Characteristics

The compact Series 56 is especially suited for:

- Front mounting
- Rear mounting
- Glass mounting

It is characterised by a large ring illumination and an excellent tactile feel.

Functions

The Series 56 incorporates the following functions:

- Indicator
- Pushbutton
- Illuminated pushbutton
- Lever switch
- Sound module
- Flashing warning beacon

Market segments

The EAO Series 56 is especially suited for applications in the segments:

- Public transportation
- Building technology

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 Single side indicator 4 6 Single side pushbutton Lever switch 8 Multi-Tone Sound Module 9 Flashing Warning Beacon 10 Rear mounting Single side indicator 13 Single side pushbutton 15 Multi-Tone Sound Module 17 Glass mounting 19 Single side pushbutton Double side pushbutton 21 Multi-Tone Sound Module 23 Accessories 25 Drawings 36 Technical data 38 Application guidelines 48 52 Index

56 Front mounting

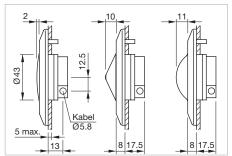
Single side indicator



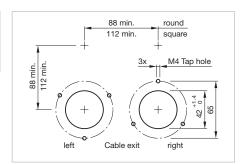
The preview is based on a sample product. This can differ from your current configuration.

Additional Information

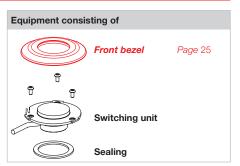
 Please fill in the form and forward it to your local EAO partner by e-mail or fax. The electronic form is available at http://www.eao.com/offer56



Dimensions [mm] [mm]

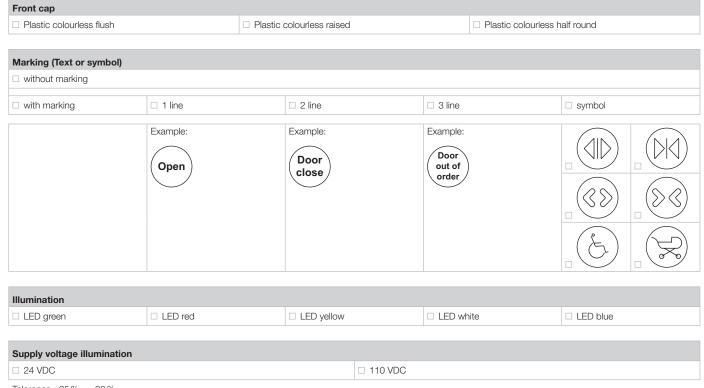


Mounting cut-outs [mm]



Each part listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.

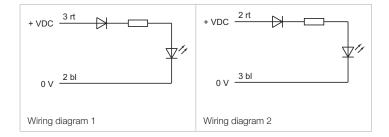


Tolerance +25 % ... -30 %

Cable exit							
□ cable exit right			□ cable exit left				
			'				
Cable length							
□ A = 200 mm	□ A = 500 mm	□ A = 1000 mm	l	□ A = 150	00 mm		_ mm
Cable and Connector type							
Cable			Connector				
□ 2x0.24 mm²			□ core end-sleeves				
			☐ AMP Connector Mate-N-Lok (Wiring diagram 2)				
			□ DEUTSCH connector (Wiring diagram 2)				
			□ AMP Connector 2.8x0.8 (Wiring diagram 1)				
			☐ AMP Connector 6.3 x 0.8 (Wiring diagram 2)				
			,				
Housing							
□ housing D73 (standard)	☐ housing	□ housing reworked 50 x 50			☐ housing reworked	68.5×50 mm	1
T							

The drawings you will find from page 36

The component layout No. 1 you will find from page 36



56 Front mounting

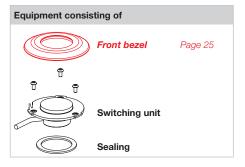
Single side pushbutton



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

Cable Ø5.8 8 17.5

Dimensions [mm]

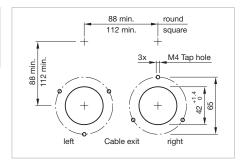


Each part listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.

Additional Information

 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/offer56



Mounting cut-outs [mm]

Lens				
☐ flush, plastic	☐ flush, aluminium	□ raised, aluminium		
☐ green RAL 6024	□ naturel	□ naturel		
□ red RAL 3020	□ green	□ green		
□ blue RAL 5017	□ red	□ red		
□ yellow RAL 1023	□ blue	□ blue		
□ grey RAL 7040	□ yellow	□ yellow		
□ black RAL 9017	□ black	□ black		
□ orange RAL 2003				

Lens marking						
□ without symbol						
□ with symbol aluminium, raised (milled)						
	□ Symbol-No. 00.835	□ Symbol-No. 00.836	□ Symbol-No. 00.868	□ Symbol-No. 00.869	□ Symbol-No. 40089	□ Symbol-No. 60523
□ with symbol aluminium, flat (engraved/lasered) □ with symbol plastic, flat (engraved/lasered)				\bigcirc	(5)	
	□ Symbol-No. 00.835	□ Symbol-No. 00.836	□ Symbol-No. 00.868	□ Symbol-No. 00.869	□ Symbol-No. 40089	□ Symbol-No. 60523
Symbol colour	□ black			□ white		

Illumination						
□ without illumination						
□ with illumination	□ 8 green	□ 8 red	□ 8 blue	☐ 8 yellow	☐ 8 green/2 red	☐ 8 red/2 green

Supply voltage illumination				
□ 24 VDC	□ 36 VDC	□ 48 VDC	□ 72 VDC	□ 110 VDC

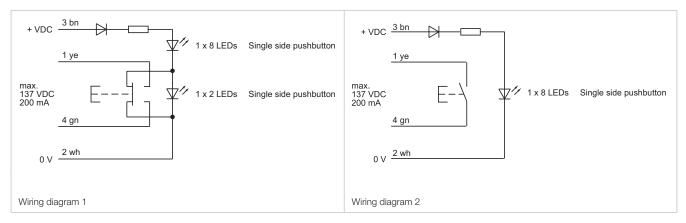
Cable exit						
□ cable exit right			□ cable exit	eft		
Cable length						
□ A = 200 mm	□ A = 500 mm	□ A = 1000 mm		□ A = 1500 mm		□ mm

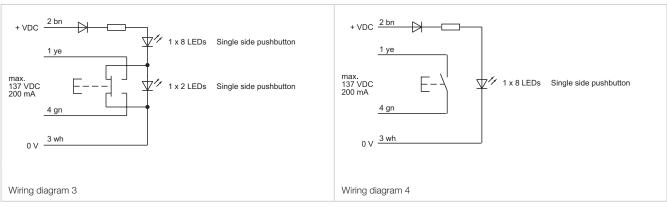
Cable and Connector type				
Cable	Connector			
□ 2x0.5mm² (Wiring diagram 5)	□ core end-sleeves			
□ 4x0.5mm² (Wiring diagram 1, 2, 3, 4)	☐ AMP Connector Mate-N-Lok (Wiring diagram 3, 4)			
	□ DEUTSCH connector (Wiring diagram 3, 4)			
	☐ AMP Connector 2.8x0.8 (Wiring diagram 1, 2)			
	☐ AMP Connector 6.3x0.8 (Wiring diagram 3, 4)			

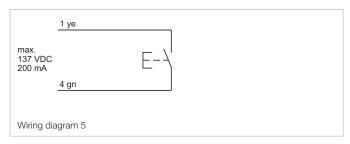
Housing		
☐ housing D73 (standard)	□ housing reworked 50 x 50 mm	□ housing reworked 68.5 x 50 mm

The drawings you will find from page 36

The component layouts No. 2 and 3 you will find from page 36







56 Front mounting

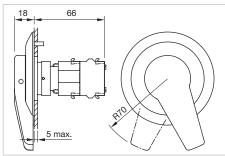
Lever switch



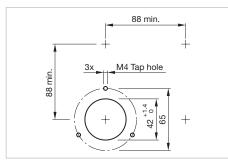
The preview is based on a sample product. This can differ from your current configuration.

Additional Information

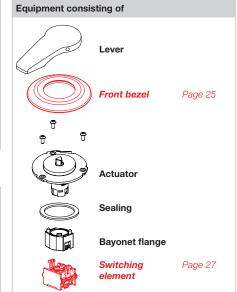
- Lever aluminium naturel anodized
- Two switching positions
- Switching action: 0-maintain
- 45° switching angle
- Switching element see technical data Series 04



Dimensions [mm]



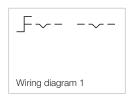
Mounting cut-outs [mm]



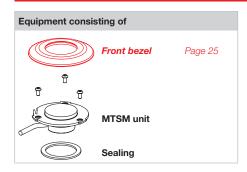
Each part listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.

Part No.	Weight
704.107.1	0.314 kg

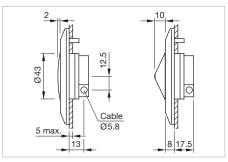


Multi-Tone Sound Module

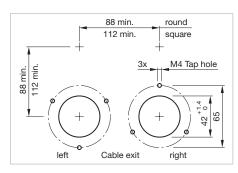


Each part listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.



Dimensions [mm]



Mounting cut-outs [mm]



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

Additional Information

- The descriptions of the standard tone sequences see «Application guidelines»
- 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/offer56

Front cap								
☐ Plastic black flush				□ Plastic black raised				
Front cap marking								
□ without symbol			□ with symbol					
Volume adjustment								
☐ Manually (3-/5-Tone Sequences Module)				☐ Automatically	(6-Tone Se	quences Module)		
Tone sequence								
☐ 3-tone		☐ 5-tone				□ 6-tone		
Supply voltage								
☐ 24 VDC (5-Tone Sequences Me	odule)	□ 1663 VDC (3-/6-Tone Sequences Module)		ule)	☐ 50143 VDC (3-/6-Tone Sequences Module)			
Tolerance ±30 %								
Cable exit								
□ cable exit right				□ cable exit left				
Cable length								
□ A = 200 mm	□ A = 500 mm		□ A = 1000 mm		□ A = 150	00 mm		mm

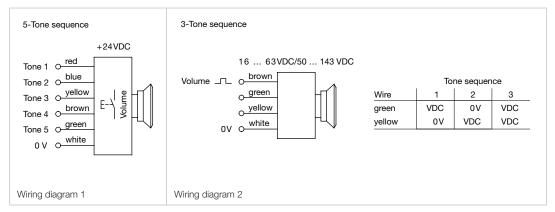
56 Front mounting

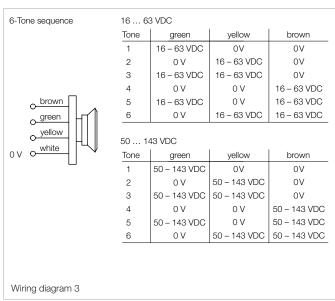
Cable and Connector type				
Cable	Connector			
□ 4x0.25 mm²	□ core end-sleeves			
□ 4x0.5mm²	☐ AMP Connector Mate-N-Lok			
□ 6x0.5mm²	□ DEUTSCH connector			
	☐ AMP Connector 2.8x0.8			
	□ AMP Connector 6.3x0.8			

Housing		
□ housing D73 (standard)	□ housing reworked 50 x 50 mm	□ housing reworked 68.5 x 50 mm

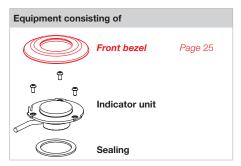
The drawings you will find from page 36

The component layouts No. 4 and 5 you will find from page 36



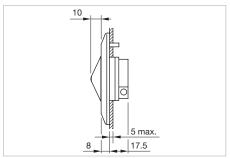


Flashing warning beacon

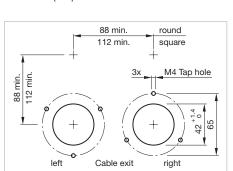


Each part listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.



