

## DALI 4Net

Art. Nr.: 22176666 and 22176666-B

### Access via Modbus TCP/IP Sample Collection

The samples were made with the program “Wireshark”. We recommend to use this program to analyse the communication on the Modbus layer.

Furthermore, the Modbus communication can be tested with the program “CAS Modbus Scanner”.

Additional information about the DALI 4Net is available in our datasheet and operating manual.

Datasheet:

[https://www.lunatone.com/wp-content/uploads/2018/03/22176666\\_DALI\\_4Net\\_EN\\_D0053.pdf](https://www.lunatone.com/wp-content/uploads/2018/03/22176666_DALI_4Net_EN_D0053.pdf)

Manual:

[https://www.lunatone.com/wp-content/uploads/2018/03/DALI4Net\\_Manual\\_EN-1.pdf](https://www.lunatone.com/wp-content/uploads/2018/03/DALI4Net_Manual_EN-1.pdf)

Content:

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Page 15 to 19: CAS Modbus Scanner examples

DALI command „RECALL MAX“ to Broadcast on line 0

Whole Frame:

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	192.168.0.101	192.168.0.98	Modbus...	83	Query: Trans: 3360; Unit: 1, Func: 23: Read Write
2	0.002025	192.168.0.98	192.168.0.101	Modbus...	73	Response: Trans: 3360; Unit: 1, Func: 23: Read Write
3	0.049236	192.168.0.101	192.168.0.98	TCP	54	51244 → 502 [ACK] Seq=30 Ack=20 Win=65050 Len=0

```

> Frame 1: 83 bytes on wire (664 bits), 83 bytes captured (664 bits) on interface \Device\NPF_{F102B2DE-25E4-4F2F-91AE-E0A1C9F60869}, interface 0
> Ethernet II, Src: WistronI_72:8b:7e (48:2a:e3:72:8b:7e), Dst: Atmel_10:56:8b (fc:c2:3d:10:56:8b)
> Internet Protocol Version 4, Src: 192.168.0.101, Dst: 192.168.0.98
> Transmission Control Protocol, Src Port: 51244, Dst Port: 502, Seq: 1, Ack: 1, Len: 29
> Modbus/TCP
> Modbus
  
```

```

0000  fc c2 3d 10 56 8b 48 2a e3 72 8b 7e 08 00 45 00  ..=V.H* .....E-
0010  00 45 08 91 40 00 80 06 00 00 c0 a8 00 65 c0 a8  .E.@.....e..
0020  00 62 c8 2c 01 f6 61 e6 50 78 00 1c 99 8c 50 18  .b.,.a.Px...P-
0030  fe 2d 82 4f 00 00 0d 20 00 00 00 17 01 17 00 65  --0.....e
0040  00 05 00 64 00 06 0c 12 bf 00 03 00 00 ff 05 00  ...d.....
0050  00 00 00
  
```

wireshark\_Ethernet\_20200813142017\_a09168.pcapng | Pakete: 3 · Angezeigt: 3 (100.0%) · Verworfen: 0 (0.0%) | Profil: Default

Data:

The screenshot shows a network traffic capture in Wireshark. The main pane displays a list of packets:

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	192.168.0.101	192.168.0.98	Modbus...	83	Query: Trans: 3360; Unit: 1, Func: 23: Read Write
2	0.002025	192.168.0.98	192.168.0.101	Modbus...	73	Response: Trans: 3360; Unit: 1, Func: 23: Read Write
3	0.049236	192.168.0.101	192.168.0.98	TCP	54	51244 → 502 [ACK] Seq=30 Ack=20 Win=65050 Len=0

The packet details pane for the selected Modbus packet (No. 1) shows:

- Frame 1: 83 bytes on wire (664 bits), 83 bytes captured (664 bits) on interface \Device\NPF\_{F102B2DE-25E4-4F2F-91AE-E0A1C9F60869}, interface 0
- Ethernet II, Src: WistronI\_72:8b:7e (48:2a:e3:72:8b:7e), Dst: Atmel\_10:56:8b (fc:c2:3d:10:56:8b)
- Internet Protocol Version 4, Src: 192.168.0.101, Dst: 192.168.0.98
- Transmission Control Protocol, Src Port: 51244, Dst Port: 502, Seq: 1, Ack: 1, Len: 29
- Modbus/TCP
  - Modbus
    - .001 0111 = Function Code: Read Write Register (23)
    - Read Reference Number: 101
    - Read Word Count: 5
    - Write Reference Number: 100
    - Write Word Count: 6
    - Byte Count: 12
    - Data: 12bf00030000ff0500000000

The packet bytes pane shows the raw data in hexadecimal and ASCII:

```

0000  fc c2 3d 10 56 8b 48 2a e3 72 8b 7e 08 00 45 00  ..V.H* .....E-
0010  00 45 08 91 40 00 80 06 00 00 c0 a8 00 65 c0 a8  .E..@.....e..
0020  00 62 c8 2c 01 f6 61 e6 50 78 00 1c 99 8c 50 18  .b.,.a.Px....P
0030  fe 2d 82 4f 00 00 0d 20 00 00 00 17 01 17 00 65  ...0.....e
0040  00 05 00 64 00 06 0c 12 bf 00 03 00 00 ff 05 00  ...d...
0050  00 00 00
    
```

