

Series 57

Innovative. Intuitive and modern.

<https://eao.com/57>



Information about the Series

Key advantages

- First choice to fully comply with EN 14752
- User friendly, extra large operating area of Ø 74 mm
- Two unique, illuminated feedback rings
- Conform to TSI PRM
- Robust, raised front bezel prevents unintended activation
- Coherent look and feel of the entire Series 57
- Integrated push button finding tone
- Optional illumination functions
- Smart final mounting

Typical application areas

- Passenger access systems
- Passenger information systems
- Call for aid terminals
- Emergency and emergency call systems
- Toilet facilities on trains and buses
- Lifting and moving systems
- Access control systems

Functions

- Indicator
- Door opening push button
- Call for aid push button
- Warning indicator

Design

- Front mounting
- Rear mounting
- Glass mounting

IP front protection

- IP65, IP67 und IP69K

Ratings

- max. 250 mA

Mounting cut-outs

- Ø 42 mm

Terminal

- Cable with plug-in connection

Lens Material

- Aluminium
- Plastic

Markings

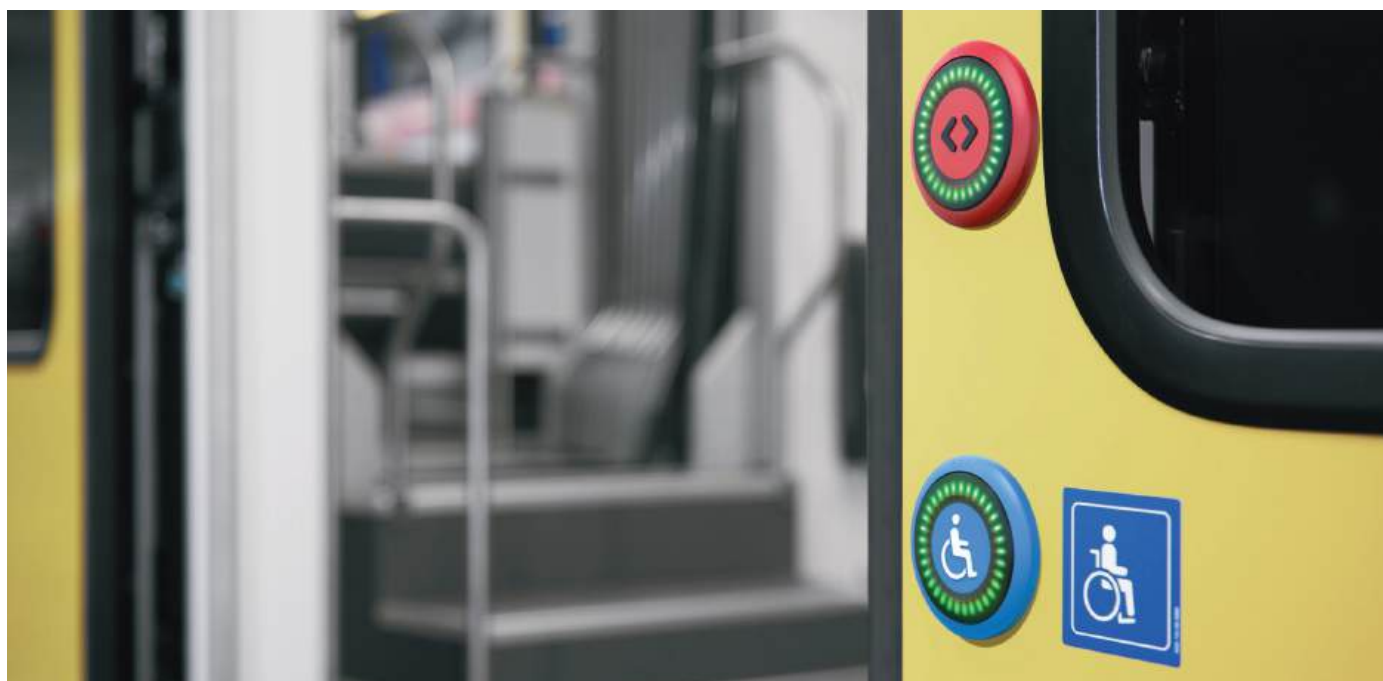
- Milling
- Injected in plastic

Approvals

- CCC
- E1 Regulation No. 10
- E1 118RII
- TSI PRM (EBC)

Conformities

- CE
- 2014/30/EU (EMC)
- 1300/2014/EU (TSI PRM)
- 2011/65/EU (RoHS)



Overview

Front mounting

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Glass mounting

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Technical data

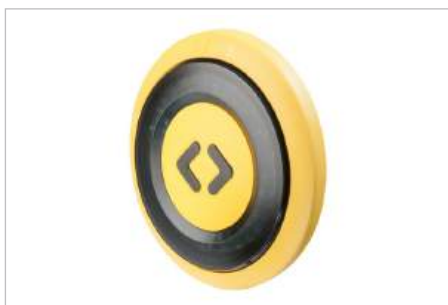
35

Application guidelines

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Front mounting

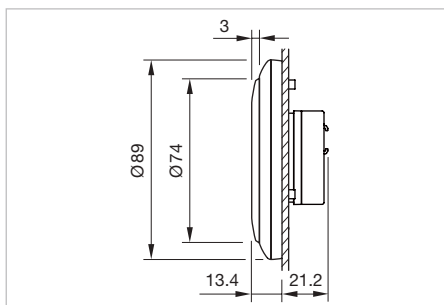
Single side push button



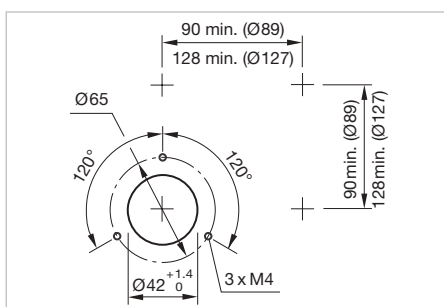
The preview is based on a sample product. This can differ from your current configuration.

General information

- User friendly, extra large operating area of Ø 74 mm
- Illuminable feedback rings; outer ring green and inner ring red
- Tri-Colour option; two additional lighting points in the outer ring. Two of the three colours can be controlled simultaneously.
- Raised symbols conform to TSI PRM
- Integrated optional push button finding tone for visually impaired persons (except Tri-Colour)
- Cable is available as single part
- Please complete a separate order form at www.eao.com/downloads and deliver it to your local EAO distributor
- Part No. 57-10-xxxxxx (with cable)
Part No. 57-100-xxxxxx (without cable)

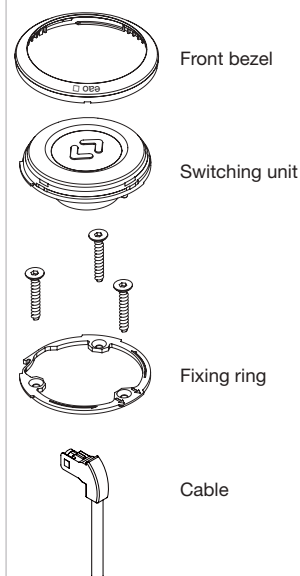


Dimensions [mm]



Mounting cut-outs [mm]

Equipment consisting of



Front bezel

plastic flush, colour similar RAL		Plastic raised, IP65, colour similar RAL	aluminium	without
☐ green RAL 6032	☐ red RAL 3000	☐ green RAL 6032	☐ natural anodized	☐
☐ blue RAL 5015	☐ yellow RAL 1023	☐ red RAL 3000		
☐ grey RAL 7040	☐ black RAL 9017	☐ yellow RAL 1023		
☐ night blue RAL 5022		☐ black RAL 9017		

Symbol insert

plastic, colour similar RAL		aluminium
☐ green RAL 6032	☐ red RAL 3000	☐ natural anodized
☐ blue RAL 5015	☐ yellow RAL 1023	
☐ grey RAL 7040	☐ night blue RAL 5022 (wheelchair)	

Symbol/Symbol colour similar RAL

Symbol plastic Symbol aluminium, natural anodized				Symbol aluminium, natural anodized			
☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017 ☐ white RAL 9003	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017

☐ white RAL 9003	☐ white RAL 9003

☐ yellow RAL 1023 ☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017

Front mounting

Push button finding tone

☐ standard 65 dB (A)

☐ without

Tri-Colour

☐ standard yellow

☐ without

Supply voltage

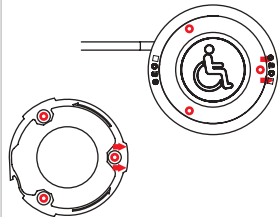
☐ 16 – 63 VDC

☐ 50 – 143 VDC

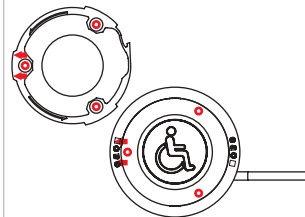
☐ 16.8 – 30 VDC (min./max.), Tri-Colour

Cable exit

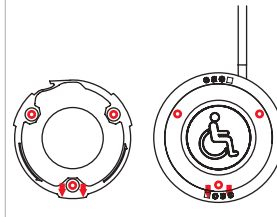
☐ cable exit left



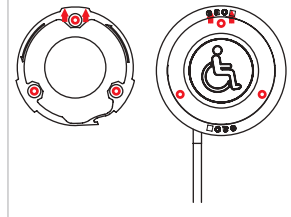
☐ cable exit right



☐ cable exit top



☐ cable exit bottom



Cable length

☐ A = 200 mm

☐ A = 1000 mm

☐ A = 2000 mm

☐ _____ mm

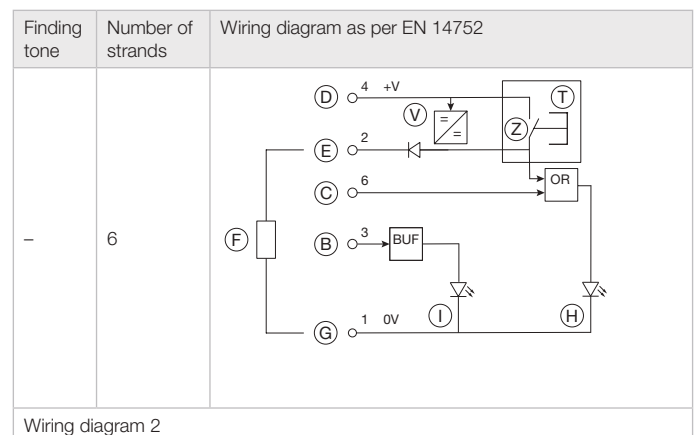
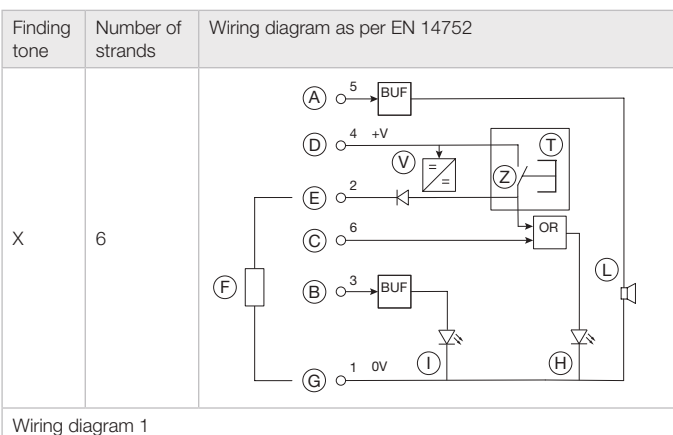
☐ without cable

Visible cable length can be shorter

Cable and Connector type

Cable	Wiring diagram	Connector	Connector pin assignment		
☐ 4 x 0.24 mm ²	3, 4	☐ Core end-sleeves		☐ standard	☐ special
☐ 4 x 0.50 mm ²	3, 4	☐ AMP MATE-N-LOK 794805-1 (4P)	1	Pin 1	—
☐ 6 x 0.24 mm ²	1, 2, 5, 6	☐ AMP MATE-N-LOK 794895-1 (6P)	2	Pin 2	—
☐ 6 x 0.50 mm ²	1, 2, 5, 6	☐ WAGO X-COM 769	3	Pin 3	—
		☐ AMP FASTIN-FASTON 180901 (4P)	4	Pin 4	—
		☐ DEUTSCH DT04-4P-C015 (4P)	5	Pin 5	—
		☐ DEUTSCH DT04-6P-C015 (6P)	6	Pin 6	—

Wiring diagrams



57 Front mounting

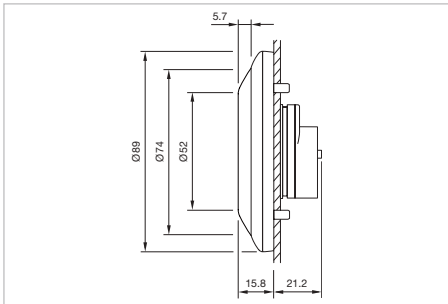
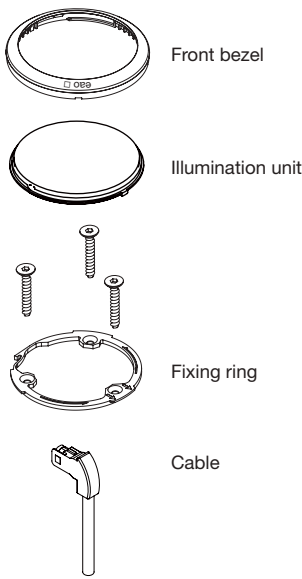
Finding tone	Number of strands	Wiring diagram as per EN 14752
X	4	
Wiring diagram 3		
X	6	
Wiring diagram 4		
-	5	
Wiring diagram 5		
-	6	
Wiring diagram 6		
-	6	
Wiring diagram 7, Tri-Colour		

Legend

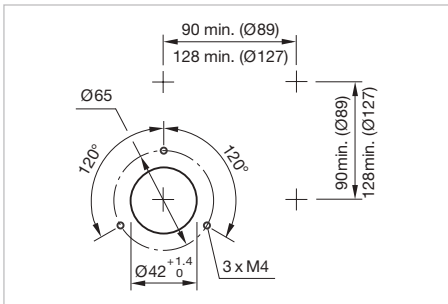
- A = Input push button finding tone
- B = Input LED outer ring
- C = Input LED inner ring
- D = Positive supply voltage (+V)
- E = Output electronic switch (not potential-free)
- F = External load
- G = Zero volt supply voltage (0V)
- H = LED inner ring
- I = LED outer ring
- L = Sound source
- N = LED additional position
- T = Push button
- V = Voltage regulator
- X = Inputs (general)
- Z = Electronic switch with overcurrent cut-off

Indicator

Equipment consisting of



Dimensions [mm]



Mounting cut-outs [mm]



The preview is based on a sample product. This can differ from your current configuration.