Dimensions [mm]



Mounting cut-outs [mm]



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

Additional Information

 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/offer56

Front cap				
☐ Plastic colourless raised				
Illumination				
□ LED white				
Supply voltage				
□ 24 VDC				
Tolerance ±30 %				
Cable exit				
□ cable exit right		□ cable exi	t left	
		'		
Cable length				
□ A = 200 mm	□ A = 500 mm	□ A = 1000 mm	□ A = 1500 mm	□ mm
			·	·
Cable and Connector type				

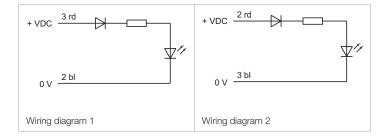
Cable and Connector type					
Cable	Connector				
□ 2x0.24mm²	□ core end-sleeves				
	☐ AMP Connector Mate-N-Lok (Wiring diagram 2)				
	□ DEUTSCH connector (Wiring diagram 2)				
	☐ AMP Connector 2.8x0.8 (Wiring diagram 1)				
	☐ AMP Connector 6.3x0.8 (Wiring diagram 2)				

Front mounting

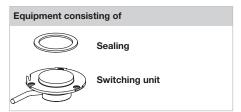
Housing		
□ housing D73 (standard)	□ housing reworked 50 x 50 mm	□ housing reworked 68.5 x 50 mm

The drawings you will find from page 36

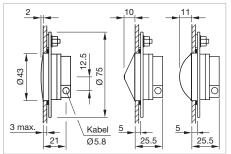
The component layout No. 1 you will find from page 36



Single side indicator



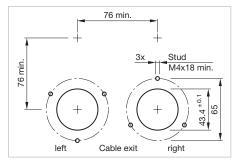
Each part number listed below includes all the black components shown in the 3D-drawing.



Dimensions [mm]



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



Mounting cut-outs [mm]

Additional Information

 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/offer56

Front cap					
☐ Plastic colourless flush	□ Plastic	colourless raised	□ Plastic colourles	☐ Plastic colourless half round	
Marking (Text or symbol)					
□ without marking					
□ with marking	□ 1 line	□ 2 line	□ 3 line	□ symbol	
	Example: Open	Example: Door close	Example: Door out of order		
Illumination					
☐ LED green	□ LED red	☐ LED yellow	□ LED white	□ LED blue	

☐ 110 VDC

Tolerance +25 % ... -30 %

Supply voltage

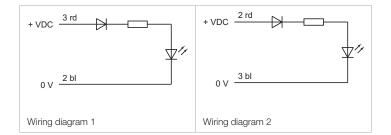
□ 24 VDC

56 Rear mounting

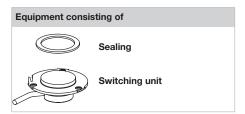
Cable exit						
□ cable exit right			□ cable exit left			
			,			
Cable length						
□ A = 200 mm	□ A = 500 mm	□ A = 1000 mm	1	□ A = 1500 mm	□ mm	
	<u>'</u>	'				
Cable + Connector type						
Cable			Connector			
□ 2*0.24 mm²	2*0.24mm²			□ core end-sleeves		
			☐ AMP Connector Mate-N-Lok (Wiring diagram 2)			
			□ DEUTSCH connector (Wiring diagram 2)			
			☐ AMP Connec	ctor 2.8x0.8 (Wiring diagram 1	1)	
			☐ AMP Connec	ctor 6.3x0.8 (Wiring diagram 2	<u>2</u>)	
			I.			
Housing						
□ housing D73 (standard)		housing reworked 50 x 50)mm	□ housing rewor	rked 68.5 x 50 mm	

The drawings you will find from page 36

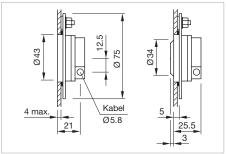
The component layout No. 1 you will find from page 36



Single side pushbutton



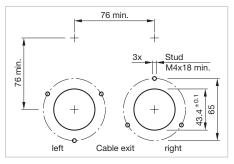
Each part listed below includes all the black components shown in the 3D-drawing.



Dimensions [mm]



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



Mounting cut-outs [mm]

Additional Information

 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/offer56

Lens					
☐ flush, plastic	☐ flush, aluminium	□ raised, aluminium			
☐ green RAL 6024	□ naturel	□ naturel			
□ red RAL 3020	□ green	□ green			
□ blue RAL 5017	□ red	□ red			
□ yellow RAL 1023	□ blue	□ blue			
□ light-grey RAL 7040	□ yellow	□ yellow			
□ black RAL 9017	□ black	□ black			
□ orange RAL 2003					

Lens marking	Lens marking						
□ without symbol							
□ with symbol aluminium, raised (milled)							
	☐ Symbol-No. 00.835	□ Symbol-No. 00.836	□ Symbol-No. 00.868	□ Symbol-No. 00.869	□ Symbol-No. 40089	□ Symbol-No. 60523	
□ with symbol aluminium, flat (engraved/lasered) □ with symbol plastic, flat (engraved/lasered)			(35)	(53)	(5)		
	□ Symbol-No. 00.835	□ Symbol-No. 00.836	☐ Symbol-No. 00.868	□ Symbol-No. 00.869	□ Symbol-No. 40089	□ Symbol-No. 60523	
Symbol colour	□ black			□ white			

Illumination						
☐ without illumination						
☐ with illumination	□ 8 green	□ 8 red	□ 8 blue	☐ 8 yellow	□ 8 green/2 red	□ 8 red/2 green
Supply voltage						

□ 72 VDC

☐ 48 VDC

Tolerance +25 % ... -30 %

□ 24 VDC

□ 36 VDC

☐ 110 VDC

56 Rear mounting

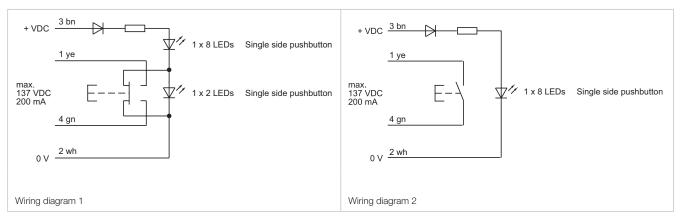
Cable exit				
□ cable exit right		□ са	able exit left	
Cable length				
□ A = 200 mm	□ A = 500 mm	□ A = 1000 mm	□ A = 1500 mm	□ mm
	<u>'</u>	<u>'</u>	<u>'</u>	

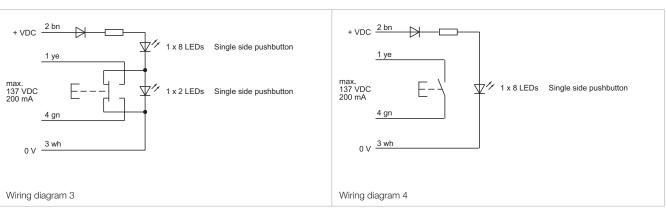
Cable + Connector type					
Cable	Connector				
□ 2x0.5 mm² (Wiring diagram 5)	□ core end-sleeves				
□ 4x0.5 mm² (Wiring diagram 1, 2, 3, 4)	☐ AMP Connector Mate-N-Lok (Wiring diagram 3, 4)				
	□ DEUTSCH connector (Wiring diagram 3, 4)				
	☐ AMP Connector 2.8x0.8 (Wiring diagram 1, 2)				
	☐ AMP Connector 6.3 x 0.8 (Wiring diagram 3, 4)				

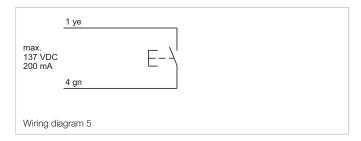
Housing		
□ housing D73 (standard)	□ housing reworked 50 x 50 mm	□ housing reworked 68.5 x 50 mm

The drawings you will find from page 36

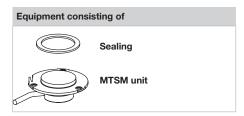
The component layout No. 2 you will find from page 36



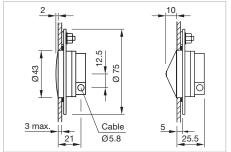




Multi-Tone Sound Module



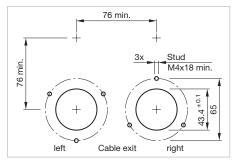
Each part listed below includes all the black components shown in the 3D-drawing.



