

Series 57

Characteristics

The Series 57 is especially suited for:

- Front mounting

It is characterised by a extra large operating area, two independently illuminated feedback rings and an excellent tactile feedback.

Functions

The Series 57 incorporates the following functions:

- Illuminated pushbutton
- Warning indicator

Market segments

The EAO Series 57 is especially suited for applications in the segment:

- Public transportation

Please refer to the EAO website to obtain detailed information regarding this series www.products.eao.com
Configure a product to your exact needs and request a quotation.



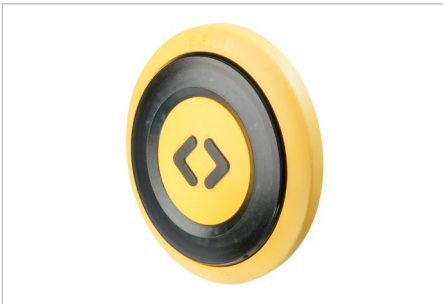
Overview**Front mounting**

Pushbutton	4
Warning indicator	6
Emergency call button	8

Accessories 10**Technical data** 12**Application guidelines** 16

57 Front mounting

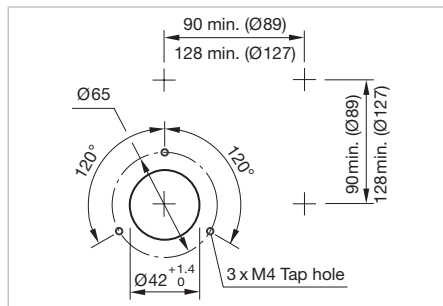
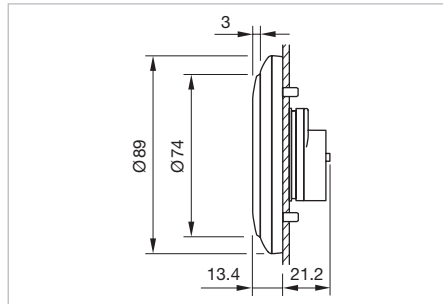
Single side pushbutton



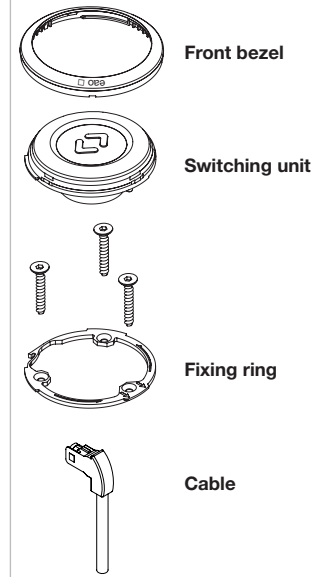
The preview is based on a sample product. This can differ from your current configuration.

Product features

- User friendly, extra large operating area of $\varnothing 74$ mm
- Two independently illuminated feedback rings
- Raised, illuminated symbols conform to TSI PRM & ADA
- Integrated finding tone for visually impaired persons
- Cable and front bezel are available as single parts
- Please fill in the form and forward it to your local EAO partner by e-mail or fax. The electronic form is available at <http://www.eao.com/offer57>



Equipment consisting of



Front bezel

plastic		aluminium
<input type="checkbox"/> green RAL 6032	<input type="checkbox"/> red RAL 3000	<input type="checkbox"/> natural anodized
<input type="checkbox"/> blue RAL 5015	<input type="checkbox"/> yellow RAL 1023	
<input type="checkbox"/> grey RAL 7040	<input type="checkbox"/> black RAL 9017	

Symbol insert

plastic		aluminium
<input type="checkbox"/> green RAL 6032	<input type="checkbox"/> red RAL 3000	<input type="checkbox"/> natural anodized
<input type="checkbox"/> blue RAL 5015	<input type="checkbox"/> yellow RAL 1023	
<input type="checkbox"/> grey RAL 7040		

