Interface for integration of Daikin air conditioners into KNX TP-1 (EIB) control systems

Compatible with Domestic line air conditioner commercialized by Daikin

Application's Program Version: 0.4

USER MANUAL

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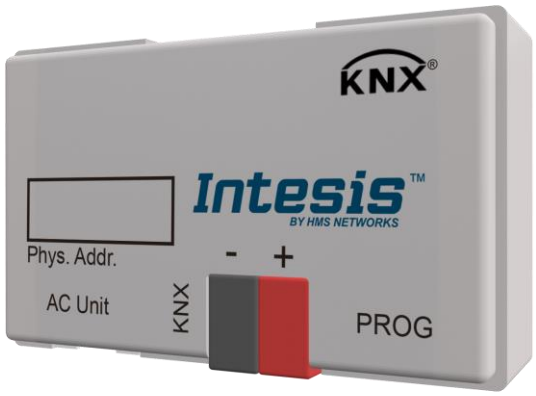

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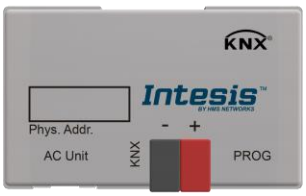
Interface for integration of Daikin air conditioners into KNX TP-1 (EIB) control systems.

Compatible with Domestic line air conditioners commercialised by Daikin.

ORDER CODE	LEGACY ORDER CODE
INKNXDAI001I000	DK-AC-KNX-1

INDEX

1. Presentation

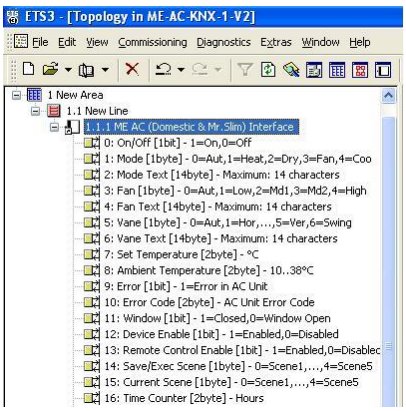


INKNXDAI001I000 allows a complete and natural integration of Daikin air conditioners with KNX control systems.

Compatible with all models of Domestic line of air conditioners.

Main features:

- Reduced dimensions. Installation even inside the A.C. indoor unit.
- Quick and non visible installation.
- External power not required.
- Direct connection to the KNX EIB bus.
- Direct connection to the AC indoor unit.
- Fully KNX interoperable, configuration from ETS.
- Multiple objects for control (of different types: bit, byte, characters…).
- Control of the AC unit based in the ambient temperature read by the own AC unit, or in the ambient temperature read by any KNX thermostat.
- Total Control and Monitoring of the AC unit from KNX, including monitoring of AC unit's state of internal variables, running hours counter (for filter maintenance control), and error indication and error code.
- AC unit can be controlled simultaneously by the IR remote control of the AC unit and by KNX.
- Up to 2 scenes can be saved and executed from KNX, fixing the desired combination of Operation Mode, Set Temperature, Fan Speed, and Swing in any moment by using a simple Switching type object.



2. Connection

The interface comes with a cable (1 meter long) for direct connection to the internal control board of the AC indoor unit.

Connection of the interface to the AC indoor unit:

Disconnect mains power from the AC unit. Open the front cover of the indoor unit in order to have access to the internal control board. In the control board locate the socket connector marked as:

S21 in Domestic line models

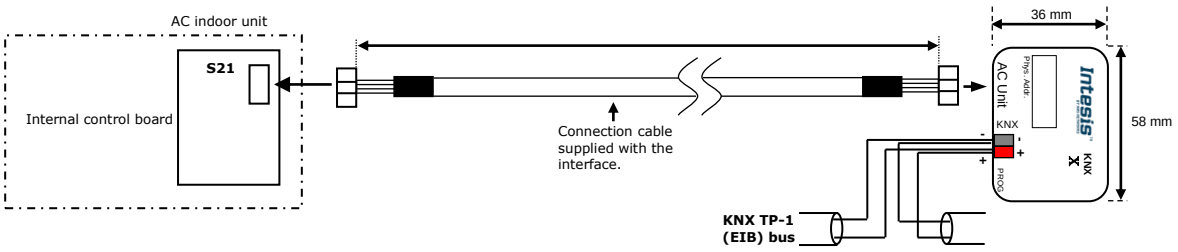
Using the cable that comes with the interface, insert its smaller connector into the socket of the INKNXDAI001I000 marked as **AC Unit**, and the other connector, the biggest one, into the socket **S21** of the AC unit's control board. Fix the INKNXDAI001I000 inside or outside the AC indoor unit depending on your needs – remember that INKNXDAI001I000 must be also connected to the KNX bus. Close the AC indoor unit's front cover again.

