

# Checklist

## Push Button PK52

(Installation in Glas doors)



Please fill out the checklist as completely as possible and send the PDF document to: [info@tsl-escha.com](mailto:info@tsl-escha.com)  
After checking the conformity of the checklist, you will receive a final article drawing in which the product is clearly described. In addition, you will receive an attractive offer according to your specifications. We will also be happy to complete the checklist together with you. Please call us if required: +49 2353/66796-0

When selecting colors and pictograms according to EN 14752 and EN 16584-1, the backgrounds must be taken into account. Furthermore, for compliance with EN 14752 and TSI-LOC & PAS, corresponding light and sound signals must be taken into account. If you have any questions about this, please do not hesitate to contact us.

### CUSTOMER INFORMATION

Company:

Name:

Address:

Phone:

E-Mail:

Date:

Project:

Quantity:

Quantity 1. year:

Quantity 2. year:

Quantity 3. year:

Notes:

## 1 APPLICATION AREA

Side entry systems for railway vehicles

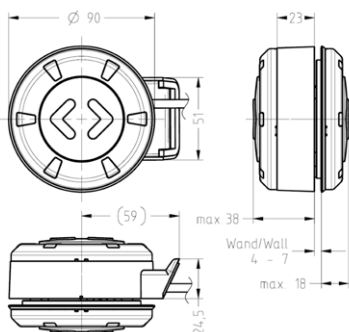
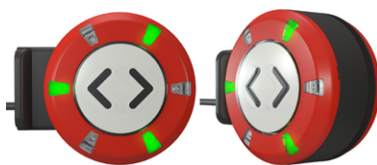
Buses

Pushbutton for help call device and sanitary cells

Other Applications

## 2 CONSTRUCTION TYPE

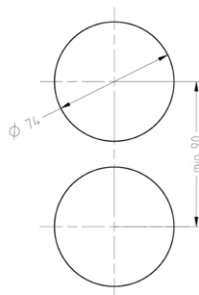
### Construction type 2 (double-sided push button)



Maße ohne Toleranz in mm  
Dimensions without tolerance in mm



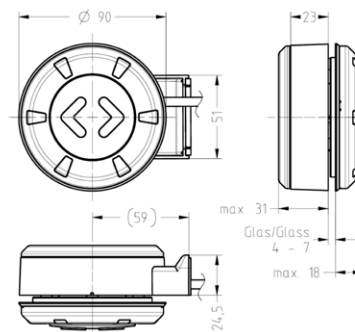
Montageausschnitt/Mounting cutout



Maße ohne Toleranz in mm  
Dimensions without tolerance in mm



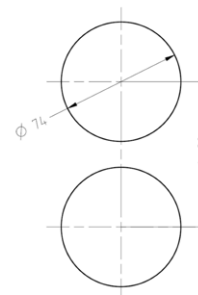
### Construction type 3 (one-sided push button)



