Technical Reference Manual

# Series 84 – IO-Link Touch.
*Technical Reference Manual.*

This TRM refers to the IODD files
Firmware revision: V8.0
IO-Link Specification: IO-Link Interface and System Specification Version 1.1.2 July 2013

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## Communication Interface

| Parameter | Value |
|---|---|
| IO-Link Version | 1.1 |
| Bitrate | COM2 |
| Min Cycle Time | 14800 µs |
| Process Data Input Bits | 80 |
| Process Data Output Bits | 64 |
| SIO supported | Yes |
| ISDU supported | Yes |
| Data Storage | Yes |
| Block Parameters | No |

## Device Variants

| Product ID | Name | Description |
|---|---|---|
| 84-ACKS | Series 84 IO-Link Touch Hygienic | Switch with stainless steel housing and M12 connector for hygienic applications |
| 84-ASKS | Series 84 IO-Link Touch Standard | Switch with plastic housing and M12 connector |
| 84-ADKS | Series 84 IO-Link Touch Stainless Steel | Switch with stainless steel housing and M12 connector |

## Process Data

Process Data Input
Bit Length: 80

| Process Data Input Condition LED Contol Mode 0 - 3 | | | |
|---|---|---|---|
| Bit Offset | Name | Value | Description |
| 0 | Pin 2 | | E1 input pin state. |
| | | 4 - Input - OFF | No Input signal on Pin |
| | | 5 - Input - ON | Input signal on Pin |
| | | 8 - Pin unused | Pin not used - parameter "Active input" is set to "None" |
| | | | Input On/Off depends on "E1/E2 Mode": |
| | | | For "Active High" high = "Input - On", low = "Input – OFF". |
| | | | For "Active Low" high = "Input -Off", low = "Input – On". |
| 8 | Pin 4 | | Sensor switching state |
| | | 0 - Output - OFF | Sensor doesn't switch |
| | | 1 - Output - ON | Sensor switches |

Process Data Output
Bit Length: 64

| Process Data Output Condition LED Control Mode 0 | | |
|---|---|---|
| Bit Offset | Name | Value |
| 0 | unused | |

## Process Data Input Condition LED Contol Mode 1

| Bit Offset | Name | Value | Description |
|---|---|---|---|
| 0 | LED Scene | 0 … 7<br>255 – Automatic | Switch between LED scenes "0" to "7"<br>For control by input pins set value to "255". |

## Process Data Input Condition LED Contol Mode 2

| Bit Offset | Name | Value | Description |
|---|---|---|---|
| 0 | Active LEDs | 0 … 1 | Define if LEDs are active, via Bin code "00" to"01" |
| 16 | LED Brightness | 0 … 100<br>255 - Automatic<br>Control [%] | Brightness of LED ring in percent. Value of "255" means automatic brightness control by sensor |
| 24 | LED Colour R | 0 … 255 | "R" – red value |
| 32 | LED Colour G | 0 … 255 | "G" – green value |
| 40 | LED Colour B | 0 … 255 | "B" – blue value |
| 48 | LED Effect | 0 - Static Ring<br>1 - Flash Ring<br>2 - Pulse Ring | LED Ring Effect |
| 56 | Effect Frequency | 1 … 60<br>0 - Default Frequency [0.1 Hz] | Frequency of LED effect in 1/10 Hz, range: "0.1" to "6" Hz |

Process Data Input
Bit Length: 80

## Process Data Input Condition LED Contol Mode 0 - 3

| Bit Offset | Name | Value | Description |
|---|---|---|---|
| 16 | Pin 5 | | E2 input pin state. |
| | | 4 - Input - OFF | No Input signal on Pin |
| | | 5 - Input - ON | Input signal on Pin |
| | | 8 - Pin unused | Pin not used - parameter "Active input" is set to "None" or "Pin 2 (E1) (4 pin mode)" |
| 24 | Actuation Flag | 0 - Idle | Sensor is not actuated |
| | | 1 - Actuated | Sensor is actuated |
| 32 | Actuation Count | 0 … 65535 | Number of actuations once sensor is turned on.<br>Count resets on restart and after 65535. |
| 48 | Actuation Strength | 0 … 100 [%] | Damping of sensor in percentage. |
| 56 | Surrounding Brightness | 0 … 100 [%] | Displays ambient brightness in percentage. |

