1	
n*10+15	Ch n Output power %	Current channel output power.	0...10000	0,01	%
n*10+16	Ch n FloorTemp	Current floor temperatur.	-4000...12500	0,01	°C
n*10+17	Ch n Min Limit setpoint	Shows the actual minimum limit setpoint for the floor.	-4000...12500	0,01	°C
n*10+18	Ch n Max Limit setpoint	Shows the actual maximum limit setpoint for the floor.	-4000...12500	0,01	°C
n*10+19	N.U. (0)				

n = Channel = 1...14

TD 04.10.01 Teknisk dokumentasjon

WLM2-xF MOD-Bus manual

Holding registers

Protocol = Standard MOD-Bus (RTU).

0x03: Read

0x06: Single Write

0x10: Multiple Write

Register	Function	Description	Range	Resolution	Unit
0	DaySetTemp	Day setpoint on master.	500...4000	0,01	°C
1	NightSetTemp	Setback setpoint on master.	500...4000	0,01	°C
2	OFF_SetTemp	Off setpoint on master.	300...800	0,01	°C
3	MinLimitSetTemp	Min setpoint for floor temperature limitation.	1000...3000	0,01	°C
4	MaxLimitSetTemp	Max setpoint for floor temperature limitation.	2000...4000	0,01	°C
5	LoOutCompSet	Weather compensation outdoor winter temperature setpoint.	-2000...1000	0,01	°C
6	HiOutCompSet	Weather compensation outdoor summer temperature setpoint.	2000...3500	0,01	°C
7	LoSupCompSet	Weather compensation water supply summer temperatur setpoint.	1000...4000	0,01	°C
8	LoSupCompSet	Weather compensation water supply winter temperature setpoint.	3000...8000	0,01	°C
9	BMS Heat/Cool override	Forces the master into cool or heat mode (0=no override, 1=heat, 2=cool).	0...2	1	°C
10	Supply Temp override	Value when the master is simulating the supply water temperature.	0...9000	0,01	°C
11	App Temp override	Value when the master is simulating the application sensor temperature.	0...9000	0,01	°C
12	Outdoor Temp override	Value when the master is simulating the outdoor temperature.	-2000...9000	0,01	°C
13	DEW point override	Value when the master is simulating the DEW point temperature.	0...9000	0,01	°C
14	N.U. (0)				
15	N.U. (0)				
16	N.U. (0)				
17	N.U. (0)				
18	N.U. (0)				
19	N.U. (0)				
n*10+10	Ch_n_Setpoint BMS override	Overrides the individual any setpoint in system (0=override; 5 - 40 °C overrides the channel setpoint).			
n*10+11	N.U. (0)				
n*10+12	N.U. (0)				
n*10+13	N.U. (0)				
n*10+14	N.U. (0)				
n*10+15	N.U. (0)				
n*10+16	N.U. (0)				
n*10+17	N.U. (0)				
n*10+18	N.U. (0)				
n*10+19	N.U. (0)				

n = Channel = 1...14

Exeption codes:

- 1 ILLIGAL FUNCTION
- 2 ILLIGAL DATA ADDRESS
- 3 ILLIGAL DATA VALUE

Loopback function:

The WLM2 supports loopback function with sub-function code zero (0x00, 0x00 in the two-byte field).