TOSHIBA

EEU-007

Model name:

BMS-IFKX0UEW-E

KN Interface

KNX Interface

for Toshiba AIR TO WATER HEAT PUMP

User Manual

Issue Date: 22/11/2022

English

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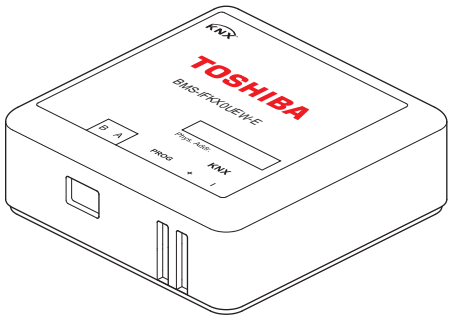
1. Product Overview



The BMS-IFKX0UEW-E interface allows a complete and natural integration of Toshiba air conditioners into KNX network.
The BMS-IFKX0UEW-E is compatible with the Toshiba ESTIA AB Bus(AW-LINK / TU2C-LINK) lines.

- Reduced dimensions, quick installation.
- Multiple objects for control and status (bit, byte, characters…) with KNX standard datapoint types.
- Status objects for every control available.
- The Toshiba ESTIA Hydro Unit can be controlled simultaneously by the wired remote controller of the hydro unit and by KNX.
- FULL Control and Monitoring of the ESTIA Hydro Unit from KNX, including monitoring of ESTIA Hydro Unit's state of internal variables and error indication and error code.

2. Specifications

Item	Specification value
Power supply	KNX line 29 VDC / 8 mA AB BUS line 14 VDC / 20 mA
Operating temperature and humidity ranges	0 ºC to 40 ºC 10 to 80% RH (non-condensing)
Storage temperature and humidity ranges	-20 ºC to 60 ºC 10 to 80% RH (non-condensing)
Housing materials	Mold unit ABS (UL 94 V0) 2.5 mm thick
Size	Mold unit 28 (H) x 70 (W) x 70 (W)
Weight	70 g (mold unit)

Supplied items

No.	Part name	Quantity	Remark
1	KN interface (mold unit)	1	
2	User manual	1	
3	Fixing screws		

Use the following wiring materials to connect the signal lines. (Procure locally)

No.	Cable	Item	Value
1	For KNX TP-1 Bus	Cable type	KNX TP1
		Cable diameter	
		Cable length	1000 m
		Polarity	Yes (+/-)
2	For AB Bus(AW-LINK / TU2C-LINK) lines	Cable type	VCTF
		Cable diameter	0.5 mm^2 to 2.0 mm^2
		Cable length	50 m (0.75^2)
		Polarity	No

Power supply

The following two types of power supplies are required for the power supplies of this product.

No.	Power supply	Remark
1	KNX TP-1 Bus	Supplies power from the KNX power unit (procure locally) using the KNX link cable.
2	AB Bus(AW-LINK / TU2C-LINK) lines	Supplies power from the hydro unit using the AB BUS link cable.

3. Supported ESTIA Unit Types

This product supports ESTIA hydro units of the 4 series, 5 series, and ESTIA R32 1 series (WM and AIO type).

