Common ZigBee Cluster Specification
Danfoss eTRV

This ZigBee cluster specification is based of the ZigBee cluster library specification.
If nothing explicit is mentioned below the commands, clusters and attributes are implemented as per ZigBee Specification

Revision History:
10-09-2020 - KJE-AMO - all changes for Ally 1.08 reviewed and confirmed
11-12-2020 - AMO - Corrected Room Sensor automatic offset functionality description
09-04-2021 - Reviewed at Ally 1.12 release. Corrected typo+formulation for attributes with not configurable reporting to "fixed"
08-11-2021 - AMO - Ally 1.16 added
08-11-2021 - AMO - Ally 1.18 added, no difference in Zigbee interface, bug fix.
13-12-2022 - AMO - Updated to support 2 Image Types: 0x0100 - Ally 1.20 and 0x0120 - Ally 0.20

Latest Official FW Releases:
- Danfoss Ally Radiator Thermostat with Image Type ID 0x0100: **01.20**
- Danfoss Ally Radiator Thermostat with Image Type ID 0x0120: **00.20**

	1. Commands				
Profile	(0x0104) Home Automation				
DeviceID	(0x0301)Thermostat				
	Command Id	**Command Name**	**M/O**	**Direction**	**Description**
General	**General command frames**				
General	0x00	Read Attributes	M	client->server	
General	0x02	Write Attribute	M	client->server	A write to a standard attribute, where another attribute defines it range. Writing outside this range will result in INVALID_VALUE A write to a standard attribute, with restricted values. Writing to the restricted values will result in INVALID_VALUE. If the device cannot support the supplied value, the status field of the corresponding write attribute status record SHALL be set to INVALID_VALUE
General	0x06	Configure Reporting	O	client->server	
General	0x08	Read Reporting Configuration	O	client->server	
General	0x0A	Report Attributes	O	server->client	
General	0x0C	Discover Attributes	O	client->server	
0x0000	**Basic Cluster (0x0000)**				
0x0000	-> no commands are received or generated				
0x0001	**Power Configuration Cluster (0x0001)**				
0x0001	-> no commands are received or generated				
0x0003	**Identify Cluster (0x0003)**				
0x0003	0x00	Identify	M	client->server	
0x0003	0x01	Identify Query	M	client->server	
0x0003	0x00	Identify Time Query Response	M	server->client	
0x000A	**Time Server Cluster(0x000A)**				
0x000A	-> no commands are received or generated				
0x0019	**OTA Update Cluster (0x0019)**				
0x0019	0x00	Image Notify	M	server->client	
0x0019	0x01	Query Next Image Request	M	client->server	
0x0019	0x02	Query Next Image Response	M	server->client	check added in QueryNextImageResponse device will not initiate OTA if battery low
0x0019	0x03	Image Block Request	M	client->server	
0x0019	0x05	Image Block Response	M	server->client	
0x0019	0x06	Upgrade End Request	M	client->server	
0x0019	0x07	Upgrade End Response	M	server->client	
0x0019	0x08	Query specific file request		client->server	
0x0019	0x09	Query specific file response		server->client	
0x0020	**Poll control Cluster (0x0020)**				
0x0020	0x00	Check in	M	server->client	
0x0020	0x00	Check in Response	M	client->server	
0x0020	0x01	Fast Poll Stop	M	client->server	
0x0201	**Thermostat Cluster (0x0201)**				

0x0201	0x00	Setpoint Raise/Lower	M	client->server	
0x0201	0x01	SetWeeklySchedule	O	client->server	Vacation day is not used, the schedule is set according to Zigbee Specifications (please refer to https://zigbeealliance.org/wp-content/uploads/2019/12/07-5123-06-zigbee-cluster-library-specification.pdf section 6) NOTE: The events within one day must be ordered chronologically
0x0201	0x02	GetWeeklySchedule	O	client->server	Can be used to verify that the schedule is stored in the eTRV (the eTRV does not modify the schedule itself) Note! The schedule information is lost after power cycle or OTA
0x0201	0x03	ClearWeeklySchedule	O	client->server	Deletes all schedule events
0x0201	0x40	Setpoint Command	O	client->server	Setpoint command sends: setpointType (enum8) + HeatingSetpoint (16bit) if setpointType = 1 the actuator will make a large movement to minimize reaction time to UI. If setpointType = 0 the behavior will be the same as setting the attribute "Occupied Heating Setpoint" to the same value. if setpointType = 2 displayed setpoint is not effected but regulated setpoint will change. can be used for Forecast functionality
0x0201	0x41	Danfoss Modify command	O	client->server	test purpose
0x0201	0x42	PreHeatCommand	O	client->server	Request eTRV to enter pre-heat if in schedule mode and if other eTRV in same room has triggeed pre-heat. command needs two parameter enum8 = 0 = force preheat. Other values for future needs. Second parameter uint32 is timestamp received from other eTRV in the same room that went into preheat.
