DALI Sensor Sensitivity Adjustment

HYTRONIK®

SENSORS & LIGHTING CONTROL

Sensitivity Adjustment

Method 1

Setting the sensitivity can be achieved through the following command combination:

1. “ENABLE WRITE MEMORY”: Enable BANK write function.
2. “DTR1:DRT0=0x1:0x2, WRITE MEMORY LOCATION =0x55”: Set the Lock byte of BANK1 to 0x55. Here a total of 2 instructions is used.

Set the Lock Byte of BANK1 to 0x55 to unlock the BANK1.

3. “DTR1:DRT0=0x1:0x11, WRITE MEMORY LOCATION = sensing gear value”: set the sensitivity of BANK1 to "sensing gear value". The first instruction is fixed and is used to locate the bank where the sensitivity is stored. Sensing gear value can be selected from 0x1 to 0x4, 0x1 is the weakest, 0x4 is the strongest.

*Before writing to the bank, two locks need to be unlocked to write normally.

- The first lock is the big lock for all banks. Unlock it with the command “ENABLE WRITE MEMORY”.
- The second lock is that each bank has its own Lock byte. When the written value is 0x55, the small lock is unlocked.

*BANK is a memory space freely defined by the manufacturer. Writing a value after unlocking has two steps:

- Specify the write address and pass in the address through DTR0 and DTR1.
- Pass in the written value with the written command "WRITE MEMORY LOCATION". This command will return the written value after the writing is successful.

Writing fails without return value.

The following is an example of an instruction to set the sensitivity to 100%.

Type	Addr	Command	Data	Delay	Answer
DALI24	BCast	ENABLE WRITE MEMORY		100...	
DALI24	BCast	ENABLE WRITE MEMORY		100...	
DALI24		DTR1: DTRO	1:2	100...	
DALI24		WRITE MEMORY LOCATION	85	100...	85
DALI24		DTR1: DTRO	1:17	100...	
DALI24		WRITE MEMORY LOCATION	4	100...	4

Method 2

The motion sensor only sends motion events. No further signals or commands will be sent. Sensor sensitivity ranges from 0 to 100%.

*Values of "detection Range" and "detection Sensitivity" shall have the following meaning:

- [0,100]: 0-100%. 0 is the lowest detection range or detection sensitivity, 100 is the highest.
- 255: Adjustment not supported.

*Set sensitivity: 0x26

*Query sensitivity: 0x2B

Command name	Address byte	Instance byte	Opcode byte	DTR0	DTR01	DTR02	Answer	Send twice	See subclause	Command subclause
CATCH MOVEMENT	Device	Instance	0×20						9.4.6	11.7.2
SET HOLD TIMER (DTR0)	Device	Instance	0×21	√				√	9.5.1	11.8.3
SET REPORT TIMER (DTR0)	Device	Instance	0×22	√				√	9.5.2	11.8.4
SET DEADTIME TIMER (DTR0)	Device	Instance	0×23	√				√	9.5.3	11.8.5
CANCEL HOLD TIMER	Device	Instance	0×24						9.5.1	11.7.3
SET SENSITIVITY (DTR0)	Device	Instance	0×26	√				√	9.5.7	11.8.7
QUERY INSTANCE CAPABILITIES	Device	Instance	0×29				√		9.5.6	11.9.7
QUERY SENSITIVITY	Device	Instance	0×2B				√		9.5.7	11.9.9

QUERY DEAOTIME TIMER	Device	Instance	0×2C				√		9.5.3	11.9.3
QUERY HOLD TIMER	Device	Instance	0×2D				√		9.5.1	11.9.4
QUERY REPORT TIMER	Device	Instance	0×2E				√		9.5.2	11.9.5
QUERY CATCHING	Device	Instance	0×2F				√		9.5.6	11.9.6

*The valid value range is 0-100, 0-24 is the lowest sensitivity of the first gear, 25-49 is the second gear, 50-74 is the third gear, and 75-100 is the highest sensitivity of the fourth gear.

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