Cetetherm

Modbus Pioneer controller Pioneer, Mini Retro P, Micro Pd och Mini Pi

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mistakes, incorrect information or changes in the hardware or software.

All these types of changes will be included in future release of the manual.

1 General

HIU with Pioneer controller can be connected to Wi-Fi and/or Modbus RTU. This requires communication module CMO40.

1.1 Information about the document

All pictures in this document are general images.

The room thermostat, RMU S40C is called RMU in this document. The communication module, CMO40, is called CMO in this document.

1.2 Terminal block

B	T1	BT	50	A	JX	A	JX	D	HW	IC		C	10			RM	N		23	0 0	Dut	AU	XC	Duft	23	80 J	IN
BT1	GND	BT50	gnd	1	GND	2	gnd	GP11 12V	GP11 LIN	GND	12V	COM A	COM B	GND	12V	HMI A	HMI B	GND	PE	N	L	P E	N	L	P E	N	L
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		1							

- BT1 (1–2) outdoor sensor, with a conductor area of 0.5 mm2, the maximum cable length is 50 meters, maximum 5 Ω /conductor.
- BT50 (3–4) extra room sensor.
- AUX 1 (5–6) to connect e.g., Pre-Payment or other potential free options.
- AUX 2 (7–8) to connect e.g., Pre-Payment or other potential free options.
- DHWC (9–11) LIN DHWC pump.
- CMO (12–15) Communication module, connect with LiYY, EKKX or similar, with a conductor area of 0.5 mm², the maximum cable length is 50 meters.
- RMU (16–19) Room thermostat with built in temperature sensor. connect with LiYY, EKKX or similar, with a conductor area of 0.5 mm², the maximum cable length is 50 meters.
- 230 Out 0-230 VAC, 3A, e.g., energy meter.
- AUX Out 0-230 VAC, 3A, to read alarms and home/away settings.
- 230 IN Power feed to the HIU.

1.3 Connecting the communication module CMO

CMO40 is a gateway that is used to connect the substation to the cloud for monitoring and control, using the app myUplink. It must be placed with access to Wi-Fi.



AA32	Space for memory card (Micro-SD)					
PF1	LED Ring (status Indication)					
S3	Reset button					
AA23-X1	Terminal block, power					
	supply					

Pull in the CMO cable through one of the three cable glands located at the lower edge of the substation, use straps to hold the cable.

Connect the CMO to terminal block AA102-X1, marked CMO (12-15).



The minimum area of communication cables must be 0.5 mm² up to 50 m, for example EKKX, LiYY or equivalent.

The AA23-X1 connector in CMO, can be removed for easier wire installation, remember to mount it back before turning on the power.



1.4 Connecting Modbus

Connect the Modbus cable to terminal block AA23X1, marked 1 and 2.

The minimum area of communication cables must be 0.5 mm² up to 50m, for example EKKX, LiYY or equivalent.

The AA23-X1 connector in CMO, can be removed for easier wire installation, remember to mount it back before turning on the power.

СМО

AA23-X	1
Modbus A	1 🗆
Modbus B	2 🗆
	3 🗆
+12V	4 🗆
A	5 🗆
В	6 🗆
GND	7 🗆



Modbus Pioneer controller

1.5 Mounting the CMO on wall

Use all mounting points and mount the CMO upright, flat against the wall, screw size M2.5 with a maximum head diameter of 5.5mm. Leave at least 100 mm of free space around the module to allow access and make cable routing easier during installation and servicing.



1.6 Activate Modbus

To use Modbus the following settings must be done in the room thermostat RMU.

• In menu 4.1 – Operating mode

Choose Outdoor control with room sensor – requires a connected outdoor- and room sensor, can be via Modbus.

Works as outdoor control with addition that set desired temperature, menu 1.1.1. Heating is used to calculate offset on supply temperature.

1.7 Choose Wi-Fi and/or Modbus

In menu 7.2.16 – SMO40, choose if Modbus or both Modbus and Wi-Fi shall be activated.

Fail safe mode **On**: Wi-Fi and Modbus Fail safe mode **Off**: Only Modbus

1.8 Modbus

Connection to Modbus uses address 247 as default. This address can be changed in menu 5.8 – TPP Configurate. Writable value between 1-245 and 247. Address 246 is occupied.

BaudRate:	57600
DataBits:	x8
StopBits:	One
Parity:	Even

1.9 Connect a Modbus sensor

If connecting a Modbus sensor, it must be activated in menu 1.3 – Room sens. Setting, activate Room temp.Modbus.

Skrivbart värde mellan 1-245 och 247.Adress 246 är upptagen.

Baud Rate:	57600
Data Bits:	x8
Stop Bits:	One
Parity:	Even

1.10 Anslut en Modbus givare

Om en Modbus givare ansluts måste den aktiveras i meny 1.3 – Rumsgivarinställn, aktivera Room temp.Modbus.



2 Parameter list

id	disText	TPP Holding	TPP Input
		Reg	Reg
3663		-	-
60371	BI50 Modbus sensor	0	-
60373	Modbus desired temperature	1	-
60375	Modbus heating curve	2	-
60376	Modbus heating min supply	3	-
60377	Modbus heating max supply	4	-
60378	Limit max. power	5	-
60379	Max power	6	-
4	Current outd temp (BT1)	-	101
54	Average temperature (BT1)	-	102
60139	Hot water out (BT38)		103
60140	Cold water (BT4)	-	104
60137	Primary return heating (BT69.1)	-	105
60142	Primary in (BT68)	-	106
60138	Primary out hot water (BT69.2)	-	107
60130	Supply heating (BT2)	-	108
60131	Return heating (BT3)	-	109
60238	Controlling room sensor	-	110
60303	Indoor temperature, external	-	111
60304	Indoor temperature	-	112
60433	Relative humidity	-	113
781	Degree minutes	-	115
60157	Status (GP1)		118
60159	Pump speed (GP1)	-	119
60106	GP1 Flow	-	120
60105	GP1 Head	-	121
60156	Flow, hot water (BF4)	-	126
60149	Pressure, prim. in (BP17)	-	127
60150	Pressure, prim. out (BP18)	-	128
60152	Primary diff pressure (BP17-BP18)	-	129
60151	Pressure, heating (BP19)	-	130
60144	Operating pressure	-	131
	Desired room temperature (no room sensor) climate system 1,		
3665	heating	-	132
3945	Set point value room temp system 1	-	134
60330	Position, valve (QN11.2)	-	136
60329	Position, valve (QN11.1)	-	137
60200	HW, set value	-	138
60205	Priority hot water	-	139
3375	Alarm number	-	140
60493	Energy consumption hot water [most recent 24-hour period per hour]	_	141
60494	Energy consumption heating [most recent 24-hour period per hour]	-	143
60496	Energy consumption hot water [previous day]	-	145
60497	Energy consumption heating [previous dav]	-	147
60498	Energy consumption [previous day]	-	149
60499	Ratio heating [previous day]	-	151



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