4. Installation Procedure and Wiring

Installation instructions

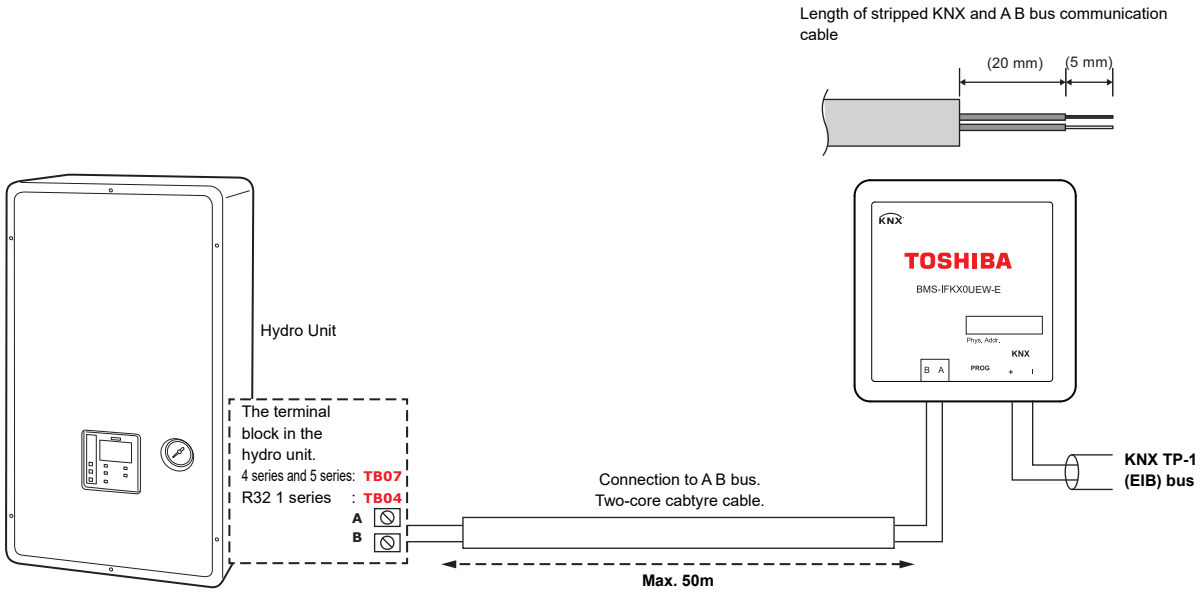
- Disconnect the Hydro unit from Mains Power.
- Disconnect the power supply of the KNX bus.
- Connect the connection cable between the interface and the Hydro unit following the instructions of the diagram below.
- Connect the KNX bus to the connector KNX of the interface. Respect the polarity.
- Close the Hydro unit and reconnect it to Mains Power.
- Reconnect power supply to the KNX bus.
- Follow the instructions on the user's manual for configuring and commissioning the interface. See below how to obtain the user's manual and the ETS database.

NOTE

The cable used for connection of BMS-IFKX0UEW-E to A B bus can be any two-core cabtyre cable, the maximum distance for bus A B is 50 meters, consult the manual of the Hydro unit for more details.

IMPORTANT:

- Use only one remote controller. A sub-remote controller cannot be connected when connecting this interface.
- It is not possible to mix and connect Hydro unit 4 series, 5 series, and R32 1 series (WM and AIO type).

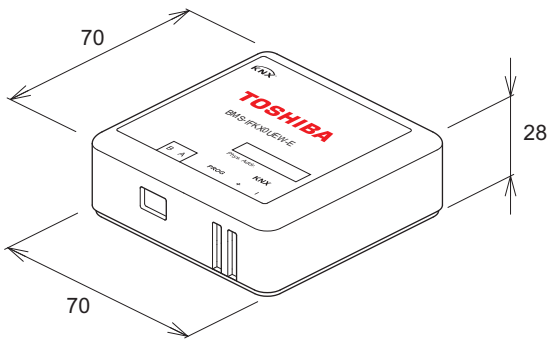


NOTE

In its place there is a pair of cables to connect the Remote Controller. Use these cables to connect the AB bus. Check your Hydro unit user or service manual for more information.

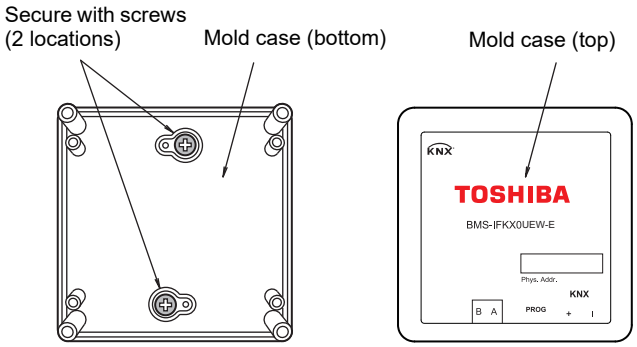
Dimensions

External dimensions



Wall mount

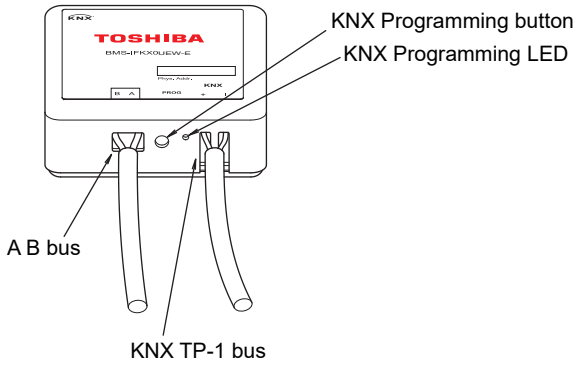
During installation, secure the metal plate and mold case (bottom) together with screws.
After wiring, attach the mold case (top), install the metal plate cover, and secure with a screw.