Dimensions [mm]



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



Mounting cut-outs [mm]

Additional Information

 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/offer56

Front cap								
☐ Plastic black flush				☐ Plastic black	raised			
Front cap marking								
□ without symbol				☐ with symbol				
Volume adjustment								
☐ Manually (3-/5-Tone Sequence	es Module)			☐ Automatically	(6-Tone Se	quences Module)		
Tone sequence								
□ 3-tone		□ 5-tone				☐ 6-tone		
Supply voltage								
☐ 24 VDC (5-Tone Sequences N	fodule)	□ 166	3 VDC (3-/6-Tone	Sequences Modi	ule)	□ 50143 VDC (3-/	6-Tone Sequ	uences Module)
Tolerance ±30 %								
Cable exit								
□ cable exit right				□ cable exit left				
Cable length								
□ A = 200 mm	□ A = 500 mm		□ A = 1000 mm	1	□ A = 150	00 mm		_ mm

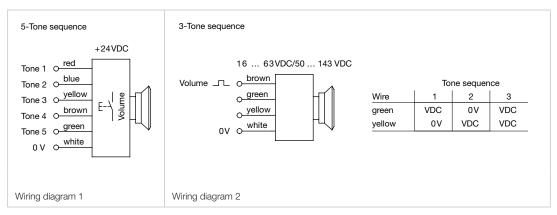
56 Rear mounting

Cable + Connector type	
Cable	Connector
□ 4x0.25mm²	□ core end-sleeves
□ 4x0.5mm²	☐ AMP Connector Mate-N-Lok
□ 6x0.5 mm²	□ DEUTSCH connector
	□ AMP Connector 2.8x0.8
	□ AMP Connector 6.3x0.8

Housing		
☐ housing D73 (standard)	□ housing reworked 50x50mm	□ housing reworked 68.5 x 50 mm

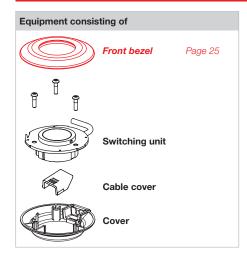
The drawings you will find from page 36

The component layouts No. 4, 5 and 6 you will find from page 36



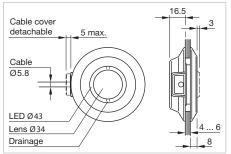
6-Tone sequence	16 6	3 VDC		
	Tone	green	yellow	brown
	1	16 - 63 VDC	OV	OV
	2	0 V	16 - 63 VDC	0V
	3	16 - 63 VDC	16 - 63 VDC	0V
	4	0 V	0 V	16 – 63 VDC
brown	5	16 - 63 VDC	0 V	16 – 63 VDC
green	6	0 V	16 - 63 VDC	16 – 63 VDC
o yellow o v white	50 1 Tone	43 VDC green	yellow	brown
	1	50 - 143 VDC	0V	OV
	2	0 V	50 - 143 VDC	ov
	3	50 - 143 VDC	50 – 143 VDC	ov
	4	0 V	0 V	50 – 143 VDC
	5	50 - 143 VDC	0 V	50 – 143 VDC
	6	0 V	50 – 143 VDC	50 – 143 VDC
Wiring diagram 3				

Single side pushbutton

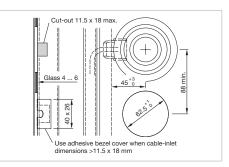


Each part listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.



Dimensions [mm]



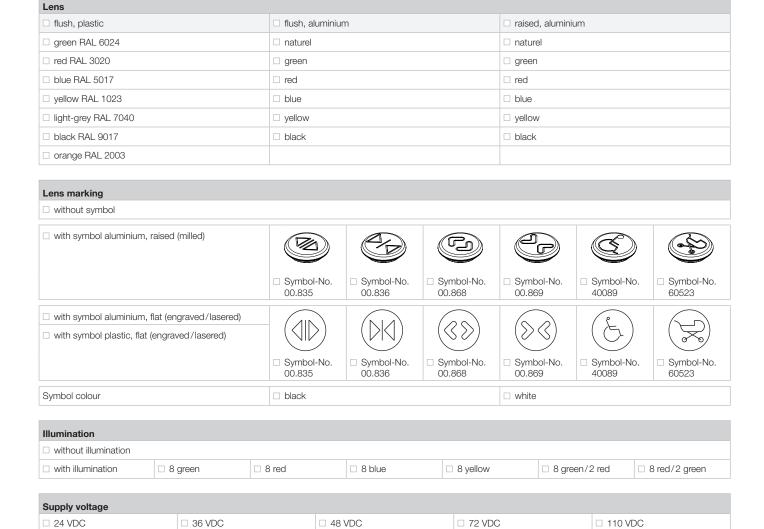
Mounting cut-outs [mm]



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

Additional Information

- Front bezel Ø 87 mm
- Cable exit left
- Housing D73 (standard)
- Other cable cover are available
- 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/offer56

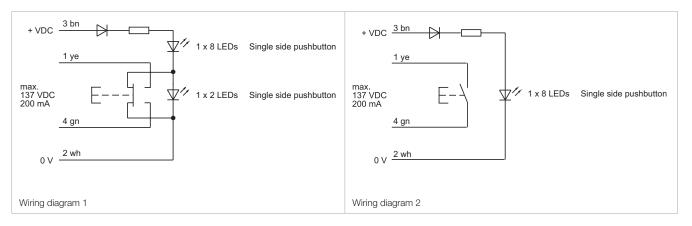


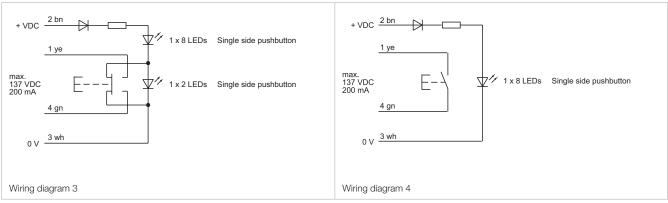
56 Glass mounting

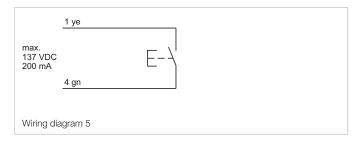
Cable length				
□ A = 200 mm	□ A = 500 mm	□ A = 1000 mm	□ A = 1500 mm	□mm

Cable + Connector type	
Cable	Connector
$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	□ core end-sleeves
\square 4x0.5 mm ² (Wiring diagram 1, 2, 3, 4)	☐ AMP Connector Mate-N-Lok (Wiring diagram 3, 4)
	□ DEUTSCH connector (Wiring diagram 3, 4)
	□ AMP Connector 2.8x0.8 (Wiring diagram 1, 2)
	□ AMP Connector 6.3 x 0.8 (Wiring diagram 3, 4)

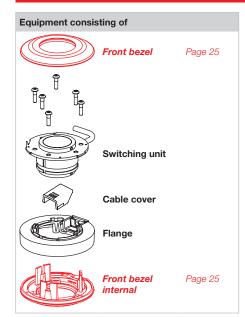
The component layouts No. 2 and 3 you will find from page 36







Double side pushbutton

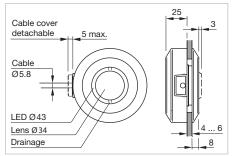


Each part listed below includes all the black components shown in the 3D-drawing.

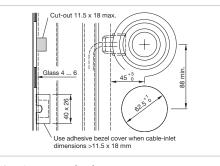
To obtain a complete unit, please select the red components from the pages shown.

Lens☐ flush, plastic

Symbol colour



Dimensions [mm]



Mounting cut-outs [mm]

☐ flush, aluminium

00.835

□ black



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

Product features

- Front bezel Ø 87 mm
- Cable exit left

☐ raised, aluminium

- Housing D73 (standard)
- 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/offer56

☐ green RAL 6024	□ naturel			□ naturel		
□ red RAL 3020	□ green			□ green		
□ blue RAL 5017	□ red			□ red		
□ yellow RAL 1023	□ blue			□ blue		
□ light-grey RAL 7040	□ yellow			□ yellow		
□ black RAL 9017	□ black			□ black		
□ orange RAL 2003						
□ without symbol						
Lens marking without symbol						
□ with symbol aluminium, raised (milled)						
	☐ Symbol-No. 00.835	□ Symbol-No. 00.836	☐ Symbol-No. 00.868	□ Symbol-No. 00.869	☐ Symbol-No. 40089	□ Symbol-No. 60523
□ with symbol aluminium, flat (engraved/lasered)□ with symbol plastic, flat (engraved/lasered)			$(\langle S \rangle)$	$(S \triangleleft)$	(5)	
	☐ Symbol-No.	☐ Symbol-No.	☐ Symbol-No.	☐ Symbol-No.	☐ Symbol-No.	☐ Symbol-No.

00.836

00.868

00.869

 $\ \square$ white

40089

60523

56 Glass mounting

Illumination				
□ without illumination				
□ with illumination	☐ 16 green	□ 16 red	□ 8 red/2 green	□ 8 green/2 red
Supply voltage illuminati	on			

□ 110 VDC

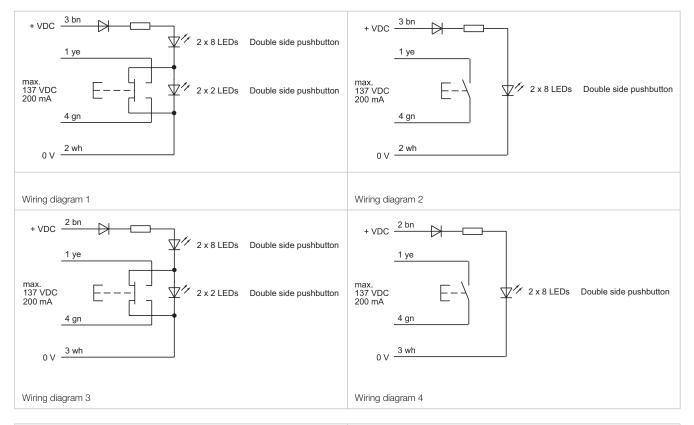
Tolerance +25 % ... -30 %

□ 24 VDC

Cable length				
□ A = 200 mm	□ A = 500 mm	□ A = 1000 mm	□ A = 1500 mm	□mm

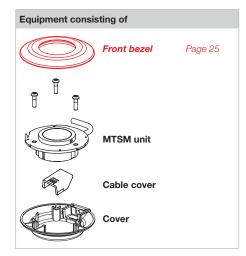
Cable + Connector type	
Cable	Connector
□ 2x0.5mm² (without illumination, wiring diagram 1, 2)	□ core end-sleeves
□ 4x0.5 mm² (Wiring diagram 1, 2, 3, 4)	□ AMP Connector Mate-N-Lok (Wiring diagram 3, 4)
	□ DEUTSCH connector (Wiring diagram 3, 4)
	□ AMP Connector 2.8x0.8 (Wiring diagram 1, 2)
	□ AMP Connector 6.3 x 0.8 (Wiring diagram 3, 4)

The component layouts No. 2 and 3 you will find from page 36





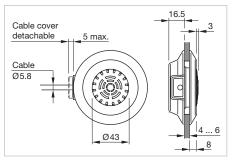
Multi-Tone Sound Module



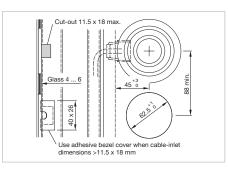
Each part listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.