Maße ohne Toleranz in mm  
Dimensions without tolerance in mm



Montageausschnitt/Mounting cutout



Maße ohne Toleranz in mm  
Dimensions without tolerance in mm



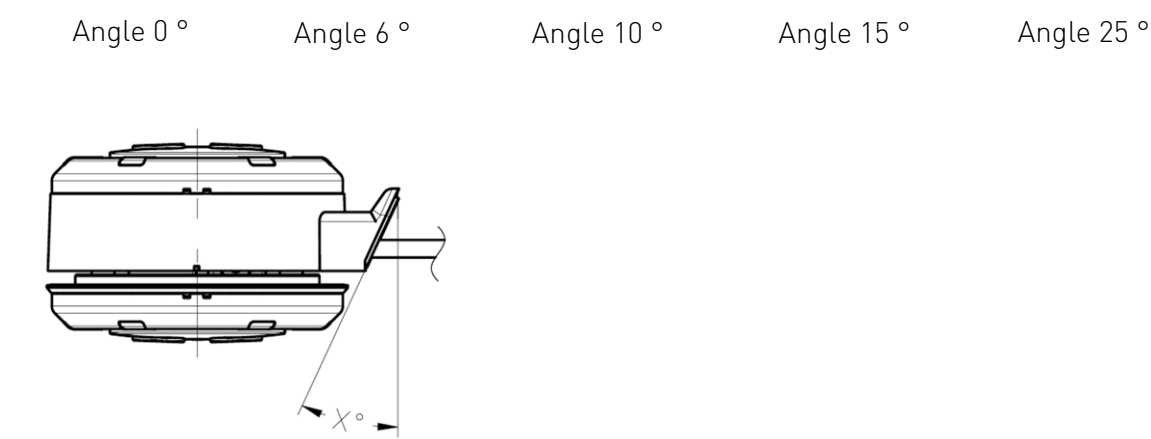
3

CABLE OUTLET (VIEW FROM OUTSIDE)



4

VARIABLE ADAPTATION TO THE DOOR PROFILE



5

GLASS THICKNESS

|                        |                         |                 |    |
|------------------------|-------------------------|-----------------|----|
| Glass thickness 4-7 mm | Glass thickness 8-13 mm | Glass thickness | mm |
|------------------------|-------------------------|-----------------|----|

## 6 FRONT PANEL

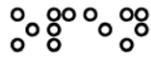
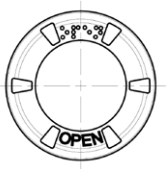
The front panels are available in powder-coated stainless steel or plastic

|                                                                                                                                                                                |                                                                                                                                                                                 |                                                                                                                                                                                 |                                                                                                                                                                                 |                                                                                                                                                                                 |                                                                                                                                                                                   |                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RAL 1023</b><br><br>Outside Push Button<br>Inside Push Button<br>Stainless steel<br>Plastic | <b>RAL 2008</b><br><br>Outside Push Button<br>Inside Push Button<br>Stainless steel<br>Plastic | <b>RAL 3020</b><br><br>Outside Push Button<br>Inside Push Button<br>Stainless steel<br>Plastic | <b>RAL 5017</b><br><br>Outside Push Button<br>Inside Push Button<br>Stainless steel<br>Plastic | <b>RAL 5022</b><br><br>Outside Push Button<br>Inside Push Button<br>Stainless steel<br>Plastic | <b>RAL 6024</b><br><br>Outside Push Button<br>Inside Push Button<br>Stainless steel<br>Plastic | <b>RAL 6032</b><br><br>Outside Push Button<br>Inside Push Button<br>Stainless steel<br>Plastic |
| <b>RAL 7035</b><br><br>Outside Push Button<br>Inside Push Button<br>Stainless steel<br>Plastic | <b>RAL 7042</b><br><br>Outside Push Button<br>Inside Push Button<br>Stainless steel<br>Plastic | <b>RAL 7043</b><br><br>Outside Push Button<br>Inside Push Button<br>Stainless steel<br>Plastic | <b>RAL9004</b><br><br>Outside Push Button<br>Inside Push Button<br>Plastic                     | <b>RAL 9006</b><br><br>Outside Push Button<br>Inside Push Button<br>Stainless steel<br>Plastic | <b>RAL 9016</b><br><br>Outside Push Button<br>Inside Push Button<br>Stainless steel<br>Plastic | <b>RAL 9017</b><br><br>Outside Push Button<br>Inside Push Button<br>Stainless steel<br>Plastic |
| Stainless steel matt not powder coated<br><br>Outside Push Button<br>Inside Push Button       | RAL-color or color shade on request<br>Outside Push Button<br>Inside Push Button                                                                                                |                                                                                                                                                                                 |                                                                                                                                                                                 |                                                                                                                                                                                 |                                                                                                                                                                                   |                                                                                                                                                                                   |

## 7 BRAILLE-LABELING/PRINTING

If you have selected the double-sided pushbutton, you must enter specifications for an outside push button and an inside push button in Design and functionality.

|                                                                                       |                     |
|---------------------------------------------------------------------------------------|---------------------|
|  | Outside Push Button |
|  | Inside Push Button  |

|                                                                                     |                  |                                                                                                  |                                                                                                    |
|-------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|  | without Braille  | Braille open  | Braille stop  |
|  | without printing | Printing OPEN                                                                                    | Printing STOP                                                                                      |