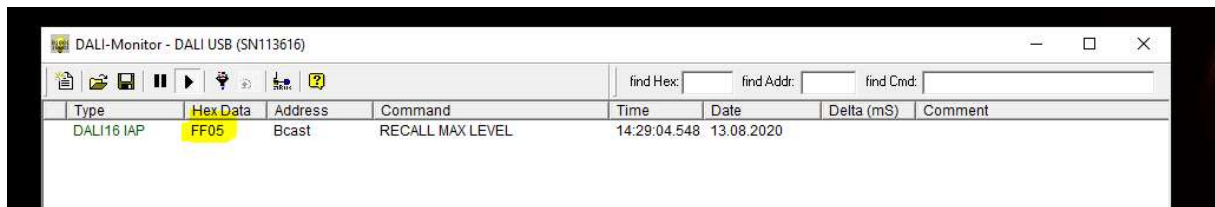
The status bar at the bottom indicates: Data (modbus.data), 12 Bytes | Pakete: 3 · Angezeigt: 3 (100.0%) · Verworfen: 0 (0.0%) | Profil: Default

DALI Frame:

```

<
0000 fc c2 3d 10 56 8b 48 2a e3 72 8b 7e 08 00 45 00  ··=·V·H* ·r·~··E·
0010 00 45 08 91 40 00 80 06 00 00 c0 a8 00 65 c0 a8  ·E·@··· ·····e·
0020 00 62 c8 2c 01 f6 61 e6 50 78 00 1c 99 8c 50 18  ·b·,··a·Px····P·
0030 fe 2d 82 4f 00 00 0d 20 00 00 00 17 01 17 00 65  ·-·0··· ·····e
0040 00 05 00 64 00 06 0c 12 bf 00 03 00 00 ff 05 00  ···d··· ·····
0050 00 00 00
    
```

DALI Monitor:



The unit identifier is used for the selection of the DALI line (here it is 1 for line 0):

```

> Frame 1: 83 bytes on wire (664 bits), 83 bytes captured (664 bits) on interface \De
> Ethernet II, Src: HewlettP_3c:0e:c6 (f4:39:09:3c:0e:c6), Dst: Atmel_0f:8a:d5 (fc:c2
> Internet Protocol Version 4, Src: 192.168.0.100, Dst: 192.168.0.99
> Transmission Control Protocol, Src Port: 51078, Dst Port: 502, Seq: 1, Ack: 1, Len:
v Modbus/TCP
  Transaction Identifier: 977
  Protocol Identifier: 0
  Length: 23
  Unit Identifier: 1
v Modbus
  .001 0111 = Function Code: Read Write Register (23)
  Read Reference Number: 101
  Read Word Count: 5
  Write Reference Number: 100
  Write Word Count: 6
  Byte Count: 12
  Data: 12d000030000ff0500000000

0000 fc c2 3d 0f 8a d5 f4 39 09 3c 0e c6 08 00 45 00  ..=...9 <...E.
0010 00 45 58 62 40 00 80 06 20 39 c0 a8 00 64 c0 a8  .EXb@... 9...d..
0020 00 63 c7 86 01 f6 99 f6 c8 17 00 00 c1 02 50 18  .c.....P.
0030 fe 40 57 e4 00 00 03 d1 00 00 00 17 01 17 00 65  @W.....e
0040 00 05 00 64 00 06 0c 12 d0 00 03 00 00 ff 05 00  ...d.....
0050 00 00 00
  
```

Line	Unit Identifier
0	1
1	2
2	4
3	8

DALI command „OFF“ to Broadcast on line 1

The screenshot shows a Wireshark capture of network traffic on an Ethernet interface. The interface list at the top shows 'Ethernet' selected. The packet list pane contains three entries:

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	192.168.0.101	192.168.0.98	Modbus...	83	Query: Trans: 3364; Unit: 2, Func: 23: Read Write
2	0.000994	192.168.0.98	192.168.0.101	Modbus...	73	Response: Trans: 3364; Unit: 2, Func: 23: Read Write
3	0.041767	192.168.0.101	192.168.0.98	TCP	54	51315 → 502 [ACK] Seq=30 Ack=20 Win=65050 Len=0

The packet details pane for the selected packet (No. 1) shows the following structure:

- Frame 1: 83 bytes on wire (664 bits), 83 bytes captured (664 bits) on interface \Device\NPF\_{F102B2DE-25E4-4F2F-91AE-E0A1C9F60869}, interface 0
- Ethernet II, Src: WistronI\_72:8b:7e (48:2a:e3:72:8b:7e), Dst: Atmel\_10:56:8b (fc:c2:3d:10:56:8b)
- Internet Protocol Version 4, Src: 192.168.0.101, Dst: 192.168.0.98
- Transmission Control Protocol, Src Port: 51315, Dst Port: 502, Seq: 1, Ack: 1, Len: 29
- Modbus/TCP
- Modbus

The packet bytes pane shows the raw data in hexadecimal and ASCII:

```

0000  fc c2 3d 10 56 8b 48 2a e3 72 8b 7e 08 00 45 00  ..=VH*.....E-
0010  00 45 08 c9 40 00 80 06 00 00 c0 a8 00 65 c0 a8  +E..@.....e..
0020  00 62 c8 73 01 f6 55 de 87 80 00 20 80 b6 50 18  -b.s..U.....P
0030  fe 2d 82 4f 00 00 0d 24 00 00 00 17 02 17 00 65  --o...$.....e
0040  00 05 00 64 00 06 0c 12 c3 00 03 00 00 ff 00 00  ...d.....
0050  00 00 00
    
```