Front cap



Dimensions [mm]



Mounting cut-outs [mm]



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

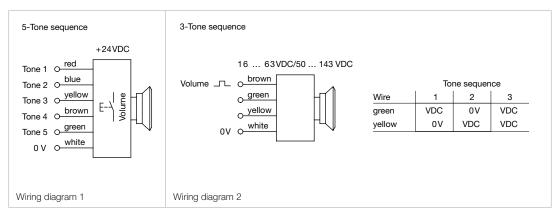
Product features

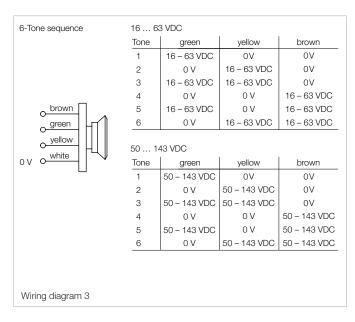
- Front bezel Ø 87 mm
- Cable exit left
- Housing D73 (standard)
- Please fill in the form and forward it to your local EAO partner by e-mail or fax. The electronic form is available at http://www.eao.com/offer56

☐ Plastic black flush				☐ Plastic black	raised			
Front cap marking								
□ without symbol				☐ with symbol				
Volume adjustment								
☐ Manually (3-/5-Tone Sequence	es Module)			☐ Automatically	(6-Tone Se	equences Module)		
Tone sequence								
☐ 3-tone		□ 5-tone				□ 6-tone		
Supply voltage								
☐ 24 VDC (5-Tone Sequences M	lodule)	□ 1660	3 VDC (3-/6-Tone	Sequences Modu	ıle)	□ 50143 VDC (3-/	6-Tone Sequ	ences Module)
Tolerance ±30 %								
Cable exit								
□ cable exit right				□ cable exit left				
Cable length								
□ A = 200 mm	□ A = 500 mm		□ A = 1000 mm	1	□ A = 150	00 mm		_ mm
Cable + Connector type				ı				
Cable				Connector				
□ 4*0.5 mm²				□ core end-slee	ves			
				☐ AMP Connec	tor Mate-N	-Lok		
				□ DEUTSCH co	nnector			
				☐ AMP Connec	tor 2.8 x 0.8	3		
				☐ AMP Connec	tor 6.3 x 0.8	3		

The component layout No. 5 you will find from page 36

Glass mounting





Front

Front bezel

Additional Information

Special colours for front bezel on request

Product attribute	Colour	Front bezel	Part No.	Weight
Front bezel,	front dimension 87)	k 87 mm		
For single side indicator and single	RAL 3020	Plastic red	56-2200	0.026 kg
side pushbutton, front mounting	RAL 1023	Plastic yellow	56-2400	0.026 kg
	RAL 6024	Plastic green	56-2500	0.026 kg
	RAL 5017	Plastic blue	56-2600	0.026 kg
		Metal matt chrome	50 4000	
0		Weta matt offorie	56-4600	0.085 kg
Front bezel,	front dimension Ø 8		56-4000	0.085 kg
For single side indicator and single	front dimension Ø 8		56-4000	0.085 kg
For single side indicator and single side pushbutton; double side push-		7 mm	100 100	
For single side indicator and single side pushbutton; double side push-	RAL 9017	7 mm Pastic black	56-1000	0.018 kg
For single side indicator and single side pushbutton; double side push-	RAL 9017 RAL 3020	7 mm Pastic black Plastic red	56-1000 56-1200	0.018 kg
For single side indicator and single side pushbutton; double side push-	RAL 9017 RAL 3020 RAL 2003	7 mm Pastic black Plastic red Plastic orange	56-1000 56-1200 56-1300	0.018 kg 0.018 kg 0.018 kg
For single side indicator and single side pushbutton; double side push-	RAL 9017 RAL 3020 RAL 2003 RAL 1023	7 mm Pastic black Plastic red Plastic orange Plastic yellow	56-1000 56-1200 56-1300 56-1400	0.018 kg 0.018 kg 0.018 kg 0.018 kg
For single side indicator and single side pushbutton; double side push-	RAL 9017 RAL 3020 RAL 2003 RAL 1023 RAL 6024	7 mm Pastic black Plastic red Plastic orange Plastic yellow Plastic green	56-1000 56-1200 56-1300 56-1400 56-1500	0.018 kg 0.018 kg 0.018 kg 0.018 kg 0.018 kg
Front bezel, For single side indicator and single side pushbutton; double side pushbutton external	RAL 9017 RAL 3020 RAL 2003 RAL 1023 RAL 6024 RAL 5017	7 mm Pastic black Plastic red Plastic orange Plastic yellow Plastic green Plastic blue	56-1000 56-1200 56-1300 56-1400 56-1500 56-1600	0.018 kg 0.018 kg 0.018 kg 0.018 kg 0.018 kg 0.018 kg

Front bezel internal

Additional Information

• For double side pushbutton

Dimension	Colour t bezel internal	Front bezel	Part No.	Weight
Ø 87 mm	RAL 3020	Plastic red	56-5200	0.09 kg
	RAL 2003	Plastic orange	56-5300	0.09 kg
	RAL 1023	Plastic yellow	56-5400	0.09 kg
	RAL 6024	Plastic green	56-5500	0.09 kg
	RAL 5017	Plastic blue	56-5600	0.09 kg
	RAL 7043	Plastic darkgrey	56-5800	0.09 kg
	RAL 7040	Plastic lightgrey	56-5800A	0.09 kg
		Metal matt chrome	56-7600	0.115 kg

Front bezel for blind and visually impaired persons round

Additional Information

- For single side pushbutton, double side pushbutton external
- Special colours for front bezel on request

Marking	Colour	Front bezel	Part No.	Weight
Chan				
Front bezel for bli	nd and visually impaired per	sons round, front dimension	Ø 87 mm	
	nd and visually impaired per	sons round, front dimension	Ø 87 mm	0.018 kg
				0.018 kg 0.018 kg
Braille + Open	RAL 3020	Plastic red	56-1291	
Front bezel for blin Braille + Open Braille + Close Braille + Open	RAL 3020 RAL 2003	Plastic red Plastic orange	56-1291 56-1391	0.018 kg

Front bezel for blind and visually impaired persons triangular

Additional Information

- For single side pushbutton
- SOS character height 15 mm, black printed according TSI/PRM and braille SOS as per DIN 32976
- Special colours for front bezel on request

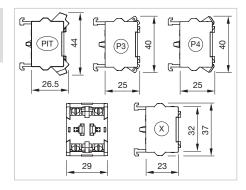
Marking	Colour	Front bezel	Part No.	Weight
SOS				
	or blind and visually impaired pers	ons triangular, front dimensio	n 106 x 101 mm	
	or blind and visually impaired pers	ons triangular, front dimensio	n 106 x 101 mm 56-8000.A	0.029 kg
Front bezel fo				0.029 kg 0.029 kg
Front bezel fo	RAL 1023	Plastic yellow	56-8000.A	

Rear side

Switching element

Additional Information

For the third switching element the terminal marking insert is to be ordered separately



Dimensions [mm]
PIT = Push-in terminal,
P3 = Plug-in terminal 6.3 x 0.8 mm,
P4 = Double plug-in terminal 6.3 x 0.8 mm,
X = Screw terminal

Switching voltage	Switching current	Switching system	Contacts	Contact material	Terminal	Part No.	Wiring	Weight
	Switching ele	ement						
250 VAC	6 A	Snap-action switching	1 NO	Gold	Push-in Terminal	704.907.1	3	0.02 kg
		element	1 NC	Gold	Push-in Terminal	704.907.2	1	0.02 kg
			2 NO	Gold	Push-in Terminal	704.907.3	5	0.027 kg
			2 NC	Gold	Push-in Terminal	704.907.4	4	0.027 kg
			1 NC + 1 NO	Gold	Push-in Terminal	704.907.5	2	0.027 kg
			1 NO	Silver	Push-in Terminal	704.908.1	3	0.02 kg
			1 NC	Silver	Push-in Terminal	704.908.2	1	0.02 kg
			2 NO	Silver	Push-in Terminal	704.908.3	5	0.027 kg
			2 NC	Silver	Push-in Terminal	704.908.4	4	0.027 kg

Accessories

Switching	Switching current	Switching system	Contacts	Contact material	Terminal	Part No.	Wiring	Weight
	Switching e	element						
50 VAC	6 A	Slow-make switching	1 NO	Gold	Push-in Terminal	704.917.1	3	0.019 kg
		element	1 NC	Gold	Push-in Terminal	704.917.2	1	0.019 kg
			2 NO	Gold	Push-in Terminal	704.917.3	5	0.026 kg
			2 NC	Gold	Push-in Terminal	704.917.4	4	0.019 kg
			1 NC + 1 NO	Gold	Push-in Terminal	704.917.5	2	0.026 kg
			1 NO	Silver	Push-in Terminal	704.918.1	3	0.019 kg
			1 NC	Silver	Push-in Terminal	704.918.2	1	0.019 kg
			2 NO	Silver	Push-in Terminal	704.918.3	5	0.026 kg
			2 NC	Silver	Push-in Terminal	704.918.4	4	0.019 kg
			1 NC + 1 NO	Silver	Push-in Terminal	704.918.5	2	0.026 kg
			2 NC 1 NC + 1 NO	Silver Silver	Plug 6.3 x 0.8 mm Plug 6.3 x 0.8 mm	704.905.4 704.905.5	2	0.028 kg
31	Switching 6		1	\				
00 VAC	10 A	Slow-make switching element	1 NO	Silver	Plug 6.3 x 0.8 mm	704.915.1	3	0.021 kg
			1 NC	Silver	Plug 6.3 x 0.8 mm	704.915.2	1 =	0.021 kg
			2 NO 2 NC	Silver	Plug 6.3 x 0.8 mm	704.915.3 704.915.4	5 4	0.028 kg 0.028 kg
			1 NC + 1 NO	Silver	Plug 6.3 x 0.8 mm	704.915.4	2	0.028 kg
			1			3 3		
	Switching e	element						
00 VAC	Switching 6	Snap-action switching element	1 NO	Gold	Double plug 6.3 x 0.8 mm	704.901.1/D	3	0.026 kg
00 VAC		Snap-action switching	1 NO	Gold		704.901.1/D 704.901.2/D	3	0.026 kg
00 VAC		Snap-action switching			6.3 x 0.8 mm Double plug			