0x0204	**Thermostat User Interface Cluster (0x0204)**				
0x0204	-> no commands are received or generated				
0x0B05	**Diagnostics Cluster (0x0B05)**				
0x0B05	-> no commands are received or generated				

2. Attributes

	Profile	(0x0104) Home Automation												
	DeviceID	(0x0301)Thermostat												
Cluster:	**Attribute ID**	**Name**	**Data Type**	**R/W**	**M/O**	**Range Min**	**Range Max**	**Reporting**	**Save**	**Def. Min Interval**	**Def. Max Interval**	**Report. Change**	**Default**	**Description**
0x0000	**Cluster:**	**(0x0000) Basic**												
0x0000	0x0000	ZCL Version	uint8	R	M	0x00	0xFF	No	No	1	65534	0	0x03	
0x0000	0x0001	Application Version	uint8	R	O	0x00	0xFF	Fixed	No	1	65534	0	0x00	Since this is only 8 bits it will contain only "minor minor" from EFR version REF: 0x4000 SWBuildID Reporting will trigger at re-join
0x0000	0x0002	Stack Version	uint8	R	O	0x00	0xFF	No	No	1	65534	0	0	Ember ZNet released versions: 0 - unknown/invalid/previous 1 - 5.10.1.0 2 - 6.0.0.0 3 - 6.1.0.0 4 - 6.2.3.0 5 - 6.3.0.0 6 - 6.3.1.0 7 - 6.4.1.0 8 - 6.5.5.0
0x0000	0x0003	HW Version	uint8	R	O	0x00	0xFF	No	No	1	65534	0	0x5	Low nibble of attribute contains Top PCB hardware minor low nibble revision. High nibble of attribute contains Side PCB hardware minor low nibble revision.
0x0000	0x0004	Manufacturer Name	string	R	O			No	No	1	65534		"Danfoss"	
0x0000	0x0005	Model Identifier	string	R	O			No	No	1	65534		"eTRV0100"	The number after eTRV is the same as image type ID
0x0000	0x0006	Date Code	string	R	O			No	Yes	1	65534		YYYYMMDD	written at production time
0x0000	0x0007	Power Source	enum8	R	M			No	No	1	65534		0x03	03 = "Battery"
0x0000	0x0010	LocationDescription	string (0-	R/	O			No	Yes	1	65534		Empty string (0)	Maximum length: 16 characters.