Process Data Output
Bit Length: 64

## Process Data Output Condition LED Control Mode 3

| Bit Offset | Name | Value |
|---|---|---|
| 0 | unused | |

## Events

| EventCodes | Definition and recommended maintenance action | Type. |
|---|---|---|
| 16912 | Device temperature over-run – Clear source of heat | Warning |
| 16928 | Device temperature under-run – Insulate device | Warning |
| 20496 | Component malfunction – Repair or exchange | Error |
| 20752 | Primary supply voltage over-run – Check tolerance | Warning |
| 20753 | Primary supply voltage under-run – Check tolerance | Warning |

Access Rights
ro - Read Only
rw - Read/Write
wo - Write Only

## System

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| System Command | 2 | wo | 128 = Device Reset<br>130 = Restore Factory Settings<br>160 = Trigger Self-Test | Restart the device<br>Restore Factory Settings<br>Self-Test will activate the switch; in Toggle mode the switch will remain activated |

## Identification

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| Vendor Name | 16 | ro | EAO AG | Vendor |
| Product Name | 18 | ro | Series 84 IO-Link Touch | Producht Line |
| Product ID | 19 | ro | 84-ASKS-XX-XXXX<br>84-ADKS-XX-XXXX<br>84-ACKS-XX-XXXX | Product Type |
| Product Text | 20 | ro | | Product Ordercode |
| Firmware Version | 23 | ro | | |
| Serial Number | 21 | ro | | Unique Product Serialnumber |
| Symbol | 276 | ro | | Touch surface symbol |

## Activation

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| Sensor Mode | 261 | rw | 1 - Toggle | Toggle: The user touches the sensor to activate and touches the sensor once more to deactivate. Can only be set back after "Output Minimum Impulse Time" is over.1 |
| | | | 2 - Dynamic | Dynamic: The user touches the sensor and the button will activate momentarily. Sensor switches as long as "Output Minimum Impulse Time" is set, even though the user is still touching the sensor it will go back to an inactive state. |
| | | | 3 - Static | Static: The user touches the sensor and the button will remain active until the user is no longer touching the sensor. |
| Touch Sensitivity | 260 | rw | 0 - High | High: "Actuation Strength" > 4%. |
| | | | 1 - Middle | Middle: "Actuation Strength" > 14%. |
| | | | 2 - Low | Low: "Actuation Strength" > 24%. |
| Water Resistance | 262 | rw | 0 - Basic | Basic: Activation by e. g. light rain / dripping water unlikely. |
| | | | 1 - Enhanced | Enhanced: Activation by water jet / high-pressure cleaner unlikely. No limitation in operability, but activation by water possible in low light conditions. |
| | | | 2 - Ultimate | Ultimate: Strongly reduced probability of activation by e. g. water jet / high-pressure cleaner. Possible limitation in operability in low light conditions. |
| Minimum Actuation Time | 263 | rw | 0 ... 65535 [ms] | Time the sensor has to be activated before output on Pin 4 switches, "Actuation Flag" is set to "Actuated" and "Actuation Count" goes up. |
| Minimum Actuation Time (Toggle OFF) | 283 | rw | 0 ... 65535 [ms] | Only available in Toggle mode. Time the sensor has to be touched in "Toggle" mode to before output on Pin 4 turns "OFF" and "Actuation Flag" is set to "Idle". |

## I/O

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| Active Inputs | 271 | rw | 3 - None (3 pin mode) | None (3 pin mode): Pin 2 and Pin 5 are off, input signals are not monitored. |
| | | | 4 - Pin 2 (E1) (4 pin mode) | Pin 2 (E1) (4 pin mode): Pin 2 is monitored Pin 5 is off, input signals are not monitored. |
| | | | 5 - Pin 2 (E1) and Pin 5 (E2) (5 pin mode) | Pin 2 (E1) and Pin5 (E2) (5 pin mode): Pin 2 and Pin 5 are monitored. |
| E1 / E2 Mode | 272 | rw | 0 - Active Low 1 - Active High | Active Low: Accepts a low signal as input to turn on. Active High: Accepts a high signal as input to turn on. |
| Output Mode | 273 | rw | 0 - NPN | NPN: Output signal pulled down to V0. |
| | | | 1 - PNP | PNP: Output signal pushed up to +VDC. |
| | | | 2 - PushPull | Push Pull: Output signal pushed up to +VDC and pulled down to V0. |
| Output NO/NC | 274 | rw | 0 - NO (Normally Open) 1 - NC (Normally Closed) | |
| Output Minimum Impulse Time | 275 | rw | 10 … 86400000 [ms] | The minimum time (ms) of the output signal when the sensor is activated. The output signal can not be interrupted. In toggle mode the sensor can only be deactivated after the minimal output signal length is over. |