General information

- Extra large illuminated surface, Ø 52 mm
- LEDs ensure an optimal Symbol Illumination
- Cable is available as single part
- Please complete a separate order form at www.eao.com/downloads and deliver it to your local EAO distributor
- Part No. 57-60-xxxxxx (with cable)
Part No. 57-600-xxxxxx (without cable)

Front bezel

plastic, colour similar RAL

☐ green RAL 6032

☐ blue RAL 5015

☐ grey RAL 7040

☐ night blue RAL 5022

☐ red RAL 3000

☐ yellow RAL 1023

☐ black RAL 9017

aluminium

☐ natural anodized

without

☐

Symbols

☐	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐		

Symbol Illumination

Single colour

☐ red

☐ blue

☐ yellow

☐ white

☐ green

Bi-colour

☐ red / yellow

☐ red / green

☐ blue / white

57 Front mounting

Optional lighting effects

☐ No ☐ Yes

With optional light effect functions

PIN 2	☐ Red ☐ Yellow ☐ Green ☐ Blue ☐ White (Please advise one colour)	☐ Flashing frequency	☐ 0.0 Hz Constant lighting	Wiring diagram
			☐ 0.2 Hz	1 – 4
			☐ 0.5 Hz	3, 4
			☐ 1.0 Hz	3, 4
			☐ 2.5 Hz	3, 4
		☐ Brightness	☐ 50 %	1 – 4
			☐ 100 %	1 – 4
PIN 3	☐ Red ☐ Yellow ☐ Green ☐ Blue ☐ White (Please advise one colour)	☐ Flashing frequency	☐ 0.0 Hz Constant lighting	1 – 4
			☐ 0.2 Hz	3, 4
			☐ 0.5 Hz	3, 4
			☐ 1.0 Hz	3, 4
			☐ 2.5 Hz	3, 4
		☐ Brightness	☐ 50 %	1 – 4
			☐ 100 %	1 – 4
PIN 4	☐ Red ☐ Yellow ☐ Green ☐ Blue ☐ White (Please advise one colour)	☐ Flashing frequency	☐ 0.0 Hz Constant lighting	1 – 4
			☐ 0.2 Hz	3, 4
			☐ 0.5 Hz	3, 4
			☐ 1.0 Hz	3, 4
			☐ 2.5 Hz	3, 4
		☐ Brightness	☐ 50 %	1 – 4
			☐ 100 %	1 – 4

Note: Total up to 3 lighting effects available per indicator, please see «Symbol Illumination».

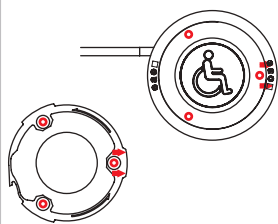
Supply voltage

☐ 24 VDC ☐ 110 VDC

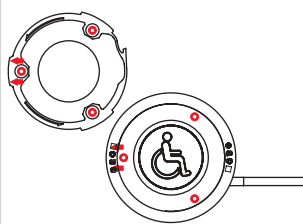
Tolerance +30 % ... -30 %

Cable exit

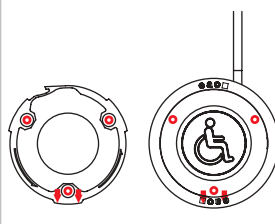
☐ cable exit left



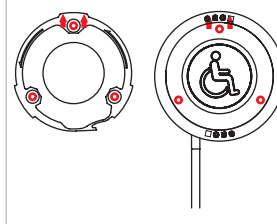
☐ cable exit right



☐ cable exit top



☐ cable exit bottom



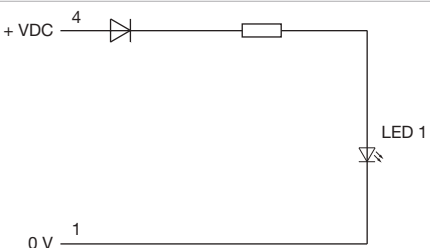
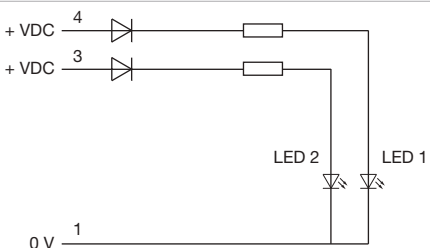
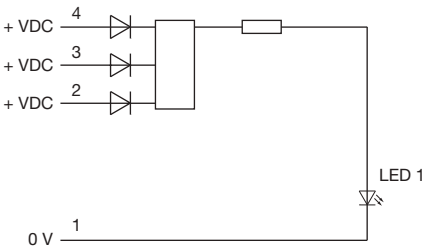
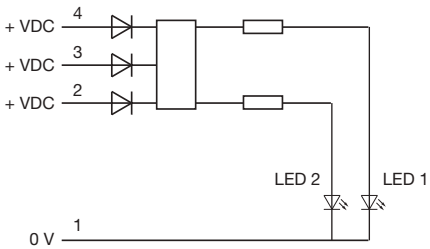
Cable length

☐ A = 200 mm (standard) ☐ A = 1000 mm ☐ A = 2000 mm ☐ _____ mm ☐ without cable

Visible cable length can be shorter

Cable and Connector type					
Cable	Wiring diagram	Connector	Connector pin assignment		
☐ 2 x 0.50 mm ²	1	☐ Core end-sleeves		☐ standard	☐ special
☐ 4 x 0.50 mm ²	2, 3, 4	☐ AMP MATE-N-LOK 794894-1 (2P)	1	Pin 1	—
		☐ AMP MATE-N-LOK 794805-1 (4P)	2	Pin 2	—
		☐ WAGO X-COM 769	3	Pin 3	—
		☐ AMP FASTIN-FASTON 180901 (4P)	4	Pin 4	—
		☐ DEUTSCH DT04-4P-C015 (4P)			
		☐ DEUTSCH DT04-6P-C015 (6P)			

Wiring diagrams

Single-colour, no lighting effects (constant lighting)	Bi-colour, no lighting effects (constant lighting)
 Wiring diagram 1	 Wiring diagram 2
Single-colour, with lighting effects	Bi-colour, with lighting effects
 Wiring diagram 3	 Wiring diagram 4

57 Front mounting

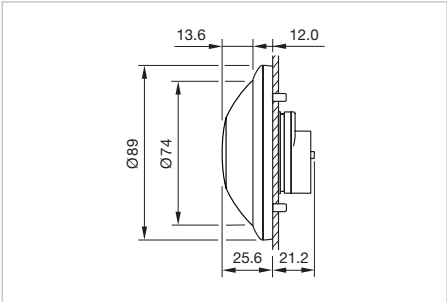
Warning indicator



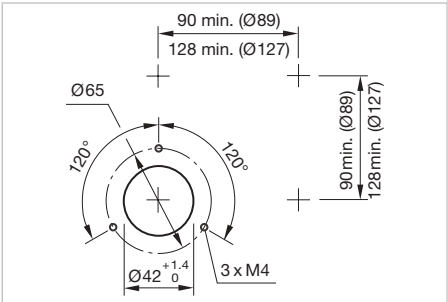
The preview is based on a sample product. This can differ from your current configuration.

General information

- Extra large illuminated lens, Ø 74 mm
- LEDs ensure an optimal illumination
- Cable is available as single part
- Please complete a separate order form at www.eao.com/downloads and deliver it to your local EAO distributor
- Part No. 57-50-xxxxxx (with cable)
Part No. 57-500-xxxxxx (without cable)

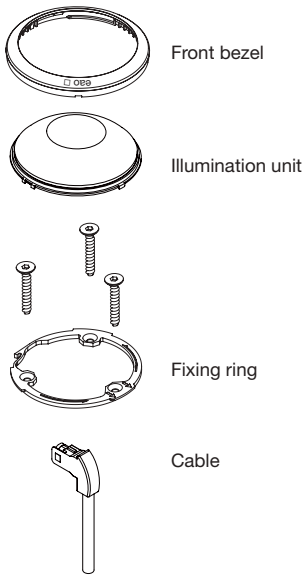


Dimensions [mm]



Mounting cut-outs [mm]

Equipment consisting of



Front bezel			
plastic, colour similar RAL		aluminium	without
☐ green RAL 6032	☐ red RAL 3000	☐ natural anodized	☐
☐ blue RAL 5015	☐ yellow RAL 1023		
☐ grey RAL 7040	☐ black RAL 9017		
☐ night blue RAL 5022			

Illumination			
☐ red	☐ blue	☐ yellow	☐ green

Supply voltage	
☐ 24 VDC	☐ 110 VDC

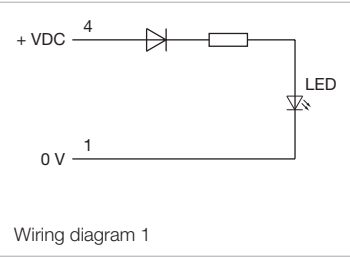
Tolerance +30 % ... -30 %

Cable exit			
☐ cable exit left	☐ cable exit right	☐ cable exit top	☐ cable exit bottom

Cable length				
☐ A = 200 mm	☐ A = 1000 mm	☐ A = 2000 mm	☐ _____ mm	☐ without cable
Visible cable length can be shorter				

Cable and Connector type					
Cable	Wiring diagram	Connector	Connector pin assignment		
☐ 2 x 0.50 mm ²	1	☐ Core end-sleeves		☐ standard	☐ special
		☐ AMP MATE-N-LOK 794894-1 (2P)	1	Pin 1	—
		☐ WAGO X-COM 769	4	Pin 4	—
		☐ DEUTSCH DT04-2P-C015 (2P)			

Wiring diagrams



57 Front mounting

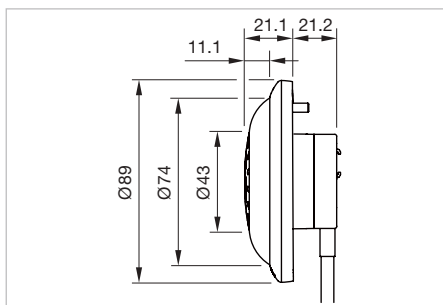
Multi-Tone Warning Indicator



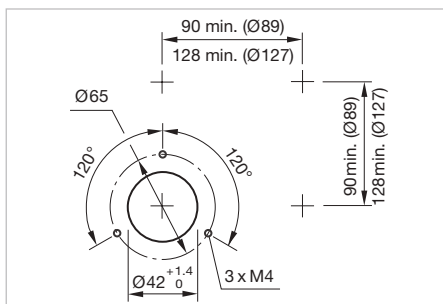
The preview is based on a sample product. This can differ from your current configuration.