0x0000	0x4000	SW Build ID	string (16)	R	O			No	No	1	65534			SW build ID will contain top pcba (radio module) sw version, side pcba (application module) sw version and stack version in a string. "numbers" will always stay in the same location. Unified version string format 16 bytes for, formatted VV.SS.EEEE< vv.ss> (version, sub-version, extension), with leading zeros, containing application (main/host controller) version andadditional (network) co-processor version. VV.SS will be major and minor for the application module, "E1""E2""E3""E4" is meant for extension. To combine everything, the HS-816 - 0x0002 Stack Version , will be placed here (in E3 and E4) The rest of the extension shall remain "00" (for now) vv.ss will be major minor for the radio module. The minor info will be mapped in HS-815 - 0x0001 Application version Examples: "00.23.0005 00.29" (Host, stack and network co-processor) => PSoC: 00.23 ; => Stack Version: 5 ; => EFR: 00.29
0x0000	0xFFFD	Cluster revision	uint16					No	No	1	65534	0	0x0001	
0x0001	**Cluster:**	**(0x0001) Power Configuration**												
0x0001	0x0020	BatteryVoltage	uint8	R	O	0	32	No	No	1	65534		0x00	in decivolt according to Zigbee Specifications
0x0001	0x0021	BatteryPercentageRemaining	uint8	R	O	0	255	Yes	No	3600	43200	2	0xFF	in units of 0.5% - range is to 0-200
0x0001	0xFFFD	Cluster revision	uint16					No	No	1	65534	0	0x0001	
0x0003	**Cluster:**	**(0x0003) Identify**												
0x0003	0x0000	Identify Time	uint16	R/	M	0x0000	0xFFFF	No	No				0x0000	Counts down the remaining time in Identify Me state
0x0003	0x4000	Identification button	Boolean	R	O	0	1	Yes	No	2	0		0x00	Activating the button on the eTRV will result in reporting "0x01" and after 3 sec "0x00" (triggered at "rising edge")
0x0003	0xFFFD	Cluster revision	uint16					No	No	1	65534	0	0x0001	
0x000A	**Cluster:**	**(0x000A) Time**												
0x000A	0x0000	Time	UTC	RW	M	0x00000000	0xFFFFFFFE	No	No	1	65534		0x2000E3B0 (Jan 5th 2017, 11:00 AM)	This cluster provides a basic interface to a real-time clock. The clock time MAY be read and also written, in order to synchronize the clock (as close as practical) to a time standard. This time standard is the number of seconds since 0 hrs 0 mins 0 sec on 1st January 2000 UTC (Universal Coordinated Time. The default value is synchronized at boot where the side MCU sends it in DATETIME format and the top ZigBee MCU converts it to UTC
0x000A	0x0001	TimeStatus	map8	RW	M	0x00	0x0F	No	No	1	65534		0x00	In Time Status attribute only a write to bit "1" (Synchronized) will result in a change. A write to any of the other specified bit, bit "0", "2" and "3". Will not result in a change of the attribute. A write to a bit above "3" will result in an invalid value. It is the responsibility of the ZigBee coordinator, after writing to the "Time" attribute, to update "Time Status" "synchronized" bit to "1"
0x000A	0x0002	TimeZone	int32	RW	O	0xFFFEAE80	0x00015180	No	Yes	1	65534	0	0	Time zone offset in seconds without DST
0x000A	0x0003	DstStart	uint32	RW	O	0x00000000	0xFFFFFFFE	No	Yes	1	65534	0	0	Must be before DstEnd and in the same year
0x000A	0x0004	DstEnd	uint32	RW	O	0x00000000	0xFFFFFFFE	No	Yes	1	65534	0	0	Must be after DstStart and in the same year
0x000A	0x0005	DstShift	int32	RW	O	0xFFFEAE80	0x00015180	No	Yes	1	65534	0	3600	Time is kept by side MCU, so even if this is set differently from 3600 (1 hour) the DST shift will always be 1 hour or 0
0x000A	0x0007	LocalTime	uint32	R	O	0x00000000	0xFFFFFFFE	No	No	1	65534	0	0	Time+Timezone+DST