The status bar at the bottom indicates: wireshark\_Ethernet\_20200813143309\_a07336.pcapng | Pakete: 3 · Angezeigt: 3 (100.0%) · Verworfen: 0 (0.0%) | Profil: Default

DALI command „GOTO Scene 0“ to group 0 on line 2

The screenshot shows a Wireshark interface with the following details:

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	192.168.0.101	192.168.0.98	Modbus...	83	Query: Trans: 3367; Unit: 4, Func: 23: Read Write
2	0.001280	192.168.0.98	192.168.0.101	Modbus...	73	Response: Trans: 3367; Unit: 4, Func: 23: Read Write
3	0.056363	192.168.0.101	192.168.0.98	TCP	54	51421 → 502 [ACK] Seq=30 Ack=20 Win=65031 Len=0

Packet Details:

- Frame 1: 83 bytes on wire (664 bits), 83 bytes captured (664 bits) on interface \Device\NPF\_{F102B2DE-25E4-4F2F-91AE-E0A1C9F60869}, interface 0
- Ethernet II, Src: WistronI\_72:8b:7e (48:2a:e3:72:8b:7e), Dst: Atmel\_10:56:8b (fc:c2:3d:10:56:8b)
- Internet Protocol Version 4, Src: 192.168.0.101, Dst: 192.168.0.98
- Transmission Control Protocol, Src Port: 51421, Dst Port: 502, Seq: 1, Ack: 1, Len: 29
- Modbus/TCP
  - Modbus
    - .001 0111 = Function Code: Read Write Register (23)
      - Read Reference Number: 101
      - Read Word Count: 5
      - Write Reference Number: 100
      - Write Word Count: 6
      - Byte Count: 12
      - Data: 12c600030000811000000000

Raw Data (Hex):

```

0000  fc c2 3d 10 56 8b 48 2a e3 72 8b 7e 08 00 45 00  ..V.H* .....E
0010  00 45 09 5b 40 00 80 06 00 00 c0 a8 00 65 c0 a8  .E. (@.....e..
0020  00 62 c8 dd 01 f6 9e 22 e3 c3 00 2d 51 5a 50 18  -b....."....QZP
0030  fe 1a 82 4f 00 00 0d 27 00 00 00 17 04 17 00 65  ...O.....e
0040  00 05 00 64 00 06 0c 12 c6 00 03 00 00 81 10 00  ...d.....
0050  00 00 00
    
```

Wireshark Status: wireshark\_Ethernet\_20200813150814\_a13076.pcapng | Pakete: 3 · Angezeigt: 3 (100.0%) · Verworfen: 0 (0.0%) | Profil: Default

DALI command „RECALL MIN LEVEL“ to single address A0 on line 3

The screenshot shows a Wireshark capture of three network packets on an Ethernet interface. The first packet is a Modbus query from 192.168.0.101 to 192.168.0.98. The second packet is the corresponding Modbus response. The third packet is a TCP ACK from 192.168.0.101 to 192.168.0.98. The packet details pane shows the structure of the Modbus query, including the function code (0111) and the data field (12c700030000010600000000).

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	192.168.0.101	192.168.0.98	Modbus...	83	Query: Trans: 3368; Unit: 8, Func: 23: Read Write
2	0.001575	192.168.0.98	192.168.0.101	Modbus...	73	Response: Trans: 3368; Unit: 8, Func: 23: Read Write
3	0.066511	192.168.0.101	192.168.0.98	TCP	54	51427 → 502 [ACK] Seq=30 Ack=20 Win=65069 Len=0

```

> Frame 1: 83 bytes on wire (664 bits), 83 bytes captured (664 bits) on interface \Device\NPF_{F102B2DE-25E4-4F2F-91AE-E0A1C9F60869}, i
> Ethernet II, Src: WistronI_72:8b:7e (48:2a:e3:72:8b:7e), Dst: Atmel_10:56:8b (fc:c2:3d:10:56:8b)
> Internet Protocol Version 4, Src: 192.168.0.101, Dst: 192.168.0.98
> Transmission Control Protocol, Src Port: 51427, Dst Port: 502, Seq: 1, Ack: 1, Len: 29
> Modbus/TCP
  Modbus
    .001 0111 = Function Code: Read Write Register (23)
      Read Reference Number: 101
      Read Word Count: 5
      Write Reference Number: 100
      Write Word Count: 6
      Byte Count: 12
      Data: 12c700030000010600000000
  
```

```

0000  fc c2 3d 10 56 8b 48 2a e3 72 8b 7e 08 00 45 00  ..=VH*.....E-
0010  00 45 09 69 40 00 80 06 00 00 c0 a8 00 65 c0 a8  .E.i@.....e..
0020  00 62 c8 e3 01 f6 64 a4 75 a6 00 2e 83 79 50 18  .b...d.u...yP
0030  fe 40 82 4f 00 00 0d 28 00 00 00 17 08 17 00 65  .@.O... (.....e
0040  00 05 00 64 00 06 0c 12 c7 00 03 00 00 01 06 00  ...d.... ..
0050  00 00 00
  
```

wireshark\_Ethernet\_20200813151118\_a07844.pcapng | Pakete: 3 · Angezeigt: 3 (100.0%) · Verworfen: 0 (0.0%) | Profil: Default



Command sequence for RGB DT8 colour control – short address A0 on line 1 with values 0,254,0 (only green)

Command sequence on DALI side (DALI Monitor):