## 8 TOUCH SURFACE COATING TO PROTECT AGAINST GRAFFITI REMOVER

Without With

Note: The graffiti remover protection offers increased protection of the touch surface against our tested graffiti cleaning chemicals. Please refer to the cleaning instructions in the installation notes. A list of tested cleaning chemicals can be found on our [Website www.tsl-escha.com](http://www.tsl-escha.com)

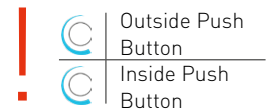
## 9 TOUCH SURFACE AND PICTOGRAPHS<sup>1)</sup>



|                      |                              |                               |                                       |                               |                               |                               |
|----------------------|------------------------------|-------------------------------|---------------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Tastfläche T00 plane | <br>B05<br>RAL 5017/RAL 9006 | <br>B12<br>RAL 1023/RAL 9017  | <br>B83<br>RAL 250 30 30/<br>RAL 9016 | <br>B29<br>RAL 9006/RAL 9017  | <br>B28<br>RAL 9006/RAL 9017  | <br>B10<br>RAL 3020/RAL 9006  |
|                      | <br>B26<br>RAL 6024/RAL 9006 | <br>B134<br>RAL 1023/RAL 9017 | <br>B07<br>RAL 1023/RAL 9017          | <br>B08<br>RAL 1023/RAL 9017  | <br>B09<br>RAL 1023/RAL 9017  | <br>B34<br>RAL 1023/RAL 9017  |
|                      | <br>B84<br>RAL 1023/RAL 9017 | <br>B123<br>RAL 1023/RAL 9017 | <br>B31<br>RAL 5017/RAL 9016          | <br>B68<br>RAL 5022/RAL 9003  | <br>B112<br>RAL 5022/RAL 9016 | <br>B135<br>RAL 5017/RAL 9016 |
|                      | <br>B02<br>RAL 5017/RAL 9016 | <br>B11<br>RAL 1023/RAL 9017  | <br>B37<br>RAL 1037/RAL 5022          | <br>B53<br>RAL 9017/RAL 9016  | <br>B59<br>RAL 5017/RAL 9016  | <br>B61<br>RAL 3020/RAL 9016  |
|                      | <br>B63<br>RAL 5022/RAL 9003 | <br>B113<br>RAL 5017/RAL 9016 | <br>B118<br>RAL 5017/RAL 9016         | <br>B140<br>RAL 9006/RAL 9016 | <br>B142<br>RAL 9016/RAL 9004 | <br>B147<br>RAL 9003/RAL 5005 |
|                      | <br>B01<br>RAL 9006/RAL 5017 | <br>B40<br>RAL 5017/RAL 9016  | <br>B111<br>RAL 5022/RAL 9016         | <br>B148<br>RAL 1023/RAL 9017 | <br>B150<br>RAL 5017/RAL 9016 | <br>B33<br>RAL 5017/RAL 9016  |
|                      | <br>B50<br>RAL 1023/RAL 9017 | <br>B62<br>RAL 3020/RAL 9016  | <br>B90<br>RAL 6024/RAL 9016          | <br>B107<br>RAL 3020/RAL 9016 | <br>B138<br>RAL 7035/RAL 9017 | <br>B32<br>RAL 1023/RAL 9017  |
|                      | <br>B70<br>RAL 5022/RAL 9003 | <br>B36<br>RAL 1037/RAL 5022  | <br>B38<br>RAL 3020/RAL 7045          | <br>B56<br>RAL 3020/RAL 9016  | <br>B58<br>RAL 9017/RAL 3020  | <br>B109<br>RAL 3020/RAL 9017 |
|                      | <br>B54<br>RAL 9017/RAL 9016 | <br>B141<br>RAL 9017/RAL 3020 | <br>B57<br>RAL 9017/RAL 9016          | <br>B85<br>RAL 3020/RAL 9016  | <br>B30<br>RAL 3020/RAL 9016  | <br>B149<br>RAL 5017/RAL 9016 |