## LED

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| LED Control Mode | 293 | rw | 0 - Automatic Scene selection | Operation of sensor using "Led Scenes" depending on "Actuation Flag" Status and E1, E2 input. Use for operation without IO-Link. |
| | | | 1 - Scene controlled by IO-Link Process Data | Operation of sensor using "Led Scenes" controlled via IO-Link "Process Data Output". For use of preconfigured Scenes via IO-Link. |
| | | | 2 - Advanced control by IO-Link Process Data | LED display completely controlled via "Process Data Output". LED scenes are no longer used. |
| | | | 3 - Classic Two LED Mode | Two status, idle and touch, sensor behavior depends on „Active Inputs". None (3 pin mode): LED colour changes when actuated from idle to touch. Pin 2 (E1) (4 pin mode): Idle LED can be controlled via E1 when actuated LED switches to Actuated. Pin 2 (E1) and Pin5 (E2) (5 pin mode): Idle LED is controlled by E1, Touch LED is controlled by E2, actuation has no effect on LED |
| Adaptive LED Brightness | 270 | rw | 0 - Off 1 - On | If turned "On" the sensor automatically adjusts the LED Brightness depending on the "Surrounding Brightness". |
| Brightness of the LED | 285 | rw | 0 … 100 [%] | Serves as minimum value with automatic brightness control. Brightness of LED sets minimal brightness if "Adaptive LED Brightness" is turned "On". |

## Classic LED Control (LED Control Mode = 3)

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| LED Colour Idle | 264 | rw | 0 - Turquoise blue 1 - Red 2 - Green 3 - Blue 4 - Yellow 5 - Magenta 10 - Orange 11 - Violet 13 - Off 14 - Clean Blue 254 - Manual | Choose colour of LED |
| LED Colour Touch | 265 | rw | 0 - Turquoise blue 1 - Red 2 - Green 3 - Blue 4 - Yellow 5 - Magenta 10 - Orange 11 - Violet 13 - Off 14 - Clean Blue 254 - Manual | Choose colour of LED |

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| LED Mode Idle | 266 | rw | 0 - Static Ring<br>1 - Flash Ring<br>2 - Pulse Ring | Choose LED ring behavior Static Ring: Static illumination<br>Flashing Ring: Flashing illumination in default frequency<br>Pulsing Ring: Pulsing illumination in default frequency |
| LED Mode Touch | 267 | rw | 0 - Static Ring 1 - Flash Ring 2 - Pulse Ring | Choose LED ring behavior Static Ring: Static illumination<br>Flashing Ring: Flashing illumination in default frequency<br>Pulsing Ring: Pulsing illumination in default frequency |

**LED Manual Colour Idle**

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| R | 268-1 | rw | 0 ... 255 | "R" – red value |
| G | 268-2 | rw | 0 ... 255 | "G" – green value |
| B | 268-3 | rw | 0 ... 255 | "B" – blue value |

**LED Manual Colour Touch**

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| R | 269-1 | rw | 0 ... 255 | "R" – red value |
| G | 269-2 | rw | 0 ... 255 | "G" – green value |
| B | 269-3 | rw | 0 ... 255 | "B" – blue value |

**LED Scenes (LED Control Mode = 0 and 1)**
**LED Scene 0 (no Touch, E1 off, E2 off)**

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| LED Colour | 295-1 | rw | 0 - Turquoise blue<br>1 - Red<br>2 - Green<br>3 - Blue<br>4 - Yellow<br>5 - Magenta<br>10 - Orange<br>11 - Violet<br>13 - Off<br>14 - Clean Blue<br>128 - Custom Colour 1<br>129 - Custom Colour 2 | Choose colour of LED ring |
| LED Effect | 295-2 | rw | 0 - Static Ring<br>1 - Flash Ring<br>2 - Pulse Ring | Static Ring: Static illumination<br>Flashing Ring: Flashing illumination, frequency adjustable<br>Pulsing Ring: Pulsing illumination, frequency adjustable |
| Effect Frequency | 295-3 | rw | 1 ... 60<br>0 - Default Frequency [0.1 Hz] | Frequency of LED effect in 1/10 Hz, range: 0.1 ... 6 Hz.<br>Applies only for animated effects |