Type	Hex Data	Address	Command	Time	Date	Delta
DALI16 Special	A300	*	DATA TRANSFER REGISTER= 0 (0x00)	15:52:30.437	06.10.2020	
DALI16 Special	C3FE	*	DATA TRANSFER REGISTER 1= 254 (0xFE)	15:52:30.458	06.10.2020	21
DALI16 Special	C500	*	DATA TRANSFER REGISTER 2= 0 (0x00)	15:52:30.505	06.10.2020	47
DALI16 Special	C108	*	ENABLE DEVICE TYPE 8	15:52:30.558	06.10.2020	53
DALI16 AppExt D801EB	A0	A0	SET TEMPORARY RGB DIMLEVEL	15:52:30.590	06.10.2020	32
DALI16 Special	C108	*	ENABLE DEVICE TYPE 8	15:52:30.637	06.10.2020	47
DALI16 AppExt D801E2	A0	A0	ACTIVATE	15:52:30.658	06.10.2020	21

The three transfer registers 0, 1 and 2 are written for colour control via DT8 commands.

- 0 for red
- 1 for green
- 2 for blue

Command 1 - DATA TRANSFER REGISTER= 0 (0x00):

```

Modbus/TCP
  Transaction Identifier: 1635
  Protocol Identifier: 0
  Length: 23
  Unit Identifier: 2
Modbus
  .001 0111 = Function Code: Read Write Register (23)
  Read Reference Number: 101
  Read Word Count: 5
  Write Reference Number: 100
  Write Word Count: 6
  Byte Count: 12
  Data: 126200030000a30000000000
  
```

```

0000 fc c2 3d 0f 8a d5 f4 39 09 3c 0e c6 08 00 45 00  ..=...9 <...E-
0010 00 45 50 b3 40 00 80 06 27 e8 c0 a8 00 64 c0 a8  .EP.@... '...d..
0020 00 63 c4 f6 01 f6 38 d3 17 f8 00 0a 26 bb 50 18  .c...8- ...&P-
0030 fd e1 76 1e 00 00 06 63 00 00 00 17 02 17 00 65  ..v...c .....e
0040 00 05 00 64 00 06 0c 12 62 00 03 00 00 a3 00 00  ...d... b.....
0050 00 00 00
  
```

Command 2 - DATA TRANSFER REGISTER 1= 254 (0xFE):

```

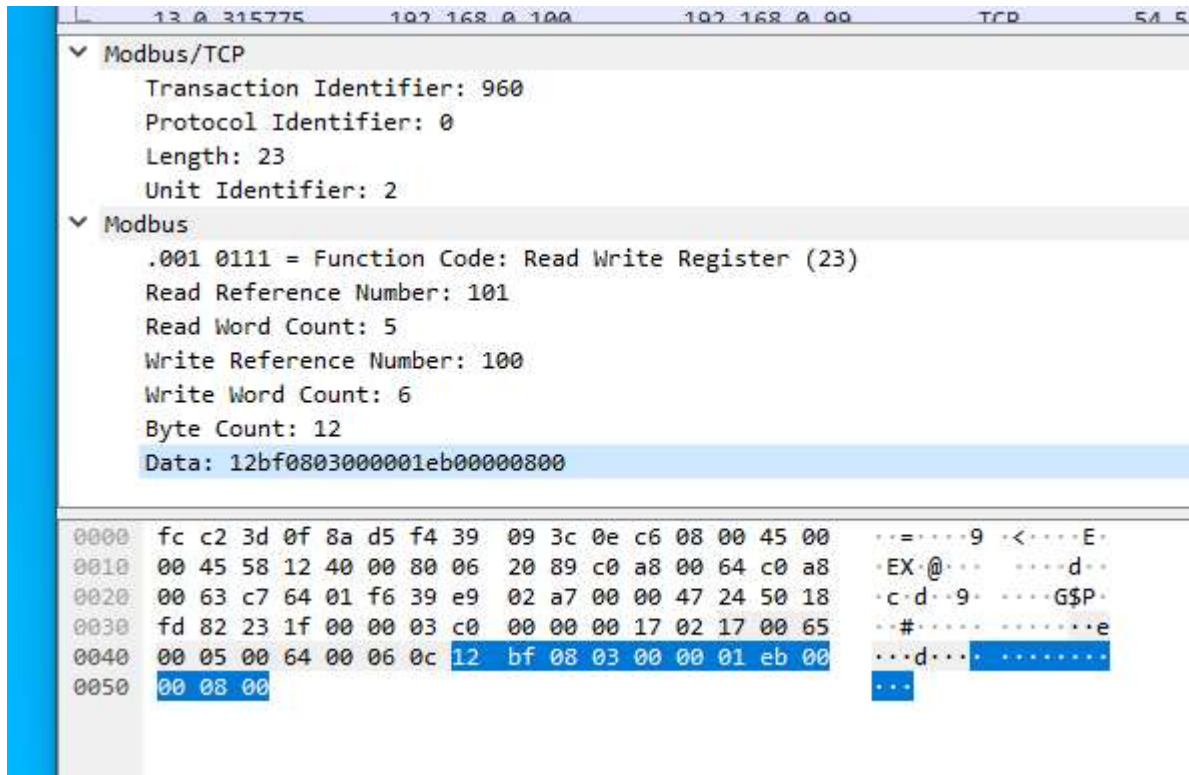
Modbus/TCP
  Transaction Identifier: 1636
  Protocol Identifier: 0
  Length: 23
  Unit Identifier: 2
Modbus
  .001 0111 = Function Code: Read Write Register (23)
  Read Reference Number: 101
  Read Word Count: 5
  Write Reference Number: 100
  Write Word Count: 6
  Byte Count: 12
  Data: 126300030000c3fe00000000
0000 fc c2 3d 0f 8a d5 f4 39 09 3c 0e c6 08 00 45 00  ..=...9 <...E
0010 00 45 50 b4 40 00 80 06 27 e7 c0 a8 00 64 c0 a8  .EP.@... '...d
0020 00 63 c4 f6 01 f6 38 d3 18 15 00 0a 26 ce 50 18  .c...8...&P
0030 fd ce 76 df 00 00 06 64 00 00 00 17 02 17 00 65  .v...d.....e
0040 00 05 00 64 00 06 0c 12 63 00 03 00 00 c3 fe 00  .d...c.....
0050 00 00 00
  