0x000A	0x0008	LastSetTime	UTC	R	O	0x00000000	0xFFFFFFFE	No	No	1	65534		0x2000E3B0	
0x000A	0xFFFD	Cluster revision	uint16					No	No	1	65534	0	0x0001	
0x0019	**Cluster:**	**(0x0019) OtA Bootloading**												
0x0019	0x0000	UpgradeServerID	IEEE address	R	M			No	Yes	1	65534		0xFFFFF…	
0x0019	0x0001	FileOffset	uint32	R	O			No	Yes	1	65534	0	0xFFFFFFFF	
0x0019	0x0002	CurrentFileVersion	uint32	R	O			No	Yes	1	65534	0	0xFFFFFFFF	Device Firmware where: AB.CD (build.release) - e.g. 01.13 (EFR sw version) = 0x010D example: 0x0000010D
0x0019	0x0003	CurrentZigBeeStackVersion	uint16	R	O			No	Yes	1	65534	0	0xFFFF	0x0002 = ZigBee Pro
0x0019	0x0004	DownloadedFileVersion	uint32	R	O			No	Yes	1	65534	0	0xFFFFFFFF	Is written at start OTA upgrade and deleted right after OTA upgrade successful
0x0019	0x0005	DownloadedZigBeeStackVersion	uint16	R	O			No	Yes	1	65534	0	0xFFFF	Is written at start OTA upgrade and deleted right after OTA upgrade successful
0x0019	0x0006	ImageUpgradeStatus	enum8	R	M			No	Yes	1	65534		0x00	
0x0019	0x0007	Manufacturer ID	uint16	R	O			No	Yes	1	65534	0	0x1246	"Danfoss" = 0x1246 (ZigBee Alliance Manufacture Code ID)
0x0019	0x0008	Image Type ID	uint16	R	O			No	Yes	1	65534	0	0x0100	
0x0019	0x0009	MinimumBlockPeriod	uint16	R	O			No	Yes	1	65534	0		
0x0019	0x000A	Image Stamp	uint16	R	O			No	Yes	1	65534	0		
0x0019	0x000B	Upgrade Activation Policy	enum8	R	O			No	No	1	65534	0	0x00	
0x0019	0xFFFD	Cluster revision	uint16					No	No	1	65534	0	0x0001	
0x0020	**Cluster:**	**(0x0020) Poll Control**												
0x0020	0x0000	Check-in Interval	uint32	R/W	M	see attribute 0x0004	0x006E0000	No	Yes	1	65534	0	0x000004B0 (1200)	Unit: seconds

0x0020	0x0001	Long Poll Interval	uint32	R	M	see attribute 0x0005	0x006E0000	No	Yes	1	65534	0	0x0000001C (28)	Unit: quarterseconds
0x0020	0x0002	Short Poll Interval	uint16	R	M	0x0001	0xFFFF	No	Yes	1	65534	0	0x0002	
0x0020	0x0003	Fast Poll Timeout	uint16	R/W	M	0x0001	see attribute 0x0006	No	Yes	1	65534	0	0x0028 (40)	
0x0020	0x0004	Check-in Interval Min	uint32	R	O			No	Yes	1	65534	0	0x000000F0 (240)	
0x0020	0x0005	Long Poll Interval Min	uint32	R	O			No	Yes	1	65534	0	0x0000001C (28)	
0x0020	0x0006	Fast Poll Timeout Max	uint16	R	O			No	Yes	1	65534	0	0x0050 (80)	
0x0020	0xFFFD	Cluster revision	uint16					No	No	1	65534	0	0x0001	
0x0201	**Cluster:**	**(0x0201) Thermostat**												
0x0201	0x0000	Local Temperature	Int16	R	M	0x954D	0x7FFF	Yes	No	300	3600	10	0x8000	Unit: Centigrades
0x0201	0x0003	absMinHeatSetpointLimit	Int16	R	O	0x954D	0x7FFF	No	No	1	65534	0	0x01F4 (500)	Manufacturer specific: absolute minimum temperature in centigrades
0x0201	0x0004	absMaxHeatSetpointLimit	Int16	R	O	0x954D	0x7FFF	No	No	1	65534	0	0x0DAC (3500)	Manufacturer specific: absolute maximum temperature centigrades
0x0201	0x0008	PIHeatingDemand	uint8	R	O	0x00	0x64	Yes	No	300	43200	1		Level of heating demanded by the PI loop in percent 0: when the thermostat is in "off"
0x0201	0x0012	OccupiedHeating Setpoint	Int16	R/W	M			Yes	Yes	1	43200	1	0x834 (2100)	"official" room setpoint directly displayed on LCD Range: 0x0015 MinHeatSetpointLimit to 0x0016 MaxHeatSetpointLimit
0x0201	0x0015	MinHeatSetpointLimit	Int16	R/W	O			Fixed	Yes	1	65534	0	0x01F4 (500)	Range: 0x0003 absMinHeatSetpointLimit to 0x0016 MaxHeatSetpointLimit
0x0201	0x0016	MaxHeatSetpointLimit	Int16	R/W	O			Fixed	Yes	1	65534	0	0x0DAC (3500)	Range: 0x0015 MinHeatSetpointLimit to 0x0004 absMaxHeatSetpointLimit
0x0201	0x001B	Control Sequence of Operation	enum8	R/	M	0x02	0x02	No	No	1	65534		0x02	Heating Only (0x02).