IMPORTANT: The cable supplied with the interface is 1.5 m (4.9 ft) long. Do not modify its length since it may affect the correct interface's operation. Keep the cable away from power and ground wires, and never bundle them together.

Connection of the interface to the KNX bus:

Disconnect power of the KNX bus. Connect the interface to the KNX TP-1 (EIB) bus using the KNX standard connector (red/grey) of the interface, respect polarity. Reconnect power of the KNX bus.

Connections diagram:



3. Configuration and setup

This is a fully compatible KNX device which must be configured and setup using standard KNX tool ETS.

ETS project for this device can be donwloaded from:

https://intesis.com/products/ac-interfaces/daikin-gateways/daikin-knx-ac-dk-ac-knx-1

Please consult the README.txt file, located inside the downloaded zip file, to find instructions on how to install the database.

IMPORTANT: Do not forget to select the correct model of AC indoor unit connected to the interface, this is in "Parameters" of the device in ETS.

4. KNX communication objects

Main Objects.

Object #	0
Name	***On/Off [1bit]***
Function	1=On, 0=Off
Description	This object is used to Start (On) and Stop (Off) the AC unit
Access type	Read/Write
Data type ID	1.001

Object #	1
Name	***Mode [1byte]***
Function	0=Aut, 1=Heat, 2=Dry, 3=Fan, 4=Cool
Description	This object is used to monitor the Operation Mode in the AC unit
Access type	Read/Write
Data type ID	5

Object #	2
Name	***DPTHvacContrMode [1byte]***
Function	0=Aut, 1=Heat, 3=Cool, 9=Fan, 14=Dry
Description	This object is used to monitor the Operation Mode in the AC unit
Access type	Read/Write
Data type ID	20.105

Object #	3
Name	***DPT Heat/Cool [1bit]***
Function	0=Cool, 1=Heat
Description	This object is used to monitor the Operation Mode in the AC unit. Writing a 0 sets the Operation Mode to Cool. Writing 1 sets the Operation Mode to Heat. Setting the Operation Mode to Heat (through Mode object or DPTHvacContrMode object) sets this object to 1. Setting the Operation Mode to any other (but Heat) sets this object to 0.
Access type	Read/Write
Data type ID	1.100

Object #	4
Name	***Mode Text [14 bytes]***
Function	14 characters maximum
Description	This object is a text description of the selected Operation Mode
Access type	Read-only
Data type ID	16.001

Object #	14
Name	***Fan [1byte]***
Function	0=Aut, 1=Low, 2=Md1, 3=Md2, 4=Md3, 5=High
Description	This object is used to monitor the Fan speed in the AC unit
Access type	Read/Write
Data type ID	5

Object #	15
Name	***Fan Text [14 bytes]***
Function	14 characters maximum
Description	This object is a text description of the selected Fan speed
Access type	Read-only
Data type ID	16.001

Object #	23
Name	***Swing [1byte]***
Function	0=Off, 1=Vertical Swing, 2=Horizontal Swing, 3=Both
Description	Swing working mode in the AC unit
Access type	Read/Write
Data type ID	5

Object #	24
Name	***Swing Text [14 bytes]***
Function	14 characters maximum
Description	This object is a text description of the selected Swing mode
Access type	Read-only
Data type ID	16.001

Object #	33
Name	***Humidifying Mode [2bytes]***
Function	0=Off, 1=Low, 2=Standard, 3=High, 4=Continuous
Description	Working mode of AC unit's Humidifier (URURU SARARA model only)
Access type	Read/Write
Data type ID	5

Object #	34
Name	***Humidifying Text [14bytes]***
Function	14 characters maximum
Description	This object is a text description of the selected Humidifying mode
Access type	Read-only
Data type ID	16.001

Object #	10
Name	***Set Temperature A.C. [2bytes]***
Function	31..16ºC or 30..10ºC or 32..18ºC depending on operation mode, see AC unit table below
Description	This object controls the temperature setpoint of the AC unit. Value is meant to be used to set the temperature of the AC unit only when "Virtual Temperature Control" parameter is inactive (set to "No"), always can be read and reflects the current setpoint in the AC unit.
Access type	Read/Write
Data type ID	9.001

Object #	27
Name	***Error [1bit]***
Function	0-No Error, 1-Operation Error
Description	This object, when set to 1, indicates either an error in the AC unit or communication failure between AC unit and INKNXDAI001I000.
Access type	Read-only
Data type ID	1.005

Object #	28
Name	***Error Code [2bytes]***
Function	AC Unit Error Code
Description	This object indicates the Error Code of the AC unit. Note that a value of 0 indicates "no error" condition; 555 indicates communication error between INKNXDAI001I000 and the AC Unit. Consult further error codes in the list below.
Access type	Read-only
Data type ID	7

Object #	40
Name	***Save/Execute Scene [1byte]***
Function	For Storing: 128=Scene1, 129=Scene2 For Executing: 0=Scene1, 1=Scene2
Description	This object is used for storing/executing a scene (a scene is a given combination of set values for Operation Mode, Setpoint Temperature, Fan Speed, Swing Mode, and Humidifying Mode in the AC unit). The actual combination of these values is stored in INKNXDAI001I000's eeprom when storing and retrieved from memory and set in the AC unit when executing.
Access type	Write-only
Data type ID	18.001

Object #	41
Name	***Current Scene [1byte]***
Function	0=Scene1, 1=Scene2
Description	This object is used to monitor the active scene (a scene is a given combination of set values for Operation Mode, Setpoint Temperature, Fan Speed, Swing Mode Humidifying Mode in the AC unit).
Access type	Read-only
Data type ID	17.001

Object #	32
Name	***Time Counter [2byte]***
Function	0.. 65535 hours
Description	This object indicates the AC indoor unit's operation time (in hours). Value is stored in INKNXDAI001I000's eeprom. This value can be used for maintenance control of AC indoor unit's filter, as well as for monitoring AC unit's operation time. Set to 0 for clearing its value after filter maintenance.
Access type	Read/Write
Data type ID	7.001

Object #	12
Name	***Set Temperature Virtual [2bytes]***
Function	31..16ºC or 30..10ºC or 32..18ºC depending on operation mode, see AC unit table below
Description	This object is used to set the temperature of the AC unit when the ambient temperature is also supplied from KNX, i.e. from a KNX temperature sensor (thermostat). Value is used by INKNXDAI001I000 only when "Virtual Temperature Control" parameter is active (set to "Yes"). See "Virtual Ambient Temperature" communication object and "Virtual Temperature Control" parameter. Object's value is read from KNX bus on startup.
Access type	Write-only
Data type ID	9.001

Object #	13
Name	***Ambient Temperature Virtual [2bytes]***
Function	10..38ºC
Description	This object is used to indicate to the AC unit the present ambient temperature measured by an external KNX sensor. Value is used by INKNXDAI001I000 only when "Virtual Temperature Control" parameter is active (set to "Yes"). See "Virtual Set Temperature" communication object and "Virtual Temperature Control" parameter. Object's value is read from KNX bus on startup.
Access type	Write-only
Data type ID	9.001

Ancillary Objects.

Object #	29
Name	***Window [1bit]***
Function	0=Open, 1=Close
Description	Indicates to the AC unit the status of the room's window. If opened, after the minutes indicated in the parameter "Minutes Window", the AC unit will be switched off automatically. The AC unit will remain OFF while the window is open. If "Minutes Window" is 0, the AC unit will be switched off immediately. Object's value is read from bus on startup.
Access type	Write-only
Data type ID	1.009

Object #	30
Name	***Device Enable [1bit]***
Function	0=Disabled,1= Enabled
Description	This object indicates wheter the INKNXDAI001I000 is enabled or disabled. Value is stored in INKNXDAI001I000's eeprom. If disabled, the only active object of INKNXDAI001I000 will be this one – the rest of objects will not be operative. To enable INKNXDAI001I000 again, set this object back to 1. Factory value for this object is "1-Enabled".
Access type	Read/Write
Data type ID	1.003

Object #	31
Name	***Remote Control Enable [1bit]***
Function	0=Disabled, 1=Enabled
Description	This object is used to disable/enable the AC indoor unit's remote control. Value is stored in INKNXDAI001I000's eeprom. If enabled, the AC unit can be controlled simultaneously by both, AC unit's remote control and KNX. Factory value for this object is "1-Enabled".
Access type	Read/Write
Data type ID	1.003

Bit Objects for selection of Operation Mode. Only one among these five objects will be active in any moment. If 1 is written in any of them, all others will be forced to zero. If the AC unit changes its Operation Mode, the corresponding object will be activated (1) while all others will be forced to zero.

Object #	5
Name	***Mode Auto [1bit]***
Function	1=Mode Auto Active
Description	Indicates or activates this Operation Mode with a value of 1.
Access type	Read/Write
Data type ID	1.002

Object #	6
Name	***Mode Heat [1bit]***
Function	1=Mode Heat Active
Description	Indicates or activates this Operation Mode with a value of 1.
Access type	Read/Write
Data type ID	1.002

Object #	7
Name	***Mode Dry [1bit]***
Function	1=Mode Dry Active
Description	Indicates or activates this Operation Mode with a value of 1.
Access type	Read/Write
Data type ID	1.002

Object #	8
Name	***Mode Cool [1bit]***
Function	1=Mode Cool Active
Description	Indicates or activates this Operation Mode with a value of 1.
Access type	Read/Write
Data type ID	1.002

Object #	9
Name	***Mode Fan [1bit]***
Function	1=Mode Ventilation Active
Description	Indicates or activates this Operation Mode with a value of 1.
Access type	Read/Write
Data type ID	1.002

Bit Object for Increasing/Decreasing Fan Speed.

Object #	16
Name	***Fanspeed [+/-][1bit]***
Function	0=Decrease, 1=Increase / 0=Up, 1=Down
Description	When the parameter "Fanspeed [+/-] Switching Object Type" is set to DPT_Step: • With every write of 0, the fan speed decreases in one step • Writing 1 increases the speed in one step When the parameter "Fanspeed [+/-] Switching Object Type" is set to DPT_UpDown: • With every write of 0, the fan speed increases in one step • Writing 1 decreases the speed in one step If speed is incremented when the maximum is reached, it changes to automatic. If speed is incremented when the maximum is reached, it changes to low speed. The operation in opposite direction is analogous.
Access type	Write-only
Data type ID	1.007 / 1.008

Bit Objects for Selection of Fan Speed. Only one among these six objects will be active in any moment. If 1 is written in any of them, all others will be forced to zero. If AC unit changes its Fan Speed, the corresponding object will be activated (1) while all others will be forced to zero.

Object #	18
Name	***Fan Low [1bit]***
Function	1=Fan Low
Description	Indicates or activates this Fan speed with a value of 1.
Access type	Read/Write
Data type ID	1.002

Object #	19
Name	***Fan Mid1 [1bit]***
Function	1=Fan Middle1
Description	Indicates or activates this Fan speed with a value of 1.
Access type	Read/Write
Data type ID	1.002

Object #	20
Name	***Fan Mid2 [1bit]***
Function	1=Fan Middle2
Description	Indicates or activates this Fan speed with a value of 1.
Access type	Read/Write
Data type ID	1.002

Object #	21
Name	***Fan Mid3 [1bit]***
Function	1=Fan Middle3
Description	Indicates or activates this Fan speed with a value of 1.
Access type	Read/Write
Data type ID	1.002

Object #	22
Name	***Fan High [1bit]***
Function	1=Fan High
Description	Indicates or activates this Fan speed with a value of 1.
Access type	Read/Write
Data type ID	1.002

Bit Objects for selecting Swing Mode. If AC unit's mode allows doing so, both objects can be active at the same time

Object #	25
Name	***Swing Vertical [1bit]***
Function	1=Enable Vertical Swing (Up/Down) 0=Disable Vertical Swing
Description	Indicates or activates Vertical Swing
Access type	Read/Write
Data type ID	1.001

Object #	26
Name	***Swing Horizontal [1bit]***
Function	1=Enable Vertical Swing (Left/Right) 0=Disable Vertical Swing
Description	Indicates or activates Horizontal Swing
Access type	Read/Write
Data type ID	1.001

Bit Objects for Selection of Humidifying Mode. Only one among these five objects will be active in any moment. If 1 is written in any of them, all others will be forced to zero. If AC unit changes its Fan Speed, the corresponding object will be activated (1) while all others will be forced to zero.
If AC unit changes its Operation Mode (Auto, Heat, Cool, …) Humidifying Mode will be automatically set to Off

Object #	35
Name	***Humidifying Off [1bit]***
Function	1=Humidifying Mode Off
Description	Indicates or activates this Humidifying Mode with a value of 1.
Access type	Read/Write
Data type ID	1.002

Object #	36
Name	***Humidifying Low [1bit]***
Function	1=Humidifying Low
Description	Indicates or activates this Humidifying Mode with a value of 1.
Access type	Read/Write
Data type ID	1.002

Object #	37
Name	***Humidifying Standard [1bit]***
Function	1=Humidifying Standard
Description	Indicates or activates this Humidifying Mode with a value of 1.
Access type	Read/Write
Data type ID	1.002

Object #	38
Name	***Humidifying High [1bit]***
Function	1=Humidifying High
Description	Indicates or activates this Humidifying Mode with a value of 1.
Access type	Read/Write
Data type ID	1.002

Object #	39
Name	***Humidifying Continuous [1bit]***
Function	1=Humidifying Continuous
Description	Indicates or activates this Humidifying Mode with a value of 1.
Access type	Read/Write
Data type ID	1.002

Bit Object for changing Setpoint Temperature.

Object #	11
Name	***Set Temperature [+/-][1bit]***
Function	0=Decrease, 1= Increase / 0=Up, 1=Down
Description	When the parameter "Set Temperature [+/-] Switching Object Type" is set to DPT_Step: • With every write of 0, the temperature setpoint decreases in one degree • Writing 1 increases in one degree When the parameter "Set Temperature [+/-] Switching Object Type" is set to DPT_Step: • With every write of 0, the temperature setpoint increases in one degree • Writing 1 decreases in one degree When the maximum or minimum setpoint temperature is reached it stops increasing or decreasing. Value is meant to be written only when "Virtual Temperature Control" parameter is inactive (set to "No").
Access type	Write-only
Data type ID	1.007 / 1.008

Bit Object for storing scenes.

Object #	42
Name	***Save Scene1 [1bit]***
Function	1=Save Scene 1
Description	Setting this object to 1 forces INKNXDAI001I000 to store in eeprom memory the current set values of Operation Mode, Setpoint Temperature, Fan Speed, Swing Mode and Humidifying Mode for scene 1.
Access type	Write-only
Data type ID	1.002

Object #	43
Name	***Save Scene2 [1bit]***
Function	1=Save Scene 2
Description	Setting this object to 1 forces INKNXDAI001I000 to store in eeprom memory the current set values of Operation Mode, Setpoint Temperature, Fan Speed, Swing Mode and Humidifying Mode for scene 2.
Access type	Write-only
Data type ID	1.002

Bit Objects for executing scenes.

Object #	44
Name	***Execute Scene1 [1bit]***
Function	1=Execute scene 1
Description	Setting this object to 1 forces INKNXDAI001I000 to retrieve from eeprom the values for scene 1, setting up its Operation Mode, Setpoint Temperature, Fan Speed, Swing Mode and Humidifying Mode in the AC unit accordingly. These values should have been saved previously using object *Save Scene1*.
Access type	Write-only
Data type ID	1.002

Object #	46
Name	***Execute Scene2 [1bit]***
Function	1=Execute scene 2
Description	Setting this object to 1 forces INKNXDAI001I000 to retrieve from eeprom the values for scene 2, setting up its Operation Mode, Setpoint Temperature, Fan Speed, Swing Mode and Humidifying Mode in the AC unit accordingly. These values should have been saved previously using object *Save Scene2*.
Access type	Write-only
Data type ID	1.002

Bit objects showing Auto Mode

Nº de Objeto	46
Nombre	***Auto Heat [1bit]***
Función	1=AC Unit is in Heat Mode
Descripción	Indicates this Operation Mode with a value of 1.
Tipo de acceso	Read-only
ID tipo de dato	1.002

Nº de Objeto	47
Nombre	***Auto Cool [1bit]***
Función	1=AC Unit is in Cool Mode
Descripción	Indicates this Operation Mode with a value of 1.
Tipo de acceso	Read-only
ID tipo de dato	1.002

5. Parameters.

Name	***AC Unit type***
Description	Indicates the type of AC indoor unit. Select the model of your AC indoor unit from the list of models available. Factory value is type CONVENTIONAL. Main features for each AC unit type will be shown in a textbox below this parameter
Data type	Enum (8bits); CONVENTIONAL…

Name	***Window minutes***
Description	Minutes to wait before switching the AC unit OFF after receiving the indication of window open. If 0, the AC unit will be switched off immediately. While in OFF, and with window open, if it receives an order to switch ON, the timer will be initialised and the AC unit will be switched OFF after the configured minutes. (0..30 minutes). Factory value is 0.
Data type	Unsigned (8bits); 0..30

Name	***Send object values to KNX on startup***
Description	Indicates if INKNXDAI001I000 will send to KNX the object values indicating AC Unit status at power-up (when KNX bus is plugged to INKNXDAI001I000). Objects indicating AC Unit status are: "Mode", "Fan Speed", "Swing Mode", "Humidifying Mode" and "Set Temperature".
Data type	Enum (8bits); Yes/No

Name	***When window closes go to last state***
Description	Defines behaviour of AC unit once window is closed, after AC unit has been switched OFF as a result of an open window timeout: • If this parameter is set to "Yes", last value that was written from KNX to object "On/Off" will be sent to the AC unit. • If it is set to "No", the AC unit will be left in OFF state until a new ON request is received from KNX.
Data type	Enum (8bits); Yes/No

Name	***Virtual Temperature Control***
Description	Meant to be enabled when you want the temperature provided by a KNX sensor to be the reference ambient temperature for the air conditioner. When enabled, the communication objects "Set Temperature Virtual" and "Ambient Temperature Virtual" are used to provide the setpoint and ambient temperatures respectively from KNX. When enabled, the following formula applies for calculation of real Set Temperature sent to the AC unit: "Set Temperature A.C."= "Set Temperature Virtual" - ("Ambient Temperature Virtual" - "Set Temperature Virtual")/2 When enabled, "Set Temperature A.C." object is meant not to be written, is only for information purposes to know in each moment the real setpoint sent to the air conditioner. When disabled, "Set Temperature Virtual" and "Ambient Temperature Virtual" objects are not present.
Data type	Enum (8bits); Yes/No

Name	***Operating Mode Byte Object Type***
Description	• When "Enumeration" is selected, Mode object is shown and DPTHvacContrMode object is hidden • When "DPT_HvacControlling" is selected, DPTHvacContrMode object is shown and Mode object is hidden • When "Both" is selected, both Mode and DPTHvacContrMode objects are shown
Data type	Enum (8bits); Enumeration/DPT_HvacControlling/Both

Name	***Fanspeed [+/-] Switching Object Type***
Description	Selects data type for Fan Speed [+/-] object: • When "DPT_ Step" is selected, Fan Speed [+/-] object works in Step logic: 0=Decrease, 1=Increase • When "DPT_UpDown" is selected, Fan Speed [+/-] object works in Up/Down logic: 0=Up, 1=Down
Data type	Enum (8bits); DPT_Step/DPT_UpDown

Name	***Set Temperature [+/-] Switching Object Type***
Description	Selects data type for Set Temperature [+/-] object: • When "DPT_ Step" is selected, Set Temperature [+/-] object works in Step logic: 0=Decrease, 1=Increase • When "DPT_UpDown" is selected, Set Temperature [+/-] object works in Up/Down logic: 0=Up, 1=Down
Data type	Enum (8bits); DPT_Step/DPT_UpDown

Name	***Show Device Objects***
Description	Show/Hide bit objects for Window, Device Enable and Remote Control Enable
Data type	Enum (8bits); Yes/No

Name	***Show Mode Bits***
Description	Show/Hide Mode bit objects
Data type	Enum (8bits); Yes/No

Name	***Show Fan Bits***
Description	Show/Hide Fan Speed bit objects
Data type	Enum (8bits); Yes/No

Name	***Show Swing Bits***
Description	Show/Hide Swing Mode bit objects
Data type	Enum (8bits); Yes/No

Name	***Show Humidifying Objects***
Description	Show/Hide Swing Mode objects
Data type	Enum (8bits); Yes/No

Name	***Show Humidifying Bits***
Description	Show/Hide Humidifying Mode bit objects
Data type	Enum (8bits); Yes/No

Name	***Show Scene Objects***
Description	Show/Hide objects for handling scenes
Data type	Enum (8bits); Yes/No

Name	***Show Scene Bits***
Description	Show/Hide bit objects for handing scenes
Data type	Enum (8bits); Yes/No

Name	***Show Auto Details***
Description	Show/Hide Auto bit objects (Heat/Cool)
Data type	Enum (8bits); Yes/No

Name	***Enable Mode/Fan/Swing/Humi. Texts***
Description	Show/Hide text type objects for Mode, Fan, Swing and Humidifying Mode
Data type	Enum (8bits); Yes/No

Name	***Mode Auto Text***
Description	Text description of Auto Mode, to be shown in "Mode Text" communication object.
Data type	String (14bytes)

Name	***Mode Heat Text***
Description	Text description of Heat Mode, to be shown in "Mode Text" communication object.
Data type	String (14bytes)

Name	***Mode Dry Text***
Description	Text description of Dry Mode, to be shown in "Mode Text" communication object.
Data type	String (14bytes)

Name	***Mode Fan Text***
Description	Text description of Fan Mode, to be shown in "Mode Text" communication object.
Data type	String (14bytes)

Name	***Mode Cool Text***
Description	Text description of Cool Mode, to be shown in "Mode Text" communication object.
Data type	String (14bytes)

Name	***Fan Low Text***
Description	Text description of Fan Speed Low, to be shown in "Fan Text" communication object.
Data type	String (14bytes)

Name	***Fan Mid-1 Text***
Description	Text description of Fan Speed Mid-1, to be shown in "Fan Text" communication object.
Data type	String (14bytes)

Name	***Fan Mid-2 Text***
Description	Text description of Fan Speed Mid-2, to be shown in "Fan Text" communication object.
Data type	String (14bytes)

Name	***Fan Mid-3 Text***
Description	Text description of Fan Speed Mid-3, to be shown in "Fan Text" communication object.
Data type	String (14bytes)

Name	***Fan High Text***
Description	Text description of Fan Speed High, to be shown in "Fan Text" communication object.
Data type	String (14bytes)

Name	***Swing Off Text***
Description	Text description of Swing mode "Off", to be shown in "Swing Text" communication object.
Data type	String (14bytes)

Name	***Swing Vertical Text***
Description	Text description of Swing mode "Vertical", to be shown in "Swing Text" communication object.
Data type	String (14bytes)

Name	***Swing Horizontal Text***
Description	Text description of Swing mode "Horizontal", to be shown in "Swing Text" communication object.
Data type	String (14bytes)

Name	***Swing Both Text***
Description	Text description of Swing mode "Both", to be shown in "Swing Text" communication object.
Data type	String (14bytes)

Name	***Humidifying Off Text***
Description	Text description of Humidifying Mode "Off", to be shown in "Humidifying Text" communication object.
Data type	String (14bytes)

Name	***Humidifying Low Text***
Description	Text description of Humidifying Mode "Low", to be shown in "Humidifying Text" communication object.
Data type	String (14bytes)

Name	***Humidifying Standard Text***
Description	Text description of Humidifying Mode "Standard", to be shown in "Humidifying Text" communication object.
Data type	String (14bytes)

Name	***Humidifying High Text***
Description	Text description of Humidifying Mode "High", to be shown in "Humidifying Text" communication object.
Data type	String (14bytes)

Name	***Humidifying Continuous Text***
Description	Text description of Humidifying Mode "Continuous", to be shown in "Humidifying Text" communication object.
Data type	String (14bytes)

6. Specifications

Dimensions:	59 X 36 X 21 mm
Weight:	42 g
KNX current consumption:	5 mA
Operating Temperature:	-25 . . . 60ºC
Stock Temperature:	-40 . . . 85ºC
Isolation voltage:	4000 V

7. AC Unit Types compatibility.

A list of Daikin indoor unit model references compatible with INKNXDAI001I000 and their available features can be found in:

https://www.intesis.com/docs/compatibilities/inxxxdai001xx00_compatibility

8. Error Codes

Error Code KNX Object	Error in Remote Controller	Error category	Error Description
17	A0	Indoor Unit	External protection devices activated
18	A1		Indoor unit PCB assembly failure
19	A2		Interlock error for fan
20	A3		Drain level system error
21	A4		Temperature of heat exchanger (1) error
22	A5		Temperature of heat exchanger (2) error
23	A6		Fan motor locked, overload, over current
24	A7		Swing flap motor error
25	A8		Overcurrent of AC input
26	A9		Electronic expansion valve drive error
27	AA		Heater overheat
28	AH		Dust collector error / No-maintenance filter error
30	AJ		Capacity setting error (indoor)
31	AE		Shortage of water supply
32	AF		Malfunctions of a humidifier system (water leaking)
33	C0		Malfunctions in a sensor system
36	C3		Sensor system of drain water error
37	C4		Heat exchanger (1) (Liquid pipe) thermistor system error
38	C5		Heat exchanger (1) (Gas pipe) thermistor system error
39	C6		Sensor system error of fan motor locked, overload
40	C7		Sensor system of swing flag motor error
41	C8		Sensor system of over-current of AC input
42	C9		Suction air thermistor error
43	CA		Discharge air thermistor system error
44	CH		Contamination sensor error
45	CC		Humidity sensor error
46	CJ		Remote control thermistor error
47	CE		Radiation sensor error
48	CF		High pressure switch sensor
49	E0	Outdoor Unit	Protection devices activated
50	E1		Outdoor uni9t PCB assembly failure
52	E3		High pressure switch (HPS) activated
53	E4		Low pressure switch (LPS) activated
54	E5		Overload of inverter compressor motor
55	E6		Over current of STD compressor motor
56	E7		Overload of fan motor / Over current of fan motor
57	E8		Over current of AC input
58	E9		Electronic expansion valve drive error
59	EA		Four-way valve error
60	EH		Pump motor over current
61	EC		Water temperature abnormal
62	EJ		(Site installed) Protection device activated
63	EE		Malfunctions in a drain water
64	EF		Ice thermal storage unit error
65	H0		Malfunctions in a sensor system
66	H1		Air temperature thermistor error
67	H2		Sensor system of power supply error
68	H3		High Pressure switch is faulty
69	H4		Low pressure switch is faulty
70	H5		Compressor motor overload sensor is abnormal
71	H6		Compressor motor over current sensor is abnormal
72	H7		Overload or over current sensor of fan motor is abnormal
73	H8		Sensor system of over-current of AC input
74	H9		Outdoor air thermistor system error
75	HA		Discharge air thermistor system error
76	HH		Pump motor sensor system of over current is abnormal
77	HC		Water temperature sensor system error
79	HE		Sensor system of drain water is abnormal
80	HF		Ice thermal storage unit error (alarm)
81	F0		No.1 and No.2 common protection device operates.
82	F1		No.1 protection device operates.
83	F2		No.2 protection device operates
84	F3		Discharge pipe temperature is abnormal
87	F6		Temperature of heat exchanger (1) abnormal
91	FA		Discharge pressure abnormal
92	FH		Oil temperature is abnormally high
93	FC		Suction pressure abnormal
95	FE		Oil pressure abnormal
96	FF		Oil level abnormal
97	J0		Sensor system error of refrigerant temperature

98	J1		Pressure sensor error
99	J2		Current sensor error
100	J3		Discharge pipe thermistor system error
101	J4		Low pressure equivalent saturated temperature sensor system error
102	J5		Suction pipe thermistor system error
103	J6		Heat exchanger (1) thermistor system error
104	J7		Heat exchanger (2) thermistor system error
105	J8		Oil equalizer pipe or liquid pipe thermistor system error
106	J9		Double tube heat exchanger outlet or gas pipe thermistor system error
107	JA		Discharge pipe pressure sensor error
108	JH		Oil temperature sensor error
109	JC		Suction pipe pressure sensor error
111	JE		Oil pressure sensor error
112	JF		Oil level sensor error
113	L0		Inverter system error
116	L3		Temperature rise in a switch box
117	L4		Radiation fin (power transistor) temperature is too high
118	L5		Compressor motor grounded or short circuit, inverter PCB fault
119	L6		Compressor motor grounded or short circuit, inverter PCB fault
120	L7		Over current of all inputs
121	L8		Compressor over current, compressor motor wire cut
122	L9		Stall prevention error (start-up error) Compressor locked, etc.
123	LA		Power transistor error
125	LC		Communication error between inverter and outdoor control unit
129	P0		Shortage of refrigerant (thermal storage unit)
130	P1		Power voltage imbalance, open phase
132	P3		Sensor error of temperature rise in a switch box
133	P4		Radiation fin temperature sensor error
134	P5		DC current sensor system error
135	P6		AC or DC output current sensor system error
136	P7		Total input current sensor error
142	PJ		Capacity setting error (outdoor)
145	U0	System	Low pressure drops due to insufficient refrigerant or electronic expansion valve error, etc.
146	U1		Reverse phase, Open phase
147	U2		Power voltage failure / Instantaneous power failure
148	U3		Failure to carry out check operation, transmission error
149	U4		Communication error between indoor unit and outdoor unit, communication error between outdoor unit and BS unit
150	U5		Communication error between remote control and indoor unit / Remote control board failure or setting error for remote control
151	U6		Communication error between indoor units
152	U7		Communication error between outdoor units / Communication error between outdoor unit and ice thermal storage unit
153	U8		Communication error between main and sub remote controllers (sub remote control error) / Combination error of other indoor unit / remote control in the same system (model)
154	U9		Communication error between other indoor unit and outdoor unit in the same system / Communication error between another BS unit and indoor/outdoor unit
155	UA		Combination error of indoor/BS/outdoor unit (model, quantity, etc.), setting error of spare parts PCB when replaced
156	UH		Improper connection of transmission wiring between outdoor and outdoor unit outside control adaptor
157	UC		Centralized address duplicated
158	UJ		Attached equipment transmission error
159	UE		Communication error between indoor unit and centralized control device
160	UF		Failure to carrey out check operation Indoor-outdoor, outdoor-outdoor communication error, etc.
209	60	Others	All system error
210	61		PC board error
211	62		Ozone density abnormal
212	63		Contamination sensor error
213	64		Indoor air thermistor system error
214	65		Outdoor air thermistor system error
217	68		HVU error (Ventiair dust-collecting unit)
219	6A		Dumper system error
220	6H		Door switch error
221	6C		Replace the humidity element
222	6J		Replace the high efficiency filter
223	6E		Replace the deodorization catalyst
224	6F		Simplified remote controller error
226	51		Fan motor of supply air over current or overload
227	52		Fan motor of return air over current / Fan motor of return air overload
228	53		Inverter system error (supply air side)
229	54		Inverter system error (return air side)
241	40		Humidifying valve error
242	41		Chilled water valve error
243	42		Hot water valve error
244	43		Heat exchanger of chilled water error
245	44		Heat exchanger of hot water error
258	31		The humidity sensor of return air sensor
259	32		Outdoor air humidity sensor error
260	33		Supply air temperature sensor error

261	34		Return air temperature sensor error
262	35		Outdoor air temperature sensor error
263	36		Remote controller temperature sensor error
267	3A		Water leakage sensor 1 error
268	3H		Water leakage sensor 2 error
269	3C		Dew condensation error
339	M2		Centralized remote controller PCB error
345	M8		Communication error between centralized remote-control devices
347	MA		Centralized remote-control devices inappropriate combination
349	MC		Centralized remote controller address setting error
555	N/A	INKNXDAI001I000	Error in the communication of INKNXDAI001I000 device with the AC unit

In case you detect an error code not listed, contact your nearest Daikin technical support service fro more information on the error meaning.