

# TRIO3-PS/.../IOL (IO-Link device) Process data and status information



Data sheet  
111031\_en\_03

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## 1 Description

As an IO-Link device, the TRIO power supplies with integrated electronic device circuit breaker provide the IO-Link master, e.g., a programmable logic controller (PLC), with its current process data and status information.

The IO-Link master-to-IO-Link device communication direction helps you with non-stationary parameterization on the TRIO power supply with integrated electronic device circuit breaker.

### Supported power supplies

The following TRIO power supplies with integrated electronic device circuit breakers are supported:

| Item designation            | Item No. |
|-----------------------------|----------|
| TRIO3-PS/1AC/24DC/10/4C/IOL | 1252696  |
| TRIO3-PS/1AC/24DC/20/8C/IOL | 1252697  |
| TRIO3-PS/3AC/24DC/20/8C/IOL | 1362791  |
| TRIO3-PS/3AC/24DC/40/8C/IOL | 1362792  |

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## 2 Cyclic process data

### 2.1 Input process data (PDin)

Communication direction: IO-Link device to IO-Link master



#### NOTE

In the IO-Link device-to-IO-Link master communication direction, the input process data (PDin) consists of 18 bytes. Note the specified bit offset during writing. In addition, you can also transmit the input process data acyclically, see Section "Acyclic status information".

|        | DPin     | Reserved | Reserved | Reserved | DC not OK | Output power >90% | Reserved | Output voltage |     |
|--------|----------|----------|----------|----------|-----------|-------------------|----------|----------------|-----|
| Byte 0 | Bit      | 143      | 142      | 141      | 140       | 139               | 138      | 137            | 136 |
|        | Subindex | --       | --       | --       | 1         | 2                 | 3        | 4              |     |

|        | DPin     | Output voltage |     |     |     |     |     |     |     |
|--------|----------|----------------|-----|-----|-----|-----|-----|-----|-----|
| Byte 1 | Bit      | 135            | 134 | 133 | 132 | 131 | 130 | 129 | 128 |
|        | Subindex | 4              |     |     |     |     |     |     |     |

|        | DPin     | Reserved | Reserved | Reserved | Reserved | Reserved | Reserved | Sum of output currents |     |
|--------|----------|----------|----------|----------|----------|----------|----------|------------------------|-----|
| Byte 2 | Bit      | 127      | 126      | 125      | 124      | 123      | 122      | 121                    | 120 |
|        | Subindex | --       | --       | --       | --       | --       | --       | 5                      |     |

|        | DPin     | Sum of output currents |     |     |     |     |     |     |     |
|--------|----------|------------------------|-----|-----|-----|-----|-----|-----|-----|
| Byte 3 | Bit      | 119                    | 118 | 117 | 116 | 115 | 114 | 113 | 112 |
|        | Subindex | 5                      |     |     |     |     |     |     |     |

|        | DPin     | Status, channel 1 |     | Status, channel 2 |     | Status, channel 3 |     | Status, channel 4 |     |
|--------|----------|-------------------|-----|-------------------|-----|-------------------|-----|-------------------|-----|
| Byte 4 | Bit      | 111               | 110 | 109               | 108 | 107               | 106 | 105               | 104 |
|        | Subindex | 6                 |     | 7                 |     | 8                 |     | 9                 |     |

|        | DPin     | Status, channel 5 |     | Status, channel 6 |     | Status, channel 7 |    | Status, channel 8 |    |
|--------|----------|-------------------|-----|-------------------|-----|-------------------|----|-------------------|----|
| Byte 5 | Bit      | 103               | 102 | 101               | 100 | 99                | 98 | 97                | 96 |
|        | Subindex | 10                |     | 11                |     | 12                |    | 13                |    |

|        | DPin     | Reserved | Reserved | Nominal current, channel 1 |    |    | Nominal current, channel 2 |    |    |
|--------|----------|----------|----------|----------------------------|----|----|----------------------------|----|----|
| Byte 6 | Bit      | 95       | 94       | 93                         | 92 | 91 | 90                         | 89 | 88 |
|        | Subindex | --       | --       | 14                         |    |    | 15                         |    |    |

