Separation of DALI double addresses
DG/S x.64.1.1 and i-bus Tool

GPG BUILDING AUTOMATION

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Introduction

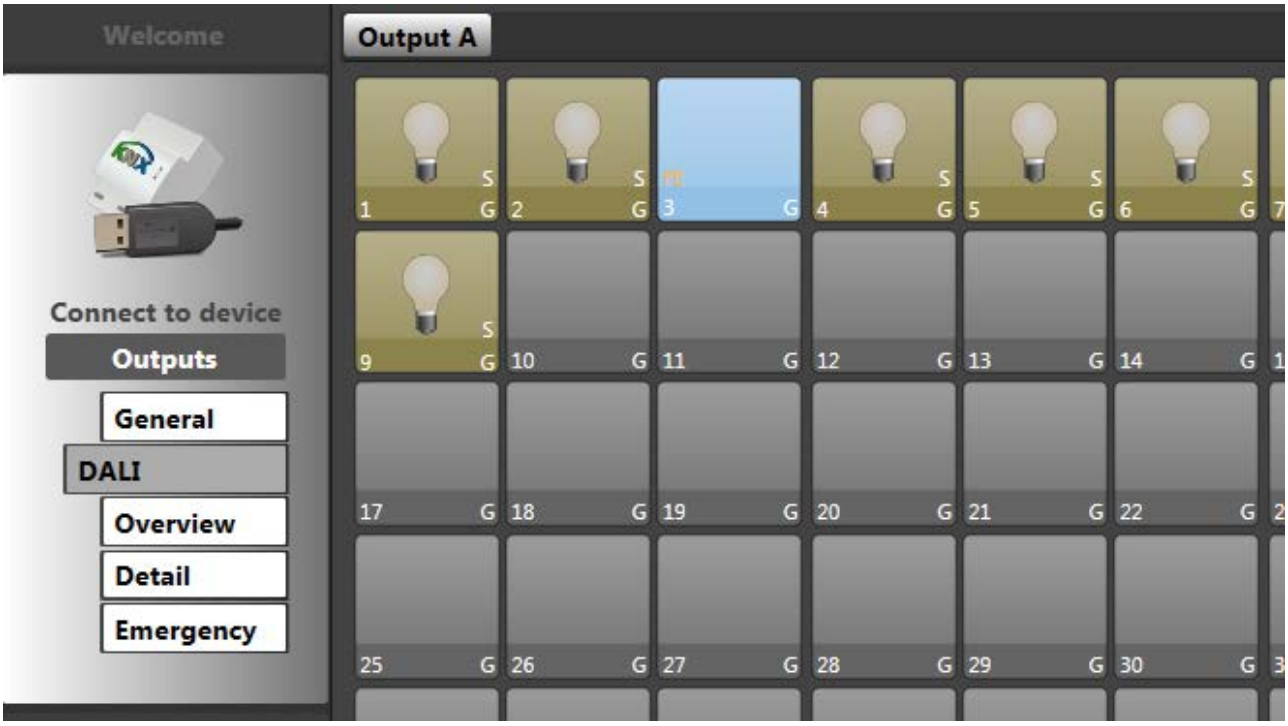
If two DALI ballasts in a DALI system with the ABB Gateways DG/S x.64.1.1 have the same DALI address, the situation can be solved as follows using the ABB i-bus tool.

Objectives of the document

The integrator should be able to separate two identical DALI addresses using the ABB i-bus tool.

Content

Example: Address 3 is used by two devices, in the i-bus tool address 3 is displayed with FE (Framing Error). If DALI address 3 is selected, the two DALI luminaires with DALI address 3 are switched on.



Background: The DALI Gateway cyclically polls all 64 DALI addresses for brightness value and presence (DALI query).

Since in our example two devices have the same address, two devices answer, which leads to an invalid response telegram, for the DALI Gateway a framing error.