Symbol

<input type="checkbox"/> Symbol plastic <input type="checkbox"/> Symbol aluminium, natural anodized				<input type="checkbox"/> Symbol aluminium, natural anodized			
<input type="checkbox"/> black RAL 9011	<input type="checkbox"/> black RAL 9011	<input type="checkbox"/> black RAL 9011	<input type="checkbox"/> black RAL 9011 <input type="checkbox"/> white RAL 9003	<input type="checkbox"/> black RAL 9011	<input type="checkbox"/> black RAL 9011	<input type="checkbox"/> black RAL 9011	<input type="checkbox"/> black RAL 9011

Symbol illumination

<input type="checkbox"/> with (only plastic symbol inserts)	<input type="checkbox"/> without
---	----------------------------------

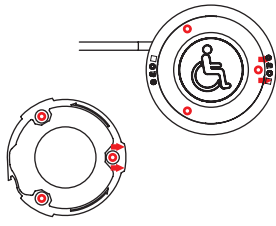
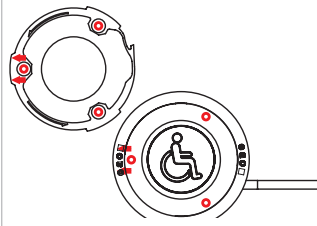
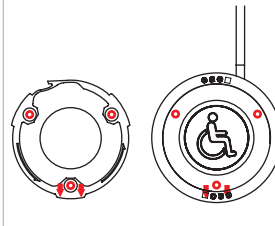
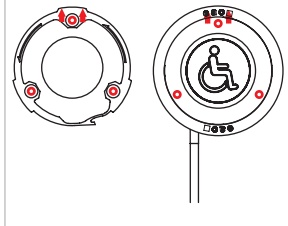
Finding tone

<input type="checkbox"/> standard 65 dB (A)	<input type="checkbox"/> without
---	----------------------------------

Supply voltage

<input type="checkbox"/> 16 – 63 VDC	<input type="checkbox"/> 50 – 143 VDC
--------------------------------------	---------------------------------------

Cable exit

 cable exit left

 cable exit right

 cable exit top

 cable exit bottom


Cable length

 A = 200mm

 A = 1000mm

 A = 2000mm

 _____ mm

Cable and Connector type

Cable	Connector	Connector pin assignment		
			standard	special
<input type="checkbox"/> 4 x 0.24 mm ²	<input type="checkbox"/> Core end-sleeves		1	—
<input type="checkbox"/> 4 x 0.50 mm ²	<input type="checkbox"/> AMP MateNLok	Pin 1	1	—
<input type="checkbox"/> 6 x 0.24 mm ²	<input type="checkbox"/> WAGO X-COM 769	Pin 2	2	—
<input type="checkbox"/> 6 x 0.50 mm ²	<input type="checkbox"/> DEUTSCH connector	Pin 3	3	—
		Pin 4	4	—
		Pin 5	5	—
		Pin 6	6	—

Symbol illumination	Finding tone	Number of strands	Wiring diagram
X	X	6	<p>VDC = 16 - 63VDC/50 - 143VDC</p>
-	X	6	<p>VDC = 16 - 63VDC/50 - 143VDC</p>
-	X	4	<p>VDC = 16 - 63VDC/50 - 143VDC</p>

Symbol illumination	Finding tone	Number of strands	Wiring diagram
X	-	4	<p>VDC = 16 - 63VDC/50 - 143VDC</p>
-	-	4	<p>VDC = 16 - 63VDC/50 - 143VDC</p>

Legend

- A = VDC finding tone
- B = VDC outer ring/symbol
- C = VDC inner ring
- D = VDC
- E = Switch
- F = Load
- G = 0 V
- H = Inner ring
- I = Outer ring
- K = Symbol
- L = Finding tone