|        | DPin     | Reserved | Reserved | Nominal current, channel 3 |    |    | Nominal current, channel 4 |    |    |
|--------|----------|----------|----------|----------------------------|----|----|----------------------------|----|----|
| Byte 7 | Bit      | 87       | 86       | 85                         | 84 | 83 | 82                         | 81 | 80 |
|        | Subindex | --       | --       | 16                         |    |    | 17                         |    |    |

|        | DPin     | Reserved | Reserved | Nominal current, channel 5 |    |    | Nominal current, channel 6 |    |    |
|--------|----------|----------|----------|----------------------------|----|----|----------------------------|----|----|
| Byte 8 | Bit      | 79       | 78       | 77                         | 76 | 75 | 74                         | 73 | 72 |
|        | Subindex | --       | --       | 18                         |    |    | 19                         |    |    |

|        | DPin     | Reserved | Reserved | Nominal current, channel 7 |    |    | Nominal current, channel 8 |    |    |
|--------|----------|----------|----------|----------------------------|----|----|----------------------------|----|----|
| Byte 9 | Bit      | 71       | 70       | 69                         | 68 | 67 | 66                         | 65 | 64 |
|        | Subindex | --       | --       | 20                         |    |    | 21                         |    |    |

|         | DPin     | Load current, channel 1 |    |    |    |    |    |    |    |
|---------|----------|-------------------------|----|----|----|----|----|----|----|
| Byte 10 | Bit      | 63                      | 62 | 61 | 60 | 59 | 58 | 57 | 56 |
|         | Subindex | 22                      |    |    |    |    |    |    |    |

|         | DPin     | Load current, channel 2 |    |    |    |    |    |    |    |
|---------|----------|-------------------------|----|----|----|----|----|----|----|
| Byte 11 | Bit      | 55                      | 54 | 53 | 52 | 51 | 50 | 49 | 48 |
|         | Subindex | 23                      |    |    |    |    |    |    |    |

|         | DPin     | Load current, channel 3 |    |    |    |    |    |    |    |
|---------|----------|-------------------------|----|----|----|----|----|----|----|
| Byte 12 | Bit      | 47                      | 46 | 45 | 44 | 43 | 42 | 41 | 40 |
|         | Subindex | 24                      |    |    |    |    |    |    |    |

|         | DPin     | Load current, channel 4 |    |    |    |    |    |    |    |
|---------|----------|-------------------------|----|----|----|----|----|----|----|
| Byte 13 | Bit      | 39                      | 38 | 37 | 36 | 35 | 34 | 33 | 32 |
|         | Subindex | 25                      |    |    |    |    |    |    |    |

|         | DPin     | Load current, channel 5 |    |    |    |    |    |    |    |
|---------|----------|-------------------------|----|----|----|----|----|----|----|
| Byte 14 | Bit      | 31                      | 30 | 29 | 28 | 27 | 26 | 25 | 24 |
|         | Subindex | 26                      |    |    |    |    |    |    |    |

|         | DPin     | Load current, channel 6 |    |    |    |    |    |    |    |
|---------|----------|-------------------------|----|----|----|----|----|----|----|
| Byte 15 | Bit      | 23                      | 22 | 21 | 20 | 19 | 18 | 17 | 16 |
|         | Subindex | 27                      |    |    |    |    |    |    |    |

|         | DPin     | Load current, channel 7 |    |    |    |    |    |   |   |
|---------|----------|-------------------------|----|----|----|----|----|---|---|
| Byte 16 | Bit      | 15                      | 14 | 13 | 12 | 11 | 10 | 9 | 8 |
|         | Subindex | 28                      |    |    |    |    |    |   |   |

|         | DPin     | Load current, channel 8 |   |   |   |   |   |   |   |
|---------|----------|-------------------------|---|---|---|---|---|---|---|
| Byte 17 | Bit      | 7                       | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
|         | Subindex | 29                      |   |   |   |   |   |   |   |

|                               |  |
|-------------------------------|--|
| <b>DC status</b>              | The DC status is transmitted in one bit and corresponds to the current status of the power supply: 0: UOut > 21 V DC (DC OK), 1: UOut < 21 V DC (DC not OK)          |
| <b>Output power status</b>    | The status of the output power is transmitted in one bit and corresponds to the current status of the power supply: 0: POut < 90%, 1: POut > 90%                     |
| <b>Output voltage</b>         | Voltage range 0 V ... 35.5 V (resolution 0.1 V)  |
| <b>Sum of output currents</b> | Current range 0 A ... 65 A (resolution 0.1 A)  |
| <b>Channel status</b>         | The channel status is transmitted in two bits and corresponds to the current status of each channel: Channel status 00: OFF, 01: ON, 10: Restart, 11: Tripped/Defect |
| <b>Tripping current INom</b>  | The INom tripping current is transmitted for each channel in three bits.   |