NOTE

When installing the interface on the plane surface instead of mounting it on the wall and securing with screws, secure the unit with double-sided adhesive tape or similar stuff.

Connections



5. Object Table

TOPIC		OBJECT NUMBER	Name	Length	Datapoint Type		Flags					Value
					Data Type Name	DPT_ID	C	R	W	T	U	
Control	On/Off	0	Control_ Zones On/ Off	1 bit	switch	DPT_1.001	C	-	W	T	U	1-On, 0-Off
		1	Control_ HW On/Off	1 bit	switch	DPT_1.001	C	-	W	T	U	1-On, 0-Off
	Mode	2	Control_ Mode (*2)	1 byte	HVAC control mode	DPT_20.105	C	-	W	T	U	1-Heat, 3-Cool
		3	Control_ Mode Cool/ Heat (*2)	1 bit	cooling/ heating	DPT_1.100	C	-	W	T	U	0-Cool, 1-Heat
		4	Control_ Mode Heat (*2)	1 bit	boolean	DPT_1.002	C	-	W	T	U	1-Set heat mode
		5	Control_ Mode Cool (*2)	1 bit	boolean	DPT_1.002	C	-	W	T	U	1-Set cool mode
	Setpoint	6	Control_ Zone1 Setting Temperature	2 bytes	tempera-ture (°C)	DPT_9.001	C	-	W	T	U	°C
		7	Control_ Zone2 Setting Temperature	2 bytes	tempera-ture (°C)	DPT_9.001	C	-	W	T	U	°C
		8	Control_ HW Setting Temperature	2 bytes	tempera-ture (°C)	DPT_9.001	C	-	W	T	U	°C
	Function On/Off	9	Control_ Auto temperature On/Off	1 bit	switch	DPT_1.001	C	-	W	T	U	1-On, 0-Off
		10	Control_ Night Setback On/Off	1 bit	switch	DPT_1.001	C	-	W	T	U	1-On, 0-Off
		11	Control_ HW Boost On/Off	1 bit	switch	DPT_1.001	C	-	W	T	U	1-On, 0-Off
		12	Control_ Frost Protection On/Off	1 bit	switch	DPT_1.001	C	-	W	T	U	1-On, 0-Off
		13	Control_ Antibacteria On/Off	1 bit	switch	DPT_1.001	C	-	W	T	U	1-On, 0-Off
		14	Control_Remote Controller Permit (*4)	1 bit	boolean	DPT_1.002	C	-	W	T	U	0-Permitted 1-Not permitted
		15	Control_Remote Controller Permit OnOff(*4)	1 bit	boolean	DPT_1.002	C	-	W	T	U	0-Permitted 1-Not permitted
		16	Control_Remote Controller Permit Mode(*4)	1 bit	boolean	DPT_1.002	C	-	W	T	U	0-Permitted 1-Not permitted
		17	Control_Remote Controller Permit Setting Temperature(*4)	1 bit	boolean	DPT_1.002	C	-	W	T	U	0-Permitted 1-Not permitted
		18	Control_Error History Reset(*4)	1bit	boolean	DPT_1.015	C	-	W	T	U	1-Reset