57 Front mounting

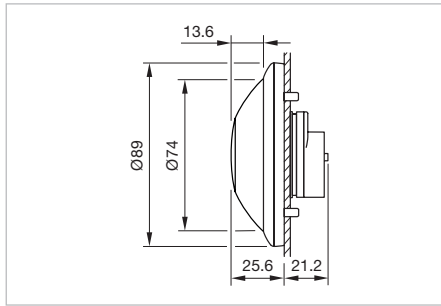
Warning indicator



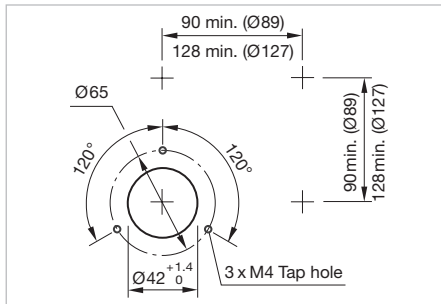
The preview is based on a sample product. This can differ from your current configuration.

Product features

- Extra large illuminated lens, Ø 74 mm
- LEDs ensure an optimal illumination
- Cable and front bezel are available as single parts
- Please fill in the form and forward it to your local EAO partner by e-mail or fax. The electronic form is available at <http://www.eao.com/offer57>

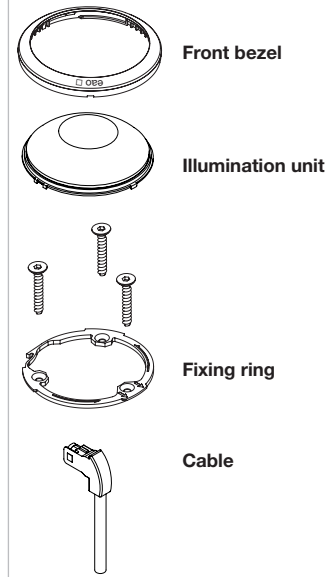


Dimensions [mm]



Mounting cut-outs [mm]

Equipment consisting of



Front bezel

plastic		aluminium
<input type="checkbox"/> green RAL 6032	<input type="checkbox"/> red RAL 3000	<input type="checkbox"/> natural anodized
<input type="checkbox"/> blue RAL 5015	<input type="checkbox"/> yellow RAL 1023	
<input type="checkbox"/> grey RAL 7040	<input type="checkbox"/> black RAL 9017	

Illumination

<input type="checkbox"/> red	<input type="checkbox"/> yellow
------------------------------	---------------------------------

Supply voltage

<input type="checkbox"/> 110 VDC

Cable exit

<input type="checkbox"/> cable exit left	<input type="checkbox"/> cable exit right	<input type="checkbox"/> cable exit top	<input type="checkbox"/> cable exit bottom

Cable length

 A = 200mm

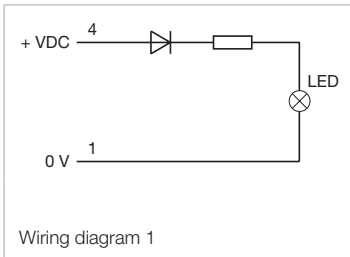
 A = 1000mm

 A = 2000mm

 _____ mm

Cable + Connector type

Cable	Connector	Connector pin assignment		
<input type="checkbox"/> 2 x 0.50 mm ²	<input type="checkbox"/> Core end-sleeves		<input type="checkbox"/> standard	<input type="checkbox"/> special
	<input type="checkbox"/> AMP MateNLok	Pin 1	1	—
	<input type="checkbox"/> WAGO X-COM 769	Pin 4	4	—
	<input type="checkbox"/> DEUTSCH connector			