| NEC Class 2 Output |       |       |       |       |       |       |
|--------------------|-------|-------|-------|-------|-------|-------|
| 0b000              | 0b001 | 0b010 | 0b011 | 0b100 | 0b101 | 0b110 |
| 1 A                | 2 A   | 3.8 A | 4 A   | 6 A   | 8 A   | 10 A  |

|                              |   |
|------------------------------|---|
| <b>Load current, channel</b> | The load current at a channel is encoded in one byte. With a resolution of 0.1 the value range 0 ... 255 corresponds to the value range 0.0 A ... 25.5 A. |
|------------------------------|---|

2.2 Output process data (PDout)

Communication direction: IO-Link master to IO-Link device



**NOTE**

In the IO-Link master-to-IO-Link device communication direction, you can make the following settings on a channel-by-channel basis using the cyclic output process data (PDout): channel status after reset, tripping current INom, enabling or disabling the priority-controlled channel shutdown

|        | DPOut    | Valid flag | Reserved | Reserved | Reserved | Reserved | Reserved | Reserved | Reserved | Channel status after reset |
|--------|----------|------------|----------|----------|----------|----------|----------|----------|----------|----------------------------|
| Byte 0 | Bit      | 55         | 54       | 53       | 52       | 51       | 50       | 49       |          | 48                         |
|        | Subindex | --         | --       | --       | --       | --       | --       | --       |          | 2                          |

|        | DPOut    | Reserved | Reserved | Nominal current, channel 1* |    |    | Nominal current, channel 2* |    |    |
|--------|----------|----------|----------|-----------------------------|----|----|-----------------------------|----|----|
| Byte 1 | Bit      | 47       | 46       | 45                          | 44 | 43 | 42                          | 41 | 40 |
|        | Subindex | --       | --       | 3                           |    |    | 4                           |    |    |

|        | DPOut    | Reserved | Reserved | Nominal current, channel 3* |    |    | Nominal current, channel 4* |    |    |
|--------|----------|----------|----------|-----------------------------|----|----|-----------------------------|----|----|
| Byte 2 | Bit      | 39       | 38       | 37                          | 36 | 35 | 34                          | 33 | 32 |
|        | Subindex | --       | --       | 5                           |    |    | 6                           |    |    |

|        | DPOut    | Reserved | Reserved | Nominal current, channel 5* |    |    | Nominal current, channel 6* |    |    |
|--------|----------|----------|----------|-----------------------------|----|----|-----------------------------|----|----|
| Byte 3 | Bit      | 31       | 30       | 29                          | 28 | 27 | 26                          | 25 | 24 |
|        | Subindex | --       | --       | 7                           |    |    | 8                           |    |    |

|        | DPOut    | Reserved | Reserved | Nominal current, channel 7* |    |    | Nominal current, channel 8* |    |    |
|--------|----------|----------|----------|-----------------------------|----|----|-----------------------------|----|----|
| Byte 4 | Bit      | 23       | 22       | 21                          | 20 | 19 | 18                          | 17 | 16 |
|        | Subindex | --       | --       | 9                           |    |    | 10                          |    |    |

|        | DPOut    | Reserved | Reserved | Reserved | Reserved | Reserved | Reserved | Reserved | Reserved | Setting the prioritization |
|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------------------------|
| Byte 5 | Bit      | 15       | 14       | 13       | 12       | 11       | 10       | 9        |          | 8                          |
|        | Subindex | --       | --       | --       | --       | --       | --       | --       |          | 11                         |

|        | DPOut    | CH1 ON/OFF/RST | CH2 ON/OFF/RST | CH3 ON/OFF/RST | CH4 ON/OFF/RST | CH5 ON/OFF/RST | CH6 ON/OFF/RST | CH7 ON/OFF/RST | CH8 ON/OFF/RST |
|--------|----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Byte 6 | Bit      | 7              | 6              | 5              | 4              | 3              | 2              | 1              | 0              |
|        | Subindex | 12             | 13             | 14             | 15             | 16             | 17             | 18             | 19             |



**NOTE\***

Valid values for these fields are 0hex ... 6hex (1 A ... 10 A). The value 7hex is set to 0hex (1 A).