**LED Scenes (LED Control Mode = 0 and 1)**
**LED Scene 1 (Touch, E1 off, E2 off)**

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| LED Colour | 296-1 | rw | 0 - Turquoise blue<br>1 - Red<br>2 - Green<br>3 - Blue<br>4 - Yellow<br>5 - Magenta<br>10 - Orange<br>11 - Violet<br>13 - Off<br>14 - Clean Blue<br>128 - Custom Colour 1<br>129 - Custom Colour 2 | Choose colour of LED ring |
| LED Effect | 296-2 | rw | 0 - Static Ring<br>1 - Flash Ring<br>2 - Pulse Ring | Static Ring: Static illumination<br>Flashing Ring: Flashing illumination, frequency adjustable<br>Pulsing Ring: Pulsing illumination, frequency adjustable |
| Effect Frequency | 296-3 | rw | 1 ... 60<br>0 - Default Frequency [0.1 Hz] | Frequency of LED effect in 1/10 Hz, range: 0.1 ... 6 Hz.<br>Applies only for animated effects |

**LED Scenes (LED Control Mode = 0 and 1)**
**LED Scene 2 (no Touch, E1 off, E2 off)**

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| LED Colour | 297-1 | rw | 0 - Turquoise blue<br>1 - Red<br>2 - Green<br>3 - Blue<br>4 - Yellow<br>5 - Magenta<br>10 - Orange<br>11 - Violet<br>13 - Off<br>14 - Clean Blue<br>128 - Custom Colour 1<br>129 - Custom Colour 2 | Choose colour of LED ring |
| LED Effect | 297-2 | rw | 0 - Static Ring<br>1 - Flash Ring<br>2 - Pulse Ring | Static Ring: Static illumination<br>Flashing Ring: Flashing illumination, frequency adjustable<br>Pulsing Ring: Pulsing illumination, frequency adjustable |
| Effect Frequency | 297-3 | rw | 1 ... 60<br>0 - Default Frequency [0.1 Hz] | Frequency of LED effect in 1/10 Hz, range: 0.1 ... 6 Hz.<br>Applies only for animated effects |

**LED Scenes (LED Control Mode = 0 and 1)**
**LED Scene 3 (Touch, E1 off, E2 off)**

| Name | Index - Subindex | Access | Value | Description |
|------|------------------|--------|-------|-------------|
| LED Colour | 298-1 | rw | 0 - Turquoise blue<br>1 - Red<br>2 - Green<br>3 - Blue<br>4 - Yellow<br>5 - Magenta<br>10 - Orange<br>11 - Violet<br>13 - Off<br>14 - Clean Blue<br>128 - Custom Colour 1<br>129 - Custom Colour 2 | Choose colour of LED ring |
| LED Effect | 298-2 | rw | 0 - Static Ring<br>1 - Flash Ring<br>2 - Pulse Ring | Static Ring: Static illumination<br>Flashing Ring: Flashing illumination, frequency adjustable<br>Pulsing Ring: Pulsing illumination, frequency adjustable |
| Effect Frequency | 298-3 | rw | 1 ... 60<br>0 - Default Frequency [0.1 Hz] | Frequency of LED effect in 1 / 10 Hz, range: 0.1 ... 6 Hz.<br>Applies only for animated effects |

**LED Scenes (LED Control Mode = 0 and 1)**
**LED Scene 4 (no Touch, E1 off, E2 off)**

| Name | Index - Subindex | Access | Value | Description |
|------|------------------|--------|-------|-------------|
| LED Colour | 299-1 | rw | 0 - Turquoise blue<br>1 - Red<br>2 - Green<br>3 - Blue<br>4 - Yellow<br>5 - Magenta<br>10 - Orange<br>11 - Violet<br>13 - Off<br>14 - Clean Blue<br>128 - Custom Colour 1<br>129 - Custom Colour 2 | Choose colour of LED ring |
| LED Effect | 299-2 | rw | 0 - Static Ring<br>1 - Flash Ring<br>2 - Pulse Ring | Static Ring: Static illumination<br>Flashing Ring: Flashing illumination, frequency adjustable<br>Pulsing Ring: Pulsing illumination, frequency adjustable |
| Effect Frequency | 299-3 | rw | 1 ... 60<br>0 - Default Frequency [0.1 Hz] | Frequency of LED effect in 1 / 10 Hz, range: 0.1 ... 6 Hz.<br>Applies only for animated effects |