For information, the DALI telegram recording of 6 connected and correctly addressed devices:

KNX DALI-Gateways DG/S x.64.1.1

DALI Communication

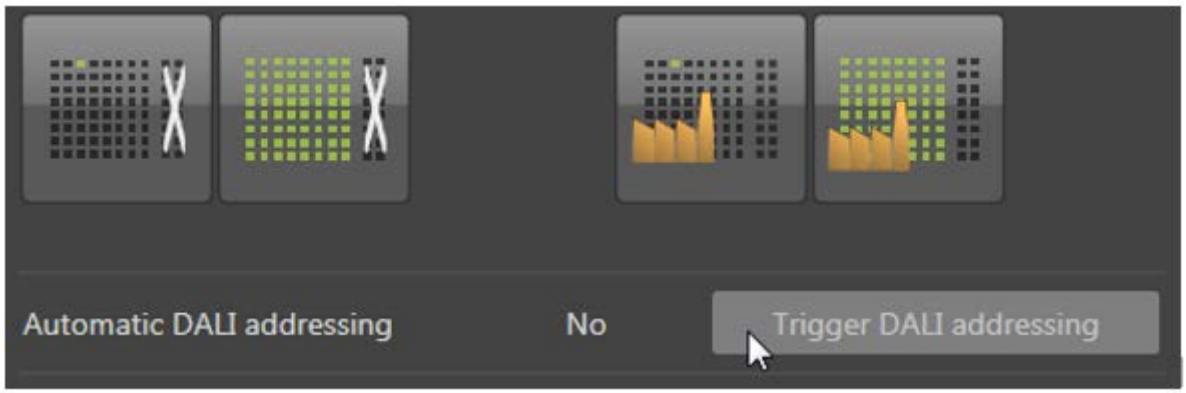
DALI QUERY

- DG/S 1.64.1.1, 6 ballasts are connected
  - QUERY ACTUAL LEVEL A0 (Ballast No. 1)
  - Answer: 254 (100 % Brightness)
  - QUERY LAMP FAILURE A0
  - → no answer from A0 as it is ok
  - The same for ballast No. 2 – 5
  - QUERY ACTUAL LEVEL A6 (Ballast No. 7)
  - → no answer from A6 as it does not exist, therefore no QUERY LAMP FAILURE necessary
  - The same for ballast No. 8 – 64
  - QUERY ACTUAL LEVEL A0 (Ballast No. 1)
  - …

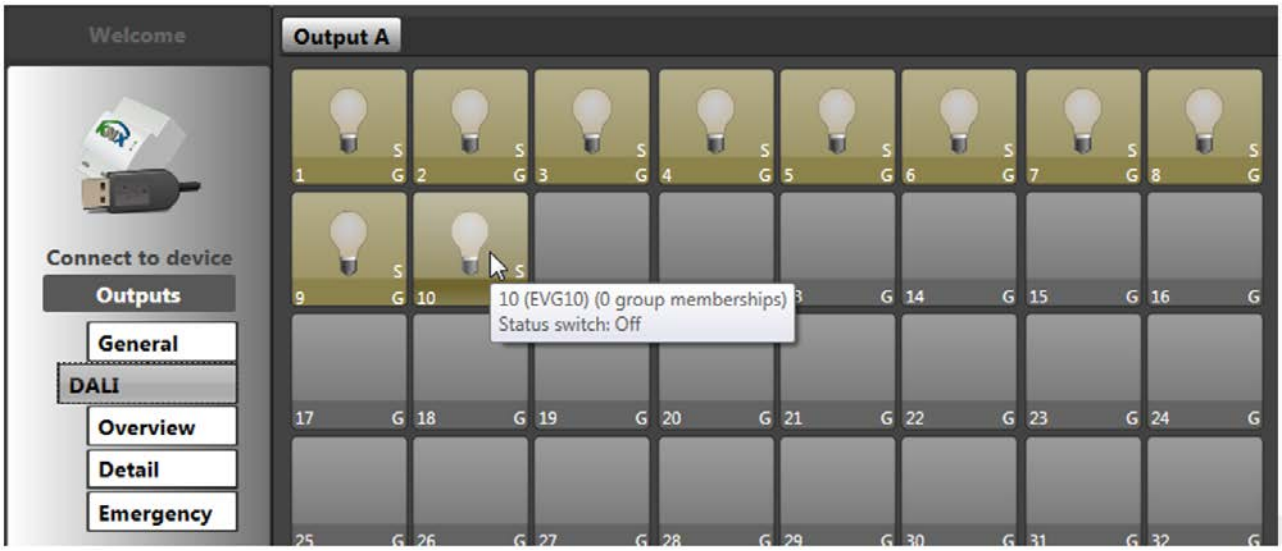
Query	01A0	A0	QUERY ACTUAL LEVEL	11:29:49.391	12.05.2017
Answer	FE		= 254 (0xFE)	11:29:49.405	12.05.2017
Query	0192	A0	QUERY LAMP FAILURE	11:29:49.435	12.05.2017
Query	03A0	A1	QUERY ACTUAL LEVEL	11:29:49.471	12.05.2017
Answer	54		= 84 (0x54)	11:29:49.485	12.05.2017
Query	0392	A1	QUERY LAMP FAILURE	11:29:49.515	12.05.2017
Query	05A0	A2	QUERY ACTUAL LEVEL	11:29:49.549	12.05.2017
Answer	FE		= 254 (0xFE)	11:29:49.563	12.05.2017
Query	0592	A2	QUERY LAMP FAILURE	11:29:49.593	12.05.2017
Query	07A0	A3	QUERY ACTUAL LEVEL	11:29:49.627	12.05.2017
Answer	00		= 0 (0x00)	11:29:49.641	12.05.2017
Query	0792	A3	QUERY LAMP FAILURE	11:29:49.671	12.05.2017
Query	09A0	A4	QUERY ACTUAL LEVEL	11:29:49.706	12.05.2017
Answer	00		= 0 (0x00)	11:29:49.719	12.05.2017
Query	0992	A4	QUERY LAMP FAILURE	11:29:49.749	12.05.2017
Query	0BA0	A5	QUERY ACTUAL LEVEL	11:29:49.786	12.05.2017
Answer	00		= 0 (0x00)	11:29:49.800	12.05.2017
Query	0B92	A5	QUERY LAMP FAILURE	11:29:49.830	12.05.2017
Query	0DA0	A6	QUERY ACTUAL LEVEL	11:29:49.865	12.05.2017
Query	0FA0	A7	QUERY ACTUAL LEVEL	11:29:49.904	12.05.2017
Query	11A0	A8	QUERY ACTUAL LEVEL	11:29:49.941	12.05.2017
Query	13A0	A9	QUERY ACTUAL LEVEL	11:29:50.069	12.05.2017
Query	15A0	A10	QUERY ACTUAL LEVEL	11:29:50.073	12.05.2017
Query	17A0	A11	QUERY ACTUAL LEVEL	11:29:50.079	12.05.2017
Query	19A0	A12	QUERY ACTUAL LEVEL	11:29:50.093	12.05.2017
Query	1BA0	A13	QUERY ACTUAL LEVEL	11:29:50.132	12.05.2017
Query	1DA0	A14	QUERY ACTUAL LEVEL	11:29:50.169	12.05.2017
Query	1FA0	A15	QUERY ACTUAL LEVEL	11:29:50.207	12.05.2017
Query	21A0	A16	QUERY ACTUAL LEVEL	11:29:50.246	12.05.2017
Query	23A0	A17	QUERY ACTUAL LEVEL	11:29:50.284	12.05.2017
Query	25A0	A18	QUERY ACTUAL LEVEL	11:29:50.323	12.05.2017
Query	27A0	A19	QUERY ACTUAL LEVEL	11:29:50.362	12.05.2017
Query	29A0	A20	QUERY ACTUAL LEVEL	11:29:50.400	12.05.2017

Solution: Usually the wrong addressing can be resolved by triggering the DALI addressing from the i-bus tool.

Prerequisite: Automatic DALI addressing is disabled in the ETS, i.e. addressing can be triggered via the i-bus tool.



In this example, one of the two doubly addressed ballasts has received the address 10, the other one has still address 3.



If the re-addressing does not lead to success, you can first reset the two ballasts with the same address and then address again. To do this, select the address with FE (Framing Error) and click on the button 'Reset a single DALI device'. The two DALI devices are set to factory settings and the DALI address is deleted. By the next DALI-addressing, the DALI devices receive a new DALI address.

Advantage: No removal of the DALI ballasts from the installation is necessary, one of the two devices receives the next free address, a change of the address is easily possible if required with the i-bus tool.

References to other documents

- FAQ Home and Building Automation
- FAQ DALI
- Engineering Guide Database