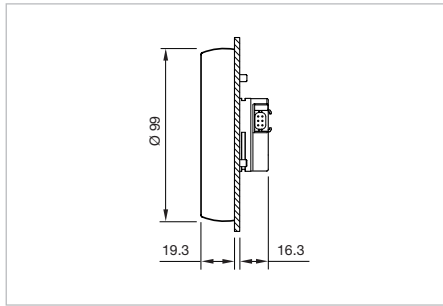


57 Front mounting

Emergency call button

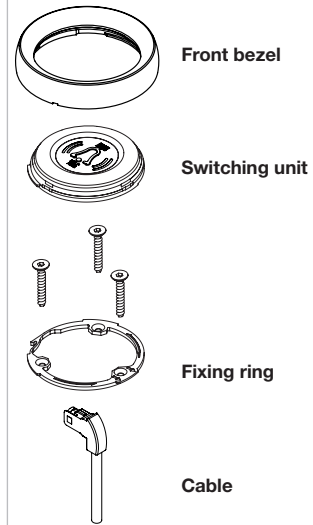


Product can differ from the current configuration.



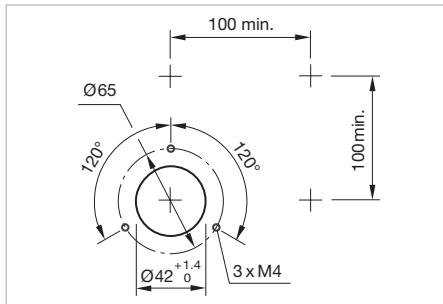
Dimensions [mm]

Equipment consisting of



Product features

- User friendly, extra large operating area of $\varnothing 74$ mm
- Two yellow illuminated, individually controllable feedback rings
- Raised bell symbol conform to TSI PRM & ADA
- Robust front ring protects against accidental actuation
- Please fill in the form and forward it to your local EAO partner by e-mail or fax. The electronic form is available at <http://www.eao.com/offer57>



Mounting cut-outs [mm]

Front bezel

Aluminium large

red anodized

Symbol insert

Symbol plastic, red RAL 3000



Symbol aluminium, red anodized



Supply voltage

16 – 63 VDC

Cable length

A = 200 mm (standard)

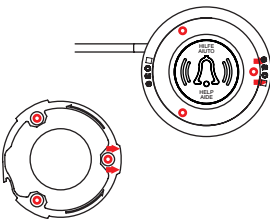
A = 1000 mm

A = 2000 mm

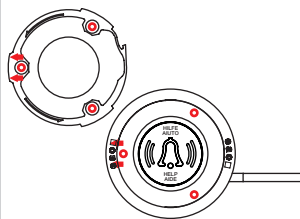
_____ mm

Cable exit

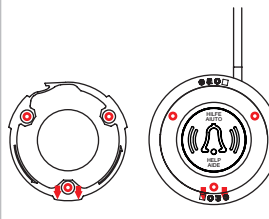
cable exit left



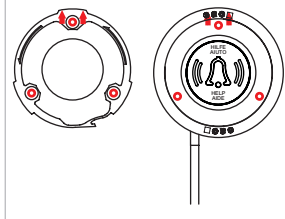
cable exit right



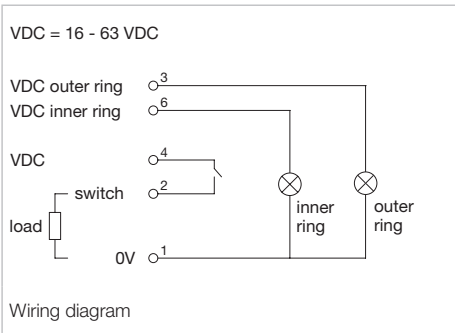
cable exit top



cable exit bottom



Cable and Connector type				
Cable	Connector	Connector pin assignment		
<input type="checkbox"/> 6 * 0.24 mm ²	<input type="checkbox"/> core end-sleeves		<input type="checkbox"/> standard	<input type="checkbox"/> special
<input type="checkbox"/> 6 * 0.50 mm ²	<input type="checkbox"/> AMP Mate n Lok	Pin 1	1	—
	<input type="checkbox"/> Wago Xcom 769	Pin 2	2	—
	<input type="checkbox"/> DEUTSCH connector	Pin 3	3	—
		Pin 4	4	—
		Pin 5	5	—
		Pin 6	6	—