**LED Scenes (LED Control Mode = 0 and 1)**
**LED Scene 5 (Touch, E1 off, E2 off)**

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| LED Colour | 300-1 | rw | 0 - Turquoise blue<br>1 - Red<br>2 - Green<br>3 - Blue<br>4 - Yellow<br>5 - Magenta<br>10 - Orange<br>11 - Violet<br>13 - Off<br>14 - Clean Blue<br>128 - Custom Colour 1<br>129 - Custom Colour 2 | Choose colour of LED ring |
| LED Effect | 300-2 | rw | 0 - Static Ring<br>1 - Flash Ring<br>2 - Pulse Ring | Static Ring: Static illumination<br>Flashing Ring: Flashing illumination, frequency adjustable<br>Pulsing Ring: Pulsing illumination, frequency adjustable |
| Effect Frequency | 300-3 | rw | 1 ... 60<br>0 - Default Frequency [0.1 Hz] | Frequency of LED effect in 1/10 Hz, range: 0.1 ... 6 Hz.<br>Applies only for animated effects |

**LED Scenes (LED Control Mode = 0 and 1)**
**LED Scene 6 (no Touch, E1 off, E2 off)**

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| LED Colour | 301-1 | rw | 0 - Turquoise blue<br>1 - Red<br>2 - Green<br>3 - Blue<br>4 - Yellow<br>5 - Magenta<br>10 - Orange<br>11 - Violet<br>13 - Off<br>14 - Clean Blue<br>128 - Custom Colour 1<br>129 - Custom Colour 2 | Choose colour of LED ring |
| LED Effect | 301-2 | rw | 0 - Static Ring<br>1 - Flash Ring<br>2 - Pulse Ring | Static Ring: Static illumination<br>Flashing Ring: Flashing illumination, frequency adjustable<br>Pulsing Ring: Pulsing illumination, frequency adjustable |
| Effect Frequency | 301-3 | rw | 1 ... 60<br>0 - Default Frequency [0.1 Hz] | Frequency of LED effect in 1/10 Hz, range: 0.1 ... 6 Hz.<br>Applies only for animated effects |

**LED Scenes (LED Control Mode = 0 and 1)**
**LED Scene 7 (Touch, E1 off, E2 off)**

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| LED Colour | 302-1 | rw | 0 - Turquoise blue<br>1 - Red<br>2 - Green<br>3 - Blue<br>4 - Yellow<br>5 - Magenta<br>10 - Orange<br>11 - Violet<br>13 - Off<br>14 - Clean Blue<br>128 - Custom Colour 1<br>129 - Custom Colour 2 | Choose colour of LED ring |
| LED Effect | 302-2 | rw | 0 - Static Ring<br>1 - Flash Ring<br>2 - Pulse Ring | Static Ring: Static illumination<br>Flashing Ring: Flashing illumination, frequency adjustable<br>Pulsing Ring: Pulsing illumination, frequency adjustable |
| Effect Frequency | 302-3 | rw | 1 ... 60<br>0 - Default Frequency [0.1 Hz] | Frequency of LED effect in 1/10 Hz, range: 0.1 ... 6 Hz.<br>Applies only for animated effects |

**LED Custom Scene Colours (LED Control Mode = 0 and 1)**
**Custom Colour 1**

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| R | 306-1 | rw | 0 ... 255 | "R" – red value |
| G | 306-2 | rw | 0 ... 255 | "G" – green value |
| B | 306-3 | rw | 0 ... 255 | "B" – blue value |

**LED Custom Scene Colours (LED Control Mode = 0 and 1)**
**Custom Colour 2**

| Name | Index - Subindex | Access | Value | Description |
|---|---|---|---|---|
| R | 307-1 | rw | 0 ... 255 | "R" – red value |
| G | 307-2 | rw | 0 ... 255 | "G" – green value |
| B | 307-3 | rw | 0 ... 255 | "B" – blue value |