```

Command 3 - DATA TRANSFER REGISTER 2= 0 (0x00):

```

Modbus/TCP
  Transaction Identifier: 1637
  Protocol Identifier: 0
  Length: 23
  Unit Identifier: 2
Modbus
  .001 0111 = Function Code: Read Write Register (23)
  Read Reference Number: 101
  Read Word Count: 5
  Write Reference Number: 100
  Write Word Count: 6
  Byte Count: 12
  Data: 126400030000c50000000000
0000 fc c2 3d 0f 8a d5 f4 39 09 3c 0e c6 08 00 45 00  ..=...9 <...E
0010 00 45 50 b5 40 00 80 06 27 e6 c0 a8 00 64 c0 a8  .EP.@... '...d
0020 00 63 c4 f6 01 f6 38 d3 18 32 00 0a 26 e1 50 18  .c...8...2.&P
0030 fd bb 73 c0 00 00 06 65 00 00 00 17 02 17 00 65  .s...e.....e
0040 00 05 00 64 00 06 0c 12 64 00 03 00 00 c5 00 00  .d...d.....
0050 00 00 00
  
```

Command 4 and 5 – ENABLE DEVICE TYPE 8 + SET TEMPORARY RGB DIMLEVEL



Because bit 3 is set in the control byte, the "ENABLE DEVICE TYPE 8" command is sent before the "SET TEMPORARY RGB DIMLEVEL" command.

Screenshot from manual:

Write Dali Command		
Byte	Name	Description
0	CmdByte	Command Byte = 0x12 always
1	Sequence number	Command Sequence number (will be sent back)
		Command Control byte Bit 7: unused, set to 0 Bit 6: if set no data is sent out on the DALI line (used to test connection status) Bit 5: sent twice, cmd will be sent twice on DALI-line (required for some DALI commands) Bit 4: Send DTR before DALI command Bit 3: Send DALI Device Type before DALI command Bit 2: Send "Set Actual Level to DTR" before DALI command
2	Control	Command Mode Byte

Command 6 and 7 – ENABLE DEVICE TYPE 8 + ACTIVATE

```

    Modbus/TCP
      Transaction Identifier: 961
      Protocol Identifier: 0
      Length: 23
      Unit Identifier: 2
    Modbus
      .001 0111 = Function Code: Read Write Register (23)
      Read Reference Number: 101
      Read Word Count: 5
      Write Reference Number: 100
      Write Word Count: 6
      Byte Count: 12
      Data: 12c00803000001e200000800
  
```

0000	fc c2 3d 0f 8a d5 f4 39 09 3c 0e c6 08 00 45 00	..=...9 .<...E.
0010	00 45 58 13 40 00 80 06 20 88 c0 a8 00 64 c0 a8	·EX·@·... ·...·d·..
0020	00 63 c7 64 01 f6 39 e9 02 c4 00 00 47 37 50 18	·c·d··9· ·...·G7P·
0030	fd 6f 2b 01 00 00 03 c1 00 00 00 17 02 17 00 65	·o+·... ·...·e
0040	00 05 00 64 00 06 0c 12 c0 08 03 00 00 01 e2 00	...d...· ·...·
0050	00 08 00	...

Here the command "ENABLE DEVICE TYPE 8" is also sent before "ACTIVATE".

Example for a Query

QUERY ACTUAL LEVEL on line 1 to address A0

DALI Monitor:

Type	Hex Data	Address	Command	Time	Date	Delta (mS)
DALI16 Query	01A0	A0	QUERY ACTUAL LEVEL	18:35:43.539	12.10.2020	
DALI8 Answer	2F		= 47 (0x2F)	18:35:43.554	12.10.2020	15

DALI command QUERY ACTUAL LEVEL:

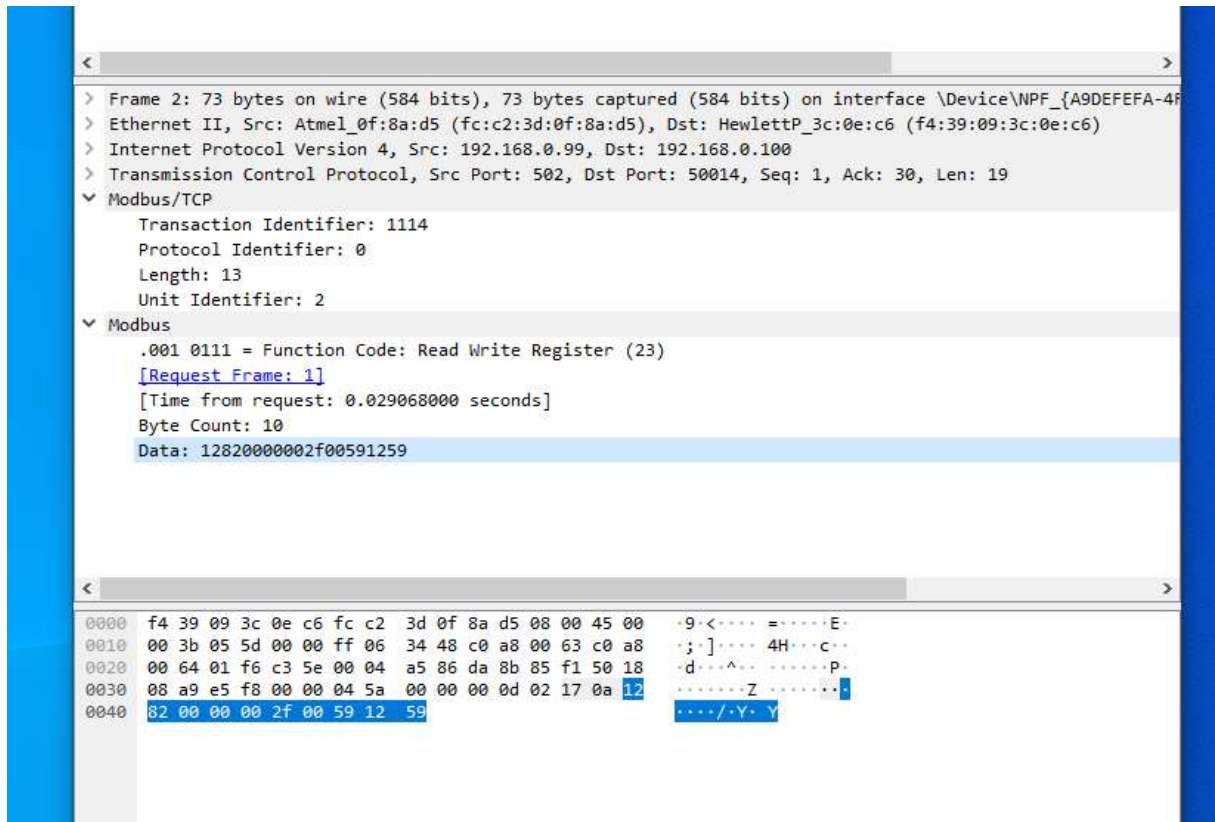
```

> Frame 1: 83 bytes on wire (664 bits), 83 bytes captured (664 bits) on interface \Device\NPF_{A9DEFEFA-4F...}
> Ethernet II, Src: HewlettP_3c:0e:c6 (f4:39:09:3c:0e:c6), Dst: Atmel_0f:8a:d5 (fc:c2:3d:0f:8a:d5)
> Internet Protocol Version 4, Src: 192.168.0.100, Dst: 192.168.0.99
> Transmission Control Protocol, Src Port: 50014, Dst Port: 502, Seq: 1, Ack: 1, Len: 29
  Modbus/TCP
    Transaction Identifier: 1114
    Protocol Identifier: 0
    Length: 23
    Unit Identifier: 2
  Modbus
    .001 0111 = Function Code: Read Write Register (23)
    Read Reference Number: 101
    Read Word Count: 5
    Write Reference Number: 100
    Write Word Count: 6
    Byte Count: 12
    Data: 12590003000001a000000000
  
```

```

0000  fc c2 3d 0f 8a d5 f4 39 09 3c 0e c6 08 00 45 00  ..=...9 <.....E
0010  00 45 90 45 40 00 80 06 e8 55 c0 a8 00 64 c0 a8  ..E@...U...d..
0020  00 63 c3 5e 01 f6 da 8b 85 d4 00 04 a5 86 50 18  ..c^.....P.
0030  fe 1a 54 cd 00 00 04 5a 00 00 00 17 02 17 00 65  ..T...Z.....e
0040  00 05 00 64 00 06 0c 12 59 00 03 00 00 01 a0 00  ...d...Y.....
0050  00 00 00  ..
  
```

Answer:



Frame 2: 73 bytes on wire (584 bits), 73 bytes captured (584 bits) on interface \Device\NPF\_{A9DEFEFA-4F...}

Ethernet II, Src: Atmel\_0f:8a:d5 (fc:c2:3d:0f:8a:d5), Dst: HewlettP\_3c:0e:c6 (f4:39:09:3c:0e:c6)

Internet Protocol Version 4, Src: 192.168.0.99, Dst: 192.168.0.100

Transmission Control Protocol, Src Port: 502, Dst Port: 50014, Seq: 1, Ack: 30, Len: 19

Modbus/TCP

- Transaction Identifier: 1114
- Protocol Identifier: 0
- Length: 13
- Unit Identifier: 2

Modbus

- .001 0111 = Function Code: Read Write Register (23)
- [Request Frame: 1]
- [Time from request: 0.029068000 seconds]
- Byte Count: 10
- Data: 12820000002f00591259