General information

- Audible and visual warning in a single device
- 3-tone sequences module with manual volume or passive loudspeaker
- The description of the standard tones can be found in the «Application guidelines».
- A single cable for two functions, space-saving and low mounting costs
- Extra large illuminated lens, Ø 74 mm
- Reliable LEDs ensure an optimum illumination
- Cable is available as single part
- Please complete a separate order form and 3-tone editor at www.eao.com/downloads and deliver it to your local EAO distributor
- Part No. 57-70-xxxxxx (with cable)
Part No. 57-700-xxxxxx (without cable)

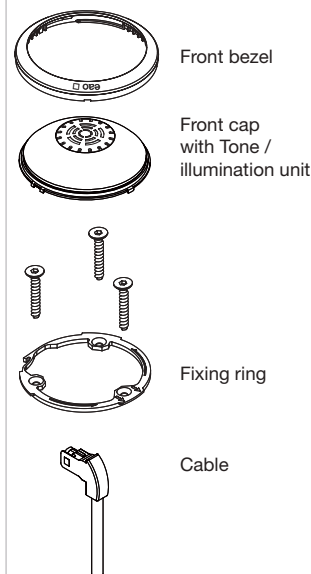


Dimensions [mm]



Mounting cut-outs [mm]

Equipment consisting of



Front bezel

plastic, colour similar RAL

☐ green RAL 6032

☐ red RAL 3000

aluminium

☐ natural anodized

without

☐ blue RAL 5015

☐ yellow RAL 1023

☐ grey RAL 7040

☐ black RAL 9017

☐ night blue RAL 5022

Illumination

Single colour

Bi-Colour

☐ red

☐ blue

☐ yellow

☐ white

☐ red/yellow

☐ red/green

Supply voltage

☐ 24 VDC

Tolerance -30 % ... +25 %

Front cap

plastic, colour similar RAL

☐ black RAL 9017

Front cap marking

☐ without symbol

☐ with symbol

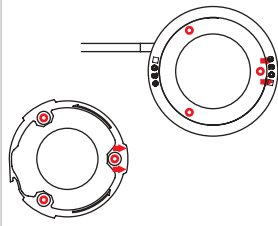
Volume adjustment

☐ Manual 3-tone sequences module

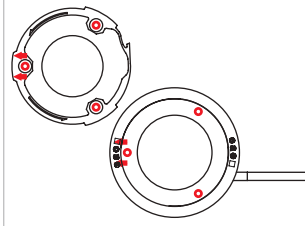
☐ Passive loudspeaker

Cable exit

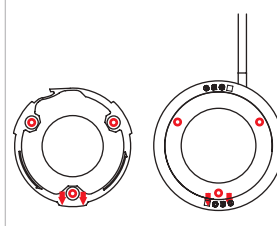
☐ cable exit left



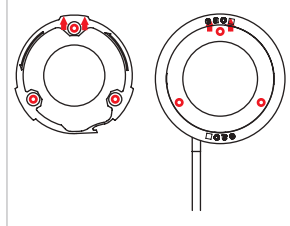
☐ cable exit right



☐ cable exit top



☐ cable exit bottom



Cable length

☐ A = 200 mm

☐ A = 1000 mm

☐ A = 2000 mm

☐ _____ mm

☐ without cable

Visible cable length can be shorter

Cable and Connector type

Cable	Wiring diagram	Connector	Connector pin assignment		
☐ 6 x 0.24 mm ²	1, 2, 3, 4	☐ Core end-sleeves	strand	☐ standard	☐ special
☐ 6 x 0.50 mm ²	1, 2, 3, 4	☐ AMP MATE-N-LOK 794895-1 (6P)	1	Pin 1	---
		☐ WAGO X-COM 769-106	2	Pin 2	---
		☐ DEUTSCH DT04-6P-C015 (6P)	3	Pin 3	---
		☐ M8x1 (0,24 mm ²)	4	Pin 4	---
			5	Pin 5	---
			6	Pin 6	---

Wiring diagrams

8Ω/1W

Single colour

Wiring diagram 1 (passive speaker)

Bi-colour

Wiring diagram 2 (passive speaker)

Single colour

Wiring diagram 3 (3-tone sequence)

pin	tone sequence		
	1	2	3
4	+24 VDC	0V	+24 VDC
2	0V	+24 VDC	+24 VDC

Bi-colour

Wiring diagram 4 (3-tone sequence)

pin	tone sequence		
	1	2	3
4	+24 VDC	0V	+24 VDC
2	0V	+24 VDC	+24 VDC

57 Front mounting

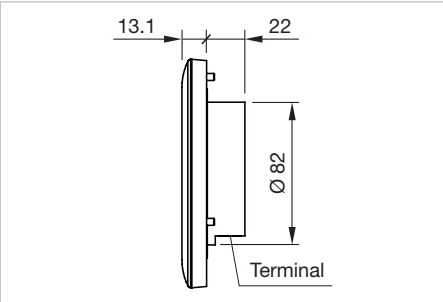
Multi-Legend Display



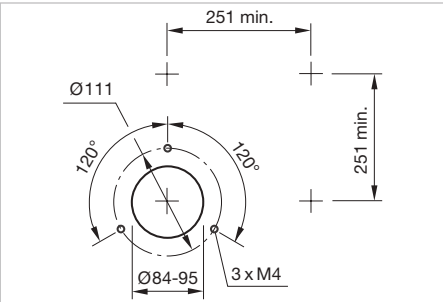
The preview is based on a sample product. This can differ from your current configuration.

General information

- Extra large screen area, 77 mm
- 3.0" TFT display
- Terminal WAGO 713-1428/037-000
- Operating voltage 24 VDC
- Integrated sensor for brightness adaptation
- Up to 18 customised symbols per display with the configuration kit for Multi-Legend Display 57-9902
- Part No. 57-800-000000
(17 standard symbols pre-installed)

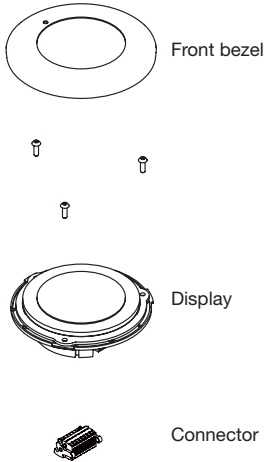


Dimensions [mm]



Mounting cut-outs [mm]

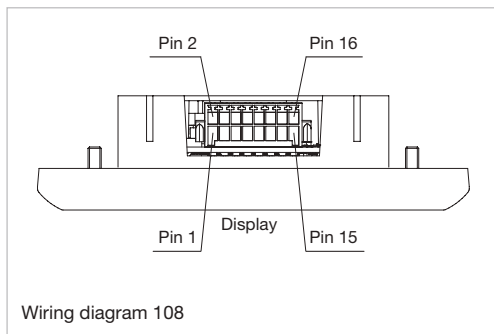
Equipment consisting of



Multi-Legend Display, Frontdimension 131 mm

Symbols	Front bezel colour	Colour similar RAL	Part No.	Com- ponent layout
	Grey (Basalt grey)	RAL 7012	57-800-000000	108

Component layouts



Pin	Description	Pin	Description	Pin	Description
1	GND 0VDC	9	Blinking function	14	Service Interface (locked)
2	GND 0VDC	10	Digital Input 5 (not in use)	15	Digital Alarm Input 1
3	24 VDC	11	Not Connected	16	Digital Alarm Input 2
4	24 VDC	12	Not Connected		
5	Digital Input 0	13	Service Interface (locked)		
6	Digital Input 1				
7	Digital Input 2				
8	Digital Input 3				

Configuration

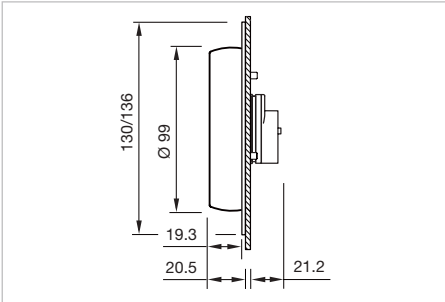
IN 0 Pin 5	IN 1 Pin 6	IN 2 Pin 7	IN 3 Pin 8	Alarm 1 Pin 15	Alarm 2 Pin 16	Display
0	0	0	0	0	0	No picture
1	0	0	0	0	0	1. Customer picture
0	1	0	0	0	0	2. Customer picture
1	1	0	0	0	0	3. Customer picture
0	0	1	0	0	0	4. Customer picture
1	0	1	0	0	0	5. Customer picture
0	1	1	0	0	0	6. Customer picture
1	1	1	0	0	0	7. Customer picture
0	0	0	1	0	0	8. Customer picture
1	0	0	1	0	0	9. Customer picture
0	1	0	1	0	0	10. Customer picture
1	1	0	1	0	0	11. Customer picture
0	0	1	1	0	0	12. Customer picture
1	0	1	1	0	0	13. Customer picture
0	1	1	1	0	0	14. Customer picture
1	1	1	1	0	0	15. Customer picture
x	x	x	x	1	0	1. Alarm picture
x	x	x	x	0	1	2. Alarm picture
x	x	x	x	1	1	3. Alarm picture

57 Front mounting

Call for aid push button



Product can differ from the current configuration.



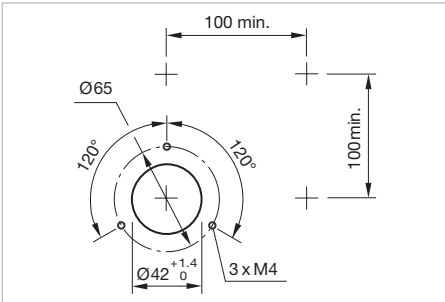
Dimensions [mm]

Equipment consisting of

- Front bezel
- Switching unit
- Fixing ring
- Warning triangle Page 30
- Cable

General information

- User friendly, extra large operating area of Ø 74 mm
- Illuminable feedback rings; outer ring green and inner ring red or yellow/yellow
- Raised bell symbol conform to TSI PRM
- Integrated optional finding tone for visually impaired persons
- Robust front bezel raised protects against accidental actuation
- Warning triangle available as accessory
- Please complete a separate order form at www.eao.com/downloads and deliver it to your local EAO distributor
- Part No. 57-10-xxxxxx (with cable)
- Part No. 57-100-xxxxxx (without cable)



Mounting cut-outs [mm]

Front bezel		
Plastic flush, colour similar RAL	Plastic raised, colour similar RAL	Aluminium safety, colour similar RAL
☐ green RAL 6032	☐ green RAL 6032	☐ red anodized, RAL 3000
☐ yellow RAL 1023	☐ red RAL 3000	☐ green anodized, RAL 6032
	☐ yellow RAL 1023	☐ nature anodized, RAL 1023
	☐ black RAL 9017	

Symbol insert				
Symbol lastic, colour similar RAL			Symbol aluminium, colour similar RAL	
red RAL 3000	green RAL 6032	yellow RAL 1023	red anodized, RAL 3000	natural anodized
☐ white RAL 9003	☐ white RAL 9003	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017

Supply voltage
☐ 16 – 63 VDC

Push button finding tone
☐ standard 65 dB (A) ☐ without

Illuminable feedback rings
☐ Outer ring green/Inner ring red ☐ Outer ring yellow/Inner ring yellow

Cable length				
☐ A = 200 mm (standard)	☐ A = 1000 mm	☐ A = 2000 mm	☐ _____ mm	☐ without cable
Visible cable length can be shorter				

Cable exit			
☐ cable exit left	☐ cable exit right	☐ cable exit top	☐ cable exit bottom

Cable and Connector type					
Cable	Wiring diagram	Connector	Connector pin assignment		
☐ 4 x 0.24 mm ²	3, 4	☐ Core end-sleeves		☐ standard	☐ special
☐ 4 x 0.50 mm ²	3, 4	☐ AMP MATE-N-LOK 794805-1 (4P)	1	Pin 1	---
☐ 6 x 0.24 mm ²	1, 2, 5, 6	☐ AMP MATE-N-LOK 794895-1 (6P)	2	Pin 2	---
☐ 6 x 0.50 mm ²	1, 2, 5, 6	☐ WAGO X-COM 769	3	Pin 3	---
		☐ AMP FASTIN-FASTON 180901 (4P)	4	Pin 4	---
		☐ DEUTSCH DT04-4P-C015 (4P)	5	Pin 5	---
		☐ DEUTSCH DT04-6P-C015 (6P)	6	Pin 6	---

Wiring diagrams

Finding tone	Number of strands	Wiring diagram as per EN 14752
X	6	

Wiring diagram 1

X	4	
---	---	--

Wiring diagram 3

Finding tone	Number of strands	Wiring diagram as per EN 14752
-	6	

Wiring diagram 2

-	4	
---	---	--

Wiring diagram 4

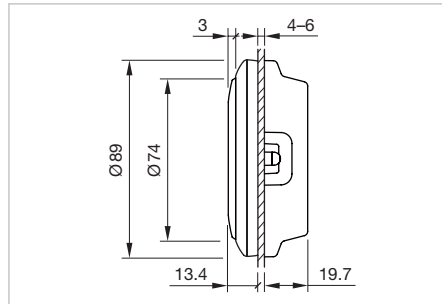
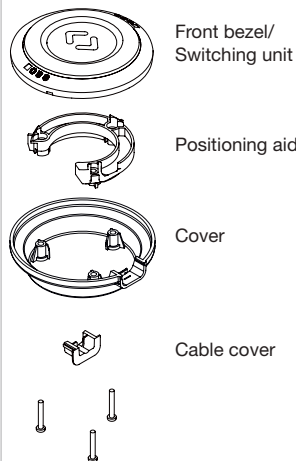
57 Front mounting

Finding tone	Number of strands	Wiring diagram as per EN 14752
X	6	
Wiring diagram 5		

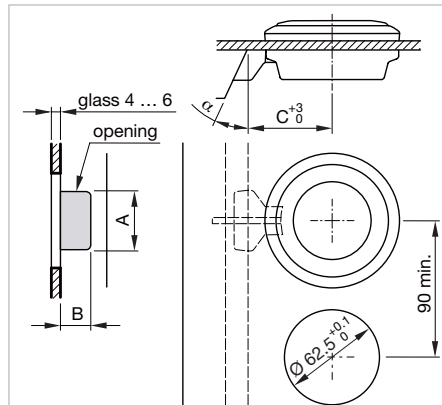
Finding tone	Number of strands	Wiring diagram as per EN 14752
-	5	
Wiring diagram 6		

Legend

- A = Input push button finding tone
- B = Input LED outer ring
- C = Input LED inner ring
- D = Positive supply voltage (+V)
- E = Output electronic switch (not potential-free)
- F = External load
- G = Zero volt supply voltage (0V)
- H = LED inner ring
- I = LED outer ring
- L = Sound source
- T = Push button
- V = Voltage regulator
- Z = Electronic switch with overcurrent cut-off

Single side push button**Equipment consisting of**

Dimensions [mm]



Mounting cut-outs [mm]



The preview is based on a sample product. This can differ from your current configuration.