**Observation**

| Name | Index | Access | Value | Description |
|---|---|---|---|---|
| LED Control Mode | 293 | rw | 0 - Automatic Scene selection<br>1 - Scene controlled by IO-Link Process Data<br>2 - Advanced control by IO-Link Process Data<br>3 - Classic Two LED Mode | Automatic Scene selection: Usage of scenes via E1 and E2 without IO-Link<br>Scene controlled by IO-Link Process Data: Usage of IO-Link Process Data to switch inbetween LED Scenes<br>advanced control by IO-Link Process Data: Complete control over LED via Processdata<br>Classic Two LED Mode: simple switch configration and behavior depending on active inputs |

Diagnose

| Name | Index | Access | Value | Description |
|------|-------|--------|-------|-------------|
| Supply VoltageState | 256 | ro | 0 ... 65535 [0.001 V] | |
| Sensor Temperature | 257 | ro | -32768 ... 32767 [0.1°C] | |
| Flash Erase Count | 259 | ro | 0 ... 65535 | |
| Input E1 Voltage | 277 | ro | 0 ... 65535 [0.001 V] | |
| Input E2 Voltage | 278 | ro | 0 ... 65535 [0.001 V] | |
| MCU Core Voltage | 279 | ro | 0 ... 65535 [0.001 V] | |
| Charge Code | 280 | ro | 0 ... 65535 | |
| Error code | 282 | ro | 0 … 65535 | |
| Device Access Locks (Data Storage Lock) | 12 | rw | true / false | |

Series 84 IO-Link Touch supports four modes for controlling its LED.
▪ Automatic Scene Selection
▪ Scene controlled by IO-Link-Process Data
▪ Advanced Control by IO-Link Process Data
▪ Classic Two LED Mode
The control mode can be selected via IO-Link parameter "LED Control Mode".

## Automatic Scene Selection
Number of applicable scenes depends on parameter "Active Inputs":

| Name | Index - Subindex |
|------|------------------|
| None (3 pin mode) | 0, 1 |
| Pin2 (E1) (4 pin mode) | 0 ... 3 |
| Pin2 (E1) and Pin5 (E2) (5 pin mode) | 0 ... 7 |

Scene n is selected depending on the state of Touch (Sensor actuation) and the state of the input pins E1 and E2:

## Input State Table

| LED Scene n | Touch | E1 | E2 | Active Inputs | | |
|-------------|-------|----|----|---------------|--------|----------------------|
| | | | | None | Pin2 (E1) | Pin2 (E1) and Pin5 (E2) |
| 0 | 0 | 0 | 0 | ✓ | ✓ | ✓ |
| 1 | 1 | 0 | 0 | ✓ | ✓ | ✓ |
| 2 | 0 | 1 | 0 | ✘ | ✓ | ✓ |
| 3 | 1 | 1 | 0 | ✘ | ✓ | ✓ |
| 4 | 0 | 0 | 1 | ✘ | ✘ | ✓ |
| 5 | 1 | 0 | 1 | ✘ | ✘ | ✓ |
| 6 | 0 | 1 | 1 | ✘ | ✘ | ✓ |
| 7 | 1 | 1 | 1 | ✘ | ✘ | ✓ |

### Scene controlled by IO-Link-Process Data
The active Scene is set according to the "LED Scene" value in IO-Link process data.

### Advanced Control by IO-Link Process DataScene controlled by IO-Link-Process Data
The LED colour, brightness, effect and effect frequency is controlled by IO-Link process data.

### Classic Two LED Mode
"Idle" and "Touch" parameters of "Classic LED Control" section are used.
The "Active Inputs" parameter controls, whether the input pins affect the selection of "Idle" or "Touch" configuration:
Active Inputs = None (3 pin mode)

| Touch | E1 | E2 | LED Configuration |
|---|---|---|---|
| 0 | not monitored | not monitored | Idle |
| 1 | not monitored | not monitored | Touch |

Active Inputs = Pin2 (E1) (4 pin mode)

| Touch | E1 | E2 | LED Configuration |
|---|---|---|---|
| 0 | 0 | not monitored | Off |
| 0 | 1 | not monitored | Idle |
| 1 | not monitored | not monitored | Touch |

| Touch | E1 | E2 | LED Configuration |
|---|---|---|---|
| not monitored | 0 | 0 | Off |
| not monitored | 1 | 0 | Idle |
| not monitored | 0 | 1 | Touch |
| not monitored | 1 | 1 | Idle & Touch colours mixed |

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