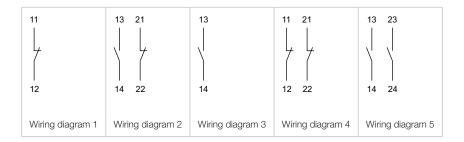
voltage	Switching current	Switching system	Contacts	Contact material	Terminal	Part No.	Wiring diagram	Weight
00 VAC	10 A	Snap-action switching element	1 NC + 1 NO	Gold	Double plug 6.3 x 0.8 mm	704.901.5/D	2	0.033 kg
			1 NO	Silver	Double plug 6.3 x 0.8 mm	704.905.1/D	3	0.026 kg
			1 NC	Silver	Double plug 6.3 x 0.8 mm	704.905.2/D	1	0.026 kg
			2 NO	Silver	Double plug 6.3 x 0.8 mm	704.905.3/D	5	0.033 kg
			2 NC	Silver	Double plug 6.3 x 0.8 mm	704.905.4/D	4	0.033 kg
			1 NC + 1 NO	Silver	Double plug 6.3 x 0.8 mm	704.905.5/D	2	0.033 kg
	1				I			
500 VAC	Switching of	element Slow-make switching element	1 NO	Silver	Double plug 6.3 x 0.8 mm	704.915.1/D	3	0.025 kg
500 VAC		Slow-make switching	1 NO 1 NC	Silver Silver		704.915.1/D 704.915.2/D	3	0.025 kg
500 VAC		Slow-make switching	-		6.3 x 0.8 mm Double plug			, and the second
500 VAC		Slow-make switching	1 NC	Silver	6.3 x 0.8 mm Double plug 6.3 x 0.8 mm Double plug	704.915.2/D	1	0.025 kg
500 VAC		Slow-make switching	1 NC 2 NO	Silver	6.3 x 0.8 mm Double plug 6.3 x 0.8 mm Double plug 6.3 x 0.8 mm Double plug	704.915.2/D 704.915.3/D	1 5	0.025 kg 0.032 kg
500 VAC		Slow-make switching element	1 NC 2 NO 2 NC	Silver Silver	6.3 x 0.8 mm Double plug	704.915.2/D 704.915.3/D 704.915.4/D	5 4	0.025 kg 0.032 kg 0.032 kg

500 VAC	10 A	Snap-action switching	1 NO	Gold	Screw	704.901.1	3	0.021 kg
		element	1 NC	Gold	Screw	704.901.2	1	0.021 kg
			2 NO	Gold	Screw	704.901.3	5	0.028 kg
			2 NC	Gold	Screw	704.901.4	4	0.028 kg
			1 NC + 1 NO	Gold	Screw	704.901.5	2	0.028 kg
			1 NO	Silver	Screw	704.900.1	3	0.021 kg
			1 NC	Silver	Screw	704.900.2	1	0.021 kg
			2 NO	Silver	Screw	704.900.3	5	0.028 kg
			2 NC	Silver	Screw	704.900.4	4	0.028 kg
			1 NC + 1 NO	Silver	Screw	704.900.5	2	0.028 kg
			1 NO	Palladium	Screw	704.902.1	3	0.021 kg
			1 NC	Palladium	Screw	704.902.2	1	0.021 kg
			2 NO	Palladium	Screw	704.902.3	5	0.028 kg
			2 NC	Palladium	Screw	704.902.4	4	0.028 kg
			1 NC + 1 NO	Palladium	Screw	704.902.5	2	0.028 kg

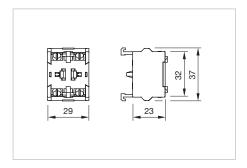
56 Accessories

Switching voltage	Switching current	Switching system	Contacts	Contact material	Terminal	Part No.	Wiring	Weight
	Switching eler	ment						
500 VAC	10 A	Slow-make switching	1 NO	Gold	Screw	704.911.1	3	0.021 kg
		element	1 NC	Gold	Screw	704.911.2	1	0.021 kg
			2 NO	Gold	Screw	704.911.3	5	0.028 kg
			2 NC	Gold	Screw	704.911.4	4	0.028 kg
			1 NC + 1 NO	Gold	Screw	704.911.5	2	0.028 kg
			1 NO	Silver	Screw	704.910.1	3	0.021 kg
			1 NC	Silver	Screw	704.910.2	1	0.021 kg
			2 NO	Silver	Screw	704.910.3	5	0.028 kg
			2 NC	Silver	Screw	704.910.4	4	0.028 kg
			1 NC + 1 NO	Silver	Screw	704.910.5	2	0.028 kg
			1 NO	Palladium	Screw	704.912.1	3	0.021 kg
			1 NC	Palladium	Screw	704.912.2	1	0.021 kg
			2 NO	Palladium	Screw	704.912.3	5	0.028 kg
			2 NC	Palladium	Screw	704.912.4	4	0.028 kg
			1 NC + 1 NO	Palladium	Screw	704.912.5	2	0.028 kg

Contacts: NC = Normally closed, NO = Normally open



Switching element ring cable lug



Dimensions [mm]

Switching voltage	Switching current	Switching system	Contacts	Contact material	Terminal	Part No.	Wiring	Weight
	Switchin	ng element for ring cable :	shoe					
500 VAC	10 A	Snap-action switching element	1 NO	Silver	Screw	704.900.1B	3	0.021 kg
			1 NC	Silver	Screw	704.900.2B	1	0.021 kg
			2 NO	Silver	Screw	704.900.3B	5	0.028 kg
			2 NC	Silver	Screw	704.900.4B	4	0.028 kg
			1 NC + 1 NO	Silver	Screw	704.900.5B	2	0.028 kg
			TNOTTNO	Glivei	GOICW	704.900.3B		0.020 Ng
500 VAC		ng element for ring cable	shoe					
500 VAC	Switchin	ng element for ring cable solow-make switching element	shoe	Gold	Screw	704.911.1B	3	0.021 kg
500 VAC			shoe 1 NO 1 NC	Gold Gold	Screw Screw	704.911.1B 704.911.2B	3	0.021 kg
500 VAC			1 NO 1 NC 2 NO	Gold Gold Gold	Screw Screw	704.911.1B 704.911.2B 704.911.3B	3 1 5	0.021 kg 0.021 kg 0.028 kg
500 VAC			shoe 1 NO 1 NC 2 NO 2 NC	Gold Gold Gold Gold	Screw Screw Screw	704.911.1B 704.911.2B 704.911.3B 704.911.4B	3 1 5 4	0.021 kg 0.021 kg 0.028 kg 0.028 kg
500 VAC			shoe 1 NO 1 NC 2 NO 2 NC 1 NC + 1 NO	Gold Gold Gold Gold Gold	Screw Screw Screw Screw	704.911.1B 704.911.2B 704.911.3B 704.911.4B 704.911.5B	3 1 5 4 2	0.021 kg 0.021 kg 0.028 kg 0.028 kg 0.028 kg
500 VAC			shoe 1 NO 1 NC 2 NO 2 NC	Gold Gold Gold Gold	Screw Screw Screw	704.911.1B 704.911.2B 704.911.3B 704.911.4B	3 1 5 4	0.021 kg 0.021 kg 0.028 kg 0.028 kg 0.028 kg 0.028 kg
000 VAC			Shoe 1 NO 1 NC 2 NO 2 NC 1 NC + 1 NO 1 NO	Gold Gold Gold Gold Gold Silver	Screw Screw Screw Screw Screw Screw	704.911.1B 704.911.2B 704.911.3B 704.911.4B 704.911.5B 704.910.1B	3 1 5 4 2	0.021 kg 0.021 kg 0.028 kg 0.028 kg 0.028 kg
500 VAC			shoe 1 NO 1 NC 2 NO 2 NC 1 NC+1 NO 1 NO	Gold Gold Gold Gold Gold Silver	Screw Screw Screw Screw Screw Screw Screw	704.911.1B 704.911.2B 704.911.3B 704.911.4B 704.910.1B 704.910.1B	3 1 5 4 2 3	0.021 kg 0.021 kg 0.028 kg 0.028 kg 0.028 kg 0.021 kg 0.021 kg

Contacts: NC = Normally closed, NO = Normally open

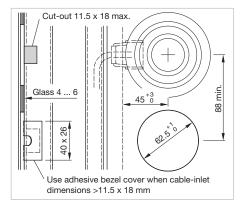
11	13 21	13	11 21	13 23
12	14 22	14	12 22	14 24
Wiring diagram 1	Wiring diagram 2	Wiring diagram 3	Wiring diagram 4	Wiring diagram 5

Mounting

Cable cover standard

Additional Information

Additional cable covers are available on request



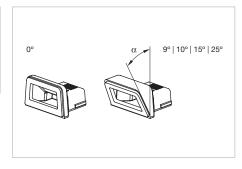
Mounting cut-outs [mm]

Cable cover standard included in standard delivery standard 0° 56-992	0.003 kg
Cable cover standard specify Part No. in purchase order standard 45° 56-992A	0.005 kg

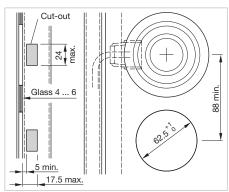
Cable cover funnel

Additional Information

- Specify Part No. in purchase order
- ▲ Caution: Funnel shaped cable cover Part No. 56-992B, C, D, E, F are not replacable after first mounting



Dimensions [mm]



Mounting cut-outs [mm]

Cable cover	Part No.	Weight
Cable cover	funnel	
funnel 0°	56-992B	0.01 kg
funnel 10°	56-992C	0.01 kg
funnel 15°	56-992D	0.01 kg
funnel 25°	56-992E	0.01 kg
Funnel 9°	56-992F	0.01 kg

Bezel cover

Product attribute	Dimension	Material	Colour	Mounting type	Part No.	Weight
Bezel	cover					
0.8 mm thick	40 x 26 mm	Aluminium	natural anodized	adhesive	56-993	0.005 kg

Mounting set for rear mounting

Additional Information

• For front panel thickness 2 mm and 3mm

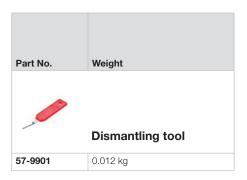
Part No.	Weight
000000000000000000000000000000000000000	Mounting set for rear mounting
56-991	0.036 kg

56 Accessories

Dismantling tool

Additional Information

• For front bezel



Anti-slip mat

Additional Information

- For dismounting of front bezel
- 3 mm dick

Dimension	Colour	Part No.	Weight
Anti-slip ma	ı		
100 x 100 mm	white	56-999	0.033 kg

Counterpart set for plug-in housing 2.8 x 0.8 mm

Additional Information

• (set of 10 pieces)

Part No.	Weight
	Counterpart set for plug-in housing 2.8 x 0.8 mm
56-994	0.012 kg

Counterpart set for plug-in housing 6.3 x 0.8 mm

Additional Information

• (set of 10 pieces)

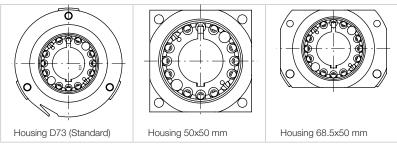
Part No.	Weight
	Counterpart set for plug-in housing 6.3 x 0.8 mm
56-995	0.012 kg

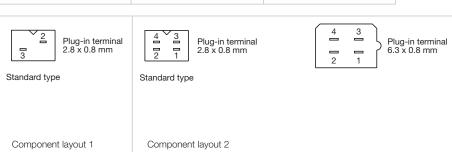
Sealing

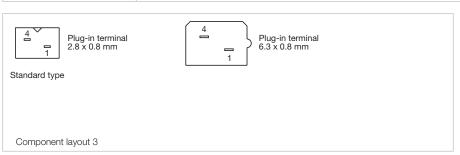
Part No.	Weight
0	Sealing black, glass mounting
56-990	0.004 kg