General information

- User friendly, extra large operating area of Ø 74 mm
- For glass thickness 4 – 6 mm
- Illuminable feedback rings; outer ring green and inner ring red
- Raised symbols conform to TSI PRM
- Integrated optional push button finding tone for visually impaired persons
- Cable, cable cover and front bezel are available as single parts
- Please complete a separate order form at www.eao.com/downloads and deliver it to your local EAO distributor
- Part No. 57-11-xxxxxx (with cable)
Part No. 57-110-xxxxxx (without cable)

	α (°)	A (mm)	B (mm)	C (mm)
Cable cover standard	0	18 max.	11.5 max.	45
Cable cover standard 45°	45	18 max.	11.5 max.	45
Cable cover funnel 0°	0	24 max.	17.5 max.	57
Cable cover funnel 10°	10	24 max.	17.5 max.	57
Cable cover funnel 15°	15	24 max.	17.5 max.	57
Cable cover funnel 25°	25	24 max.	17.5 max.	57
Cable cover funnel 25° H24	25	24 max.	21.5 max.	62.5

Front bezel

plastic, colour similar RAL

- | | |
|--|--|
| ☐ green RAL 6032 | ☐ red RAL 3000 |
| ☐ blue RAL 5015 | ☐ yellow RAL 1023 |
| ☐ grey RAL 7040 | ☐ black RAL 9017 |
| ☐ night blue RAL 5022 | |

aluminium

- ☐
- natural anodized with dismantling opening

without

Symbol insert

plastic, colour similar RAL

- | | |
|---|--|
| ☐ green RAL 6032 | ☐ red RAL 3000 |
| ☐ blue RAL 5015 | ☐ yellow RAL 1023 |
| ☐ grey RAL 7040 | ☐ night blue RAL 5022 (wheel chair) |

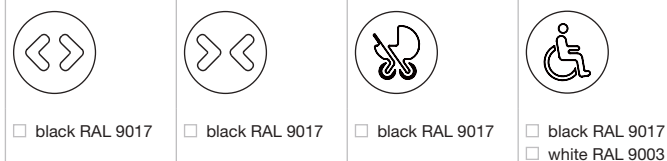
aluminium

- ☐
- natural anodized

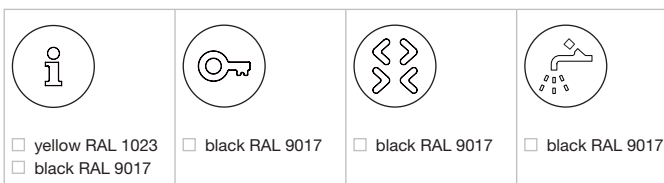
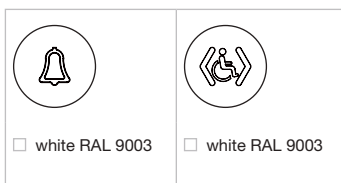
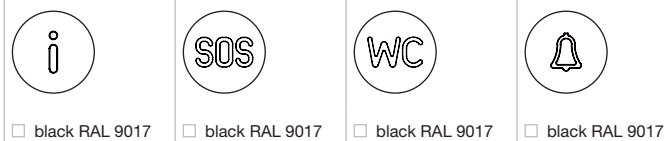
57 Glass mounting

Symbol/Symbol colour similar RAL

- ☐ Symbol plastic
☐ Symbol aluminium, natural anodized



- ☐ Symbol aluminium, natural anodized



Push button finding tone

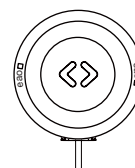
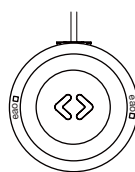
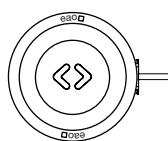
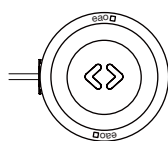
- ☐ standard 65 dB (A) ☐ without

Supply voltage

- ☐ 16 – 63 VDC ☐ 50 – 143 VDC

Cable exit (view from outside)

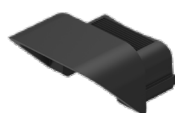
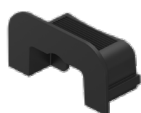
- ☐ cable exit left ☐ cable exit right ☐ cable exit top ☐ cable exit bottom



Cable cover

Standard

- ☐ 0° ☐ 45°



Funnel

- ☐ 0° ☐ 10° ☐ 15° ☐ 25° ☐ 25° H24



Cable length

- ☐ A = 200 mm (standard) ☐ A = 1000 mm ☐ A = 2000 mm ☐ _____ mm ☐ without cable

Visible cable length can be shorter

Cable and Connector type					
Cable	Wiring diagram	Connector	Connector pin assignment		
☐ 4 x 0.24 mm ²	3, 4	☐ Core end-sleeves		☐ standard	☐ special
☐ 4 x 0.50 mm ²	3, 4	☐ AMP MATE-N-LOK 794805-1 (4P)	1	Pin 1	—
☐ 6 x 0.24 mm ²	1, 2, 5, 6	☐ AMP MATE-N-LOK 794895-1 (6P)	2	Pin 2	—
☐ 6 x 0.50 mm ²	1, 2, 5, 6	☐ WAGO X-COM 769	3	Pin 3	—
		☐ AMP FASTIN-FASTON 180901 (4P)	4	Pin 4	—
		☐ DEUTSCH DT04-4P-C015 (4P)	5	Pin 5	—
		☐ DEUTSCH DT04-6P-C015 (6P)	6	Pin 6	—

Wiring diagrams

Finding tone	Number of strands	Wiring diagram as per EN 14752
X	6	
Wiring diagram 1		
X	4	
Wiring diagram 2		
X	6	
Wiring diagram 3		
X	6	
Wiring diagram 4		
X	6	
Wiring diagram 5		

Finding tone	Number of strands	Wiring diagram as per EN 14752
—	6	
Wiring diagram 6		
—	4	
Wiring diagram 7		
—	5	
Wiring diagram 8		

Legend

A = Input push button finding tone
 B = Input LED outer ring
 C = Input LED inner ring
 D = Positive supply voltage (+V)
 E = Output electronic switch (not potential-free)
 F = External load
 G = Zero volt supply voltage (0V)

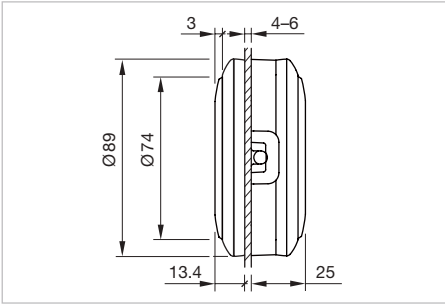
H = LED inner ring
 I = LED outer ring
 L = Sound source
 T = Push button
 V = Voltage regulator
 Z = Electronic switch with overcurrent cut-off

57 Glass mounting

Double side push button



Product can differ from the current configuration.

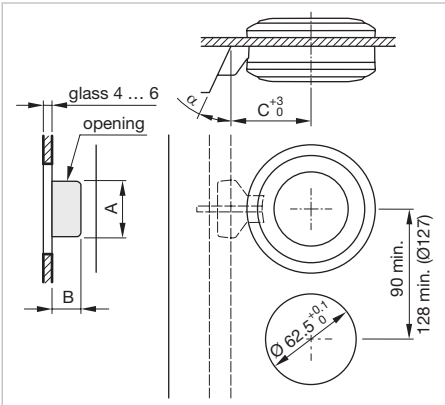


Dimensions [mm]

Equipment consisting of

- Front bezel
- Switching unit internal
- Flange
- Cable cover
- Switching unit external

- General information**
- User friendly, extra large operating area of Ø 74 mm
 - For glas thickness 4 – 6 mm
 - Illuminable feedback rings; outer ring green and inner ring red
 - Raised symbols conform to TSI PRM
 - Integrated optional push button finding tone for visually impaired persons
 - Cable cover and front bezel are available as single parts
 - Please complete a separate order form at www.eao.com/downloads and deliver it to your local EAO distributor
 - Part No. 57-12-xxxxxx (with cable)



Mounting cut-outs [mm]

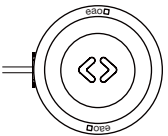
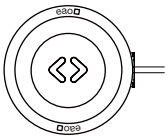
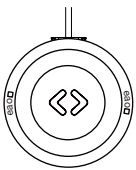
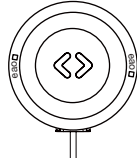
	α (°)	A (mm)	B (mm)	C (mm)
Cable cover standard	0	18 max.	11.5 max.	45
Cable cover standard 45°	45	18 max.	11.5 max.	45
Cable cover funnel 0°	0	24 max.	17.5 max.	57
Cable cover funnel 10°	10	24 max.	17.5 max.	57
Cable cover funnel 15°	15	24 max.	17.5 max.	57
Cable cover funnel 25°	25	24 max.	17.5 max.	57
Cable cover funnel 25° H24	25	24 max.	21.5 max.	62.5

Front bezel external		
Plastic, colour similar RAL		Aluminium natural anodized
☐ green RAL 6032	☐ red RAL 3000	☐ with dismantling opening
☐ blue RAL 5015	☐ yellow RAL 1023	☐ without dismantling opening
☐ grey RAL 7040	☐ black RAL 9017	
☐ night blue RAL 5022		

Front bezel internal		
Plastic, colour similar RAL		Aluminium
☐ green RAL 6032	☐ red RAL 3000	☐ natural anodized
☐ blue RAL 5015	☐ yellow RAL 1023	
☐ grey RAL 7040	☐ black RAL 9017	
☐ night blue RAL 5022		

Symbol insert external		
Plastic, colour similar RAL		Aluminium
☐ green RAL 6032	☐ red RAL 3000	☐ natural anodized
☐ blue RAL 5015	☐ yellow RAL 1023	
☐ grey RAL 7040	☐ black RAL 9017	
☐ night blue RAL 5022 (wheelchair)		

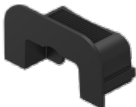
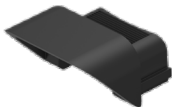
Symbol insert internal		
Plastic, colour similar RAL		Aluminium
☐ green RAL 6032	☐ red RAL 3000	☐ natural anodized
☐ blue RAL 5015	☐ yellow RAL 1023	
☐ grey RAL 7040	☐ black RAL 9017	
☐ night blue RAL 5022 (wheelchair)		

Symbol/Symbol colour similar RAL, external				Symbol/Symbol colour similar RAL, internal			
☐ Symbol plastic ☐ Symbol aluminium, natural anodized				☐ Symbol plastic ☐ Symbol aluminium, natural anodized			
							
☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017 ☐ white RAL 9003	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017 ☐ white RAL 9003
							
☐ white RAL 9003	☐ white RAL 9003			☐ white RAL 9003	☐ white RAL 9003		
☐ Symbol Aluminium, natural anodized				☐ Symbol Aluminium, natural anodized			
							
☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017
							
☐ yellow RAL 1023 ☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017	☐ yellow RAL 1023 ☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017
Push button finding tone ☐ standard 65 dB (A) ☐ without							
Supply voltage ☐ 16 – 63 VDC ☐ 50 – 143 VDC							
Cable exit (view from outside) ☐ cable exit left ☐ cable exit right ☐ cable exit top ☐ cable exit bottom							
							

57 Glass mounting

Cable cover

Standard

☐ 0° 	☐ 45° 	
--	---	--

Funnel

☐ 0° 	☐ 10° 	☐ 15° 	☐ 25° 	☐ 25° H24 
--	---	---	--	---

Cable length

☐ A = 200 mm	☐ A = 1000 mm	☐ A = 2000 mm	☐ _____ mm
-------------------------------------	--------------------------------------	--------------------------------------	-----------------------------------