**Example**

PDout = 81 2D 2D 2D 2D 00 FFhex

PDout valid, all channels are initially switched off after a restart, all eight INom 8 A tripping currents are set and switched on

**NOTE\***

Valid values for these fields are 0hex ... 6hex (1 A ... 10 A). The value 7hex is set to 0hex (1 A).

**Validity of PDout (valid flag)**

If the most significant bit (MSB) of the IO-Link master is changed from byte 0 to 1, the IO-Link device (power supply) recognizes the output process data (PDout) as valid. In the case of a 0 in the MSB, the received output process data (PDout) is ignored.

**Channel status after reset**

The channel status after reset is transmitted in one bit and describes the status of the channels after a restart.

0: State of charge before last switch-off, 1: All channels off

**Setting the prioritization**

Prioritized channel shutdown is performed when there is a risk of a device overload. It is transmitted in one bit and corresponds to the current status of the power supply:

0: Automatic; in case of power supply overload, the channel with the highest load current is switched off, 1: In case of power supply overload, the channel with the lowest priority (e. g. CH4 resp. CH8) is switched off.

**Switching channel**

To switch on a channel, 1 is written to the associated bit. If 0 is written, the channel is switched off. If several channels are switched on at the same time, a cascaded approach is used. The interval between the individual switch-on processes is 100 ms.

0: Switch off the channel, 1: Switch on the channel

### 3 Acyclic status information

#### 3.1 IO-Link-specific data

| Index          | Subindex | Name                                | Description                 | Access rights | Length in bytes | Value range | Comment                  |    |    |    |
|----------------|----------|-------------------------------------|-----------------------------|---------------|-----------------|-------------|--------------------------|----|----|----|
| 02hex<br>2dec  | 0        | System command                      | Restart device              | WO            | 1               | 80hex       | Command                  |    |    |    |
|                |          |                                     | Reset application           |               | 1               | 81hex       |                          |    |    |    |
|                |          |                                     | Restore delivery state      |               | 1               | 82hex       |                          |    |    |    |
|                |          |                                     | Back to box                 |               | 1               | 83hex       |                          |    |    |    |
| 0Chex<br>12dec | 0        | Device access lock                  | Reserved                    | RW            | 1               | Bit 0       | Disabled                 |    |    |    |
|                |          |                                     | Local parameterization lock |               |                 | Bit 2       | 0: Unlocked<br>1: Locked |    |    |    |
|                |          |                                     | Local user interface lock   |               |                 | Bit 3       | 0: Unlocked<br>1: Locked |    |    |    |
| 10hex<br>16dec | 0        | Manufacturer name                   | --                          | RO            | 15              | --          | --                       |    |    |    |
| 11hex<br>17dec | 0        | Manufacturer text                   | Manufacturer URL            |               | 21              |             |                          |    |    |    |
| 12hex<br>18dec | 0        | Product name                        | --                          |               | 27              |             |                          |    |    |    |
| 13hex<br>19dec | 0        | Product ID                          | Item number                 |               | 7               |             |                          |    |    |    |
| 14hex<br>20dec | 0        | Product text                        |                             |               | 7               |             |                          |    |    |    |
| 15hex<br>21dec | 0        | Serial number                       |                             |               | 11              |             |                          |    |    |    |
| 16hex<br>22dec | 0        | Hardware version                    |                             |               | 2               |             |                          |    |    |    |
| 17hex<br>23dec | 0        | Firmware version                    |                             |               | --              |             |                          | 8  |    |    |
| 18hex<br>24dec | 0        | Application-specific identification |                             |               | RW              |             |                          | 32 | -- | -- |
| 19hex<br>25dec | 0        | Function identification             |                             |               |                 |             |                          | 32 |    |    |
| 1Ahex<br>26dec | 0        | Location identification             |                             | 32            |                 |             |                          |    |    |    |