57 Front mounting

Front

Front bezel


Additional Information

- Special colours for front bezel on request


Colour	Front bezel	Weight
 <p>Front bezel flush, Front dimension Ø 89 mm</p>		
RAL 9017 similar	Plastic black	0.018 kg
RAL 3000 similar	Plastic red	0.018 kg
RAL 1023 similar	Plastic yellow	0.018 kg
RAL 6032 similar	Plastic green	0.018 kg
RAL 5015 similar	Plastic blue	0.018 kg
RAL 7040 similar	Plastic grey	0.018 kg
	Aluminium natural anodized	0.070 kg
 <p>Front bezel flush, Front dimension Ø 127 mm</p>		
RAL 1023 similar	Plastic yellow	0.037 kg
RAL 5015 similar	Plastic blue	0.037 kg
 <p>Front bezel raised, Front dimension Ø 99 mm</p>		
	Aluminium red anodized	0.135 kg

Mounting



Dismantling tool

Part No.	Weight
 <p>Dismantling tool to front bezel</p>	
57-9901	0.011 kg

Mounting plate

Dimension	Mounting cut-out	Material	Part No.	Weight
 <p>Mounting plate</p>				
Ø 88 mm	Ø 42.5 mm	Chromstahl	57-9905	0.066 kg

Mounting enclosure

Product	Dimension	Mounting cut-out	Material	Part No.	Weight
 <p>Mounting enclosure flush version</p>					
suitable for the most common in-wall flush boxes	100 x 100 mm	Ø 45 mm	Plastic black	57-9903	0.073 kg
 <p>Mounting enclosure surface version</p>					
for direct wall mounting, with cable relief, break-out cable entries	100 x 100 mm	Ø 45 mm	Plastic black	57-9904	0.118 kg

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).

Material

Connection cable

Halogen-free, flame retardant, cross-linked by e-beam irradiation
Polymer according to EN 50306-2

Front bezel

Polyamide (PA66-GF25)
Aluminium natural anodized

Housing

Polyamide (PA66-GF25)

Symbol insert

Polyamide (PA66-GF25)
Aluminium natural anodized

Lens/Symbols

Polyamide (PA12)

Mechanical characteristics

Terminals

AMP Mini Universal MateNLok
WAGO X-COM 769
DEUTSCH connector
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

Countersunk screws M4 x 10 mm

Tightening torque

max. 100 Ncm

Key (mounting and dismantling)

Hexagon socket wrench size 2.5 mm

Actuating force

max. 15 N

Actuating travel

~0.5 mm

Mechanical lifetime

2 million cycles of operation

Electrical characteristics

Illumination

Side-LED green for outer ring
Side-LED red for inner ring
Point-LED white for symbol illumination

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

Finding tone

Standard tone sequence tone 1: 500 Hz, Tone 2: 700 Hz
Sound pressure level: 65 dB (A) ±4 dB @ 10cm
(see graphic in «Application guidelines»)

Units compliant to

EN 60947-5-1
EN 50155
EN14752

EMC

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

Cables according to

EN 50306-2; VDE 0260-306-2
EN 50306-4; VDE 0260-306-4
NFF 63808 / NFF 61030

Symbole and illumination

TSI PRM & ADA

Operating voltage

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

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

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

Protection degree

Front side IP 69 K
Rear side IP 67

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

E1
EBC
NFF

Declaration of conformity

CE
TSI/PRM

Warning indicator

Material

Connection cable

Halogen-free, flame retardent, cross-linked by e-beam irradiation
Polymer according to EN 50306-2

Lens

Polyamide (PA12)

Front bezel

Polyamide (PA66-GF25)

Housing

Polyamide (PA66-GF25)

Mechanical characteristics

Terminals

AMP Mini Universal MateNLok
WAGO X-COM 769
DEUTSCH connector
Open ends with core end-sleeves