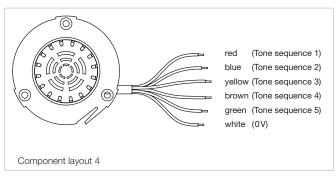
56 Drawings

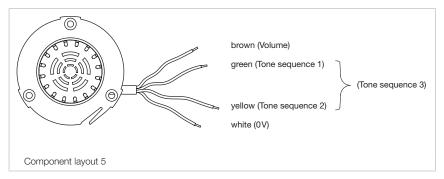
Drawings

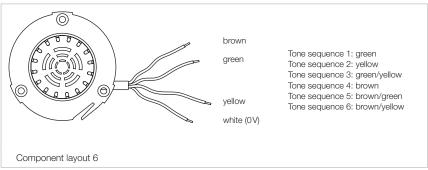












Indicator

Material

Connection cable

Halogene free Polyolefine mixture

Lens

Polycarbonate (PC), as per UL94 V0

Front bezel

Zinc matt chromium plated or Polybutylenterephthalat (PBT), as per UL94 V0

Actuator

Polycarbonate (PC), as per UL94 V0

Mechanical characteristics

Terminals

Cable 2-poles with plug-in connection 2.8 x 0.8 mm Flat plug-in housing rectangular, AMP No. 626 057-0

Counterpart to AMP Flat plug-in housing (not part of delivery)
Receptacle housing AMP No. 626 056-0
Receptacle socket AMP No. 160 655-2

Wire cross-section

0.24 mm²

Wire length

200 mm with AMP connector 2.8 x 0.8 mm

Fixing screws

For front mounting M4 x 8 mm

Tightening torque

For screws for front mounting 80 Ncm...100 Ncm Key (mounting and dismantling) Hexagon socket wrench size 2.5 mm

Electrical characteristics

Illumination

15 LED green, red, yellow, white or blue Supply voltage 24, 110 VDC Tolerance -30 % ... +25 % 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 61058-1, EN 50081-1, EN 50082-1, EN 50082-2, EN 50121-3-2, EN 50155

Environmental conditions

Storage temperature

-45°C...+90°C

Operating temperature

-40°C...+80°C

Protection degree

Front side IP 67 Rear side IP 65

Climate resistance

Damp heat, cyclic 96 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

100 cycles, -40°C ... +80°C, as per EN IEC 60068-2-14

Shock resistance

(semi-sinusoidal)

max. 250 m/s², pulse width 11 ms, as per EN IEC 60068-2-27

Vibration resistance

(sinusoidal)

max. $100\,\text{m/s}^2$ at $10\,\text{Hz}\dots2000\,\text{Hz}$, as per EN IEC 60068-2-6

Approvals

Approbations

CQC

NFF

Declaration of conformity

CE

Multi-Tone Sound Module

Material

Connection cable

Halogene free Polyolefine mixture Housing switching unit and speaker cap Polycarbonate (PC), as per UL94 V0

Front bezel

Zinc matt chromium plated or Polybutylenterephthalat (PBT), as per UL94 V0

Housing

Tritan (Copolyeste)

Mechanical characteristics

Terminals

 $200\,\mathrm{mm}$ with crimped metal sleeves

3-tone sequences module: $4 \times 0.5 \, \text{mm}^2$ or $4 \times 0.25 \, \text{mm}^2$

5-tone sequences module: 6 x 0.5 mm² 6-tone sequences module: 6 x 0.5 mm²

Fixing screws

For front mounting M4 x 8 mm (3x)

Tightening torque

For screws for front mounting 80 Ncm...100 Ncm Key (mounting and dismantling) Hexagon socket wrench size 2.5 mm

Electrical characteristics

Units compliant to

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

Operating voltage/-current

Operation voltage 24 VDC $\pm 30\,\%$, 5-tone sequences module Operation voltage range $16\dots63\,/\,50\dots143\,\text{VDC}$, 3-tone sequences module/6-tone sequences module Current rating $< 50\,\text{mA}$ depending on voltage and volume

Electric strength

 $4000\,\text{VAC},\,50\,\text{Hz},\,1$ min, between all terminals and mounting plate/front element

Acoustic characteristics

5-tone sequences:

The volume of each tone sequence is configured in five steps by 6 dB, adjustable from the rear side. All sounds are controlled using a wire cable.

The tones can be played in any sequence at different volumes, durations and intervals.

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. All sounds are controlled using a wire cable. In order to symplify the definition of the Multi-Tone Sound Module, a "volume control box" is at EAO customer's disposal as an accessory.

The tones can be played in any sequence at different volumes, durations and intervals.

6-tone sequences:

The «MTSM self-adjusting» offers six individual tone sequences that can be emitted at different frequencies, number of repeats and durations. The volume can be pre-set so it is always a specified number of decibels above the ambient noise. The six tone sequences are controlled in a binary manner, via three wires.

Frequency range

 $500\,Hz\ldots3000\,Hz\pm1\,\%$

480 Hz... 3000 Hz ±1 % (6-tone sequences module)

Time range of tone sequence

0...∞ (endless)

Acoustic pressure level

3-/5-tone sequences module: 90 dB (A) 10 cm @ 1 kHz Level 17 for 3-tone sequences module Level 5 for 5-tone sequences module 6-tone sequences module: Max. 100 db @ 10 cm @ 1 kHz

Environmental conditions

Storage temperature

-45°C...+90°C

Operating temperature

-40°C...+85°C

Protection degree

3-/6-tone sequences module: Front side IP 69K oder IP 40 Rear side IP 65

5-tone sequences module: Front side IP 69K Rear side IP 65

Climate resistance

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

Saline mist 96 hours, as per EN IEC 60068-2-11

Shock resistance

(semi-sinusoidal)

max. 50 m/s², pulse width 30 ms, as per EN 61373

Vibration resistance

Max. 7.9 m/s² at 10 Hz... 150 Hz, as per EN 61373

Approvals

Approbations

CQC F1

NFF

Declaration of conformity

CE

TSI/PRM

Pushbutton

Switching system

Self-cleaning, double-breaking snap-action switching system 1 Normally Open contact, momentary function

Material

Connection cable

Halogene free Polyolefine mixture

Lens

Aluminium anodized or Polybutylenterephthalat (PBT), as per UL94 V0

Front bezel

Zinc matt chromium plated or Polybutylenterephthalat (PBT), as per UL94 $\,\mathrm{VO}$

Actuator

Polycarbonate (PC), as per UL94 V0

Material of contact

Gold plated silver

Mechanical characteristics

Terminals

Cable 4-poles with plug-in connection $2.8\times0.8\,\mathrm{mm}$ Flat plug-in housing rectangular, AMP No. 626 057-0

Counterpart to AMP Flat plug-in housing (not part of delivery)
Receptacle housing AMP No. 626 056-0
Receptacle socket AMP No. 160 655-2

Other version:

Cable 4 poles with plug-in connection 6.3 x 0.8 mm Flat plug-in housing rectangular, AMP No. 180 901-0

Counterpart to AMP Flat plug-in housing (not part of delivery)
Receptacle housing AMP No. 180 900-0
Receptacle socket AMP No. 160 860-2

Wire cross-section

 $0.5 \, \text{mm}^2$

Wire length

200 mm with AMP connector 2.8 x 0.8 mm

Fixing screws

Single side pushbutton for front mounting M4 x8mm

Double side pushbutton for glass mounting M4 x 25 mm

Single side pushbutton for glass mounting M4 x 20 mm

(for glass ≥ 5 mm)

Single side pushbutton for glass mounting M4 x 16 (for 4 mm glass)

Tightening torque

glass mounting 50 Ncm

Screws for single side pushbutton for front mounting 80 Ncm...100 Ncm
Screws for single side- and double side pushbutton for

Key (mounting and dismantling)

Hexagon socket wrench size 2.5 mm

Actuating force

6N...12N

Actuating travel

~0.5 mm

Mechanical lifetime

2 million cycles operation

Electrical characteristics

Illumination

Ready status, 8 LED green, red or yellow Optical switch on status, 2 LED green or red (3 LED for special versions)
Supply voltage 24 VDC
Tolerance +25 % ... -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 61058-1, EN 61000-6-2, EN 61000-6-3, EN 50155

Switch rating

min. 5 VDC, 5 mA

max. 137 VDC/VAC, max. 200 mA

Electric strength

 $4000\,\text{VAC},\,50\,\text{Hz},\,1$ min, between all terminals and mounting plate/front element

Environmental conditions

Storage temperature

-45°C...+90°C

Operating temperature

-40°C ... +80°C

Protection degree

Front side IP 67 Back side IP 65

Climate resistance

Damp heat, cyclic 96 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

100 cycles, -40°C...+80°C, as per EN IEC 60068-2-14

Shock resistance

(semi-sinusoidal)

max. 250 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

CQC NFF

Declaration of conformity

CE TSI/PRM

Flashing warning beacon

Material

Connection cable

Halogene free Polyolefine mixture

Lens

Polycarbonate (PC), as per UL94 V0

Front bezel

Zinc matt chromium plated or Polybutylenterephthalat (PBT), as per UL94 V0

Actuator

Polycarbonate (PC), as per UL94 V0

Mechanical characteristics

Terminals

Cable 2-poles with plug-in connection 2.8 x 0.8 mm Flat plug-in housing rectangular, AMP No. 626 057-0

Counterpart to AMP Flat plug-in housing (not part of delivery)
Receptacle housing AMP No. 626 056-0
Receptacle socket AMP No. 160 655-2

Wire cross-section

0.24 mm²

Wire length

200 mm with AMP connector 2.8 x 0.8 mm

Fixing screws

For front mounting M4 x 8 mm

Tightening torque

For screws for front mounting 80 Ncm... 100 Ncm Key (mounting and dismantling) Hexagon socket wrench size 2.5 mm

Electrical characteristics

Illumination

3 LED white

Supply voltage 24 VDC \pm 30 %

Current consumption < 500 mA

Blitzfrequenz 1 Hz

Impulsdauer 50 ms

Pausendauer 950 ms

Einschaltdauer 5 %

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

Units compliant to

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

Environmental conditions

Storage temperature

-45°C...+90°C

Operating temperature

-40°C...+80°C

Protection degree

Front side IP 67 Rear side IP 65

EAO reserves the right to alter specifications without further notice.

Climate resistance

Damp heat, cyclic

96 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

100 cycles, -40°C...+80°C, as per EN IEC 60068-2-14

Shock resistance

(semi-sinusoidal)

max. 250 m/s², pulse width 11 ms, as per EN IEC 60068-2-27

Vibration resistance

(sinusoidal)

max. 100 m/s² at 10 Hz... 2000 Hz, as per EN IEC 60068-2-6

Approvals

Approbations

CQC NFF

Declaration of conformity

CE

Slow-make switching element

Switching system

The double-break, slow-make switching element is equipped with one or two independent contact systems, acting as normally open or normally closed contact. The normally closed contact has forced opening.