#### 3.2 Manufacturer data

| Index          | Subindex | Name              | Description                               | Access rights | Length in bytes | Value [unit] | Comment |
|----------------|----------|-------------------|---|---------------|-----------------|--------------|---------|
| 41hex<br>65dec | 0        | Manufacturer data | Information gathered from subindex 1 to 7 | RO            | 95              | --           | --      |
|                | 1        |                   | Street                                    |               | 17              |              |         |
|                | 2        |                   | ZIP code                                  |               | 5               |              |         |
|                | 3        |                   | City                                      |               | 8               |              |         |
|                | 4        |                   | State                                     |               | 19              |              |         |
|                | 5        |                   | Country                                   |               | 2               |              |         |
|                | 6        |                   | Link to the homepage                      |               | 40              |              |         |
|                | 7        |                   | Production date                           |               | 4               |              |         |



### 3.3 Operating data

| Index          | Subindex | Name                   | Description                      | Access rights | Length in bytes | Value [unit]  | Resolution |
|----------------|----------|------------------------|----------------------------------|---------------|-----------------|---|------------|
| 60hex<br>96dec | 0        | Device-specific status | All parameters                   | RO            | 7               | --  | --         |
|                | 1        |                        | Status of output voltage UOut    |               | 1               | 0: UOut <21 V DC<br>1: UOut >21 V DC                        |            |
|                | 2        |                        | Status of output power POut      |               | 1               | 0: POut <90%<br>1: POut >90%                                |            |
|                | 3        |                        | Status of operating hours        |               | 1               | Operating time<br>0: <Threshold value<br>1: Threshold value |            |
|                | 4        |                        | Reserved                         |               | 1               | --  |            |
|                | 5        |                        | Status of surge protection (OVP) |               | 1               | 0: OVP not active<br>1: OVP active                          |            |
|                | 6        |                        | Total operating hours            |               | 4               | [h]   |            |
|                | 7        |                        | Operating hours since last start |               | 2               | [h]   | 0.1        |
| 62hex<br>98dec | 0        | Output status          | All parameters                   | RO            | 4               | --  | --         |
|                | 1        |                        | Output voltage                   |               | 2               | [V]   | 0.1        |
|                | 2        |                        | Sum of outputs                   |               | 2               | [A]   | 0.1        |

## 3.4 Signaling data

| Index           | Subindex | Name        | Description                            | Access rights | Length in bytes | Value [unit]  | Resolution |
|-----------------|----------|-------------|--|---------------|-----------------|---|------------|
| 63hex<br>99dec  | 0        | IO status   | All parameters                         | RO            | 12<br>16        | 4-channel<br>8-channel  | --         |
|                 | 1        |             | Relay contact 13/14 (DC OK)            |               | 1               | Contact<br>0: Opened<br>1: Closed   |            |
|                 | 2        |             | LED1 (DC OK)                           |               | 1               | LED<br>0: Off<br>1: Green<br>2: Yellow<br>3: Red<br>4: Flashing red   |            |
|                 | 3        |             | LED2 (bargraph 1 A)                    |               | 1               | LED<br>0: Off<br>1: On  |            |
|                 | 4        |             | LED3 (bargraph 2 A)                    |               | 1               |   |            |
|                 | 5        |             | LED4 (bargraph 3.8 A)                  |               | 1               |   |            |
|                 | 6        |             | LED5 (bargraph 4 A)                    |               | 1               |   |            |
|                 | 7        |             | LED6 (bargraph 6 A)                    |               | 1               |   |            |
|                 | 8        |             | LED7 (bargraph 8 A)                    |               | 1               |   |            |
|                 | 9        |             | LED8 (bargraph 10 A)                   |               | 1               |   |            |
|                 | 10       |             | LED9 (channel 1)                       |               | 1               |   |            |
|                 | 11       |             | LED10 (channel 2)                      |               | 1               | LED<br>0: Off<br>1: Green<br>2: Yellow<br>3: Red<br>4: Flashing red/yellow<br>5: Flashing red<br>6: Flashing yellow |            |
|                 | 12       |             | LED11 (channel 3)                      |               | 1               |   |            |
|                 | 13       |             | LED12 (channel 4)                      |               | 1               |   |            |
|                 | 14       |             | LED13 (channel 5)                      |               | 1               |   |            |
|                 | 15       |             | LED14 (channel 6)                      |               | 1               |   |            |
|                 | 16       |             | LED15 (channel 7)                      |               | 1               |   |            |
|                 | 17       |             | LED16 (channel 8)                      |               | 1               |   |            |
|                 | 18       |             | LED17 (IO-Link Com)                    |               | 1               | LED<br>0: Off<br>1: On  |            |
| 64hex<br>100dec | 0        | Static data | All parameters                         | RO            | 14              | --  | --         |
|                 | 1        |             | Min. output voltage UOut               |               | 2               | [V]   | 0.01       |
|                 | 2        |             | Max. output voltage UOut               |               | 2               |   |            |
|                 | 3        |             | Max. output current INom >10 s         |               | 2               | [A]   | 0.01       |
|                 | 4        |             | Max. output current IDyn               |               | 2               |   |            |
|                 | 5        |             | Counter for surge protection (OVP)     |               | 2               | 0...65535   | --         |
|                 | 6        |             | Counter for dynamic boost              |               | 2               |   |            |
|                 | 7        |             | Counter for power supply device starts |               | 2               |   |            |

3.5 Configuration

| Index           | Subindex                        | Name   | Description                        | Access rights | Length in bytes           | Value [unit]          | Resolution |
|-----------------|---------------------------------|--|------------------------------------|---------------|---------------------------|-----------------------|------------|
| 82hex<br>130dec | 0                               | Power supply output parameters                 | All parameters                     | RW            | 3                         | --                    | --         |
|                 | 1                               |  | Output voltage UOut                |               | 2                         | [V]                   | 0.01       |
|                 | 2                               |  | Internal output voltage switch-off |               | 1                         | 0: PS ON<br>1: PS OFF | ---        |
| 83hex<br>131dec | 0                               | All parameters                                 | 5                                  |               | --                        |                       |            |
|                 | 1                               | Enable relay contact                           | 1                                  |               | 0: Disabled<br>1: Enabled |                       |            |
|                 | 2                               | Enable DC OK signal                            | 1                                  |               |                           |                       |            |
|                 | 3                               | Enable IOut >90% signal                        | 1                                  |               |                           |                       |            |
|                 | 4                               | Reserved                                       | 1                                  |               | --                        |                       |            |
|                 | 5                               | Enable operating time > threshold value signal | 1                                  |               | 0: Disabled<br>1: Enabled |                       |            |
|                 | 6                               | Enable channel tripped signal                  | 1                                  |               |                           |                       |            |
| 7               | Enable channel defective signal | 1  |                                    |               |                           |                       |            |
| 8               | Operating time threshold value  | 4  | 0...1600000 h                      | 1             |                           |                       |            |

3.6 Output data of electronic device circuit breaker

| Index              | Subindex | Name   | Description                     | Access rights | Length in bytes        | Value [unit]                 | Resolution |
|--------------------|----------|--|---------------------------------|---------------|------------------------|------------------------------|------------|
| 1060hex<br>4192dec | 0        | Device-specific status of device circuit breaker | All parameters                  | RO            | 5<br>9                 | 4-channel<br>8-channel       | --         |
|                    | 1        |  | Output current IOut, channel 1  |               | 1                      | [A]                          | 0.1        |
|                    | 2        |  | Output current IOut, channel 2  |               | 1                      |                              |            |
|                    | 3        |  | Output current IOut, channel 3  |               | 1                      |                              |            |
|                    | 4        |  | Output current IOut, channel 4  |               | 1                      |                              |            |
|                    | 5        |  | Output current IOut, channel 5  |               | 1                      |                              |            |
|                    | 6        |  | Output current IOut, channel 6  |               | 1                      |                              |            |
|                    | 7        |  | Output current IOut, channel 7  |               | 1                      |                              |            |
|                    | 8        |  | Output current IOut, channel 8  |               | 1                      |                              |            |
|                    | 9        |  | Threshold value IOut, channel 1 |               | 1                      | 0: IOut <80%<br>1: IOut >80% |            |
|                    | 10       |  | Threshold value IOut, channel 2 |               |                        |                              |            |
|                    | 11       |  | Threshold value IOut, channel 3 |               |                        |                              |            |
|                    | 12       |  | Threshold value IOut, channel 4 |               |                        |                              |            |
|                    | 13       |  | Threshold value IOut, channel 5 |               |                        |                              |            |
|                    | 14       |  | Threshold value IOut, channel 6 |               |                        |                              |            |
|                    | 15       |  | Threshold value IOut, channel 7 |               |                        |                              |            |
|                    | 16       |  | Threshold value IOut, channel 8 |               |                        |                              |            |
| 1070hex<br>4208dec | 0        |  | All parameters                  | 8<br>16       | 4-channel<br>8-channel | --                           |            |
|                    | 1        |  | Output voltage UOut, channel 1  | 2             | [V]                    | 0.01                         |            |
|                    | 2        |  | Output voltage UOut, channel 2  | 2             |                        |                              |            |
|                    | 3        |  | Output voltage UOut, channel 3  | 2             |                        |                              |            |
|                    | 4        |  | Output voltage UOut, channel 4  | 2             |                        |                              |            |
|                    | 5        |  | Output voltage UOut, channel 5  | 2             |                        |                              |            |
|                    | 6        |  | Output voltage UOut, channel 6  | 2             |                        |                              |            |
|                    | 7        |  | Output voltage UOut, channel 7  | 2             |                        |                              |            |
|                    | 8        |  | Output voltage UOut, channel 8  | 2             |                        |                              |            |

3.7 Configuration of electronic device circuit breaker

| Index              | Subindex             | Name   | Description                           | Access rights | Length in bytes | Value [unit]   | Resolution |
|--------------------|----------------------|--|---------------------------------------|---------------|-----------------|--|------------|
| 1080hex<br>4224dec | 0                    | Device-specific status of device circuit breaker | All parameters                        | RW            | 5<br>9          | 4-channel<br>8-channel   | --         |
|                    | 1                    |  | Channel status after reset            |               | 1               | 0: Restore status<br>1: All channels off   |            |
|                    | 2                    |  | Nominal current INom, channel 1       |               | 1               | 0: 1 A*<br>1: 2 A*<br>3: 3.8 A*<br>4: 4 A<br>5: 6 A<br>6: 10 A                   |            |
|                    | 3                    |  | Nominal current INom, channel 2       |               | 1               |  |            |
|                    | 4                    |  | Nominal current INom, channel 3       |               | 1               |  |            |
|                    | 5                    |  | Nominal current INom, channel 4       |               | 1               |  |            |
|                    | 6                    |  | Nominal current INom, channel 5       |               | 1               |  |            |
|                    | 7                    |  | Nominal current INom, channel 6       |               | 1               |  |            |
|                    | 8                    |  | Nominal current INom, channel 7       |               | 1               |  |            |
|                    | 9                    |  | Nominal current INom, channel 8       |               | 1               |  |            |
|                    | 10                   |  | Priority for total current switch-off |               | 1               | 0: Automatic (highest measured current first)<br>1: Highest channel number first |            |
|                    | 11                   |  | Channel 1 ON/OFF/RST                  |               | 1               | 0: Off<br>1: On/Reset  |            |
|                    | 12                   |  | Channel 2 ON/OFF/RST                  |               | 1               |  |            |
|                    | 13                   |  | Channel 3 ON/OFF/RST                  |               | 1               |  |            |
|                    | 14                   |  | Channel 4 ON/OFF/RST                  |               | 1               |  |            |
|                    | 15                   |  | Channel 5 ON/OFF/RST                  |               | 1               |  |            |
|                    | 16                   |  | Channel 6 ON/OFF/RST                  |               | 1               |  |            |
|                    | 17                   |  | Channel 7 ON/OFF/RST                  |               | 1               |  |            |
| 18                 | Channel 8 ON/OFF/RST | 1  |                                       |               |                 |  |            |

\*NEC Class 2 Output

## 3.8 Event messages

| Index           | Subindex | Event code (hex) |  | Description  | Access rights | Type    | Comment |  |         |  |  |
|-----------------|----------|------------------|--|--|---------------|---------|---------|--|---------|--|--|
|                 |          | 4-channel        | 8-channel  |  |               |         |         |  |         |  |  |
| 80hex<br>128dec | 0        |                  |  | All events   | RW            | --      | --      |  |         |  |  |
|                 | 1        | 1800             | 1800   | DC not OK  |               | Warning |         |  |         |  |  |
|                 | 2        | 1801             | 1801   | PDyn >90%  |               |         |         |  |         |  |  |
|                 | 3        | Reserved         | Reserved   | Reserved   |               |         |         |  |         |  |  |
|                 | 4        | 1803             | 1803   | Short circuit, channel 1   |               |         |         |  |         |  |  |
|                 | 5        | 1804             | 1804   | Short circuit, channel 2   |               |         |         |  |         |  |  |
|                 | 6        | 1805             | 1805   | Short circuit, channel 3   |               |         |         |  |         |  |  |
|                 | 7        | 1806             | 1806   | Short circuit, channel 4   |               |         |         |  |         |  |  |
|                 | 8        | --               | 1807   | Short circuit, channel 5   |               |         |         |  |         |  |  |
|                 | 9        | --               | 1808   | Short circuit, channel 6   |               |         |         |  |         |  |  |
|                 | 10       | --               | 1809   | Short circuit, channel 7   |               |         |         |  |         |  |  |
|                 | 11       | --               | 180A   | Short circuit, channel 8   |               |         |         |  |         |  |  |
|                 | 12       | 1807             | 180B   | Overload, channel 1  |               |         |         |  |         |  |  |
|                 | 13       | 1808             | 180C   | Overload, channel 2  |               |         |         |  |         |  |  |
|                 | 14       | 1809             | 180D   | Overload, channel 3  |               |         |         |  |         |  |  |
|                 | 15       | 180A             | 180E   | Overload, channel 4  |               |         |         |  |         |  |  |
|                 | 16       | --               | 180F   | Overload, channel 5  |               |         |         |  |         |  |  |
|                 | 17       | --               | 1810   | Overload, channel 6  |               |         |         |  |         |  |  |
|                 | 18       | --               | 1811   | Overload, channel 7  |               |         |         |  |         |  |  |
|                 | 19       | --               | 1812   | Overload, channel 8  |               |         |         |  |         |  |  |
|                 | 20       | 180B             | 1813   | Total current switch-off as priority setting                                   |               |         |         |  | Error   | 0: Event acknowledged<br>1: Event occurred |  |
|                 | 21       | 180C             | 1814   | Defect in output path, channel 1   |               |         |         |  |         |  |  |
|                 | 22       | 180D             | 1815   | Defect in output path, channel 2   |               |         |         |  |         |  |  |
|                 | 23       | 180E             | 1816   | Defect in output path, channel 3   |               |         |         |  |         |  |  |
|                 | 24       | 180F             | 1817   | Defect in output path, channel 4   |               |         |         |  |         |  |  |
|                 | 25       | --               | 1818   | Defect in output path, channel 5   |               |         |         |  |         |  |  |
|                 | 26       | --               | 1819   | Defect in output path, channel 6   |               |         |         |  |         |  |  |
|                 | 27       | --               | 181A   | Defect in output path, channel 7   |               |         |         |  |         |  |  |
|                 | 28       | --               | 181B   | Defect in output path, channel 8   |               |         |         |  |         |  |  |
|                 | 29       | 1810             | 181C   | Power supply failed<br>(power supply unit/communication module)                |               |         |         |  | Warning |  |  |
|                 | 30       | 1811             | 181D   | Difference between UOut power supply,<br>channel 1, and device circuit breaker |               |         |         |  |         |  |  |
|                 | 31       | 1812             | 181E   | Difference between UOut power supply,<br>channel 2, and device circuit breaker |               |         |         |  |         |  |  |
|                 | 32       | 1813             | 181F   | Difference between UOut power supply,<br>channel 3, and device circuit breaker |               |         |         |  |         |  |  |
|                 | 33       | 1814             | 1820   | Difference between UOut power supply,<br>channel 4, and device circuit breaker |               |         |         |  |         |  |  |
|                 | 34       | --               | 1821   | Difference between UOut power supply,<br>channel 5, and device circuit breaker |               |         |         |  |         |  |  |
|                 | 35       | --               | 1822   | Difference between UOut power supply,<br>channel 6, and device circuit breaker |               |         |         |  |         |  |  |
|                 | 36       | --               | 1823   | Difference between UOut power supply,<br>channel 7, and device circuit breaker |               |         |         |  |         |  |  |
|                 | 37       | --               | 1824   | Difference between UOut power supply,<br>channel 8, and device circuit breaker |               |         |         |  |         |  |  |
|                 | 38       | 1815             | 1825   | Difference between IOut power supply<br>and total current of all channels      |               |         |         |  |         |  |  |
| 39              | 1816     | 1826             | All channels are switched off /<br>faulty differential current measurement |  |               |         |         |  |         |  |  |