TOPIC		OBJECT NUMBER	Name	Length	Datapoint Type		Flags					Value
					Data Type Name	DPT_ID	C	R	W	T	U	
Status	On/Off	19	Status_ Zones On/Off	1 bit	switch	DPT_1.001	C	R	-	T	-	1-On, 0-Off
		20	Status_ HW On/Off	1 bit	switch	DPT_1.001	C	R	-	T	-	1-On, 0-Off
	Mode	21	Status_ Mode	1 byte	HVAC control mode	DPT_20.105	C	R	-	T	-	1-Heat, 3-Cool
		22	Status_ Mode Cool/ Heat	1 bit	cooling/ heating	DPT_1.100	C	R	-	T	-	0-Cool, 1-Heat
		23	Status_ Mode Heat	1 bit	boolean	DPT_1.002	C	R	-	T	-	1-Heat mode active
		24	Status_ Mode Cool	1 bit	boolean	DPT_1.002	C	R	-	T	-	1-Cool mode active
	Setpoint	25	Status_ Zone1 Setting Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		26	Status_ Zone2 Setting Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		27	Status_ HW Setting Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
	Function On/Off	28	Status_ Auto Temperature On/Off	1 bit	switch	DPT_1.001	C	R	-	T	-	1-On, 0-Off
		29	Status_ Night Setback On/Off	1 bit	switch	DPT_1.001	C	R	-	T	-	1-On, 0-Off
		30	Status_ HW Boost On/Off	1 bit	switch	DPT_1.001	C	R	-	T	-	1-On, 0-Off
		31	Status_ Frost Protection On/Off	1 bit	switch	DPT_1.001	C	R	-	T	-	1-On, 0-Off
		32	Status_ Antibacteria On/Off	1 bit	switch	DPT_1.001	C	R	-	T	-	1-On, 0-Off
	Alarm	33	Status_ Alarm	1 bit	alarm	DPT_1.005	C	R	-	T	-	1-Alarm, 0-No alarm
		34	Status_ Alarm Code	2 bytes		-	C	R	-	T	-	Alarm code '-1=0xFFFF' communication error (*5) '-3=0xFFFD' paused '-4=0xFFFC' initialization (*6) Any other, see manual "Check Code"
		35	Status_ Alarm Text	14 bytes	Character String (ISO 8859-1)	DPT_16.001	C	R	-	T	-	Alarm description see manual "Check Code"
		36	Status_ Alarm Address	2 bytes		-	C	R	-	T	-	Alarm address
	Hydro Unit and Outdoor Unit Status	37	Status_ Zone1 Control Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		38	Status_ Zone2 Control Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		39	Status_ HW Control Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C

TOPIC		OBJECT NUMBER	Name	Length	Datapoint Type		Flags					Value
					Data Type Name	DPT_ID	C	R	W	T	U	
Status	Hydro Unit and Outdoor Unit Status	40	Status_ Control Temperature (*3)	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		41	Status_ Outdoor Liquid Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		42	Status_ HW Cylinder Water Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		43	Status_ Condensed Refrigerant Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		44	Status_ Water Inlet Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		45	Status_ Water Outlet Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		46	Status_ Water Heater Outlet Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		47	Status_ Zone2 Inlet Temperature (TFI)	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		48	Status_ Motorized Mixing Valve Position	2 bytes	pulses	DPT_7.001	C	R	-	T	-	Position
		49	Status_ System Low Pressure	4 bytes	pressure (Pa)	DPT_14.058	C	R	-	T	-	Pa
		50	Status_ Outdoor Heat Exchanger Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		51	Status_ Discharge Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		52	Status_ Outdoor Suction Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		53	Status_ Outside Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		54	Status_ Outdoor Compressor Frequency	4 bytes	frequency (Hz)	DPT_14.033	C	R	-	T	-	Hz
		55	Status_ Outdoor Lower Fan Speed	4 bytes	frequency (Hz)	DPT_14.033	C	R	-	T	-	Hz
		56	Status_ Outdoor Upper Fan Speed	4 bytes	frequency (Hz)	DPT_14.033	C	R	-	T	-	Hz
		57	Status_ HW mode compressor Second Counter	4 bytes	time lag (s)	DPT_13.100	C	R	-	T	-	Sec
		58	Status_ HW mode compressor Hour Counter	2 bytes	time (h)	DPT_7.007	C	R	-	T	-	Hours
		59	Status_ Heating mode compressor Second Counter	4 bytes	time lag (s)	DPT_13.100	C	R	-	T	-	Sec
		60	Status_ Heating mode compressor Hour Counter	2 bytes	time (h)	DPT_7.007	C	R	-	T	-	Hours