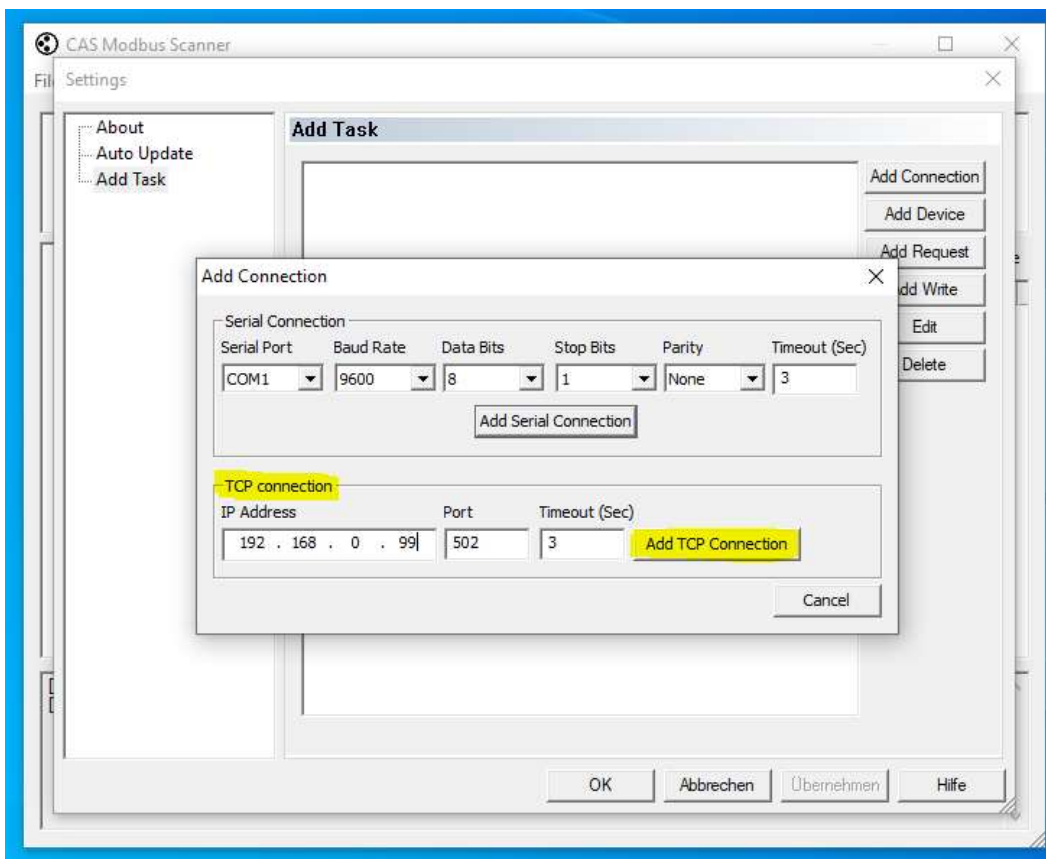
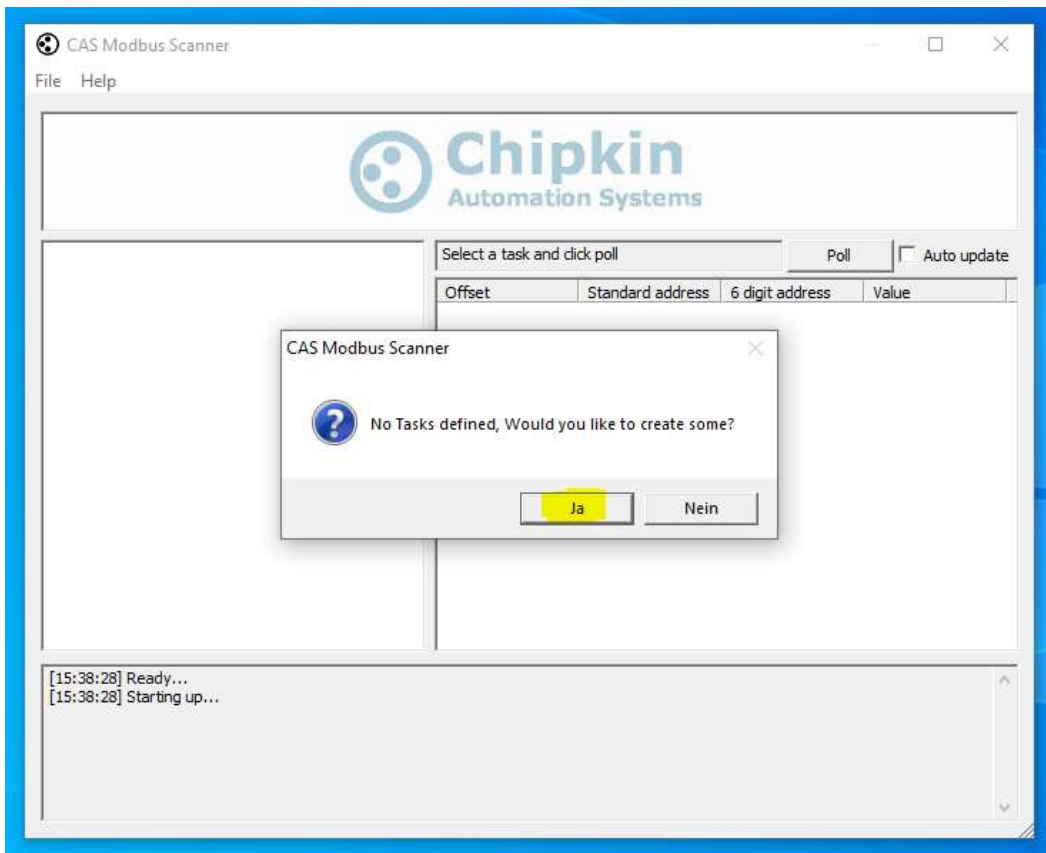
```

0000  f4 39 09 3c 0e c6 fc c2 3d 0f 8a d5 08 00 45 00  .9<.... =.....E.
0010  00 3b 05 5d 00 00 ff 06 34 48 c0 a8 00 63 c0 a8  ;.].... 4H...c..
0020  00 64 01 f6 c3 5e 00 04 a5 86 da 8b 85 f1 50 18  .d...^... ..P.
0030  08 a9 e5 f8 00 00 04 5a 00 00 00 0d 02 17 0a 12  .....Z.....
0040  82 00 00 00 2f 00 59 12 59  .... / . Y . Y
    
```

Byte no. 5 contains the value for the actual level. In this case 47 (hex 2F).