1) First RAL specification background/second RAL specification symbol

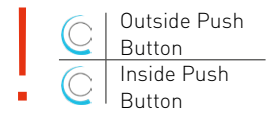
## 9 TOUCH SURFACE AND PICTOGRAPHS<sup>1)</sup>



|                                                                                                                                          |                                                                                                                  |                                                                                                                  |                                                                                                                 |                                                                                                                  |                                                                                                                   |                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                          | <br>B94<br>RAL 3020/RAL 9017    | <br>B49<br>RAL 5017             | <br>B128<br>RAL 1023           | <br>B129<br>RAL 6024           | <br>F1<br>RAL 9006             |                                                                                                                   |
| <br>Touch Surface T01<br>tactile arrows<br>open         | <br>B28<br>RAL 9006/RAL 9017    | <br>B39<br>RAL 6024/RAL 9017    | <br>B42<br>RAL 3020/RAL 9016   | <br>B46<br>RAL 6024/RAL 9016   | <br>B55<br>RAL 9017/RAL 9016   | <br>B91<br>RAL 6024/RAL 9003   |
|                                                                                                                                          | <br>B120<br>RAL 5022/RAL 9016   | <br>B100<br>RAL 9016/RAL 9004   | <br>B35<br>RAL 1023/RAL 9017   | <br>B114<br>RAL 6032/RAL 9017  | <br>B143<br>RAL 3020/RAL 9004  | <br>B144<br>RAL 5022/RAL 9004  |
|                                                                                                                                          | <br>B101<br>RAL 9016/RAL 9004  | <br>B68<br>RAL 5022/RAL 9003   | <br>B75<br>RAL 5017/RAL 9003  | <br>B110<br>RAL 9016/RAL 5017 | <br>B95<br>RAL 5022/RAL 9003  | <br>B127<br>RAL 3020/RAL 9016 |
|                                                                                                                                          | <br>B151<br>RAL 9006/RAL 9017 | <br>B152<br>RAL 5017/RAL 9003 | <br>B130<br>RAL 3020         | <br>B49<br>RAL 5017          |                                                                                                                   |                                                                                                                   |
| <br>Touch Surface T02<br>tactile arrows close         | <br>B29<br>RAL 9006/RAL 9017  | <br>B97<br>RAL 9016/RAL 9017  | <br>B47<br>RAL 3020/RAL 9016 | <br>B92<br>RAL 3020/RAL 9003 | <br>B96<br>RAL 3020/RAL 9017 |                                                                                                                   |
| <br>Touch Surface T03<br>tactile key                  | <br>B60<br>RAL 5017/RAL 9016  | <br>B79<br>RAL 5022/RAL 9003  | <br>B87<br>RAL 5005/RAL 9016 | <br>B98<br>RAL 3020/RAL 9017 | <br>B99<br>RAL 9006/RAL 9004 |                                                                                                                   |
| <br>Touch Surface T04<br>tactile „i“                  | <br>B69<br>RAL 5022/RAL 9003  | <br>B36<br>RAL 1037/RAL 5022  |                                                                                                                 |                                                                                                                  |                                                                                                                   |                                                                                                                   |
| <br>Touch Surface T06<br>tactile arrows<br>close/open | <br>B70<br>RAL 5022/RAL 9003  |                                                                                                                  |                                                                                                                 |                                                                                                                  |                                                                                                                   |                                                                                                                   |