TOPIC		OBJECT NUMBER	Name	Length	Datapoint Type		Flags					Value
					Data Type Name	DPT_ID	C	R	W	T	U	
Status	Hydro Unit and Outdoor Unit Status	61	Status_ Cooling mode compressor Second Counter	4 bytes	time lag (s)	DPT_13.100	C	R	-	T	-	Sec
		62	Status_ Cooling mode compressor Hour Counter	2 bytes	time (h)	DPT_7.007	C	R	-	T	-	Hours
		63	Status_ HU water pump operation Second Counter	4 bytes	time lag (s)	DPT_13.100	C	R	-	T	-	Sec
		64	Status_ HU water pump operation Hour Counter	2 bytes	time (h)	DPT_7.007	C	R	-	T	-	Hours
		65	Status_ HW cylinder heater Second Counter	4 bytes	time lag (s)	DPT_13.100	C	R	-	T	-	Sec
		66	Status_ HW cylinder heater Hour Counter	2 bytes	time (h)	DPT_7.007	C	R	-	T	-	Hours
		67	Status_ HU back up Heater Second Counter	4 bytes	time lag (s)	DPT_13.100	C	R	-	T	-	Sec
		68	Status_ HU back up Heater Hour Counter	2 bytes	time (h)	DPT_7.007	C	R	-	T	-	Hours
	Function Code and Hydro Unit Dip-SW setting	69	Status_ Zone1 Device Connected	1 bit	boolean	DPT_1.002	C	R	-	T	-	0-Not connected, 1-Connected
		70	Status_ Zone2 Device Connected	1 bit	boolean	DPT_1.002	C	R	-	T	-	0-Not connected, 1-Connected
		71	Status_ HW Device Connected	1 bit	boolean	DPT_1.002	C	R	-	T	-	0-Not connected, 1-Connected
		72	Status_ Zones Cool Setting Temperature MAX	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		73	Status_ Zones Cool Setting Temperature MIN	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		74	Status_ Zone1 Heat Setting Temperature MAX	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		75	Status_ Zone1 Heat Setting Temperature MIN	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		76	Status_ Zone2 Heat Setting Temperature MAX	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		77	Status_ Zone2 Heat Setting Temperature MIN	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		78	Status_ HW mode water Temp MAX	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		79	Status_ HW mode water Temp MIN	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		80	Status_ Frost protection Setting Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C

TOPIC		OBJECT NUMBER	Name	Length	Datapoint Type		Flags					Value
					Data Type Name	DPT_ID	C	R	W	T	U	
Status	Function Code and Hydro Unit Dip-SW setting	81	Status_ HW Boost Setting Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		82	Status_ Antibacteria Setting Temperature	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		83	Status_ Operation Heat Mode Permitted	1 bit	boolean	DPT_1.002	C	R	-	T	-	0-Not permitted, 1-Permitted
		84	Status_ Operation Cool Mode Permitted	1 bit	boolean	DPT_1.002	C	R	-	T	-	0-Not permitted, 1-Permitted
		85	Status_ Auto Temperature Permitted	1 bit	boolean	DPT_1.002	C	R	-	T	-	0-Not permitted, 1-Permitted
		86	Status_ Frost Protection Permitted	1 bit	boolean	DPT_1.002	C	R	-	T	-	0-Not permitted, 1-Permitted
		87	Status_ Night Setback Permitted	1 bit	boolean	DPT_1.002	C	R	-	T	-	0-Not permitted, 1-Permitted
		88	Status_ HW Boost Permitted	1 bit	boolean	DPT_1.002	C	R	-	T	-	0-Not permitted, 1-Permitted
		89	Status_ Antibacteria Permitted	1 bit	boolean	DPT_1.002	C	R	-	T	-	0-Not permitted, 1-Permitted
		90	Status_Remote Controller Permit ALL(*4)	1 bit	boolean	DPT_1.002	C	R	-	T	-	0-Permitted, 1-Not permitted
		91	Status_Remote Controller Permit OnOff(*4)	1 bit	boolean	DPT_1.002	C	R	-	T	-	0-Permitted, 1-Not permitted
		92	Status_Remote Controller Permit Mode(*4)	1 bit	boolean	DPT_1.002	C	R	-	T	-	0-Permitted, 1-Not permitted
		93	Status_Remote Controller Permit Setting Temperature(*4)	1 bit	boolean	DPT_1.002	C	R	-	T	-	0-Permitted, 1-Not permitted
		94	Status_Floor Dry Status(*4)	1 bit	switch	DPT_1.001	C	R	-	T	-	1-On, 0-Off
		95	Status_Zone1 Auto Curve Target Temperature(*4)	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		96	Status_Zone2 Auto Curve Target Temperature(*4)	2 bytes	temperature (°C)	DPT_9.001	C	R	-	T	-	°C
		97	Status_Frost Protection Function Setting Status(*4)	1 bit	switch	DPT_1.001	C	R	-	T	-	1-On, 0-Off
		98	Status_Low Noise Function Setting Status(*4)	1 bit	switch	DPT_1.001	C	R	-	T	-	1-On, 0-Off
		99	Status_Hot Water Tank Thermo Status(*4)	1 bit	switch	DPT_1.001	C	R	-	T	-	1-On, 0-Off
		100	Status_External Thermo Control Status(*4)	1 bit	switch	DPT_1.001	C	R	-	T	-	1-On, 0-Off