Slow-make contacts with forced action are ideal for high switch ratings.

Up to three switching elements can be snapped to each actuator. For the emergency-stop pushbutton use the slow-make switching element (max. 3).

Material

Material of contact

Hardsilver, gold-silver, silver-palladium (for aggressive atmospheres)

Switch housing

Polycarbonate (PC)

Mechanical characteristics

Terminals

Screw terminals

Plug-in terminals 6.3 x 0.8 mm

max. wire cross-section 2 x 2.5 mm²

max. wire cross-section of stranded cable 2 x 1.5 mm² For switches with plug-in terminals it is necessary to provide insulation sleeves and to maintain a spacing of 65 mm between rows (mounting cut-outs)

Tightening torque

Screws at the mounting flange max. 25–30 Ncm Screws at switching element max. 50 Ncm

Actuating force

1 Normally closed 2N

1 Normally open 3.1 N

Actuating travel

 $5.8 \, \text{mm} \pm 0.2 \, \text{mm}$

Rebound time

≤ 1 ms

Mechanical lifetime

(with 1 switching element)

Pushbutton maintained action
Pushbutton momentary action
Selector switch maintained action
Selector switch momentary action
Selector switch momentary action
Selector switch momentary action
Selector switch momentary action

1.5 million Cycles of operation
Selector switch momentary action
Selector switch momentary action

2.5 million Cycles of operation
Selector switch momentary action
Selector switch momentary action

Emergency-stop switch 50 000 Cycles of operation Keylock switch maintained action Keylock switch momentary action 50 000 Cycles of operation 50 000 Cycles of operation

Electrical characteristics

Standards

The switches comply with the "Standards for low-voltage switching devices" EN IEC 60947-5-1

Rated Insulation Voltage Ui

500 VAC/600 VDC, as per EN IEC 60947-5-1

Contact resistance

New state $\leq 50 \,\mathrm{m}\Omega$ as per DIN IEC 60512-2-4

Isolation resistance

 $\geq 10\,\text{M}\Omega$ between open contacts at 500 VDC, as per DIN IEC 60512-3-1

Electrical life

6050 cycles of operations

Conventional free air thermal current I_{th}

As per EN IEC 60947-5-1 6A for plug-in terminals

10A for screw terminals

the maximum current in continuous operation and at ambient temperature must not exceed the quoted maximum values.

Switch rating

At switch rating AC for gold-silver, silver-palladium and hardsilver contacts, service category AC-15, as per EN IEC 60947-5-1 ($\cos\phi$ 0.3)

Voltage 230 VAC 400 VAC 500 VAC Current 7A 5A 4A

At switch rating DC for gold-silver and hardsilver contacts, service category DC-13, as per EN IEC 60947-5-1

Voltage 24 VDC 60 VDC 110 VDC 250 VDC Current 10 A 5 A 2.5 A 0.6 A

Recommended minimum operational data

Gold-silver contacts:

Voltage 24 VDC 110 VDC Current 10 mA 2 mA

Hardsilver contacts:

Voltage 24 VDC 110 VDC Current 50 mA 10 mA

Protection class

Indicators and switches, fit for mounting into devices with protection class II

Environmental conditions

Storage temperature

-40°C...+85°C

Operating temperature

-25°C...+55°C

Protection degree

IP OO

Shock resistance

(single impacts, semi-sinusoidal) 300 m/s² puls width 11 ms, as per EN IEC 60068-2-27

Vibration resistance

(sinusoidal) $100\,\text{m/s}^2$ at $10\,\text{Hz}\dots500\,\text{Hz},$ amplitude $0.75\,\text{mm},$ as per EN IEC 60068-2-6

Approvals

Approbations

CB (IEC 60947) CCC CSA Germanischer Lloyd GOST NFF 16-102

Declaration of conformity

CF

Ull

Snap-action switching element

Switching system

The double-break, snap-action switching element is equipped with one or two independent contact systems, acting as normally open or normally closed contact. The snap-action switching element is fitted with self-cleaning contacts.

Up to three switching elements can be snapped to each actuator. Snap-action switching elements are not permissible for emergency-stop pushbuttons!

Material

Material of contact

Hardsilver, gold-silver, silver-palladium (for aggressive atmospheres)

Switch housing

Polycarbonate (PC)

Mechanical characteristics

Terminals

Screw terminals
Plug-in terminals 6.3 x 0.8 mm
max. wire cross-section 2 x 2.5 mm²
max. wire cross-section of stranded cable 2 x 1.5 mm²
For switches with plug-in terminals it is necessary to provide insulation sleeves and to maintain a spacing of 65 mm between rows (mounting cut-outs)

Tightening torque

Screws at the mounting flange max. 25-30 Ncm Screws at switching element max. 50 Ncm

Actuating force

1 Normally closed 1.9 N

1 Normally open 2N

Actuating travel

 $5.8 \, \text{mm} \pm 0.2 \, \text{mm}$

Rebound time

≤3ms

Mechanical lifetime

(with 1 switching element)

Pushbutton maintained action
Pushbutton momentary action
Selector switch maintained action
Selector switch momentary action
Keylock switch momentary action

1.5 million Cycles of operation
2.5 million Cycles of operation

Electrical characteristics

Standards

The switches comply with the "Standards for low-voltage switching devices" EN IEC 60947-5-1

Rated Insulation Voltage Ui

500 VAC/600 VDC, as per EN IEC 60947-5-1

Contact resistance

New state $\leq 50 \,\mathrm{m}\Omega$ as per DIN IEC 60512-2-4

Isolation resistance

 $\geq 10\,\text{M}\Omega$ between open contacts at 500 VDC, as per DIN IEC 60512-3-1

Electrical life

50000 cycles of operations

Conventional free air thermal current Ith

As per EN IEC 60947-5-1 6A for plug-in terminals 10A for screw terminals

the maximum current in continuous operation and at ambient temperature must not exceed the quoted maximum values.

Switch rating

At switch rating AC for gold-silver, silver-palladium and hardsilver contacts, service category AC-15, as per EN IEC 60947-5-1 ($\cos\phi$ 0.3)

Voltage 230 VAC 400 VAC 500 VAC Current 6A 4A 2.5 A

At switch rating DC for gold-silver and hardsilver contacts, service category DC-13, as per EN IEC 60947-5-1

Voltage 24VDC 60VDC 110VDC Current 10A 3A 1A

Recommended minimum operational data

Gold-silver contacts:

Voltage 5VDC 24VDC 110VDC Current 15mA 5mA 2mA

Hardsilver contacts:

Voltage 24 VDC 110 VDC Current 50 mA 10 mA

Protection class

Indicators and switches, fit for mounting into devices with protection class II

Environmental conditions

Storage temperature

-40°C...+85°C

Operating temperature

-25°C...+55°C

Protection degree

IP 00

Shock resistance

(single impacts, semi-sinusoidal) $300\,\mathrm{m/s^2}$ puls width 11 ms, as per EN IEC 60068-2-27

Vibration resistance

(sinusoidal)

100 m/s² at 10 Hz ... 500 Hz, amplitude 0.75 mm, as per EN IEC 60068-2-6

Approvals

Approbations

CB (IEC 60947)

CCC CSA

Germanischer Lloyd

GOST NFF 16-102

UL

Declaration of conformity

CE

Slow-make switching element PIT

Switching system

The double-break, slow-make switching element is equipped with one or two independent contact systems, acting as normally open or normally closed contact. The normally closed contact has forced opening.

Slow-make contacts with forced action are ideal for high switch ratings.

Up to three switching elements can be snapped to each actuator. For the emergency-stop pushbutton use the slow-make switching element (max. 3).

Material

Material of contact

Hardsilver and gold-silver

Switch housing

Polycarbonate (PC)

Mechanical characteristics

Terminals

PIT push-in terminal

Skinning 8 mm

Wire cross-section:

Wire 0.2 to 1.0 mm²

Stranded wire 0.2 to 1.0 mm² without core and sleeve Stranded wire 0.2 to 0.75 mm² with core and sleeve

Tightening torque

Screws at the mounting flange max. 25 Ncm

Actuating force

1 Normally closed 2 N

1 Normally open 3.1 N

Actuating travel

 $5.8 \, \text{mm} \pm 0.2 \, \text{mm}$

Rebound time

≤1ms

Mechanical lifetime

(with 1 switching element)

Pushbutton maintained action
Pushbutton momentary action
Selector switch maintained action
Selector switch momentary action
Emergency-stop switch

1.5 million Cycles of operation
3 million Cycles of operation
2.5 million Cycles of operation
2.5 million Cycles of operation
50 000 Cycles of operation

Keylock switch maintained action
Keylock switch momentary action

25 000 Cycles of operation
50 000 Cycles of operation

Electrical characteristics

Standards

The switches comply with EN IEC 60947-1/EN IEC 60947-5-1

Rated Insulation Voltage U

500 VAC/600 VDC, as per EN IEC 60947-5-1

Contact resistance

New state \leq 50 m Ω as per DIN IEC 60512-2-4

Isolation resistance

 \geq 10 M Ω between open contacts at 500 VDC, as per DIN IEC 60512-3-1

Electrical life

6050 cycles of operations

Conventional free air thermal current I,

6A, as per EN IEC 60947-5-1

the maximum current in continuous operation and at ambient temperature must not exceed the quoted maximum values.

Switch rating

At switch rating AC for gold-silver and hardsilver contacts, service category AC-15, as per EN IEC 60947-5-1 ($\cos\phi$ 0.3)

Voltage 250 VAC Current 6 A

At switch rating DC for gold-silver and hardsilver contacts, service category DC-13, as per EN IEC 60947-5-1

Voltage 24 VDC 110 VDC Current 6A 1.0 A

Recommended minimum operational data

Gold-silver contacts: Voltage 24 VDC Current 5 mA

Hardsilver contacts: Voltage 24 VDC Current 50 mA

Protection class

Indicators and switches, fit for mounting into devices with protection class II

Environmental conditions

Storage temperature

-40°C...+85°C

Operating temperature

-25°C...+55°C

Protection degree

IP 20

Shock resistance

(single impacts, semi-sinusoidal) 300 m/s² puls width 11 ms, as per EN IEC 60068-2-27

Approvals

Approbations

CB (IEC 60947) CSA Germanischer Lloyd

GOST NFF 16-102

UL

Declaration of conformity

CE

Snap-action switching element PIT

Switching system

The double-break, snap-action switching element is equipped with one or two independent contact systems, acting as normally open or normally closed contact. The snap-action switching element is fitted with self-cleaning contacts.

Up to three switching elements can be snapped to each actuator. Snap-action switching elements are not permissible for emergencystop pushbuttons!