Wire cross-section

Cable 2-poles 0.5mm²

Cable length

200 mm; 1000 mm; 2000 mm

Fixing screws

Countersunk screws M4 x 10 mm

Tightening torque

max. 100 Ncm

Key (mounting and dismantling)

Hexagon socket wrench size 2.5 mm

Electrical characteristics

Illumination

LED red, yellow
Supply voltage 110 VDC ±30 %
Current consumption < 50 mA

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

Units compliant to

EN 60947-5-1
EN 50155
EN14752

EMC

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

Cables according to

EN 50306-2; VDE 0260-306-2
EN 50306-4; VDE 0260-306-4
NFF 63808 / NFF 61030

Environmental conditions

Storage temperature

-45 °C ... +90 °C

Operating temperature

-40 °C ... +85 °C

Protection degree

Front side IP 69K

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

Emergency call button

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).

Material

Connection cable

Halogen-free, flame retardant, cross-linked by e-beam irradiation
Polymer according to EN 50306-2

Front bezel

Aluminium anodized

Housing

Polyamide (PA66-GF25)

Symbol insert

Polyamide (PA66-GF25)
Aluminium anodized

Lens/Symbols

Polyamide (PA12)

Mechanical characteristics

Terminals

AMP Mini Universal MateNLok
WAGO X-COM 769
DEUTSCH connector
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

Countersunk screws M4 x 10 mm

Approvals

Declaration of conformity

CE

Tightening torque

max. 100 Ncm

Key (mounting and dismantling)

Hexagon socket wrench size 2.5 mm

Actuating force

max. 15 N

Actuating travel

~0.5 mm

Mechanical lifetime

2 million cycles of operation

Electrical characteristics

Illumination

Side-LED yellow for outer ring
Side-LED yellow for inner ring

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

Units compliant to

EN 60947-5-1
EN 50155
EN14752

EMC

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

Cables according to

EN 50306-2; VDE 0260-306-2
EN 50306-4; VDE 0260-306-4
NFF 63808 / NFF 61030

Symbol and illumination

TSI PRM & ADA

Operating voltage

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

Switch rating

max. 250 mA

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

Environmental conditions

Storage temperature

-45 °C ... +90 °C

Operating temperature

-40 °C ... +85 °C

Protection degree

Front side IP 69 K

Rear side IP 67

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

E1

EBC

NFF

Declaration of conformity

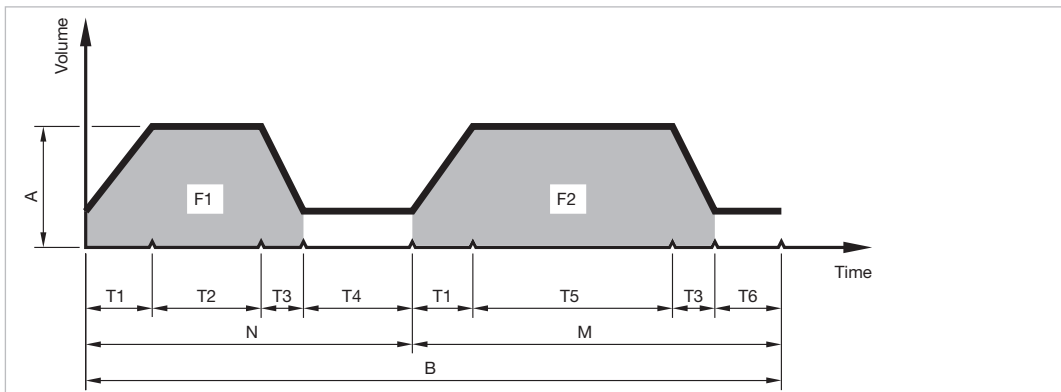
CE

TSI/PRM

EAO reserves the right to alter specifications without further notice.

57 Application guidelines

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 (± 8 dB) @ 10 cm
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

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

Other finding tone on request.