1) First RAL specification background/second RAL specification symbol

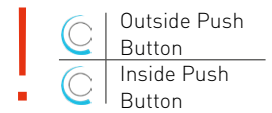
## 9 TOUCH SURFACE AND PICTOGRAPHS<sup>1)</sup>



|  |                          |                           |                           |                           |                           |
|--|--------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
|  | B93<br>RAL 6024/RAL 9017 | B116<br>RAL 5022/RAL 9003 | B126<br>RAL 9006/RAL 9017 | B131<br>RAL 1023/RAL 9017 | B139<br>RAL 9016/RAL 9017 |
|  | B56<br>RAL 3020/RAL 9016 | B102<br>RAL 6024/RAL 9016 | B103<br>RAL 1023/RAL 9017 |                           |                           |
|  | B48<br>RAL 5017/RAL 9016 |                           |                           |                           |                           |
|  | B64<br>RAL 5017/RAL 9016 | B49<br>RAL 5017           | B80<br>RAL 5022/RAL 9003  | B82<br>RAL 9017/RAL 9016  | B88<br>RAL 5005/ RAL 9016 |
|  | B43<br>RAL 5005/RAL 9016 | B77<br>RAL 5022/RAL 9003  |                           |                           |                           |
|  | B44<br>RAL 5005/RAL 9016 | B78<br>RAL 5022/RAL 9003  |                           |                           |                           |
|  | B45<br>RAL 2003/RAL 9016 | B66<br>RAL 5017/RAL 9016  | B81<br>RAL 5022/RAL 9003  | B86<br>RAL 5005/RAL 9016  |                           |
|  | B05<br>RAL 5017/RAL 9006 | B26<br>RAL 6024/RAL 9006  | B71<br>RAL 5017/RAL 9006  |                           |                           |
|  | B59<br>RAL 5017/RAL 9016 |                           |                           |                           |                           |

1) First RAL specification background/second RAL specification symbol

## 9 TOUCH SURFACE AND PICTOGRAPHS<sup>1)</sup>



|                                                                                                                                  |                                                                                                                       |                                                                                                                  |                                                                                                                  |                                                                                                                   |                                                                                                                    |                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| <br>Touch Surface T16<br>tactile Braille ramp   | <br>B59<br>RAL 5017/RAL 9016         |                                                                                                                  |                                                                                                                  |                                                                                                                   |                                                                                                                    |                                                                                                                    |
| <br>Touch Surface T17<br>tactile bell           | <br>B30<br>RAL 3020/RAL 9016         | <br>B106<br>RAL 6018/ RAL 9016  | <br>B108<br>RAL 6032/RAL 9016   | <br>B124<br>RAL 9006/RAL 9017   |                                                                                                                    |                                                                                                                    |
| <br>Touch Surface T18<br>tactile wheelchair     | <br>B59<br>RAL 5017/RAL 9016         | <br>B117<br>RAL 5022/RAL 9003   |                                                                                                                  |                                                                                                                   |                                                                                                                    |                                                                                                                    |
| <br>Touch Surface T19<br>tactile Halt          | <br>B90<br>RAL 6024/RAL 9016        |                                                                                                                  |                                                                                                                  |                                                                                                                   |                                                                                                                    |                                                                                                                    |
| <br>Touch Surface T20<br>tactile Braille stop | <br>B02<br>RAL 5017/RAL 9016       | <br>B10<br>RAL 3020/RAL 9006  | <br>B28<br>RAL 9006/RAL 9017  | <br>B31<br>RAL 5017/RAL 9016  | <br>B33<br>RAL 5017/RAL 9016  | <br>B146<br>RAL 9016/RAL 5017 |
|                                                                                                                                  | <br>B40<br>RAL 5017/RAL 9016       | <br>B107<br>RAL 3020/RAL 9016 | <br>B119<br>RAL 5015/RAL 9016 | <br>B145<br>RAL 6024/RAL 9016 | <br>B132<br>RAL 9016/RAL 9004 | <br>B133<br>RAL 5017/RAL 9016 |
|                                                                                                                                  | <br>B59<br>RAL 5017/RAL 9016       | <br>B68<br>RAL 5022/RAL 9003  |                                                                                                                  |                                                                                                                   |                                                                                                                    |                                                                                                                    |
| <br>Touch Surface T21<br>tactile wheelchair   | <br>B121<br>RAL 5002S/<br>RAL 9016 | <br>B137<br>RAL 5017/RAL 9016 |                                                                                                                  |                                                                                                                   |                                                                                                                    |                                                                                                                    |