Material

Material of contact

Hardsilver and gold-silver

Switch housing

Polycarbonate (PC)

Mechanical characteristics

Terminals

PIT push-in terminal Skinning 8 mm Wire cross-section: Wire 0.2 to 1.0 mm²

Stranded wire 0.2 to 1.0 mm² without core and sleeve Stranded wire 0.2 to 0.75 mm² with core and sleeve

Tightening torque

Screws at the mounting flange max. 25 Ncm

Actuating force

1 Normally closed 1.9 N 1 Normally open 2 N

Actuating travel

 $5.8 \, \text{mm} \pm 0.2 \, \text{mm}$

Rebound time

 $< 3 \,\mathrm{ms}$

Mechanical lifetime

(with 1 switching element)

Pushbutton maintained action
Pushbutton momentary action
Selector switch maintained action
Selector switch momentary action
Emergency-stop switch
Keylock switch maintained action
Keylock switch momentary action
Keylock switch momentary action
Keylock switch momentary action
Keylock switch momentary action

1.5 million Cycles of operation
2.5 million Cycles of operation
3 million Cycles of operation
2.5 million Cycles of operation
3 million Cycles of operation
2.5 million Cycles of operation
3 million Cycles of operation
3 million Cycles of operation
2.5 million Cycles of operation
3 million Cycles of operation
3 million Cycles of operation

Electrical characteristics

Standards

The switches comply with EN IEC 60947-1/EN IEC 60947-5-1

Rated Insulation Voltage Ui

500 VAC/600 VDC, as per EN IEC 60947-5-1

Contact resistance

New state \leq 50 m Ω as per DIN IEC 60512-2-4

Isolation resistance

 $\geq 10\,\text{M}\Omega$ between open contacts at 500 VDC, as per DIN IEC 60512-3-1

Electrical life

50000 cycles of operations

Conventional free air thermal current I,

6A, as per EN IEC 60947-5-1

the maximum current in continuous operation and at ambient temperature must not exceed the quoted maximum values.

Switch rating

At switch rating AC for gold-silver and hardsilver contacts, service category AC-15, as per EN IEC 60947-5-1 ($\cos \phi$ 0.3)

Voltage 250 VAC Current 6 A At switch rating DC for gold-silver and hardsilver contacts, service category DC-13, as per EN IEC 60947-5-1

Voltage 24 VDC 110 VDC Current 6A 1.0 A

Recommended minimum operational data

Gold-silver contacts: Voltage 24 VDC Current 5 mA

Hardsilver contacts: Voltage 24 VDC Current 50 mA

Protection class

Indicators and switches, fit for mounting into devices with protection class II

Environmental conditions

Storage temperature

-40°C...+85°C

Operating temperature

-25°C...+55°C

Protection degree

IP 20

Shock resistance

(single impacts, semi-sinusoidal) 300 m/s² puls width 11 ms, as per EN IEC 60068-2-27

Vibration resistance

(sinusoidal)

 $100\,\text{m/s}^2$ at $10\,\text{Hz}\dots500\,\text{Hz},$ as per EN IEC 60068-2-6 and EN 61373 Increased broad band noise, class 1B

Approvals

Approbations

CB (IEC 60947) CSA Germanischer Lloyd GOST NFF 16-102 UL

Declaration of conformity

CE

56 Application guidelines

Suppressor circuits

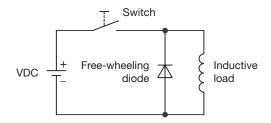
When switching inductive loads such as relays, DC motors, and DC solenoids, it is always important to absorb surges (e.g. with a diode) to protect the contacts. When these inductive loads are switched off, a counter emf can severely damage switch contacts and greatly shorten lifetime.

Fig. 1 shows an inductive load with a free-wheeling diode connected in parallel. This free-wheeling diode provides a path for the inductor current to flow when the current is interrupted by the switch. Without this free-wheeling diode, the voltage across the coil will be limited only by dielectric breakdown voltages of the circuit or parasitic elements of the coil. This voltage can be kilovolts in amplitude even when nominal circuit voltages are low (e. g. 12 VDC) see Fig. 2.

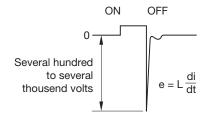
The free-wheeling diode should be chosen so that the reverse breakdown voltage is greater than the voltage driving the inductive load. The DC blocking voltage (VR) of the free-wheeling diode can be found in the datasheet of a diode. The forward current should be equal or greater than the maximum current flowing through the load.

To get an efficient protection, the free-wheeling diode must be connected as close as possible to the inductive load!

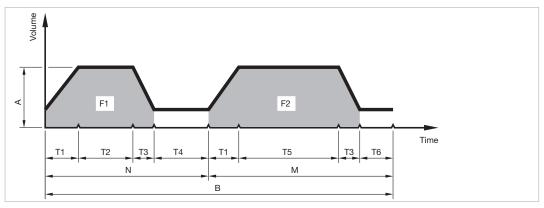
Switching with inductive load Fig. 1



Counter EMF over load without free-wheeling diode Fig. 2



Multi-Tone Sound Module, standard tone sequence



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
М	Number of repetitions of tone 2
А	Volume level (±8 dB) @ 10 cm
В	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

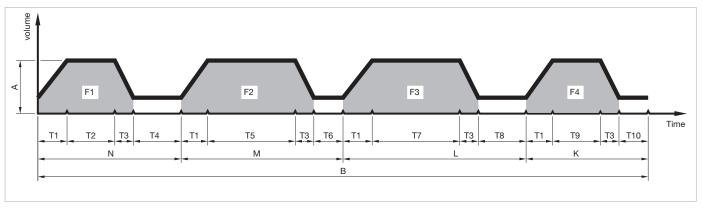
Tone sequence	es 1-5 Transportation (T)					
	Parameter	Sequence 1 Door orientation signal	Sequence 2 Door opening signal	Sequence 3 Warning signal for door closing	Sequence 4 Door out of order signal	Sequence 5 Hussle Alarm
Tone 1	F1	500 Hz	800 Hz	2000 Hz	1400 Hz	875 Hz
	T2	500 ms	300 ms	500 ms	50 ms	1000 ms
	T4	900 ms	700 ms	200 ms	100 ms	250 ms
	N	∞	1	∞	3	3
Tone 2	F2	deactivated	830 Hz	deactivated	deactivated	deactivated
	T5	deactivated	500 ms	deactivated	deactivated	deactivated
	T6	deactivated	0 ms	deactivated	deactivated	deactivated
	M	deactivated	1	deactivated	deactivated	deactivated
General	А	3 / 78 dB (A)	3 / 78 dB (A)	5 / 90 dB (A)	3 / 78 dB (A)	3 / 78 dB (A)
	В	∞	∞	1	1	1
	T1	0 ms	0 ms	0 ms	0 ms	0 ms
	Т3	0 ms	0 ms	0 ms	0 ms	0 ms

56 Application guidelines

Tone sequences 1-	3 Transportation (T1)			
	Parameter	Sequence 1 Door enabled	Sequence 2 Door closing	Sequence 3 Signal for visual impaired people
Tone 1	F1	1500 Hz	1900 Hz	600 Hz
	T2	∞	50 ms	50 ms
	T4	250 ms	50 ms	20 ms
	N	∞	∞	2
Tone 2	F2	deactivated	deactivated	500 Hz
	T5	deactivated	deactivated	1000 Hz
	T6	deactivated	deactivated	900 ms
	М	deactivated	deactivated	1
General	A	17 / 90 db (A)	17 / 90 dB (A)	9 / 78 dB (A)
	В	∞	∞	∞
	T1	0 ms	0 ms	0 ms
	T3	0 ms	0 ms	0 ms

Tone sequenc	es 6-10 Machinery (M)					
	Parameter	Sequence 6	Sequence 7	Sequence 8	Sequence 9	Sequence 10
Tone 1	F1	750 Hz	2500 Hz	2000 Hz	2500 Hz	1000 Hz
	T2	100 ms	300 ms	250 ms	100 ms	500 ms
	T4	200 ms	500 ms	200 ms	100 ms	100 ms
	N	1	1	1	2	1
Tone 2	F2	500 Hz	2000 Hz	1000 Hz	2000 Hz	1500 Hz
	T5	450 ms	500 ms	250 ms	100 ms	500 ms
	T6	100 ms	400 ms	200 ms	100 ms	100 ms
	М	1	1	1	2	1
General	А	4 / 84 dB (A)	4 / 84 dB (A)	5 / 90 dB (A)	5 / 90 dB (A)	4 / 84 dB (A)
	В	∞	∞	∞	∞	∞
	T1	0 ms				
	T3	200 ms	0 ms	500 ms	0 ms	0 ms

Multi-Ton Sound Modul, self adjusting, standard Tone sequence



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
М	Number of repetitions of tone 2
F3	Frequency 3 of a tone sequence
T7	Playing time tone 3
T8	Break

L	Number of repetitions of tone 3
F4	Frequency 4 of a tone sequence
T9	Playing time tone 4
T10	Break
K	Number of repetitions of tone 4
A	Basic volume level
D	Acoustic pressure difference
В	Number of repetitions of the complete tone sequence, or blockage of the tone sequence
T1	Fade-in tone 1 to 4
T3	Fade-out tone 1 to 4

Tone sequence	es 6 1-6						
	Parameter	Sequence 1 Door enabled	Sequence 2 Door closing	Sequence 3 Customer specific	Sequence 4 Customer specific	Sequence 5 Customer specific	Sequence 6 Customer specific
Tone 1	F1	1500 Hz	1900 Hz	_	_	_	_
	T2	250 ms	100 ms	-	-	-	-
	T4	250 ms	50 ms	-	-	-	-
	N	∞	1	-	-	-	-
Tone 2	F2	deactivated	deactivated	-	-	-	-
	T5	deactivated	deactivated	-	-	-	-
	T6	deactivated	deactivated	-	-	-	-
	М	deactivated	deactivated	-	_	_	-
Tone 3	F3	deactivated	deactivated	-	_	_	-
	T7	deactivated	deactivated	-	_	_	-
	T8	deactivated	deactivated	-	-	-	-
	L	deactivated	deactivated	-	_	_	_
Tone 4	F4	deactivated	deactivated	-	-	-	-
	Т9	deactivated	deactivated	-	-	-	-
	T10	deactivated	deactivated	-	-	-	-
	K	deactivated	deactivated	-	_	_	-
General	А	48 dB (A) @ 1.5 m	48 dB (A) @ 1.5 m	-	_	_	-
	D	+2 db	+2 db	-	_	_	-
	В	∞	∞	_	_	_	-
	T1	0 ms	0 ms	_	_	_	-
	T3	0 ms	0 ms	_	_	_	_

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