0x0201	0x001C	System Mode	enum8	R/W	M	0x04	0x04	No	Yes	1	65534		0x04	0x04: Heating control active Everything else rejected with INVALID_VALUE
0x0201	0x0020	Start of Week	enum8	R	O			No	No	1	65534	0	0x01	Monday
0x0201	0x0021	Number of Weekly transitions.	uint8	R	O			No	No	1	65534	0	42	"= NumberOfDailyTransitions * 7 days"
0x0201	0x0022	Number of Daily transitions.	uint8	R	O			No	No	1	65534	0	6	
0x0201	0x0025	Thermostat programming operation mode.	map8	R/W	O	0	0xFF	Fixed	No	1	65534	0	0b00000000	Bit 0 = Simple setpoint (0) or schedule (1)
0x201	0x0030	Setpoint Change Source	enum8	R	O	0x00	0x02	Yes	No	1	0	0		0x00: Manual setpoint by User. 0x01: Schedule setpoint change 0x02: Setpoint change by external Attribute Write or Setpoint Command
0x0201	0x4000	eTRV Open Window Detection	enum8	R	O	0x00	0x04	Yes	No	60	43200		0x00	0x00: Quarantine 0x01: Windows are closed 0x02: Hold ,Windows are maybe about to open 0x03: Open window detected 0x04: In window open state from external, but detected closed locally
0x0201	0x4003	External Open Window Detected	boolean	R/W	O	0x00	0x01	Fixed	No	1	65534		0x00	0x00: Windows are closed 0x01: Windows are opened
0x0201	0x4010	Exercise day of week	enum8	R/W	O	0x00	0x07	No	Yes	1	65534		0x04	Range 0-7 0 = Sunday, 1 = Monday, … 6 = Saturday, 7 = undefined
0x0201	0x4011	Exercise trigger time	uint16	R/W	O	0	1439	No	Yes	1	65534	0	0x0294 (660)	Range 0 to 1439 Minutes since midnight
0x0201	0x4012	Mounting mode active	boolean	R	O	0	1	Yes	No	1	0		0x00	0x00: Mounted 0x01: Not mounted (after factory reset) Default is 0, but overwritten to actual status at Init.
0x0201	0x4013	Mounting mode control	boolean	R/W	O	0	1	Fixed	No	1	65534		0x00	0x00 Go to mounting mode (the eTRV can now be mounted on a valve) 0x01 Go to Mounted posittion (the eTRV now act as if it's mounted on a valve)
0x0201	0x4014	eTRV Orientation	boolean	R/W	O	0	1	Fixed	No	1	65534		0x00	0x00: Horizontal (Default) 0x01: Vertical Default is 0, but overwritten to value from production configuration at Init.
0x0201	0x4015	External Measured Room Sensor	Int16	R/W	O	0x8000	0x7FFF	No	No	1	65534	0	0xE0C0 (-8000)	Depending on 0x4016: 0x4016 FALSE: Recommended to be received from Gateway at least every 3 hours but not more often than every 30 minutes @ every 0,1K change After 3 hours the function is disabled and goes back to standard mode 0x4016 TRUE: At least every 30 minutes but not more often than every 5minutes @ every 0,1K change for covered radiators (after 35 minutes the function is disabled and goes back to standard mode) The value -8000 disables the function
0x0201	0x4016	Radiator Covered	boolean	R/W	O	0	1	Fixed	Yes	1	65534		0	FALSE = Auto Offset Mode for Exposed Radiators TRUE = Room Sensor Mode (allows Covered Radiators)
0x0201	0x4020	Control algorithm scale factor	uint8	R/W	O	1	255	Fixed	Yes	1	65534	0	1	Range 1-10 (lower 4 bit allocated to scale factor) Scale factor of setpoint filter timeconstant ("aggressiveness" of control algorithm) 1=5min(Quick) ... 5=30min(Moderate) ... 10=80min(Slow). Bit4=Quick open feature disable. 1=disable. 0=enable
0x0201	0x4030	Heat Available	boolean	R/W	O	0	1	Fixed	No	1	65534		0x00	0x00 No heat available 0x01 Heat avaliable Default is 0, but overwritten to actual Control value at Init. (by default the heat is considered on if the gatway does not send any info about that)
0x0201	0x4031	Heat Supply Request	boolean	R	O	0	1	Yes	No	60	43200		0x00	0x00 No heat request 0x01 Heat request Default is 0, but overwritten to actual status at Init.
0x0201	0x4032	Load Balancing Enable	boolean	R/W	O	0	1	Fixed	No	1	65534		0x01	0x00 Load balancing is disable and thermostat act as stand alone thermostat 0x01 Load balancing is enabled and thermostat expected to receive loads from all thermostats in room
0x0201	0x4040	Load Radiator Room Mean	Int16	W	O	0x8000	0x7FFF	Fixed	No	1	65534	0	0xE0C0 (-8000)	Mean radiator load for room calculated by gateway
0x0201	0x404A	Load estimate on this radiator	Int16	R	O	0x954D	0x7FFF	Yes	No	60	3600	50	0xE0C0 (-8000)	
0x0201	0x404B	Regulation SetPoint Offset	Int8	R/W	O	0xE7	0x19	No	No	1	65534	0	0x00	in steps of 0.1°C. The range of this offset is –2.5 °C to +2.5 °C (0xE7 … 0x19).
0x0201	0x404C	Adaptation run control	enum8	R/W	O	0x00	0x02	Fixed	No	1	65534		0x00	1=Initiate Adaptation run 2=cancel Adaptation run
0x0201	0x404D	Adaptation run status	bitmap8	R	O	0x00	0xFF	Yes	No	60	43200		0x00	bit0=Adaptation run in progress bit1=Valve Characteristic found bit2=Valve Characteristic lost
0x0201	0x404E	Adaptation run settings	bitmap8	R/W	O	0x00	0x01	No	No	1	65534		0x00	1=Automatic adaptation run enabled (the one during the night)
0x0201	0x404F	Preheat Status	boolean	R	O	0	1	Yes	No	60	0		0x01	0x00 no preheat. 0x01 pre-heat running. Specific for pre-heat in Zigbee Weekly Schedule mode
0x0201	0x4050	Preheat Time	uint32	R	O	0x00000000	0xFFFFFFFF	Yes	No	60	0	1	0x00000000	Time stamp related to Preheat during schedule
0x0201	0x4051	Window Open Feature ON/OFF	boolean	R/W	O	0	1	Fixed	Yes	1	65534		0x01	0x00: window open feature OFF. 0x01: window open feature ON.
0x0201	0xFFFD	Cluster revision	uint16					No	No	1	65534	0	0x0001	
0x0204	**Cluster:**	**(0x0204) Thermostat UI Configuration**												

0x0204	0x0000	TemperatureDisplayMode	enum8	R/W	M	0x00	0x00	No	No	1	65534		0x00	0x00 = °C 0x01 = °F Not supported!
0x0204	0x0001	KeypadLockout	enum8	R/W	M	0x00	0x05	Fixed	Yes	1	65534	0	0x00	Range: 0 to 5 0x00 = no lockout 0x01 to 0x05 = lockout (child lock)
0x0204	0x4000	Viewing Direction	enum8	R/W	O	0x00	0x01	Fixed	Yes	1	65534	0	0x00	Range: 0 to 1 0x00 = viewing direction 1 0x01 = viewing direction 2 Default is 0, but overwritten to value from production configuration at Init
0x0204	0xFFFD	Cluster revision	uint16					No	No	1	65534	0	0x0001	
0x0B05	**Cluster:**	**(0x0B05) Diagnostic**												
0x0B05	0x0000	Number of resets	uint16	R	O	0x0000	0xFFFF	No	No	1	65534	0	0x00	
0x0B05	0x011B	Average mac retry per aps message sent	uint16	R	O	0x0000	0xFFFF	No	No	1	65534	0	0x00	A counter that is equal to the average number of MAC retries needed to send an APS message
0x0B05	0x011C	LastMessageLQI	uint8	R	O	0x00	0xFF	No	No	1	65534	0	0x00	The Link Quality Indicator is a value between 0 and 255 where 0 indicates the worst possible link and 255 indicates the best possible link.
0x0B05	0x011D	LastMessageRSSI	int8	R	O	0x00	0xFF	No	No	1	65534	0	0x00	This is the receive signal strength indication (in dBm) for the last message received.
0x0B05	0x4000	SW error code	bitmap16	R/W	O	0x0000	0xFFFF	Yes	No	60	43200		0x00	Writing "0" will act as a error reset command, but Error codes auto clear when error recovered, no need to clear from external. E12 error only show error if lost coordinator more than 2 minutes and auto-clear on rejoin
0x0B05	0x4001	Wake time avg	uint32	R	O	0x0000	0xFFFF	No	No	1	65534	0	0x00	Debug
0x0B05	0x4002	Wake time max duration	uint32	R	O	0x0000	0xFFFF	No	No	1	65534	0	0x00	Debug
0x0B05	0x4003	Wake time min duration	uint32	R	O	0x0000	0xFFFF	No	No	1	65534	0	0x00	Debug
0x0B05	0x4004	Sleep Postponed count avg	uint32	R	O	0x0000	0xFFFF	No	No	1	65534	0	0x00	Debug
0x0B05	0x4005	Sleep Postponed count max	uint32	R	O	0x0000	0xFFFF	No	No	1	65534	0	0x00	Debug
0x0B05	0x4006	Sleep Postponed count min	uint32	R	O	0x0000	0xFFFF	No	No	1	65534	0	0x00	Debug
0x0B05	0x4010	Motor step counter	uint32	R	O	0x0000	0xFFFFFFFF	Yes	No	3600	43200	1000		Number of motor step run since production Resolution = 250 steps in Zigbee interface
0x0B05	0x4020	Data Logger	octet string(50)	R/W	O			Yes	No	1	0			Debug Length="50"
0x0B05	0x4021	Control Diagnostics	octet string(30)	R	O			Yes	No	60	0	0		Debug Length="30"
0x0B05	0x4022	Control Diagnostics Frequency	uint16	R/W	O	0x0000	0xFFFF	Fixed	No	1	65534		0x0000	Frequency of analog data and ON/OFF. 0=disable. 1-XX enable logging and minute resolution filter of analog parameters.
0x0B05	0x4022	Control Diagnostics Frequency	uint16	R/W	O	0x0000	0xFFFF	Fixed	No	1	65534		0x0005	Frequency of analog data and ON/OFF. 0=disable. 1-XX enable logging and minute resolution filter of analog parameters.
0x0B05	0xFFFD	Cluster revision	uint16					No	No	1	65534	0	0x0001	