Touch surface and pictograph on request



10

NOMINAL VOLTAGE

24 VDC

VDC

11

QUICK CONFIGURATION: LIGHT AND TONE SIGNALS

If individual functions are required, please go to **Step 12**

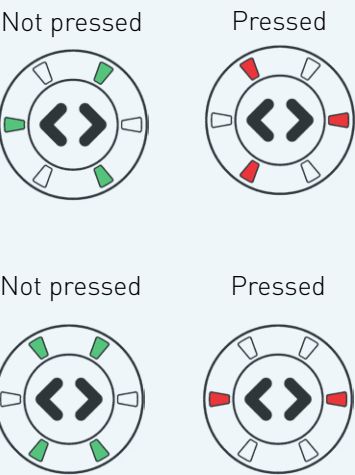
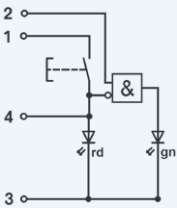
If the pushbutton is pressed applies:

LED: duration of operation with 1 sec. minimum pulse

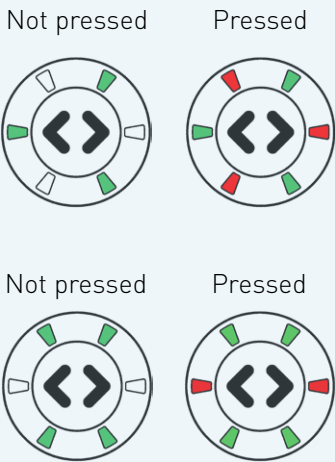
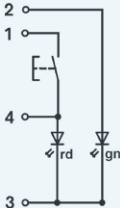
OUT: Duration of operation with 0.5 sec. minimum pulse

|        |     |
|--------|-----|
| PIN 1: | In1 |
| PIN 2: | In2 |
| PIN 3: | GND |
| PIN 4: | OUT |

Change of color and position  
for rail vehicles according to EN 14752



Red light signal added  
(first color is on when pressed)



Delete selection

|                                              |                                              |                                      |                 |
|----------------------------------------------|----------------------------------------------|--------------------------------------|-----------------|
| Orientation tone<br>3,8 kHz 0,05 Sec. 0,5 Hz | Confirmation tone<br>3,5 kHz 0,5 Sec. 1-time | Orientation and<br>confirmation tone | without<br>tone |
|----------------------------------------------|----------------------------------------------|--------------------------------------|-----------------|

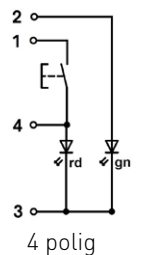


## 12 INDIVIDUAL SELECTION OF FUNCTIONS

You can parameterize two functions individually. Define the light, tone and output signals (see chart below for function 1 and function 2). The light signals and sound signals are identical for inside and outside push buttons, the same applies to the output signal. For LED light signals with sand glass effect or special requests, please contact our team.

| Light Signal       | Display | Light Signal     | Display |
|--------------------|---------|------------------|---------|
| L0                 |         | L4<br>2 red LEDs |         |
| L1<br>4 green LEDs |         | L5<br>4 red LEDs |         |
| L2<br>6 green LEDs |         | L6<br>6 red LEDs |         |
| L3<br>3 green LEDs |         | L7<br>3 red LEDs |         |

| Tone Signal A | Frequency | Duration  | Interval | Description       |
|---------------|-----------|-----------|----------|-------------------|
| A0            | -         | -         | -        | without tone      |
| A1            | 3,5 kHz   | 0,5 Sec.  | 1-mal    | Confirmation tone |
| A2            | 3,8 kHz   | 0,05 Sec. | 0,5 Hz   | Orientation tone  |
| AX            | kHz       | Sec.      | Hz       |                   |