(*1) Temperature Read data 0x8000 means No Sensor or Sensor Error.
(*2) If Cool mode prohibit, never set Cool mode.
(*3) When the ESTIA 4 series is selected in the parameter settings of the ETS tool, “Status_ Control Temperature” cannot be used.
(*4) When the ESTIA 5 or ESTIA 4 series is selected in the parameter settings of the ETS tool, the function cannot be used.
(*5) There is considered to be a communication error if communication between this product and the ESTIA hydro unit and between the remote controller and the ESTIA hydro unit is interrupted for 3 minutes. If the setting operation of FC is performed in “FIELD SETTING MENU” on the remote controller, a communication error may occur.
(*6) If the setting operation of FC is performed in “FIELD SETTING MENU” on the remote controller, this product will also execute the initialization process.

Precaution

When the temperature setting is made for Zones 1/2 from the BMS-IFKX0UEW-E, the actual water temperature may be lower than the set temperature depending on the FC setting of the remote controller.

6. Setting Using ETS Tool

This product is a KNX device that complies with the KNX standard, so configuration and commissioning can be performed with the ETS tool of KNX Association. Use the ETS4, ETS5 or ETS6 version of the ETS tool.

6.1 How to obtain the ETS database

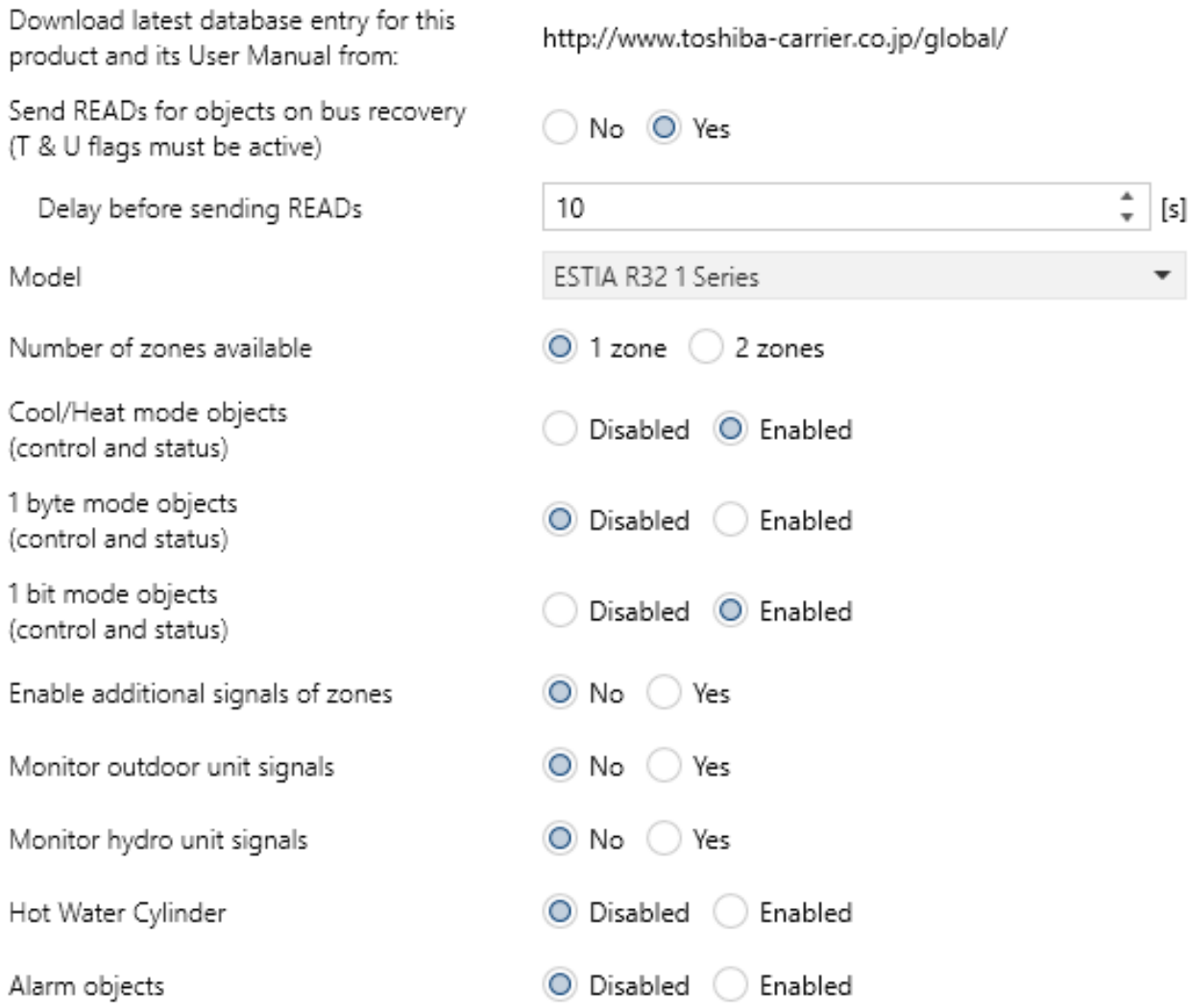
Download the ETS database from the following website.
http://www.toshiba-carrier.co.jp/global/appli/ets_db/download/
Database file for ETS6/5/4 BMS-IFKX0UEW-E_v1.0.knxprod

