

Integration of KNX devices: Data conversion

Concepts

The 'Write' column corresponds to 'W' objects: Device control. The 'Read' column corresponds to 'T' objects: state feedback for the controlled device (indicator).

Installing the device

Example: management of a module that returns a bit (0/1) to the bus and check of another module that will receive a byte (0/255).

We will apply a trigger system to scenarios. The triggers will respond to the state of the property of the module based on the bit. The scenarios will write in the module property based on a byte.

2 options are possible:

• Using 2 devices in Tydom 3.0:

The first has a read property whose DPT is on a bit: a detector, a switch or a light for example.

The second has a write property whose DPT is on a byte.

With this solution, the default display of widgets in Design Studio will not necessarily be consistent and will depend on the device selected.

• Use one generic KNX device by adding a property and indicating the associated DPTs. This solution is retained as the device will appear as a generic device in Design Studio.

ETS programming:



Create 2 group addresses (the example uses arbitrary addresses):

- 1/1/1: related to the 'W' object writing the data on 1 bit.
- 2/1/0: related to the 'T' object feeding a state back to 1 bit.

Interfacing group addresses and properties in Tydom 3.0 :

Function		Object	Property
Write value 2 or 3	'W' type object on 1 byte DPT 5.010 for example		Proprietës: ETS X Commande Etriture Lecture 1/1/1 (P .
Read value 0 or 1	'T' type object on 1 byte DPT 1.002 for example		Propriétés : Eco Commande ETS X Ecriture Lecture 2/1/0



Programming a device:

Create a generic device:







• Add a property:



• Change the DPTs to match the KNX objects:

Devises	11 22					
Devices 7					Properties :	
and the second s					Command	ets 🗙
Heating/Cooling				The second secon	Write	Read
1-40 Heating/ Cooning	Default				1/1/1	2/1/0
Lighting and sockets 2				1 AV	Dpt 5.xxx (8-bit unsigned value) 🕨	Dpt 1.xxx (1-bit)
	1 A 2	Label :			5.010 counter pulses (0255) 🕨	1.002 boolean 🕨 🕨
Motorization 3		Device (Generic)			loit	Refresh
		Description :				When connect and follow
Remote control					Min : 0	·
					Max 255	F History
NOK					Step - 20	3 year(s) ▶
Air treatment		Status :			Step +: 20	
	Sol		(?)	•	Edge	Unit
	AN				Rising Falling	? ►
Device (Generic) 1 +	A.			▶ 🗶		
Water treatment		Room :				
Measures			?	► +		
Monitoring 1						
Automatism						
	/					
		0				



• Create triggers:







Data conversion

28/08/2015



Add conditions:

Conditions	
Something is open	\$ +
New condition	÷



Data conversion

28/08/2015



 \Rightarrow Select conditions in the triggers:

Conditions Value 0	Current Site : Malson	Triggers manager		1	\otimes
	Trigger : Déclenche	eur	Used in : No scenario		
	Value 0 Each time Device (Generic) (Cuisi	ine) - Command = TRUE			
New condition +					

Create scenarios:



Data conversion

Automation

28/08/2015

Scenarios	3 🕂
Trigger	3 +
Alerts	÷
Automatons	1 +
Variables	÷



Current Site : Maison



Admin Scenario (2) Trigger : Reception value	Label : Scenario (2) Description :
АЛТО 💿 ৈ 😑	
	Run mode if the scenario is already running :
	Normal Restart If the scenario is already running, the launch command will be rejected.
	Triggers :
	Reception value 1



Data conversion

28/08/2015

Admin Scenario Trigger : Reception value	Admin Scenario (2) Trigger : Reception value	Label : Scenario Description :
Scenario 2		Run mode if the scenario is already running : Normal Restart If the scenario is already running, the launch command will be rejected. Triggers :
Image: A transformed and tr		Reception value 0
		Θ

⇒ Edit scenarios:





Data conversion

28/08/2015





➡ The word 'AUTO' on the scenario's thumbnail must be illuminated for the trigger to run the scenario whenever the value is received.