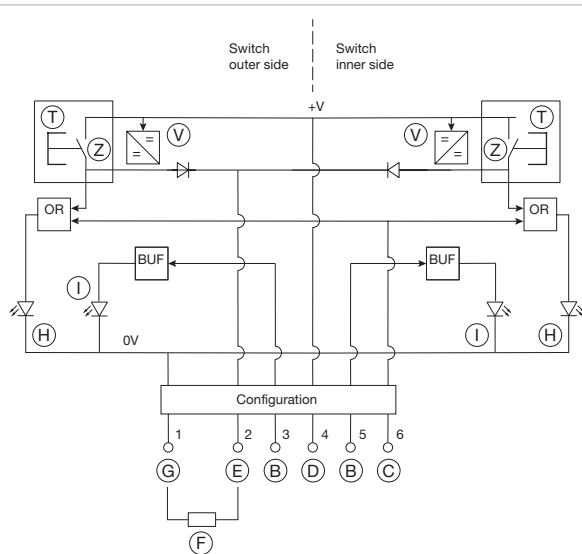
Visible cable length can be shorter

Cable and Connector type

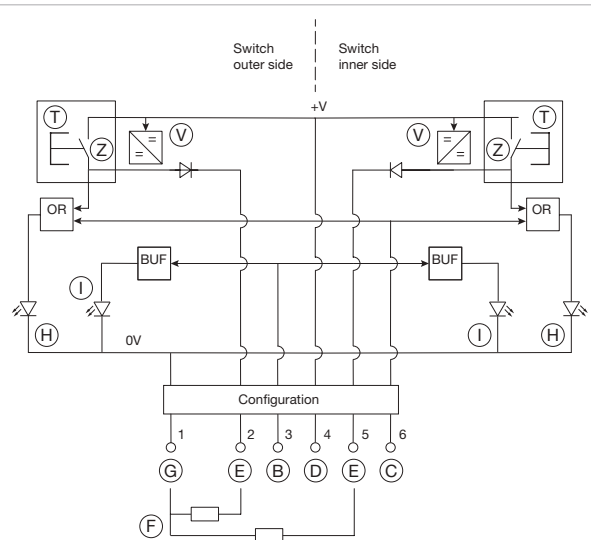
Cable	Wiring diagram	Connector	Connector pin assignment		
☐ 4 x 0.24 mm ²	3	☐ Core end-sleeves		☐ standard	☐ special
☐ 4 x 0.50 mm ²	3	☐ AMP MATE-N-LOK 794805-1 (4P)	1	Pin 1	—
☐ 6 x 0.24 mm ²	1, 2, 4	☐ AMP MATE-N-LOK 794895-1 (6P)	2	Pin 2	—
		☐ WAGO X-COM 769	3	Pin 3	—
		☐ AMP FASTIN-FASTON 180901 (4P)	4	Pin 4	—
		☐ DEUTSCH DT04-4P-C015 (4P)	5	Pin 5	—
		☐ DEUTSCH DT04-6P-C015 (6P)	6	Pin 6	—

Wiring diagram select by function

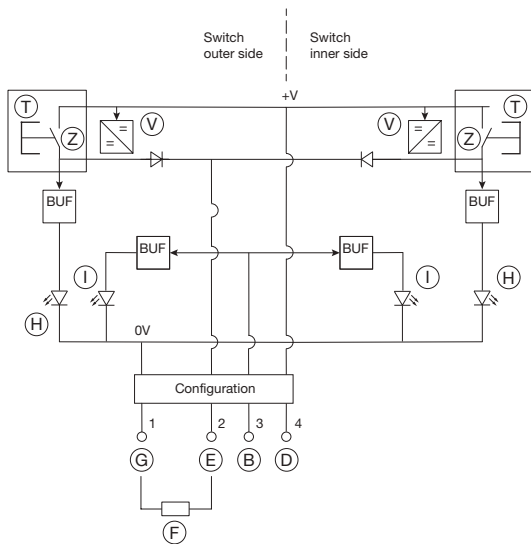
Function	Cable	Wiring diagram
☐ Diagram six pole, switch parallel, LED outer ring separately, LED inner ring parallel , without push button finding tone	6 x 0.24 mm ²	1
☐ Diagram six pole, switch separately, LED inner ring / outer ring parallel, without push button finding tone	6 x 0.24 mm ²	2
☐ Diagram four pole, switch parallel, LED outer ring parallel, without push button finding tone	4 x 0.24 mm ² 4 x 0.50 mm ²	3
☐ Diagram six pole, switch parallel, LED inner ring / outer ring parallel, with push button finding tone	6 x 0.24 mm ²	4

Wiring diagrams

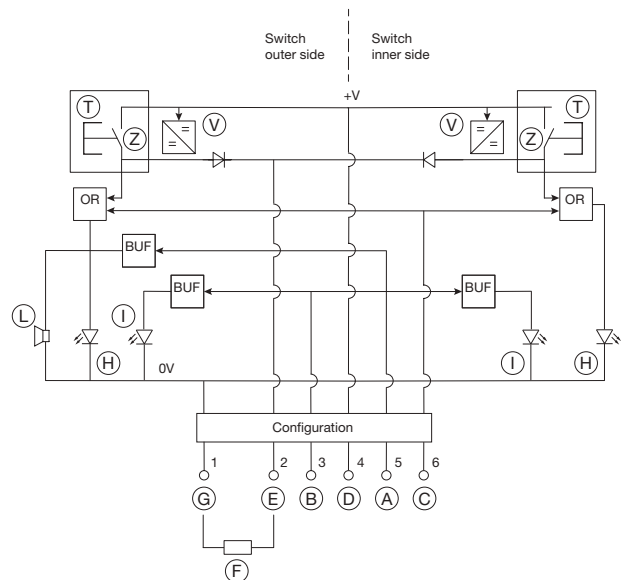
Wiring diagram 1



Wiring diagram 2



Wiring diagram 3



Wiring diagram 4

Legend

- A = Input push button finding tone
- B = Input LED outer ring
- C = Input LED inner ring
- D = Positive supply voltage (+V)
- E = Output electronic switch (not potential-free)
- F = External load
- G = Zero volt supply voltage (0V)
- H = LED inner ring
- I = LED outer ring
- L = Sound source
- T = Push button
- V = Voltage regulator
- Z = Electronic switch with overcurrent cut-off

57 Flush mounting

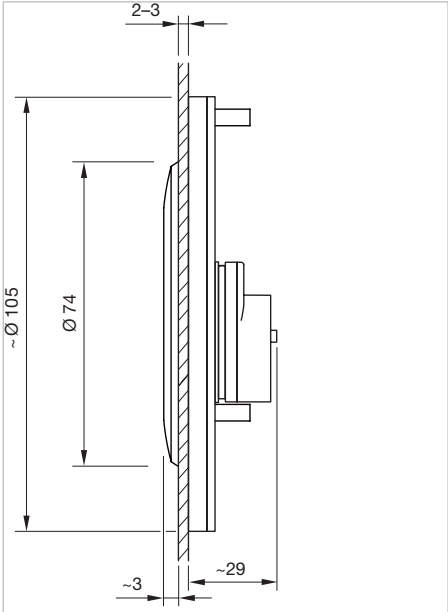
Single side push button



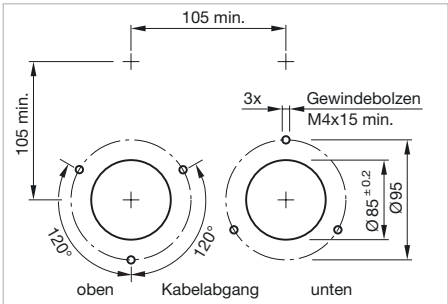
The preview is based on a sample product. This can differ from your current configuration.

General information

- User friendly, extra large operating area of Ø 74 mm
- Illuminable feedback rings; outer ring green and inner ring red
- Tri-Colour option; two additional lighting points in the outer ring. Two of the three colours can be controlled simultaneously.
- Raised symbols conform to TSI PRM
- Integrated optional push button finding tone for visually impaired persons (except Tri-Colour)
- Cable is available as a single part
- Please complete a separate order form at www.eao.com/downloads and deliver it to your local EAO distributor
- Part No. 57-10-xxxxxx (with cable)
Part No. 57-100-xxxxxx (without cable)

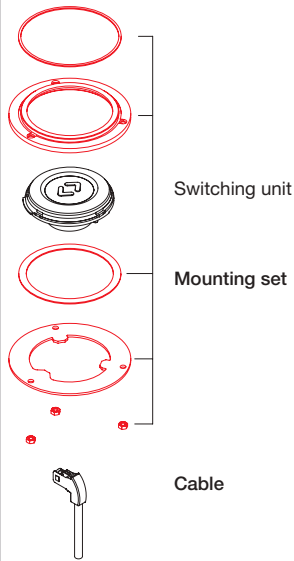


Dimensions [mm]



Mounting cut-outs [mm]

Equipment consisting of



Page 33

Symbol insert		
plastic, colour similar RAL		aluminium
☐ green RAL 6032	☐ red RAL 3000	☐ natural anodized
☐ blue RAL 5015	☐ yellow RAL 1023	
☐ grey RAL 7040	☐ night blue RAL 5022 (wheelchair)	

Symbol/Symbol colour similar RAL				Symbol aluminium, natural anodized			
☐ Symbol plastic				☐ Symbol aluminium, natural anodized			
☐ Symbol aluminium, natural anodized							
☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017 ☐ white RAL 9003	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017
☐ white RAL 9003	☐ white RAL 9003			☐ yellow RAL 1023 ☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017	☐ black RAL 9017

Push button finding tone

☐ standard 65 dB (A) ☐ without

Tri-Colour

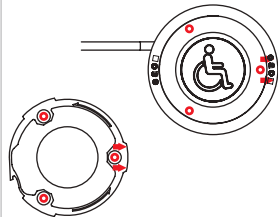
☐ standard yellow ☐ without

Supply voltage

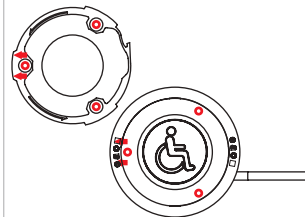
☐ 16 – 63 VDC ☐ 50 – 143 VDC ☐ 16.8 – 30 VDC (min./max.), Tri-Colour

Cable exit

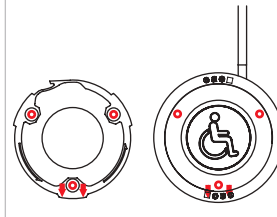
☐ cable exit left



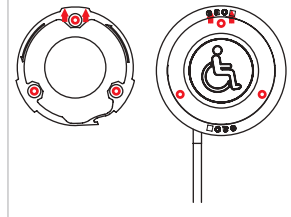
☐ cable exit right



☐ cable exit top



☐ cable exit bottom



Cable length

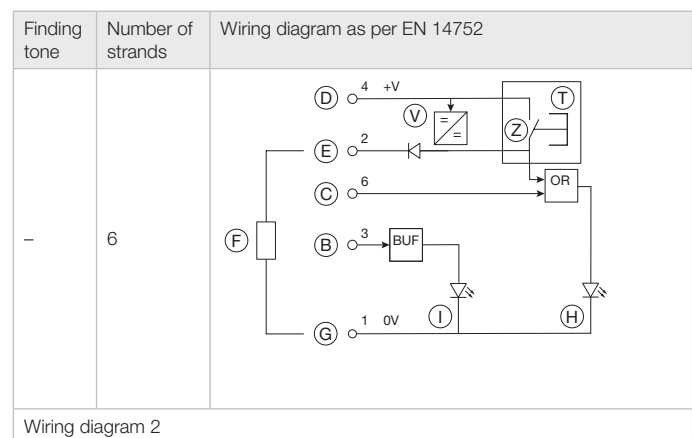
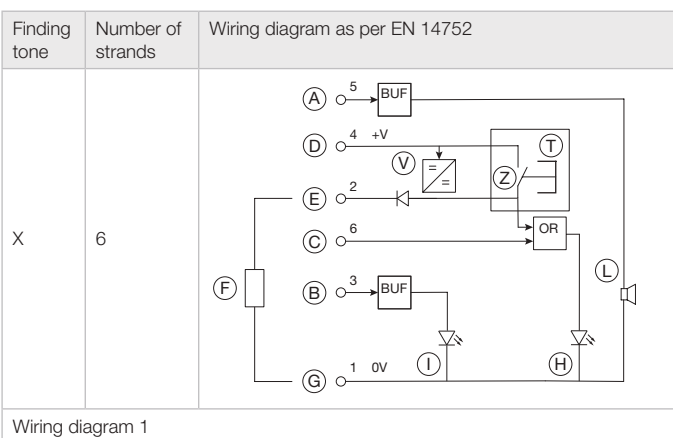
☐ A = 200 mm ☐ A = 1000 mm ☐ A = 2000 mm ☐ _____ mm ☐ without cable

Visible cable length can be shorter

Cable and Connector type

Cable	Wiring diagram	Connector	Connector pin assignment		
☐ 4 x 0.24 mm ²	3, 4	☐ Core end-sleeves		☐ standard	☐ special
☐ 4 x 0.50 mm ²	3, 4	☐ AMP MATE-N-LOK 794805-1 (4P)	1	Pin 1	—
☐ 6 x 0.24 mm ²	1, 2, 5, 6	☐ AMP MATE-N-LOK 794895-1 (6P)	2	Pin 2	—
☐ 6 x 0.50 mm ²	1, 2, 5, 6	☐ WAGO X-COM 769	3	Pin 3	—
		☐ AMP FASTIN-FASTON 180901 (4P)	4	Pin 4	—
		☐ DEUTSCH DT04-4P-C015 (4P)	5	Pin 5	—
		☐ DEUTSCH DT04-6P-C015 (6P)	6	Pin 6	—

Wiring diagrams



57 Flush mounting

Finding tone	Number of strands	Wiring diagram as per EN 14752
X	4	
Wiring diagram 3		
X	6	
Wiring diagram 4		
X	6	
Wiring diagram 5		
-	6	
Wiring diagram 6		
-	6	
Wiring diagram 7, Tri-Colour		

Legend

- A = Input push button finding tone
- B = Input LED outer ring
- C = Input LED inner ring
- D = Positive supply voltage (+V)
- E = Output electronic switch (not potential-free)
- F = External load
- G = Zero volt supply voltage (0V)
- H = LED inner ring
- I = LED outer ring
- L = Sound source
- N = LED additional position
- T = Push button
- V = Voltage regulator
- X = Inputs (general)
- Z = Electronic switch with overcurrent cut-off

Finding tone	Number of strands	Wiring diagram as per EN 14752
-	4	
Wiring diagram 3		
-	5	
Wiring diagram 4		
-	5	
Wiring diagram 5		
-	5	
Wiring diagram 6		

Front side



Front bezel flush, Front dimension Ø 89 mm

Colour	Front bezel	Part No.
RAL 9017 similar	Plastic black	57-300-000001
RAL 5015 similar	Plastic blue	57-300-000002
RAL 1023 similar	Plastic yellow	57-300-000003
RAL 6032 similar	Plastic green	57-300-000004
RAL 7040 similar	Plastic grey	57-300-000005
RAL 7004 similar	Aluminium natural anodized	57-300-000006
RAL 3000 similar	Plastic red	57-300-000007
RAL 7015 similar	Plastic slate grey	57-300-000010
RAL 7004 similar	Aluminium natural anodized, without dismantling opening, only for outside of double-sided push button for glass mounting	57-300-000014
RAL 5022 similar	Plastic night blue	57-300-000025



Front bezel large, Front dimension Ø 127 mm

Colour	Front bezel	Part No.
RAL 1023 similar	Plastic yellow	57-300-000008
RAL 5015 similar	Plastic blue	57-300-000009



Front bezel raised, Front dimension Ø 99 mm

Colour	Front bezel	Part No.
RAL 3000 similar	Aluminium red anodized	57-300-000011
RAL 1023 similar	Aluminium yellow anodized	57-300-000015
RAL 6032 similar	Aluminium green anodized	57-300-000024
RAL 9017 similar	Plastic black, IP65	57-300-000029
RAL 3000 similar	Plastic red, IP65	57-300-000030
RAL 6032 similar	Plastic green, IP65	57-300-000031
RAL 1023 similar	Plastic yellow, IP65	57-300-000032
RAL 5015 similar	Plastic blue, IP65	57-300-000033

57 Components



Warning triangle flat, Front dimension 136 x 130 x 0.8 mm

Colour	Front bezel	Part No.
RAL 1023 similar	Plastic yellow, self-adhesive, for cable exit bottom	56-8000.B



Assembly aid Ø 85/45 mm x 15/25 mm

Colour	Front bezel	Part No.
–	Aluminium, assembly aid for warning triangle flat	56-988

Cable cover



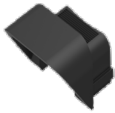
Cable cover Standard 0°

Material

Plastic

Part No.

57-9907



Cable cover Standard 45°

Material

Plastic

Part No.

57-9908



Cable cover Trichter 0°

Material

Plastic

Part No.

57-9909



Cable cover Trichter 10°

Material

Plastic

Part No.

57-9910



Cable cover Trichter 15°

Material

Plastic

Part No.

57-9911



Cable cover Trichter 25°

Material

Plastic

Part No.

57-9912



Cable cover Trichter 25° H24

Material

Plastic

Part No.

57-9913

Mounting



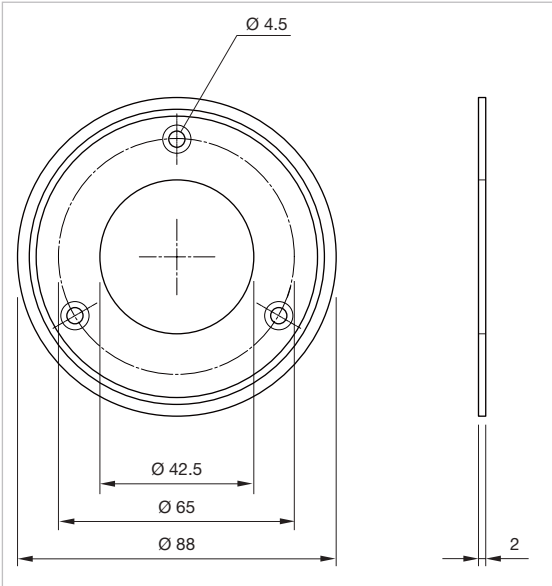
Dismantling tool

Product attributes	Part No.
To front bezel	57-9901

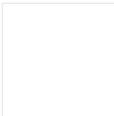


Mounting plate for refurbishment

Dimension	Mounting cut-out	Material	Part No.
Ø 88 mm	Ø 42.5 mm	Stainless steel	57-9905



Abmessungen [mm]



Configuration Kit for Multi-Legend Display

Material	Art.-Nr.
Plastic/metal	57-9902

**Mounting set for rear mounting**

Product attribute	Art.-Nr.
Mounting set for front panel thickness 2 mm (front bezel is not required)	57-9920A
Mounting set for front panel thickness 3 mm (front bezel is not required)	57-9921A
Fixing ring	57-9906
Countersunk screw set for fixing ring M4 x 10 mm	57-9915

**Mounting enclosure flush version**

Product attribute	Dimension	Mounting cut-out	Material	Art.-Nr.
Suitable for the most common in-wall flush boxes	100 mm x 100 mm	Ø 45 mm	Plastic black	57-9903

**Mounting enclosure surface version**

Product attribute	Dimension	Mounting cut-out	Material	Art.-Nr.
For direct wall mounting, with cable relief, break-out cable entries	100 mm x 100 mm	Ø 45 mm	Plastic black	57-9904

57 Technical data

Single side pushbutton

Switching system

The Series 57 is equipped with an electronic high side switch, is short circuit proof and overload protected. In case of over current the switch opens automatically (protection against destruction). The pushbutton is not potential-free.

Material

Connection cable

Halogen free, electron-beam crosslinked cables with improved behaviour in case of fire, easy to strip, soldering resistant and flexible, in accordance with the EN 50306-4 standard

Front bezel

Plastic
Aluminium natural anodized

Housing

Plastic

Symbol insert

Plastic
Aluminium natural anodized

Lens/Symbols

Plastic

Mechanical characteristics

Terminals

AMP MATE-N-LOK
WAGO X-COM 769
DEUTSCH connector
AMP FASTIN-FASTON
Open ends with core end-sleeves

Wire cross-section

Wire 4-/6-poles 0.24 mm²
Wire 4-/6-poles 0.5 mm²

Cable length

200 mm, 1000 mm, 2000 mm

Fixing screws

Original EAO countersunk screws M4 x 10 mm

Tightening torque

0.8 ... 1 Nm

Key (mounting and dismantling)

Hexagon socket wrench size 2.5 mm

Recommended installation conditions

Painted surfaces: No paint defects such as orange peel, scratches or bubbles permitted, flatness 0.2 mm for Ø 90 mm.
Metal surfaces: Degree of roughness Ra < 1.6 µm
Curvature: Radius min. 10 000 mm

Actuating force

max. 15 N

Actuating travel

~0.5 mm

Mechanical lifetime

> 8 million cycles of operation

Electrical characteristics

Illumination

Side-LED green for outer ring
Side-LED red for inner ring
Optional Tri-Colour: LED yellow for outer ring

Luminosity and wave length variations caused by LED manufacturing processes may cause slight differences regarding the illumination

Pushbutton finding tone

Standard tone sequence tone 1: 500 Hz, Tone 2: 700 Hz
Volume level (± 4 dB) @ 10 cm, typical at 25 °C
(see further details in «Application guidelines»)

Units compliant to

EN 50155 (Voltage interruption class S1)
EN14752
EN 45545
EN 60947-5-1 (without Tri-Colour)

EMC

EN 61000-6-2 (without Tri-Colour)
EN 61000-6-3 (without Tri-Colour)
EN 50121-3-2
ESD min. 20 kV

Cables according to

EN 50306-4; VDE 0260-306-4
EN 45545
NFPA130
ECE R118

Symbols

TSI PRM (EBC)

Operating voltage

16 ... 63 VDC (min./max.)
50 ... 143 VDC (min./max.)
16.8 ... 30 VDC (min./max.), Tri-Colour

Switch rating

max. 250 mA

Standby current

16 ... 63 VDC without tone: < 2 mA @ 24 VDC
 50 ... 143 VDC without tone: < 2 mA @ 110 VDC
 16 ... 63 VDC with tone: < 10 mA @ 24 VDC
 50 ... 143 VDC with tone: < 4 mA @ 110 VDC
 16 ... 63 VDC with tone and illumination: < 20 mA @ 24 VDC

Standby current Tri-Colour

16,8 ... 30 VDC without illumination: < 15 mA @ 24 VDC
 16,8 ... 30 VDC with illumination: < 35 mA @ 24 VDC

Note: Only pin 1 (0 V) und pin 4 (VDC) connected

Electric strength

4000 VAC, 50 Hz, 1 minute,
 all terminals against mounting plate/front element

Environmental conditions

Storage temperature

−45 °C ... +90 °C

Operating temperature

−40 °C ... +85 °C

Protection degree

Protection degree product
 Front side IP65, IP67 and IP69K
 Rear side
 IP65 and IP67

Protection degree Application
 Depending on installation conditions
 Front side IP65 and IP67

Impact resistance

IK07

Climate resistance

Damp heat, cyclic
 48 hours, +25 °C / 97 %, +55 °C / 93 % relative humidity,
 as per EN IEC 60068-2-30

Damp heat, state
 56 days, +40 °C / 93 % relative humidity, as per
 EN IEC 60068-2-78

Salt spray 96 h (DIN EN 60068-2-11)

Rapid change of temperature

5 cycles, −45 °C ... +90 °C, as per EN IEC 60068-2-14

Shock resistance

50 g, pulse width 11 ms, 6 shocks/axis as per
 DIN EN 60068-2-27

Vibration resistance

Broad band noise as per EN 61373 class 1B
 10 g from 10 Hz ... 500 Hz, as per DIN EN 60068-2-6

Approvals

Approbations

CCC (not Tri-Colour)
 E1 Regulation No. 10 (not Tri-Colour)
 E1 118RII (not Tri-Colour)
 TSI PRM (EBC)

Declaration of conformity

CE
 2014/30/EU (EMC)
 1300/2014/EU (TSI PRM)
 2011/65/EU (RoHS)

Indicator

Material

Connection cable

Halogen free, electron-beam crosslinked cables with improved
 behaviour in case of fire, easy to strip, soldering resistant and
 flexible, in accordance with the EN 50306-4 standard

Lens

Plastic

Front bezel

Plastic
 Aluminium natural anodized

Housing

Plastic

Mechanical characteristics

Terminals

AMP MATE-N-LOK
 WAGO X-COM 769
 DEUTSCH connector
 AMP FASTIN-FASTON
 Open ends with core end-sleeves

Wire cross-section

Cable 2-poles 0.5 mm²
 Cable 4-poles 0.5 mm²

Cable length

200 mm, 1000 mm, 2000 mm

57 Technical data

Fixing screws

Original EAO countersunk screws M4 x 10 mm

Tightening torque

0.8 ... 1 Nm

Key (mounting and dismantling)

Hexagon socket wrench size 2.5 mm

Recommended installation conditions

Painted surfaces: No paint defects such as orange peel, scratches or bubbles permitted, flatness 0.2 mm for Ø 90 mm.

Metal surfaces: Degree of roughness Ra < 1.6 µm

Curvature: Radius min. 10 000 mm

Electrical characteristics

Symbol Illumination

Single colour: LED red, yellow, green, blue, white

Bi-colour: LED red/yellow, red/green, blue/white

Supply voltage 24 VDC ±30 %
 110 VDC ±30 %

Current consumption ≤ 30 mA@110 VDC
 ≤ 100 mA@24 VDC

Luminosity and wave length variations caused by LED manufacturing processes may cause slight differences regarding the illumination.

Units compliant to

EN 50155 (Voltage interruption class S1)
EN 45545

EMC

EN 61000-6-2
EN 61000-6-3
EN 50121-3-2

Cables according to

EN 50306-4; VDE 0260-306-4
EN 45545
NFPA130
ECE R118

Environmental conditions

Storage temperature

–45 °C ... +90 °C

Operating temperature

–40 °C ... +85 °C

Protection degree

Protection degree product

Front side IP65, IP67 and IP69K

Rear side

IP65 and IP67

Protection degree Application

Depending on installation conditions

Front side IP65 and IP67

Impact resistance

IK07

Climate resistance

Damp heat, state

56 days, + 40 °C / 93 % relative humidity,

as per EN IEC 60068-2-78

Rapid change of temperature

5 cycles, –45 °C ... +90 °C, as per EN IEC 60068-2-14

Shock resistance

(semi-sinusoidal)

max. 500 m/s², pulse width 11 ms, as per EN IEC 60068-2-27

Vibration resistance

(sinusoidal)

max. 100 m/s² at 10 Hz ... 500 Hz, as per EN IEC 60068-2-6

Approvals

Approbations

CCC

E1 118RII

Declaration of conformity

CE

2014/30/EU (EMC)

1300/2014/EU (TSI PRM)

2011/65/EU (RoHS)

Warning indicator

Material

Connection cable

Halogen free, electron-beam crosslinked cables with improved behaviour in case of fire, easy to strip, soldering resistant and flexible, in accordance with the EN 50306-4 standard

Lens

Plastic

Front bezel

Plastic

Aluminium natural anodized

Housing

Plastic

Mechanical characteristics

Terminals

AMP MATE-N-LOK

WAGO X-COM 769

DEUTSCH connector

AMP FASTIN-FASTON

Open ends with core end-sleeves

Wire cross-section

Cable 2-poles 0.5 mm²

Cable length

200 mm; 1000 mm; 2000 mm

Fixing screws

Original EAO countersunk screws M4 x 10 mm

Tightening torque

0.8 ... 1 Nm

Key (mounting and dismantling)

Hexagon socket wrench size 2.5 mm

Recommended installation conditions

Painted surfaces: No paint defects such as orange peel, scratches or bubbles permitted, flatness 0.2 mm for Ø 90 mm.

Metal surfaces: Degree of roughness Ra < 1.6 µm

Curvature: Radius min. 10000 mm

Electrical characteristics

Illumination

LED red, yellow

Supply voltage 24 VDC ± 30 v%

110 VDC ± 30 %

Current consumption ≤ 30 mA@110 VDC

≤ 100 mA@24 VDC

Luminosity and wave length variations caused by LED manufacturing processes may cause slight differences regarding the illumination.

Units compliant to

EN 50155 (Voltage interruption class S1)

EMC

EN 61000-6-2

EN 61000-6-3

EN 50121-3-2

Cables according to

DIN EN 50306-4; VDE 0260-306-4

EN 45545

NFPA130

ECE R118

Environmental conditions

Storage temperature

−45 °C ... +90 °C

Operating temperature

−40 °C ... +85 °C

Protection degree

Protection degree product

Front side IP65, IP67 and IP69K

Rear side

IP65 and IP67

Protection degree Application

Depending on installation conditions

Front side IP65 and IP67

Impact resistance

IK07

Climate resistance

Damp heat, state

56 days, +40 °C / 93 % relative humidity,

as per EN IEC 60068-2-78

Rapid change of temperature

5 cycles, −45 °C ... +90 °C, as per EN IEC 60068-2-14

Shock resistance

(semi-sinusoidal)

max. 500 m/s², pulse width 11 ms, as per EN IEC 60068-2-27

Vibration resistance

(sinusoidal)

max. 100 m/s² at 10 Hz ... 500 Hz, as per EN IEC 60068-2-6

57 Technical data

Approvals

Approbations
CCC
E1 118RII

Declaration of conformity

CE
2014/30/EU (EMC)
1300/2014/EU (TSI PRM)
2011/65/EU (RoHS)

Multi-Tone Warning Indicator

Material

Connection cable

Halogen free, electron-beam crosslinked cables with improved behaviour in case of fire, easy to strip, soldering resistant and flexible, in accordance with the EN 50306-4 standard

Front cap

Plastic black

Lens

Plastic transparent

Front bezel

Plastic
Aluminium natural anodized

Housing

Plastic

Mechanical characteristics

Terminals

AMP MATE-N-LOK
WAGO X-COM 769-106
DEUTSCH DT04-6P-C015
M8x1, 6-poles
Open ends with core end-sleeves

Wire cross-section

Wire 6-poles 0.24 mm²
Wire 6-poles 0.5 mm²

Cable length

200 mm, 1000 mm, 2000 mm

Fixing screws

Original EAO countersunk screws M4 x 10 mm

Tightening torque

0.8 ... 1 Nm

Key (mounting and dismantling)

Hexagon socket wrench size 2.5 mm

Recommended installation conditions

Painted surfaces: No paint defects such as orange peel, scratches or bubbles permitted, flatness 0.2 mm for Ø 90 mm.

Metal surfaces: Degree of roughness Ra < 1.6 µm

Curvature: Radius min. 10 000 mm

Electrical characteristics

Illumination

Single colour: 18 LEDs red, yellow, blue, white

Bi-colour: 9/9 LEDs red/yellow, red/green

Operating voltage 24 VDC (–30 % ... +25 %)

Current consumption depending on voltage and volume
< 100 mA for the 3-tone sequences module
< 75 mA for passive loudspeakers

Luminosity and wave length variations caused by LED manufacturing processes may cause slight differences regarding the illumination.

Electric strength

4000 VAC, 50 Hz, 1 min, between all terminals and mounting plate/front element

Units compliant to

EN 50155 (Voltage interruption class S1)
EN 14752

EMC

IEC 61000-6-2:2016, EN 61000-6-2:2019

EN 61000-6-3:2006+A1:2010

EN 50121-3-2

ESD according to EN 61000-4-2 ±20 kV

Regulation no. EMV 06 (radio compatibility of Deutsche Bahn)

Cable

DIN EN 50306-4; VDE 0260-306-4

EN 45545

NFPA130

ECE R118

Acoustic characteristics

3-Tone sequences

The volume of each tone sequence can be changed in 17 steps of 1.5 dB each, by means of the tone-editing programme or “external” by wire. Tone sequence 1 and 2 are being activated by wire, whereby sequence 3 is being activated binarily. The tones can be played in any sequence at different volumes, durations and intervals. Programmable according to TSI PRM.

Passive loudspeaker

In contrast to the version with tone sequences, the loudspeaker requires an external signal source with amplification.
Impedance: 8 Ohm $\pm$ 15 %, rated power 1.0 W, max. power 1.5 W

Frequency range

500 Hz ... 3000 Hz $\pm$ 1 % (3-tone sequences module)
30 Hz ... 20000 Hz (passive loudspeaker)

Length of time

100 ms ... ∞ (endless)

Sound pressure level

3-tone sequences module:
90 dB (A) 10 cm @ 1 kHz
Level 17 for 3-tone sequences Module
programmable according to TSI PRM.

Passive speaker:

98 $\pm$ 3 dBA @ 1 W RMS @ 10 cm

Environmental conditions

Storage temperature

–45 °C ... +85 °C

Operating temperature

–40 °C ... +70 °C

Protection degree

IP67 front side
IP67 rear side

Impact resistance

IK05

Climate resistance

Damp heat, cyclic
48 hours, +25 °C/97 %, +55 °C/93 % relative humidity,
as per EN IEC 60068-2-30

Damp heat, state

56 days, +40 °C/93 % relative humidity, as per
EN IEC 60068-2-78

Rapid change of temperature

5 cycles, –45 °C ... +90 °C, as per EN IEC 60068-2-14

Shock resistance

(semi-sinusoidal)
500 m/s², pulse width 11 ms, 6 shocks/axis as per
DIN EN 60068-2-27

Vibration resistance

(semi-sinusoidal)
max. 100 m/s² from 10 Hz ... 500 Hz,
according to EN IEC 60068-2-6

Broad band noise as per EN 61373 class 1B

5.72 m/s² 5 h per axis, according to EN IEC 60068-2-6

Approvals

Conformities

CE
2014/30/EU (EMC)
1300/2014/EU (TSI PRM)
2011/65/EU (RoHS)

57 Technical data

Multi-Legend Display

Material

Front bezel

Plastic

Display cover

Plastic transparent

Housing

Plastic

Plug connection

Plastic

Operating voltage

24 VDC -30 % ... +25 %

Electric strength

4000 VAC, 50 Hz, 1 min, between all connections and mounting plate/front panel

Current consumption

Max. 140 mA

Control

4 binary inputs (24 VDC) for selection of the max. 18 images/symbols

Interface

RS232 RX and TX

Brightness sensor

Ambient light sensor
(from 10 ... 1000 lux)

Display size

3" TFT display
LED backlight

Picture size

432 × 432 px

File format

PNG, JPG, JPEG, BMP

Colours

RGB 24 bit

Number of images/symbols

Max. 18

Brightness

Max. 800 cd/m²

Electrical life

Display life ~50000 h Ø 50 % brightness
Depending on the brightness of the display, the service life is affected

LED backlighting

Technology-related fluctuations in brightness and wavelength of LEDs of the LEDs can lead to visible differences in illumination.

Contrast ratio

600 : 1

Viewing angle

140°

Mechanical characteristics

Terminals

Plug connection on Multi-Legend Display
WAGO 713-1428/037-000

Mating connector (part of delivery)

(WAGO 713-1108/037-9037)

Uniquely compact, 2-row plug-in system for conductor cross-sections up to 1.5 mm² and CAGE CLAMP® connection technology

Solid conductor 0.08 ... 1.5 mm²/28 ... 16 AWG

Fine-stranded conductor 0.08 ... 1.5 mm²/28 ... 16 AWG

Fine-stranded conductor; with ferrule with plastic collar
0.25 ... 1 mm²

Mounting screws

For front mounting pan-head screws M4 x 12 mm

Tightening torque

0.8 ... 1 Nm

Mounting tool

Hexagon socket, spanner size 2.5 mm

Electrical characteristics

Geräte entsprechen

EN 50155 (Voltage interruption class S1)
EN 45545

EMV

EN 61000-6-2

EN 61000-6-3

EN 50121-3-2

ESD according to EN 61000-4-2 +/-20 kV

Regulation No. EMV 06 (Radio compatibility of Deutsche Bahn)

Cable recommendation

According to EN 45545 for railway applications

According to ECE R118 for road vehicles

Ambient conditions

Operating temperature
-20 °C ... +70 °C

Storage temperature
-30 °C ... +80 °C

Protection degree
IP67/IP65 front side towards internal electronics and panel
IP20 rear side

Climate resistance
Damp heat, cyclic
48 hours, +25 °C/97 %, +55 °C/93 % relative humidity,
according to EN IEC 60068-2-30

Humid heat, constant
56 days, +40 °C / 93 % relative humidity,
according to EN IEC 60068-2-78

Rapid temperature change
5 cycles, -30 °C ... +80 °C, according to EN IEC 60068-2-14

Shock resistance
(semi-sinusoidal)
500 m/s², pulse width 11 ms, 6 shocks/axis,
according to DIN EN 60068-2-27

Vibration resistance
(sinusoidal)
max. 100 m / s² from 10 Hz ... 500 Hz,
according to EN IEC 60068-2-6

Broadband noise
Broadband noise according to EN 61373 class 1B
5.72 m/s² 5h per axis, according to EN IEC 60068-2-6

Certificates

Conformities
CE
2014/30/EU (EMC)
2011/65/EU (RoHS)
UKCA

Call for aid pushbutton

Switching system

The Series 57 is equipped with an electronic high side switch, is short circuit proof and overload protected. In case of over current the switch opens automatically (protection against destruction). The pushbutton is not potential-free.

Material

Connection cable
Halogen free, electron-beam crosslinked cables with improved behaviour in case of fire, easy to strip, soldering resistant and flexible, in accordance with the EN 50306-4 standard

Front bezel
Aluminium anodized
Plastic

Housing
Plastic

Symbol insert
Plastic
Aluminium anodized

Lens / Symbols
Plastic

Mechanical characteristics

Terminals
AMP MATE-N-LOK
WAGO X-COM 769
DEUTSCH connector
AMP FASTIN-FASTON
Open ends with core end-sleeves

Wire cross-section
Wire 4-/6-poles 0.24 mm²
Wire 4-/6-poles 0.5 mm²

Cable length
200 mm, 1000 mm, 2000 mm

Fixing screws
Original EAO countersunk screws M4 x 10 mm

Tightening torque
0.8 ... 1 Nm

Key (mounting and dismantling)
Hexagon socket wrench size 2.5 mm

Recommended installation conditions
Painted surfaces: No paint defects such as orange peel, scratches or bubbles permitted, flatness 0.2 mm for Ø 90 mm.
Metal surfaces: Degree of roughness Ra < 1.6 µm
Curvature: Radius min. 10000 mm

57 Technical data

Actuating force

max. 15 N

Actuating travel

~0.5 mm

Mechanical lifetime

>8 million cycles of operation

Standby current

16...63 VDC: < 2 mA @ 24 VDC

Note: Only pin 1 (0 V) und pin 4 (VDC) connected

Electric strength

4000 VAC, 50 Hz, 1 min, between all terminals and mounting plate / front element

Electrical characteristics

Illumination

Side-LED yellow or green for outer ring

Side-LED yellow or red for inner ring

Luminosity and wave length variations caused by LED manufacturing processes may cause slight differences regarding the illumination

Pushbutton finding tone

Standard tone sequence tone 1: 500 Hz, Tone 2: 700 Hz

Volume level (± 4 dB) @ 10 cm, typical at 25 °C

(see further details in «Application guidelines»)

Units compliant to

EN 50155 (Voltage interruption class S1)

EN 16584-1

EN 16584-2

EN 16683

EMV

EN 61000-6-2

EN 61000-6-3

EN 50121-3-2

ESD mind. 20 kV

EN 45545

Cables according to

EN 50306-4; VDE 0260-306-4

EN 45545

NFPA130

ECE R118

Symbole

TSI PRM (EBC)

Operating voltage

16...63 VDC (min./max.)

Switch rating

max. 250 mA

Environmental conditions

Storage temperature

-45 °C ... +90 °C

Operating temperature

-40 °C ... +85 °C

Protection degree

Protection degree product

Front side IP65, IP67 and IP69K

Rear side

IP65 and IP67

Protection degree Application

Depending on installation conditions

Front side IP65 and IP67

Impact resistance

IK07

Climate resistance

Damp heat, cyclic

48 hours, +25 °C / 97 %, +55 °C / 93 % relative humidity, as per EN IEC 60068-2-30

Damp heat, state

56 days, +40 °C / 93 % relative humidity, as per

EN IEC 60068-2-78

Salt spray 96 h (DIN EN 60068-2-11)

Rapid change of temperature

5 cycles, -45 °C ... +90 °C, as per EN IEC 60068-2-14

Shock resistance

50 g, pulse width 11 ms, 6 shocks/axis as per

DIN EN 60068-2-27

Vibration resistance

Broad band noise as per EN 61373 class 1B

10 g from 10 Hz ... 500 Hz, as per DIN EN 60068-2-6

Approvals

Approbations

CCC
E1 Regulation No. 10
E1 118RII
TSI PRM (EBC)

Declaration of conformity

CE
2014/30/EU (EMC)
1300/2014/EU (TSI PRM)
2011/65/EU (RoHS)

Pushbutton Glass mounting

Switching system

The Series 57 is equipped with an electronic high side switch, is short circuit proof and overload protected. In case of over current the switch opens automatically (protection against destruction). The pushbutton is not potential-free.

Material

Connection cable

Halogen free, electron-beam crosslinked cables with improved behaviour in case of fire, easy to strip, soldering resistant and flexible, in accordance with the EN 50306-4 standard

Front bezel

Plastic
Aluminium natural anodized

Housing

Plastic

Flange

Plastic

Symbol insert

Plastic
Aluminium natural anodized

Lens/Symbols

Plastic

Mechanical characteristics

Terminals

AMP MATE-N-LOK
WAGO X-COM 769
DEUTSCH connector
AMP FASTIN-FASTON
Open ends with core end-sleeves

Wire cross-section

Wire 4-/6-poles 0.24 mm²
Wire 4-/6-poles 0.5 mm²
Wire 6 x 0.5 mm² (single side pushbutton)

Cable length

200 mm, 1000 mm, 2000 mm

Fixing screws

Single side pushbutton: PT head screw Torx K30x20
Double side pushbutton: PT head screw Torx K30x10
The screws are included in delivery.

Tightening torque

Single side pushbutton: 0.6 ... 0.7 Nm
Double side pushbutton: 0.4 ... 0.5 Nm

Key (mounting and dismantling)

Single side pushbutton: Torx plus 8 IP
Double side pushbutton: Torx plus 10 IP

Actuating force

max. 15 N

Actuating travel

~0.5 mm

Mechanical lifetime

>8 million cycles of operation

Recommended installation conditions

Painted surfaces: No paint defects such as orange peel, scratches or bubbles permitted, flatness 0.2 mm for Ø 90 mm.
Metal surfaces: Degree of roughness Ra < 1.6 µm
Curvature: Radius min. 10 000 mm

Electrical characteristics

Illumination

Side-LED green for outer ring
Side-LED red for inner ring

Luminosity and wave length variations caused by LED manufacturing processes may cause slight differences regarding the illumination

Pushbutton finding tone

Standard tone sequence tone 1: 500 Hz, Tone 2: 700 Hz
Volume level (± 4 dB) @ 10 cm, typical at 25 °C
(see further details in «Application guidelines»)

57 Technical data

Units compliant to

EN 50155 (Voltage interruption class S1)
EN14752
EN 45545

EMC

EN 61000-6-2
EN 61000-6-3
EN 50121-3-2
ESD min. 20 kV

Cables according to

EN 50306-4; VDE 0260-306-4
EN 45545
NFPA130
ECE R118

Symbols

TSI PRM (EBC)

Operating voltage

16 ... 63 VDC (min./max.)
50 ... 143 VDC (min./max.)

Switch rating

max. 250 mA

Standby current

Single side pushbutton
16 ... 63 VDC without tone: < 2 mA @ 24 VDC
50 ... 143 VDC without tone: < 2 mA @ 110 VDC
16 ... 63 VDC with tone: < 10 mA @ 24 VDC
50 ... 143 VDC with tone: < 4 mA @ 110 VDC
16 ... 63 VDC with tone and illumination: < 20 mA @ 24 VDC

Double side pushbutton

16 ... 63 VDC without tone: < 4 mA @ 24 VDC
50 ... 143 VDC without tone: < 4 mA @ 110 VDC
16 ... 63 VDC with tone: < 20 mA @ 24 VDC
50 ... 143 VDC with tone: < 8 mA @ 110 VDC

Note: Only pin 1 (0 V) und pin 4 (VDC) connected

Electric strength

4000 VAC, 50 Hz, 1 min, between all terminals and mounting plate/
front element

Environmental conditions

Storage temperature

-45 °C ... +90 °C

Operating temperature

-40 °C ... +85 °C, single side pushbutton, outer side
-40 °C ... +85 °C, double side pushbutton, outer side
-10 °C ... +85 °C, double side pushbutton, inner side

Protection degree

Protection degree product
Front side IP65, IP67 and IP69K
Rear side
IP65 and IP67

Protection degree Application

Depending on installation conditions
Front side IP65 and IP67

Impact resistance

IK07

Climate resistance

Damp heat, cyclic
48 hours, +25 °C / 97 %, +55 °C / 93 % relative humidity,
as per EN IEC 60068-2-30

Damp heat, state

56 days, +40 °C / 93 % relative humidity, as per
EN IEC 60068-2-78
Salt spray 96 h (DIN EN 60068-2-11)

Rapid change of temperature

5 cycles, -45 °C ... +90 °C, as per EN IEC 60068-2-14

Shock resistance

50 g, pulse width 11 ms, 6 shocks /axis as per
DIN EN 60068-2-27

Vibration resistance

Broad band noise as per EN 61373 class 1B
10 g from 10 Hz ... 500 Hz, as per DIN EN 60068-2-6

Approvals

Approbations

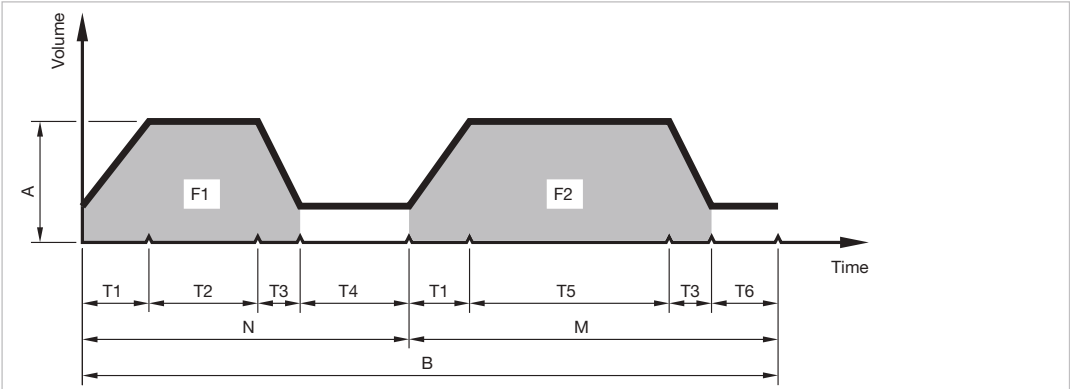
CCC
E1 Regulation No. 10
E1 118RII
TSI PRM (EBC)

Declaration of conformity

CE
2014/30/EU (EMC)
1300/2014/EU (TSI PRM)
2011/65/EU (RoHS)

EAO reserves the right to alter specifications without further notice.

Push button finding tone



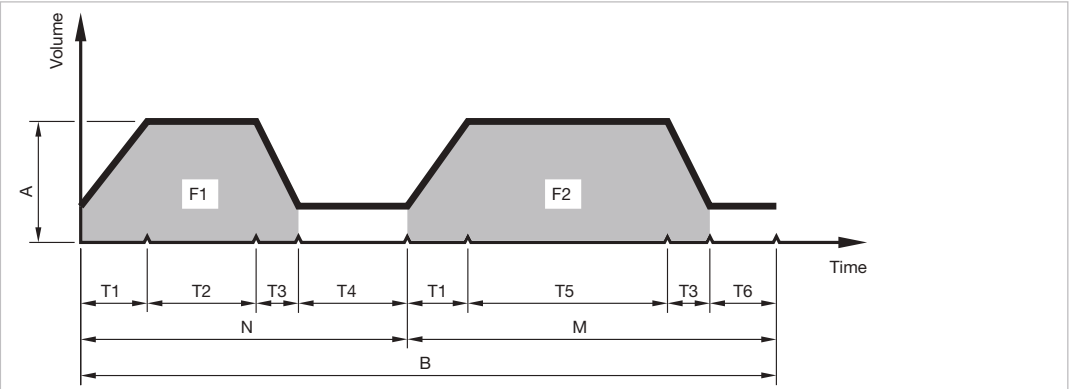
Diagram

F1	Frequency 1 of a tone sequence
T2	Playing time tone 1
T4	Break
N	Number of repetitions of tone 1
F2	Frequency 2 of a tone sequence
T5	Playing time tone 2
T6	Break
M	Number of repetitions of tone 2
A	Volume level (± 4 dB) @ 10 cm, typical at 25 °C *
B	Number of repetitions of the complete tone sequence, or blockage of the tone sequence
T1	Fade-in tone 1 and 2
T3	Fade-out tone 1 and 2

* Volume level not compliant to appendix G.3, TSI PRM 2023/1694/EU

Tone sequence		
	Parameter	Standard Push button finding tone
Tone 1	F1	500 Hz
	T2	100 ms
	T4	200 ms
	N	1
Tone 2	F2	700 Hz
	T5	100 ms
	T6	900 ms
	M	1
General	A	65 dB (A)
	B	∞
	T1	100 ms
	T3	100 ms

Multi-Tone Warning Indicator, 3-Tone sequence module



Diagram

F1	Frequency 1 of a tone sequence
T2	Playing time tone 1
T4	Break
N	Number of repetitions of tone 1
F2	Frequency 2 of a tone sequence
T5	Playing time tone 2
T6	Break
M	Number of repetitions of tone 2
A	Volume level (±4 dB) @ 10 cm, typical at 25°C
B	Number of repetitions of the complete tone sequence, or blockage of the tone sequence
T1	Fade-in tone 1 and 2
T3	Fade-out tone 1 and 2

Standard push button finding tone		
	Parameter	Push button finding tone
Tone 1	F1	500 Hz
	T2	100 ms
	T4	200 ms
	N	1
Tone 2	F2	700 Hz
	T5	100 ms
	T6	900 ms
	M	1
General	A @ 0.1 m	65 dB (A)*
	B	∞
	T1	100 ms
	T3	100 ms

* Volume levels not compliant to appendix G.3, TSI PRM 2023/1694/EU

Standard door signals railway					
	Parameter	Sequence 1 Door opening signal	Sequence 2 Door closing signal	Sequence 3 Door finding signal – single tone	Sequence 4 Door finding signal – dual tone
Tone 1	F1	2200 Hz $\pm$ 100 Hz	1900 Hz $\pm$ 100 Hz	630 Hz $\pm$ 50 Hz	550 Hz $\pm$ 50 Hz
	T2	500 ms	100 ms	5 ms	100 ms
	T4	50 ms	50 ms	250 ms	200 ms
	N	1	∞	∞	1
Tone 2	F2	1700 Hz $\pm$ 100 Hz			750 Hz $\pm$ 50 Hz
	T5	500 ms			100 ms
	T6	50 ms			900 ms
	M	1			1
General	A @ 1 kHz @ 1.5 m	Adaptive and non-adaptive 16/70.5 dB (A)	Adaptive and non-adaptive 16/70.5 dB (A)	Adaptive 1/48 dB (A) - 12/64.5 dB (A) Non-adaptive 9/60 dB (A)	Adaptive 2/49.5 dB (A) - 16/70.5 dB (A) Non-adaptive 16/70.5 dB (A)
	B	∞	∞	∞	∞
	T1	0 ms	0 ms	0 ms	100 ms
	T3	0 ms	0 ms	0 ms	100 ms