NOTE

"_v1.0" of the database file name is the version number. This number may change.

6.2 ETS parameters

Perform the configuration of this product in the Parameter screen of the ETS tool.



No.	Item	Selection type	Additional Object No(*1)	Display condition of item
1	Send READs for objects on bus recovery (T & U flags must be active)	Radio Button (No/Yes)	Yes	
2	Delay before sending READs [seconds]	Set Number		Displayed when No.1 is “Yes”
3	Model	Pull-Down Menu (ESTIA 4 series/ ESTIA 5 series/ ESTIA R32 1 series)	[ ], [40], [14-18, 40, 90-100]	
4	Number of zones available	Radio Button (1 zone/2 zones)	7, 26, 38, 47-48, 70, 76-77	
5	Cool/Heat mode objects (control and status)	Radio Button (Disabled/Enabled)	3, 22	
6	1 byte mode objects (control and status)	Radio Button (Disabled/Enabled)	2, 21	
7	1 bit mode objects (control and status)	Radio Button (Disabled/Enabled)	4-5, 23-24	
8	Enable additional signals of zones	Radio Button (No/Yes)	9-10, 12, 28-29, 31, 80-82, 85-89, 94-100	
9	Monitor outdoor unit signals	Radio Button (No/Yes)	41, 43, 50-62	
10	Monitor hydro unit signals	Radio Button (No/Yes)	49, 63-68	
11	Hot water Cylinder	Radio Button (Disabled/Enabled)	1, 8, 20, 27, 39	
12	Enable additional signals of Hot Water Cylinder	Radio Button (No/Yes)	11, 13, 30, 32, 42, 44-46, 57-58, 65-66, 71, 78-79, 81-82, 88-89	Displayed when No.11 is “Enabled”
13	Alarm objects	Radio Button (Disabled/Enabled)	33-36	

(*1) The object may not be displayed until multiple parameter setting are changed.
(Example) To add the objects No.14-18, 40, and 90-100 by setting the parameter No.3 “Model” to “Estia R32 1 series”, it is also necessary to set the parameter No.8 “Enable additional signals of zones” to “Yes”.

7. Check Code

Check code		Alarm Unit	Alarm Description
Hexadecimal Number	Remote Controller Display		
0000	N/A	I/F	
0001	A01	Hydro Unit	Pump or flowing quantity error
0002	A02	Hydro Unit	Temperature increase error (Heating)
0003	A03	Hydro Unit	Temperature increase error (Hot Water Supply)
0004	A04	Hydro Unit	Antifreeze operation (1)
0005	A05	Hydro Unit	Piping antifreeze operation
0007	A07	Hydro Unit	Pressure switch operation
0008	A08	Hydro Unit	Low pressure sensor operation error
0009	A09	Hydro Unit	Overheat protection operation
000A	A10	Hydro Unit	Antifreeze operation (2)
000B	A11	Hydro Unit	Operation of the release protection
000C	A12	Hydro Unit	Heating, hot water heater
000D	A13	Hydro Unit	Pump error
000E	A14	Hydro Unit	Pump error (Mainly low voltage to the system)
000F	A15	Hydro Unit	Pump error (Mainly except low voltage to the system)
0041	E01	Remote Controller	No communication between hydro unit and remote controller
0042	E02	Remote Controller	Defect in the signal transmission to the hydro unit.
0043	E03	Hydro Unit	Regular communication error between hydro unit and remote controller
0044	E04	Hydro Unit	Regular communication error between hydro unit and outdoor unit
0048	E08	Hydro Unit	Duplicate address of Hydro unit, or Duplicate master Hydro unit during Group control
0049	E09	Remote Controller	Several remote controller base units
004E	E14	Hydro Unit	Regular communication error between hydro unit and 0-10 V-IF
0052	E18	Hydro Unit	Regular communication error between master Hydro unit and slave Hydro unit during Group control
0063	F03	Hydro Unit	TC sensor error
0064	F04	Outdoor Unit	TD sensor error
0066	F06	Outdoor Unit	TE sensor error
0067	F07	Outdoor Unit	TL sensor error
0068	F08	Outdoor Unit	TO sensor error
006A	F10	Hydro Unit	TWI sensor error
006B	F11	Hydro Unit	TWO sensor error
006C	F12	Outdoor Unit	TS sensor error
006D	F13	Outdoor Unit	TH sensor error
006E	F14	Hydro Unit	TTW sensor error
006F	F15	Outdoor Unit	TE, TS sensors error
0071	F17	Hydro Unit	TFI sensor error
0072	F18	Hydro Unit	THO sensor error
0073	F19	Hydro Unit	Detection of THO disconnection error

Check code		Alarm Unit	Alarm Description
Hexadecimal Number	Remote Controller Display		
0074	F20	Hydro Unit	TFI sensor error
0077	F23	Hydro Unit	Low pressure sensor error
0078	F24	Outdoor Unit	PD sensor error
007D	F29	Hydro Unit	EEPROM error
007E	F30	Hydro Unit	Extended IC error
007F	F31	Outdoor Unit	EEPROM error
0160	F32	Hydro Unit	Flow sensor error
0161	F33	Hydro Unit	Flowing quantity error
0081	H01	Outdoor Unit	Compressor
0082	H02	Outdoor Unit	Compressor lock
0083	H03	Outdoor Unit	Defect in the current detection circuit
0084	H04	Outdoor Unit	Operation of case thermostat
00C2	L02	Hydro Unit	Combination
00C7	L07	Hydro Unit	Communication error
00C9	L09	Hydro Unit	Communication error
00CA	L10	Outdoor Unit	Unset service PC board jumper
00CF	L15	Outdoor Unit	Combination error
00D0	L16	Hydro Unit	Setting error
00D6	L22	Hydro Unit	0-10V Setting error
00DD	L29	Outdoor Unit	The communication between the outdoor PC board MUCs error
00E3	P03	Outdoor Unit	The outlet temperature error
00E4	P04	Outdoor Unit	The high pressure switch error
00E5	P05	Outdoor Unit	The power supply voltage error
00E7	P07	Outdoor Unit	Overheating of heat-sink error
00EF	P15	Outdoor Unit	Detection of gas leak
00F3	P19	Outdoor Unit	The 4-way valve inversion error
00F4	P20	Outdoor Unit	High pressure protection operation
00F6	P22	Outdoor Unit	Outdoor fan system
00FA	P26	Outdoor Unit	Short circuit of the compressor driver element error
00FD	P29	Outdoor Unit	Compressor rotor position error
00FF	P31	Hydro Unit	Slave Hydro unit error which occurs when error occurs in master Hydro unit
FFFF(-1)	-	I/F	Error in the communication of BMS-IFKX0UEW-E device with the Hydro unit

In case you detect an error code not listed, contact your nearest Toshiba technical support service.

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