EnOcean Equipment Profiles

REVISION HISTORY

Ver.	Editor	Change	Date
2.6.8	NM	Last xml edition of the EEP-Specification	Dec 31, 2017

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D2-05: Blinds Control for Position and Angle

Submitter: AWAG Elektrotechnik AG

Description
The protocol is intended for commissioning as well as for operation of a blind actuator that supports control of the vertical position as well as the rotation angle of the slats.

Data exchange
Direction: bidirectional
Addressing: unicast (ADT) & broadcast
Communication trigger: event-triggered or upon query
Communication interval: TYPE 00,01: heartbeat (off or 30 s or 3 min), TYPE 02: event-triggered

Trigger event TYPE 00,01:
a) status change (alarm, blockage, deblockage)
b) position change > 10 % of range
c) end position reached (0% or 100%)
d) heartbeat
Trigger event TYPE 02:
request, manual change (position, angle)

Tx delay: n/a
Rx timeout: n/a

Teach-in
Teach-in method: Universal teach-in

Security
Encryption supported: no
Security level format: n/a

EEP Family Table
Each TYPE has to support all telegrams and parameters marked in its column.

Command Overview	Type 0x00	Type 0x01	Type 0x02
No. of output channels	1	4	1
Go to Position and Angle	X	X	X
Stop	X	X	X
Query Position and Angle	X	X	X
Reply Position and Angle	X	X	X
Set parameters	X	X	-

Parameter Overview	Type 0x00	Type 0x01	Type 0x02
Vertical position	X	X	X
Rotation angle	X	X	X
Repositioning	X	X	X
Blockage mode	X	X	X
Alarm mode	X	X	-
Set vertical, 5 sec ... 5 min	X	X	-
Set rotation, 0 ... 2.54 sec	X	X	-
Set Alarm Action	X	X	-

RORG	D2	VLD Telegram
FUNC	05	Blinds Control for Position and Angle
TYPE	00	Type 0x00

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CMD 1 - Go to Position and Angle

Once the actuator is configured either by the "Set Parameters" command or through manual configuration (using local buttons) the position of the blinds can be controlled with this command.
When the actuator is set to "blockage" mode, neither local nor central positioning and configuration commands will be executed. This mode is intended for putting the device temporarily out of service, e.g. for a maintenance operation.
When the actuator is set to the "alarm" mode neither local nor central positioning and configuration commands will be executed. Before entering the "alarm" mode, the actuator will execute the "alarm action" as configured by the "Set parameter" command.
When this command is sent with the "deblockage" option, the actuator terminates the "alarm" or "blockage" mode and enters the normal mode.

Exemplary illustration of data bytes 0 ... 3:

Command ID 01 (CMD)

	DB_3								DB_2								DB_1								DB_0							
DB_3.BIT_7 ← 0	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0
Bit Offset: 0 → 31	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	POS								ANG								REPO					LOCK			CHN				CMD			

Offset	Size	Data	ShortCut	Description	Valid Range	Scale	Unit
0	1	Not Used (= 0)					
1	7	Position	POS	Vertical position	Enum: 0...100: 0...100 % 127: Do not change		
8	1	Not Used (= 0)					
9	7	Angle	ANG	Rotation angle	Enum: 0...100: 0...100 % 127: Do not change		
16	1	Not Used (= 0)					
17	3	Repositioning	REPO	How to adjust the internal positioning tracker before going to the new position	Enum: 0: Go directly to POS/ANG 1: Go up (0%), then to POS/ANG 2: Go down (100%), then to POS/ANG 3 ... 7: Reserved		
20	1	Not Used (= 0)					
21	3	Locking modes	LOCK	Set/reset locking modes	Enum: 0: Do not change 1: Set blockage mode 2: Set alarm mode 3 ... 6: Reserved 7: Deblockage		
24	4	Channel	CHN	Channel address	Enum: 0: Channel 1 1: Channel 2 2: Channel 3 3: Channel 4 15: All channels		
28	4	Command ID	CMD	Command identifier	Enum: 1: Goto command		

CMD 2 - Stop

This command immediately stops a running blind motor. It has no effect when the actuator is in "blockage" or "alarm" mode, i.e. it will not stop an eventual "go up" or "go down" alarm action.

Offset	Size	Data	ShortCut	Description	Valid Range	Scale	Unit
0	4	Channel	CHN	Channel address	Enum: 0: Channel 1 1: Channel 2 2: Channel 3 3: Channel 4 15: All channels		
4	4	Command ID	CMD	Command identifier	Enum: 2: Stop command		

CMD 3 - Query Position and Angle

This command requests the actuator to return a "reply" command.

Offset	Size	Data	ShortCut	Description	Valid Range	Scale	Unit
0	4	Channel	CHN	Channel address	Enum: 0: Channel 1 1: Channel 2 2: Channel 3 3: Channel 4 15: All channels		
4	4	Command ID	CMD	Command identifier	Enum: 3: Query command		

CMD 4 - Reply Position and Angle

Either upon request ("Query" command) or after an internal trigger (see EEP Properties) the actuator sends this command to inform about its current state.

Offset	Size	Data	ShortCut	Description	Valid Range	Scale	Unit
0	1	Not Used (= 0)					
1	7	Position	POS	Current vertical position	Enum: 0...100: 0...100 % 127: Position unknown, will be known after the next goto cmd		
8	1	Not Used (= 0)					
9	7	Angle	ANG	Current rotation angle	Enum: 0...100: % 0...100 127: Angle unknown, will be known after the next goto cmd		
16	5	Not Used (= 0)					
21	3	Locking modes	LOCK	Current locking mode	Enum: 0: Normal (no lock) 1: Blockage mode 2: Alarm mode 3 ... 7: Reserved		
24	4	Channel	CHN	Channel address	Enum: 0: Channel 1 1: Channel 2 2: Channel 3 3: Channel 4		
28	4	Command ID	CMD	Command identifier	Enum: 4: Reply command		

CMD 5 - Set parameters

This command sets one or multiple configuration parameters of the actuator. When a parameter value is set to "-> no change" this parameter will not be modified. The VERT and ROT parameters describe the duration needed by the motor for a full run of the blind, or for a complete turn of the slats, respectively. They have to be measured on site and assigned to the actuator.

Offset	Size	Data	ShortCut	Description	Valid Range	Scale	Unit
0	1	Not Used (= 0)					
1	15	Set vertical	VERT	Measured duration of a vertical run	Enum: 500...30000: 5000...300000 ms 0 ... 499: Reserved 32767 (0x7FFF): -> No change		
16	8	Set rotation	ROT	Measured duration of rotation	Enum: 1...254: 10...2540 ms 0: No rotation 255: -> No change		
24	5	Not Used (= 0)					
29	3	Set alarm action	AA	Besides locking all other commands entering the alarm mode results in	Enum: 0: No action 1: Immediate stop 2: Go up (0%) 3: Go down (100%) 4 ... 6: Reserved 7: -> No change		
32	4	Channel	CHN	Channel address	Enum: 0: Channel 1 1: Channel 2 2: Channel 3 3: Channel 4 15: All channels		
36	4	Command ID	CMD	Command identifier	Enum: 5: Set parameters command		