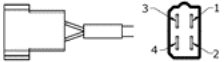
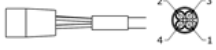
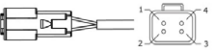
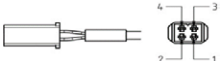


| Function 1 |      | Not Pressed      |    |    |    |               | Pressed          |    |    |    |         |                           |                       |
|------------|------|------------------|----|----|----|---------------|------------------|----|----|----|---------|---------------------------|-----------------------|
| Vin        | In 1 | LED Light-Signal |    |    |    |               | LED Light-Signal |    |    |    |         | Output Signal             |                       |
| 1          | 0    | L0               | L1 | L2 | L3 | Durable       | L0               | L1 | L2 | L3 | L1 + L4 | 0,5 Sec.                  | 0,5 Sec.              |
|            |      | L4               | L5 | L6 | L7 | Flashing 1 Hz | L4               | L5 | L6 | L7 | L3 + L7 | Duration of operation     | 1 Sec.                |
|            |      |                  |    |    |    |               |                  |    |    |    |         | <input type="text"/> Sec. | Duration of operation |
|            |      | Tone Signal      |    |    |    |               | Tone Signal      |    |    |    |         | No Output Signal          |                       |
|            |      | A0               |    | A2 |    | AX            | A0               |    | A1 |    | AX      |                           |                       |

| Function 2 |      | Not Pressed      |    |    |    |               | Pressed          |    |    |    |         |                           |                       |
|------------|------|------------------|----|----|----|---------------|------------------|----|----|----|---------|---------------------------|-----------------------|
| Vin        | In 1 | LED Light-Signal |    |    |    |               | LED Light-Signal |    |    |    |         | Output Signal             |                       |
| 1          | 1    | L0               | L1 | L2 | L3 | Durable       | L0               | L1 | L2 | L3 | L1 + L4 | 0,5 Sec.                  | 0,5 Sec.              |
|            |      | L4               | L5 | L6 | L7 | Flashing 1 Hz | L4               | L5 | L6 | L7 | L3 + L7 | Duration of operation     | 1 Sec.                |
|            |      |                  |    |    |    |               |                  |    |    |    |         | <input type="text"/> Sec. | Duration of operation |
|            |      | Tone Signal      |    |    |    |               | Tone Signal      |    |    |    |         | No Output Signal          |                       |
|            |      | A0               |    | A2 |    | AX            | A0               |    | A1 |    | AX      |                           |                       |

13

CONNECTION CABLES

|                                                                   |                                                                                   |                                                                 |                                                                                     |
|-------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 64) TE Mini-Universal MATE-N-LOK, TE 794805-1 <b>4pole</b> (IP56) |  | 01) TE FASTIN-FASTON 250 TE 180901-0, 6,3 x 0,8 mm <b>4pole</b> |  |
| 66) TE SUPERSEAL 1.5MM TE 282106-1 <b>4pole</b> (IP67)            |  | 00) TE CIRCULAR MATE-N-LOK, TE 925075, Ø 2,1 mm <b>4pole</b>    |  |
| 71) TE DEUTSCH DTM DTM04-4P <b>4pole</b> (IP67)                   |  | 02) TE FASTIN-FASTON 110 TE 626057-0, 2,8 x 0,8 mm <b>4pole</b> |  |
| 60) ESCHA M8/Ø8 Snap (max. 60 VDC) SSFP4 <b>4pole</b> (IP67)      |  | 8S) TE ULTRAFAST TE 2502-520184-2, 6,2 x 0,8mm                  |                                                                                     |
| 8A) with wire-end sleeve                                          |  | Customer specific                                               |                                                                                     |

PIN ASSIGNMENT

|        | Version 1 | Version 2<br>(chapter 11) |
|--------|-----------|---------------------------|
| PIN 1: | Vin       | In1                       |
| PIN 2: | In1       | In2                       |
| PIN 3: | GND       | GND                       |
| PIN 4: | OUT       | OUT                       |

ALTERNATIVE  
PIN ASSIGNMENT

|        |  |
|--------|--|
| PIN 1: |  |
| PIN 2: |  |
| PIN 3: |  |
| PIN 4: |  |

14

CONNECTION LINE

(according to EN 45545-2 and UN/ECE R118)

|                |     |                            |
|----------------|-----|----------------------------|
| L = ca. 160 mm | L = | mm (Minimum length 160 mm) |
|----------------|-----|----------------------------|