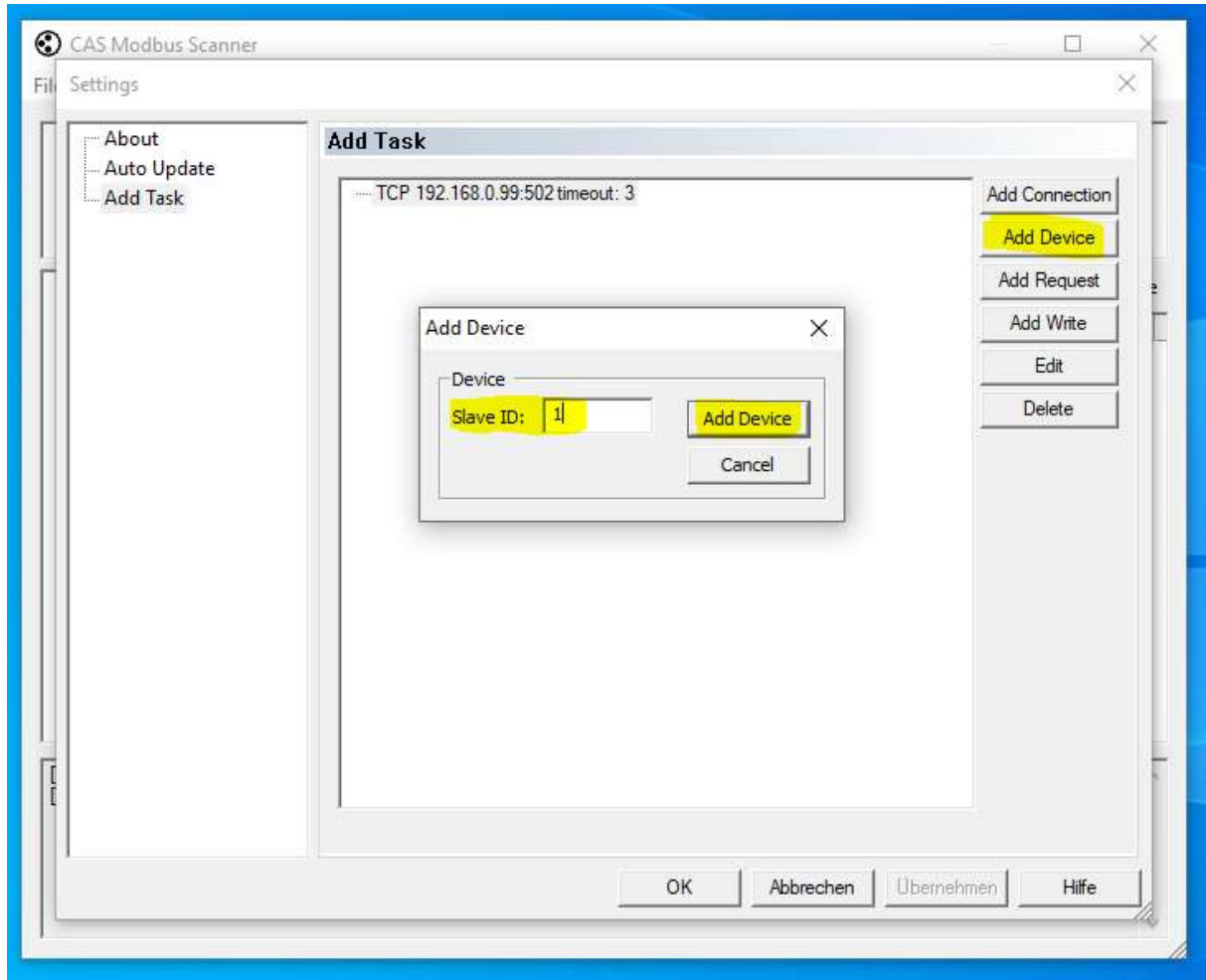
Read Dali Command		
Byte	Name	Description
0	Cmd Byte	Command Byte = 0x12 always
		Command Status byte: High nibble: identifier, value =7 Low nibble: status 0: OK 1: DALI answer = "NO" 2: DALI 8bit data 3: DALI 16bit data 4: DALI 25bit data (eDALI) 5: DSI 6: DALI 24bit data 7: Error/Info, if set: Check sum: DATA_LO=1; DALI-line short circuit: DATA_LO=2; DALI receive error: DATA_LO=3; DALI bus back to ok: DATA_LO=4; Switch to DSI-mode: DATA_LO=5; Switch to DALI-mode: DATA_LO=6;
1	Status	
2	Reserved	Reserved
3	Reserved	DALI_HI
4	Reserved	DALI_MI
5	Answer	DALI_LO (answer to previous command)
6	Reserved	
7	Sequence number	Command sequence number same as previously sent

CAS Modbus Scanner



The slave ID determines the DALI line (unit identifier):

Line 0: 1  
Line 1: 2  
Line 2: 4  
Line 3: 8





Reading the IP configuration:

