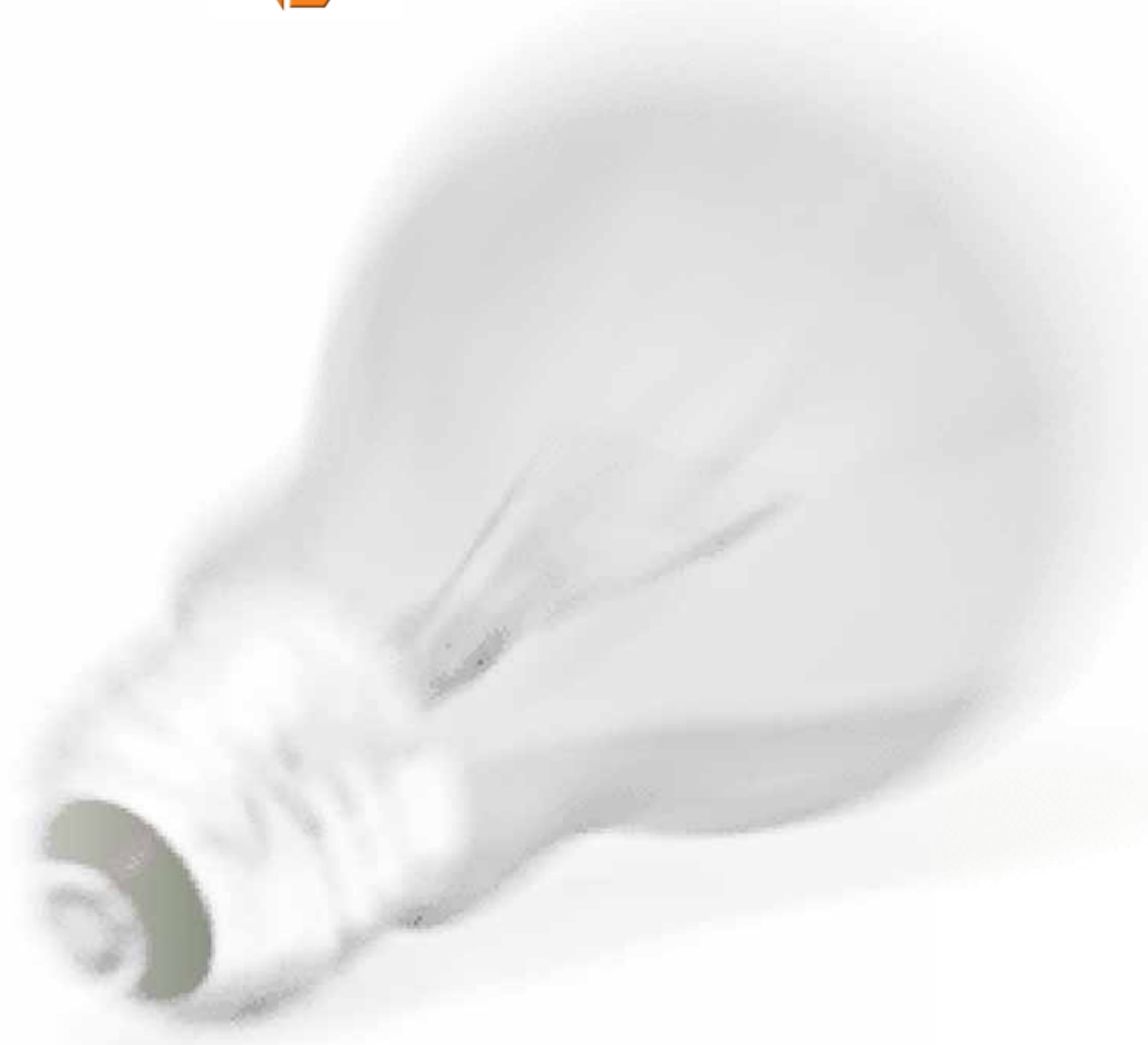




**VISUAL AND AUDIO INDICATORS**



**VISUAL AND AUDIO INDICATORS**

# new products



**MULTICOLOR  
AND AUDIO INDICATORS**  
page 2



**SIGNAL TOWER  
KOMPAKT**  
page 20



**VISUAL AND  
AUDIO INDICATORS**  
370 series  
page 10



**AUDIO INDICATORS**  
370 series  
pages 11/12



**VISUAL AND  
AUDIO INDICATORS**  
180 series  
page 25

**VISUAL INDICATORS  
FOR PANEL**  
220 series  
page 32



# INDEX



02 MULTICOLOR SERIES

SIGNAL TOWERS

04 370 series

16 450 series

20 300 series



22 VISUAL INDICATORS

29 PRESET HOUSINGS



30 VISUAL INDICATORS FOR  
PANEL APPLICATIONS



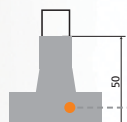
pag. 34 VISUAL AND AUDIO INDICATORS



35 AUDIO INDICATORS



36 LED LAMP



40 MECHANICAL DIMENSIONS

44 RULES

# MULTICOLOR SERIES



**Three colors, one unit, one single lamp to indicate the different conditions of a machine.**

**Low current consumption and long duration are some of the main features of this visual indicator.**

It combines technology and design and is a concrete answer to the most complex needs of the industrial world. It can be used as a single multicolor lamp or as an alternative to the traditional three color units with no changes in the electric installation required.



The illumination is obtained by means of ultra bright LEDs.



**MULTICOLOR AND AUDIO INDICATORS**  
TYPE 94T7B

## TECHNICAL FEATURES

### Compliance

EEC regulation 2006/95 Low Voltage  
EEC regulation 89/336 Electromagnetic compatibility

### Conformity standards

EN 60947.5.1 - EN 60073 - EN 60529 - EN 60068.2.6 - EN 457  
EN 981 - IEC 536

### Material

Polycarbonate

### Voltage

24V DC (+/-10%)

### Current consumption

90 mA

### Protection degree

IP 64 (if correctly assembled with cap and gasket)  
according to EN 60529

### Protection against electric shock

Class II, safety insulation  
According to IEC 536

### Resistance to vibrations

2 g min. (10 - 150 Hz) according to EN 60068-2-6

### Operating Temperature

-20°C +50°C

### Connections:

Screw clamps with binding post gauge max. 1,5 mm<sup>2</sup>  
inside the wiring unit

### Sound

Intermittent or continuous

### Sound frequency

2900 Hz / 3700 Hz

### Weighed sound level "A" at one meter

85 dB

The only multicolor lamp which can be used to integrate information with an audio or visual signal device.



TYPE 94T5B

TYPE	CODE FOR ORDERING	NOTATION
Three color-lamp green, amber, red	94T1B 532	<b>Above</b> it is possible to add light unit
Three color-lamp blue, amber, red	94T1B 632	<b>Above</b> it is possible to add light unit
Three color-lamp white, amber, red	94T1B 932	<b>Above</b> it is possible to add light unit
Three color-lamp blue, white, red	94T1B 692	<b>Above</b> it is possible to add light unit
Three color-lamp green, amber, red	94T5B 532	<b>Under</b> it is possible to add light unit
Three color-lamp blue, amber, red	94T5B 632	<b>Under</b> it is possible to add light unit
Three color-lamp white, amber, red	94T5B 932	<b>Under</b> it is possible to add light unit
Three color-lamp blue, white, red	94T5B 692	<b>Under</b> it is possible to add light unit
Three color-lamp green, amber, red	94T7B 532	With audio indicators
Three color-lamp blue, amber, red	94T7B 632	With audio indicators
Three color-lamp white, amber, red	94T7B 932	With audio indicators
Three color-lamp blue, white, red	94T7B 692	With audio indicators

# 370 SERIES

Modular visual and audio indicators



By means of a simple manual operation, the bayonet fixing system makes it possible to combine up to seven signal units and simultaneously to connect them electrically



A wide range of audio indicators further extends the signalling possibilities



A particularly elegant design



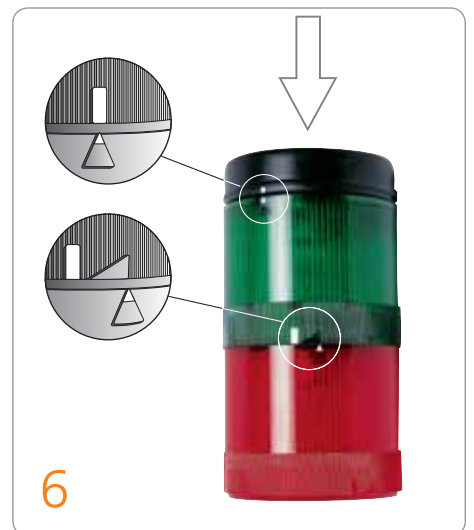
Visual and audio indicators

## THE MODULAR SYSTEM

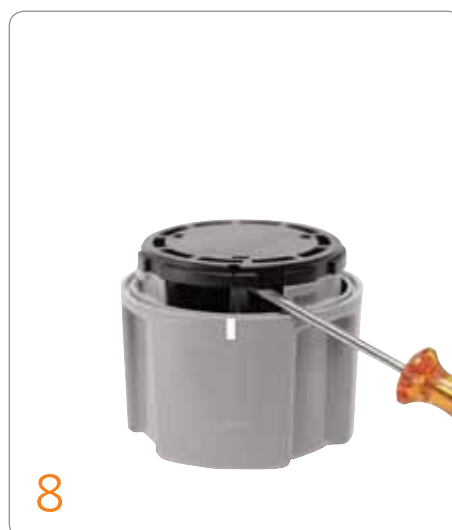
Place the signalling unit onto terminal unit (fig.1), align the reference marks first and then twist clockwise until they click locked (fig. 2-3).



Follow the same steps as above to add more signalling units (fig. 4-5-6). On the last unit mount the cap (fig. 6). Since the audio indicator is already equipped with a cap, it can be mounted only as a final unit.



In order to fix the extension tube (a base is always included with it), insert it into the relevant hole and tighten the screw on the side (fig. 7). In order to make the connections, reach the terminal board by prising the black disc (fig. 8). Connect to terminals (coloured units are numbered from base to top). Place the terminal board back into position by aligning the reference marks (fig. 9) and pressing inwards.





## TECHNICAL FEATURES

### Compliance

EEC regulation 2006/95 Low Voltage  
EEC regulation 89/336 Electromagnetic Compatibility

### Conformity to standards

EN 60947.5.1 - EN 60073 - EN 60529 - EN 60068-2-6 - EN 457 - EN 981 - IEC 536

### Homologations



### Material

Visual and audio module, cable unit, cap and base: polycarbonate  
Tube: anodised aluminium or polycarbonate

### Voltage

250 V max.

### Protection degree

IP 64 (if correctly assembled with cap and gasket) according to EN 60529

### Protection against electric shock

Class II, in case of double insulation and polycarbonate support tubes  
Class I, in case of metallic support tubes  
According to IEC 536

### Operating Temperature

-20°C +50°C (12 V 40°C)

### Resistance to vibrations

2 g min. (10 - 150 Hz), according to EN 60068-2-6

### Unit colors

Amber - blue - yellow - neutral- green, according to EN 60073

### Bulb

Bayonet connection type: BA 15d - 5W max.  
With flash circuits: Xenon bulbs.

### Number of combinable units

For all the indicators: each cable unit can be combined with up to seven modular units (except for the single beacon type, which can be combined with maximum two units).

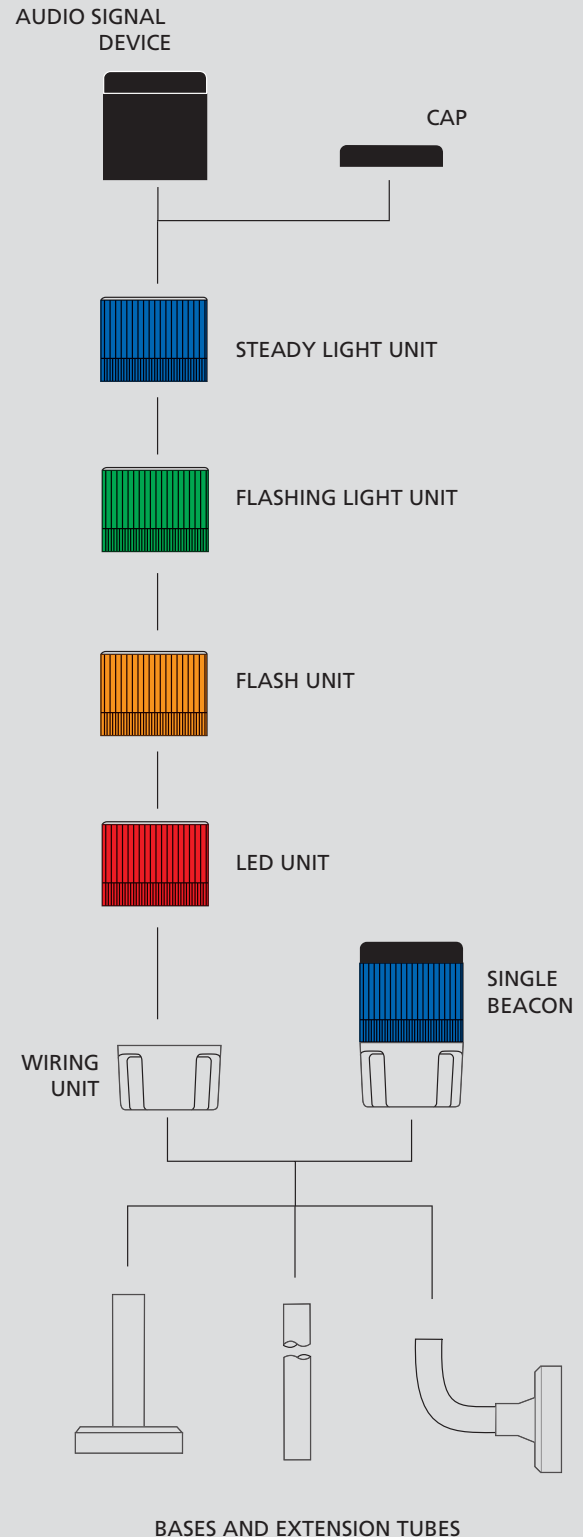
### Connections

Screw clamps with binding post max. gauge 1,5 mm<sup>2</sup>

### Connection Id. Code

C - common to all signal units.  
Numbers from 1 to 7 refer to each single module from the base to the top (for the single beacon type the reference is from 1 to 2)

## STRUCTURE



## WIRING UNIT

Connections by means of clamps;  
on demand also with faston type 250 or pre-wired.

### Clamps

screw clamps with binding post

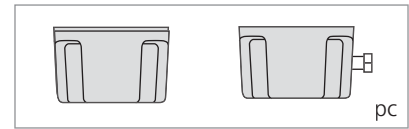
### Maximum gauge

1.5 mm<sup>2</sup>

### Connection id. code

C - common to all units.

Numbers from 1 to 5 refer to the colours, from the base to the top



ORDER CODES AND DATA		
90-01	GREY	
90-02	BLACK	
90M01	GREY	
90M02	BLACK	

ORDER CODES AND DATA		
90-01PC	GREY	
90-02PC	BLACK	
90M01PC	GREY	
90M02PC	BLACK	

With cable gland

## STEADY LIGHT UNIT

### Illumination

LED or filament bulb

### Bulb type

with bayonet connection BA 15d - max 5 W

### Voltage

from 12 V up to 240 V DC/AC

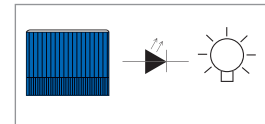
### Current consumption

with 5 W filament bulbs

24 V, 210 mA - 115 V, 43 mA - 240 V, 22 mA

with LED bulbs

24 V, < 50 mA - 115 V, < 18 mA - 240 V, < 17 mA



COLOR	ORDER CODES AND DATA	
	12-240V AC-DC	
	12-00	
	13-00	
	14-00	
	15-00	
	16-00	
	19-00	

Bulbs not included

COLOR	ORDER CODES AND DATA		
	24V DC-AC	115V AC	240V AC
	12-4B	12-4F	12-4G
	13-4B	13-4F	13-4G
	14-4B	14-4F	14-4G
	15-4B	15-4F	15-4G
	16-4B	16-4F	16-4G
	19-4B	19-4F	19-4G

LED bulbs included

Technical diagrams → see page 40

## FLASHING LIGHT UNIT

### Illumination

LED or filament bulb

### Bulb type

bayonet connection BA 15d - max 5 W

### Voltage

24 V - 115 V - 240 V DC/AC

### Current consumption

with 5 W filament bulbs

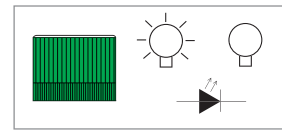
24 V DC - 130 mA / 24 V AC - 145 mA / 115 V AC/DC - 25 mA / 240 V AC/DC - 15 mA

with LED bulbs

24 V, < 50 mA - 115 V, < 18 mA - 240 V, < 17 mA

### Flash frequency

1.4 Hz approx. (84 flashes per min.) according to EN 60073



with filament bulbs				with LED bulbs			
COLOR	ORDER CODES AND DATA			COLOR	ORDER CODES AND DATA		
	24V DC-AC	115V AC	240V AC		24V DC-AC	115V AC	240V AC
●	22-24	22-15	22-30	●	22-4B	22-4F	22-4G
●	23-24	23-15	23-30	●	23-4B	23-4F	23-4G
●	24-24	24-15	24-30	●	24-4B	24-4F	24-4G
●	25-24	25-15	25-30	●	25-4B	25-4F	25-4G
●	26-24	26-15	26-30	●	26-4B	26-4F	26-4G
●	29-24	29-15	29-30	●	29-4B	29-4F	29-4G

Bulbs not included

LED bulbs included

## FLASH UNIT

### Illumination

4-Joule xenon bulb

### Voltage

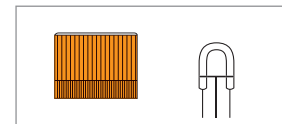
24 V DC/AC - 115 V AC - 240 V AC

### Current consumption

24 V DC, 75 mA - 24V AC, 135 mA - 115 V, 20 mA - 240 V, 15 mA

### Flash frequency

1.4 Hz approx. (84 flashes per min.) according to EN 60073



COLOR	ORDER CODES AND DATA		
	24V DC-AC	115V AC	240V AC
●	32-24	32-15	32-30
●	33-24	33-15	33-30
●	34-24	34-15	34-30
●	35-24	35-15	35-30
●	36-24	36-15	36-30
●	39-24	39-15	39-30

Xenon bulbs included

Technical diagrams → see page 40

## MULTIFUNCTION LED LIGHT UNIT

**Illumination**

24 ultra bright integrated LEDs

**Duration**

more than 50000 working hours

**Operating modes**

Steady light, flashing or rotating light (to change the function just remove or shift the CN1 jumper)

**Voltage**

24 V DC/AC

**Current consumption**

24 V DC, 55 mA - 24 V AC, 85 mA

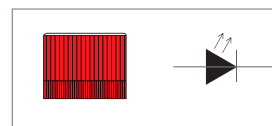
(the same for all the illumination functions)

**Flash frequency**

1.4 Hz approx. (84 flashes per min.) according to EN 60073

**Rotation frequency**

1 revolution per second approx.



COLOUR	ORDER CODES AND DATA	
	24V DC-AC	
●	42-24	42-24
●	43-24	43-24
●	44-24	44-24
●	45-H4	45-H4
●	46-H4	46-H4
●	49-H4	49-H4

## STEADY OR FLASHING LIGHT UNIT

**Illumination**

6 ultra bright integrated LEDs

**Duration**

more than 50000 working hours

**Operating modes**

Steady or flashing light (to change the function just remove or shift the CN1 jumper)

**Voltage**

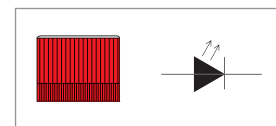
24 V DC/AC

**Current consumption**

30 mA (the same for all illumination modes)

**Flash frequency**

1.4 Hz approx. (84 flashes per min.) according to EN 60073



COLOR	ORDER CODES AND DATA	
	24V DC-AC	
●	42-KB	42-KB
●	43-KB	43-KB
●	44-KB	44-KB
●	45-KB	45-KB
●	46-KB	46-KB
●	49-KB	49-KB

Technical diagrams → see page 40

**VISUAL AND AUDIO INDICATORS UNIT (steady)**

Combined beacon (steady) and sounder with intermittent or continuous audio signal.  
The sounder can be fixed only as last sector.

**Voltage**

24 V dc (ac)

**Current consumption**

with 5 W filaments bulbs

24 V dc – 150 mA

**Illumination**

LED or filament bulb

**Bulb type**

with bayonet connection BA 15d - max 7 W

**Sound**

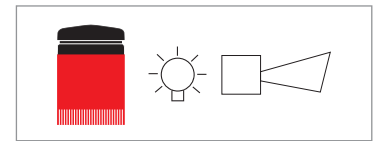
intermittent or continuous

**Sound frequency**

3700 Hz

**Weighted sound level A at 1 m**

85 dB



COLOR	ORDER CODES	
	Separate power	Common power
●	127CB	12B73
●	137CB	13B73
●	147CB	14B73
●	157CB	15B73
●	167CB	16B73
●	197CB	19B73

Intermittent or continuous                      Continuous



**VISUAL AND AUDIO INDICATORS UNIT (steady)**

Combined beacon (flashing) and beacon with intermittent audio signal, **common power**.  
Combined beacon (flashing) and beacon with intermittent or continuous audio signal, **separate power**.  
The sounder can be fixed only as last sector.

**Voltage**

24 V dc (ac)

**Current consumption**

with 5 W filaments bulbs

24 V dc - 150 mA / 24 V sc - 155 mA / 115 V dc/ac - 35 mA / 230 V dc/ac - 25 mA

**Illumination**

LED or filament bulb

**Bulb type**

with bayonet connection BA 15d - max 5 W

**Flash frequency**

1.4 Hz approx. (84 flashes per min.) according to EN 60073

**Sound**

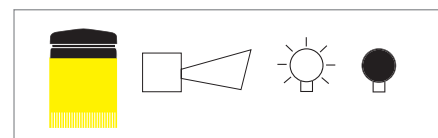
intermittent

**Sound frequency**

2900/3700 Hz Hz

**Weighted sound level A at 1 m**

85 dB



COLOR	ORDER CODES AND DATA			
	separate power	common power	common power	common power
	24 V DC	24 V DC/AC	115 V AC	230 V AC
●	227CB	22B73	22F73	22G73
●	237CB	23B73	23F73	23G73
●	247CB	24B73	24F73	24G73
●	257CB	25B73	25F73	25G73
●	267CB	26B73	26F73	26G73
●	297CB	29B73	29F73	29G73



## AUDIO SIGNAL DEVICE TYPE 77 IP64

Already equipped with a cap, the audio indicator can be mounted as final top unit only.

**Sound**

intermittent or continuous (to change it, just remove or insert the relevant jumper in the printed circuit)

**Sound frequency**

2600 Hz according to EN457

**Signal repetition rate**

1 Hz according to EN457

**Weighted sound level A at 1 m**

Type 77-24: Intermittent signal 84.5 dB - Continuous signal 82.6 dB

Type 77-15: Intermittent signal 78 dB - Continuous signal 75 dB

Type 77-30: Intermittent signal 78 dB - Continuous signal 75 dB

**Voltage**

Type 77-24: 24 V DC/AC

Type 77-15: 115 V AC

Type 77-30: 240 V AC

**Current consumption**

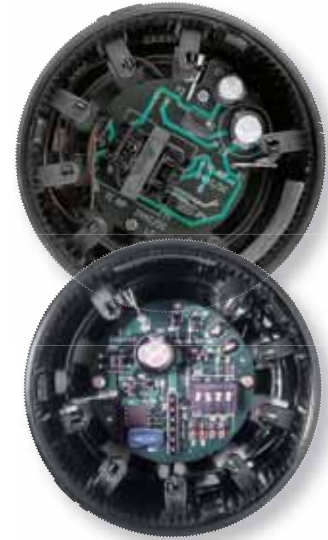
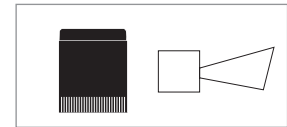
Type 77-24: DC/AC, 200mA

Type 77-15: AC, 40mA

Type 77-30: AC, 30mA

**Protection degree**

IP64



ORDER CODES AND DATA

24V DC/AC	24V DC/AC	115V AC	240V AC
77-MB	77-24	77-15	77-30

## AUDIO SIGNAL DEVICE TYPE 71 AND 72

Already equipped with a cap, the audio indicator can only be mounted as a final top unit.

**Sound frequency**

3300 Hz

**Signal repetition rate**

0.8 Hz

**Voltage**

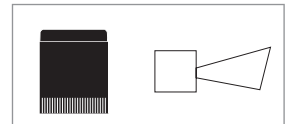
24 V DC/AC

**Current consumption**

24 V DC, 32 mA - 24 V AC, 100 mA

**Protection degree**

type71: IP30 – type 72:IP64



ORDER CODES AND DATA

TYPE	POWER	SOUND	LEVEL	NOTE
71-24	24 V AC/DC	intermittent	80 dB	common power
71-5B	24 V DC (ac)	intermittent or continuous	85 dB	separate power
72-24	24 V AC/DC	intermittent	75 dB	common power
72-6B	24 V DC (ac)	intermittent or continuous	75 dB	separate power

**AUDIO SIGNAL DEVICE TYPE 75 IP54**

Already equipped with a cap, the audio indicator can be mounted as final top unit only.

**Sound**

Type 75-MB, 16 sounds selectable by means of a dip switch.  
 Type 75-24 / 75-15 / 75-30 intermittent or continuous tone  
 (to change the function just remove or insert the jumper in the printed circuit)

**Sound frequency**

2500 - 2900 Hz according to EN457

**Weighted sound level A at 1 m**

Type 75-MB: 16 sounds, max 90 dB,  
 Type 75-24: Intermittent signal 100 dB - Continuous signal 98 dB  
 Type 75-15: Intermittent signal 95 dB - Continuous signal 93 dB  
 Type 75-30: Intermittent signal 95 dB - Continuous signal 93 dB

**Voltage**

Type 75-MB or 75-24: 24 V DC/AC  
 Type 75-15: 115 V AC  
 Type 75-30: 240 V AC

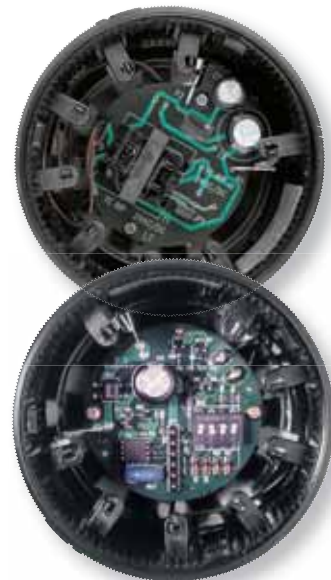
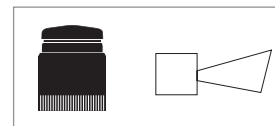
**Current consumption**

Type 75-MB: DC/AC, 40 mA  
 Type 75-24: DC/AC, 200 mA  
 Type 75-15: AC, 40 mA  
 Type 75-30: AC, 30 mA

**Protection degree**

IP54

ORDER CODES AND DATA				
	24V DC/AC	24V DC/AC	115V AC	240V AC
BLACK	75-MB	75-24	75-15	75-30
BICOLOR	75TMB	75T24	75T15	75T30



**AUDIO SIGNAL DEVICE TYPE 73 IP54**

Already equipped with a cap, the audio indicator can be mounted as a final top unit only.

**Sound frequency**

2900 Hz

**Signal repetition rate**

0.5 Hz

**Weighted sound level A at 1 m**

90 dB

**Voltage**

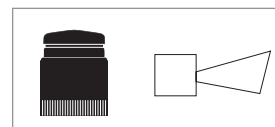
24 V DC/AC

**Current consumption**

20 mA

**Protection degree**

IP54



ORDER CODES AND DATA				
	TYPE	POWER	SOUND	NOTE
BLACK	73-24	24 V AC/DC	intermittent	common power
BLACK	73-5B	24 V DC (ac)	intermittent or continuous	separate power
BICOLOR	73T24	24 V AC/DC	intermittent	common power
BICOLOR	73T5B	24 V DC (ac)	intermittent or continuous	separate power

## LED AND FILAMENT BULBS

### LED BULBS

**Bulb**

BA 15d

**Duration**

more than 25000 working hours  
No maintenance or service costs  
Perfect functioning also in case of strong vibrations or hits.

**Low current consumption**

24 V DC/AC, < 50 mA - 115 V AC,  
< 18 mA - 240 V, <17 mA.

To be used together with alarm devices whose domes are of the same colour as the LEDs

COLOR	ORDER CODES					
	24V DC-AC	115V AC	240V AC	24V DC-AC	115V AC	240V AC
●	11EB2	11EF2	11EG2	11NB2	11NF2	11NG2
●				11NB3	11NF3	11NG3
●	11EB4	11EF4	11EG4	11NB4	11NF4	11NG4
●	11EB5	11EF5	11EG5	11NB5	11NF5	11NG5
●	11EB6	11EF6	11EG6	11NB6	11NF6	11NG6
●	11EB9	11EF9	11EG9	11NB9	11NF9	11NG9



### FILAMENT BULBS

**Bulb** BA 15d

**Filament** Shockproof

**Duration** 2.000 working hours

ORDER CODES				
12V/5W	24V/5W	30V/5W	130V/5W	260V/5W
11-12	11S24	1130V	11E15	11E30



## FITTINGS

BASES WITH POLYCARBONATE EXTENSION TUBES			h 100 mm	h 200 mm	h 300 mm	h 400 mm	h 500 mm
		grey Ø 80	80-01	80-02	80-03	80-04	80-05
		grey Ø 70	54-01	54-02	54-03	54-04	54-05
		black Ø 80	80-10	80-20	80-30	80-40	80-50
		black Ø 70	54-10	54-20	54-30	54-40	54-50

POLYCARBONATE EXTENSION TUBES		h 100 mm	
		grey	88-01
		black	88-10

BASES WITH POLYCARBONATE TUBES FOR 90° FIXING		grey Ø 80	80-09
		grey Ø 70	54-09
		black Ø 80	80-90
		black Ø 70	54-90

POLYCARBONATE ADAPTERS FOR 90° FIXING			GREY	BLACK
		individual fixing Ø70	54T19	54T91
		double fixing Ø70	54T29	54T92

METAL AND POLYCARBONATE ADAPTERS FOR 90° FIXING			METAL BASE Ø70 AND BLACK CONNECTION
		individual fixing	54TC1
		double fixing	54TC2

Technical diagrams → see page 41



ADAPTERS FOR 22-ØØ HOLE



88A22



possible use

BASES WITH ALUMINIUM EXTENSION TUBES



54M0X

	h 50 mm	h 100 mm	h 200 mm	h 300 mm	h 400 mm	h 500 mm
grey Ø 80		80M01	80M02	80M03	80M04	80M05
grey Ø 70	54M0X	54M01	54M02	54M03	54M04	54M05
black Ø 80		80M10	80M20	80M30	80M40	80M50
black Ø 70		54M10	54M20	54M30	54M40	54M50

BASES WITH METAL EXTENSION TUBES FOR 90° FIXING



grey Ø 80	80M09
grey Ø 70	54M09
black Ø 80	80M90
black Ø 70	54M90

METAL BASES Ø70 WITH TUBES FOR 90° FIXING



TUBE	
plastic	54MP9
metal	54MM9

BASES WITH METAL EXTENSION TUBES FOR 45° FIXING



GREY Ø70	54M59
BLACK Ø70	54M95

ALUMINIUM TUBES



h 100 mm	h 200 mm	h 300 mm	h 400 mm	h 500 mm	h 1000 mm
88M10	88M20	88M30	88M40	88M50	88M80

BLACK METAL BASE



Ø 70	
h 20 mm	54M65

EXTENSION TUBES



EXTENSION TUBES h 250 mm
88N25

ADAPTERS



ADAPTERS FOR 30 mm TUBES
88A30

EXTENSION TUBES



EXTENSION TUBES FOR Ø 22 mm HOLE	
H 100 mm	88F10
H 300 mm	88F30

Technical diagrams → see page 41



# 450 SERIES

Modular visual and audio indicators



A small-sized lamp which exalts the design features of our vertical modular indicators.

The reliability of sounders is a guarantee of maximum safety for the operators and machines.  
The low absorptions simply and prolong the life of circuits.  
No maintenance/service cost.

## TECHNICAL FEATURES

### Compliance

EEC regulation 2006/95 Low Voltage  
EEC regulation 89/336 Electromagnetic Compatibility

### Conformity to standards

EN 60947.5.1 - EN 60073 - EN 60529 - EN 60068-2-6 - EN 457 - EN 981 - IEC 536

### Material

Polycarbonate

### Protection degree

IP 64 (if correctly assembled with cap and gasket); IP 54 (if with an audio unit type FA 74-B1 or -2) - according to EN 60529

### Protection against electric shock

Class II, safety insulation. According to IEC 536

### Resistance to vibrations

2 g min. (10 - 150 Hz) according to EN 60068-2-6

### Operating Temperature

-20°C +50°C

### Number of combinable units

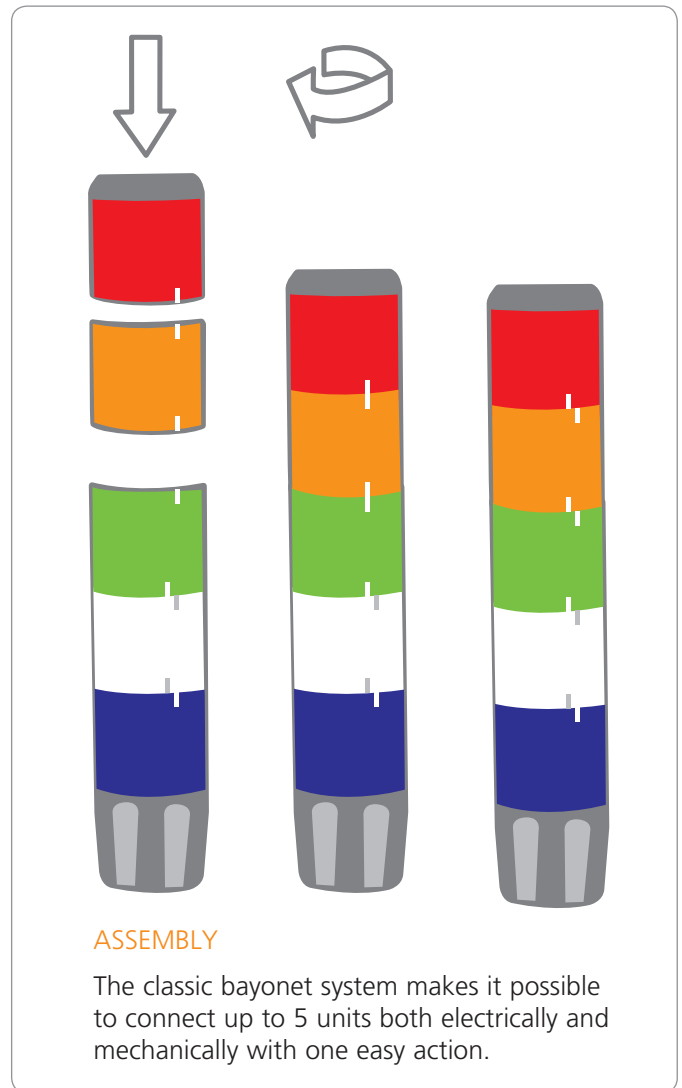
Max 5

### Color of the modules

Amber – blue – yellow – neutral – red – green  
According to EN60073

### Connections

Screw clamps with binding post max. gauge max. 1,5 mm  
inside the wiring unit



Ultra bright LEDs and an accurate illumination system for each unit guarantee large visibility; the audio signal devices increase the signalling possibilities.

## WIRING UNIT

Clamp connections  
With pre-cabled wire on request

### Clamps

Screw clamps with binding post

### Max gauge

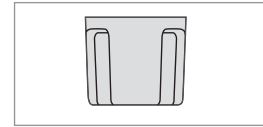
1.5 mm<sup>2</sup>

### Connection id. code

C = for all the units

Numbers from 1 to 5 refer to the colours,  
from the base to the top

	with cap	without cap
	ORDER CODES AND DATA	
GREY	FA94-01	FA94-07
BLACK	FA94-02	FA94-08



## LUMINOUS UNIT

### Illumination

Steady light by means of 6 ultra bright LEDs

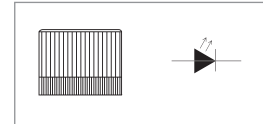
### Voltage

24V DC/AC (+/-%)

### Current consumption

24V DC – 35 mA / 24 V AC – 55 mA

COLOR	ORDER CODES AND DATA	
	24V	24V dome neutral
●	FA42-BF	FA642-BF
●	FA43-BF	FA643-BF
●	FA44-BF	FA644-BF
●	FA45-BF	FA645-BF
●	FA46-BF	FA646-BF
●	FA49-BF	FA649-BF



## AUDIO SIGNAL DEVICE

The audio signal device already has a cap and can be used as the final module only

### Sound

Intermittent or continuous

### Sound frequency

3.700 Hz

### Signal repetition frequency

1 Hz, according to EN 457

### Weighed sound level "A" at one meter

Type FA74-B2 intermittent signal 84 dB

Type FA74-B6 intermittent signal 75 dB

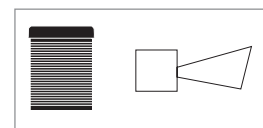
### Voltage

24 V DC/AC (+/-10%)

### Current consumption

24V DC – 35 mA / 24 V AC – 40 mA

	intermittent sound
	ORDER CODES AND DATA
IP54	FA74-B2
IP65	FA74-B6



FITTINGS



black	FA60-98
-------	---------

Polycarbonate cap



black	50-20
-------	-------

Polycarbonate



grey	54-01
black	54-10

Bases with polycarbonate extension tubes



grey	54-09
black	54-90

Bases with polycarbonate tubes for 90° fixing



black	54MP9
-------	-------

Metal bases with polycarbonate tubes for 90° fixing



grey	88-01
black	88-10

Polycarbonate extension tubes



black	88A22
-------	-------

Adapter for 22 mm-hole

Technical diagrams → see page 41

# 300 SERIES

Visual and audio indicator

Reduced dimensions, great brightness, facility of wiring and flexibility of assemblage are some characteristics that distinguish this series.

Are available modules in the traditional 5 colors that are furnished already assembled, a lot of possible combinations.



## TECHNICAL FEATURES

### Compliance

EEC regulation 2006/95 Low Voltage.

EEC regulation 89/336 Electromagnetic Compatibility.

### Conformity to standards

EN 60947.5.1 - EN 60073 - EN 60529 - EN 60068-2-6 - EN 457 - EN 981 - IEC 536

### Material

polycarbonate

### Voltage

24V DC (+/-10%)

### Current consumption

90mA

### Protection degree

IP 54 (if correctly assembled with cap and gasket) - according to EN 60529

### Protection against electric shock

Class II, safety insulation. According to IEC 536

### Resistance to vibrations

2 g min. (10 - 150 Hz) according to EN 60068-2-6

### Operating Temperature

-20°C +50°C

### Number of combinable units

Max 5

### Color of the modules

Amber – blue – yellow – neutral – red – green According to EN60073

### Sound

Continuous

### Sound frequency

+/- 4.000 Hz

### Weighed sound level "A" at one meter

75dB

### Connections

Screw cable Screw clamps with binding post max. gauge max. 1,5 mm<sup>2</sup> inside the wiring unit



TYPE	ORDER CODE AND DATA
TWR30 L1Y2B	1 color, tier red
TWR30 L1Y3B	1 color, tier amber
TWR30 L1Y4B	1 color, tier yellow
TWR30 L1Y5B	1 color, tier green
TWR30 L1Y6B	1 color, tier blue
TWR30 L1Y9B	1 color, tier neutral
TWR30 L2Y52B	2 color, tier, green-red
TWR30 L3Y532B	3 color, tier, green-amber-red
TWR30 L3A532B	3 color, tier, green-amber-red-sount
TWR30 L4Y5632B	4 color, tier, green-blue-amber-red
TWR30 L4A5632B	4 color, tier, green-blue-amber-red-sount
TWR30 L5Y95632B	5 color, tier, neutral-green-blue-amber-red
TWR30 LMY532B	Multicolor, green-amber-red
TWR30 LMY632B	Multicolor, blue-amber-red
TWR30 LMY932B	Multicolor, neutral-amber-red
TWR30 LMY692B	Multicolor, blue-neutral-red

## FITTINGS



black 50-20

Polycarbonate bases  $\varnothing$  45mm

black 88-25

Polycarbonate extension tubes h 90mm



black 54-10

Bases with polycarbonate extension tubes



nero 88-10

polycarbonate extension tubes



nero 54-90

Base with polycarbonate tubes for 90° fixing



nero 54MP9

Metal bases with polycarbonate tubes for 90° fixing



# 180 SERIES

Modular visual and audio indicators



A simple bayonet system simplifies the mounting and maintenance, which can be performed in complete safety



The wiring unit can be easily reached and extracted, thus simplifying the wiring operation

The modular structure makes it possible to build at least 5 configurations for each visual unit



8 different ways of fixing

4 kinds of illumination

2 types of domes



## TECHNICAL FEATURES

**Compliance**

EEC Low Voltage directive nr. 2006/95  
EEC Electromagnetic Compatibility directive nr. 89/336

**Conformity to standards**

EN 60947.5.1. - EN 60073 - EN 60529 - EN 60068.2.6 - EN 457 -  
EN 981 - IEC 536

**Material**

Polycarbonate

**Voltage**

250 V

**Protection degree**

IP 54 - clamps IP 20 - According to EN 60529

**Protection against electrical shock**

Class II, double insulation. According to IEC 536

**Operating temperature**

-20°C +40°C

**Resistance to vibrations**

2 g min. (10 - 150 Hz) according to EN 60068.2.6

**Colors of domes**

amber - blue - yellow - neutral - red - green according to EN 60073

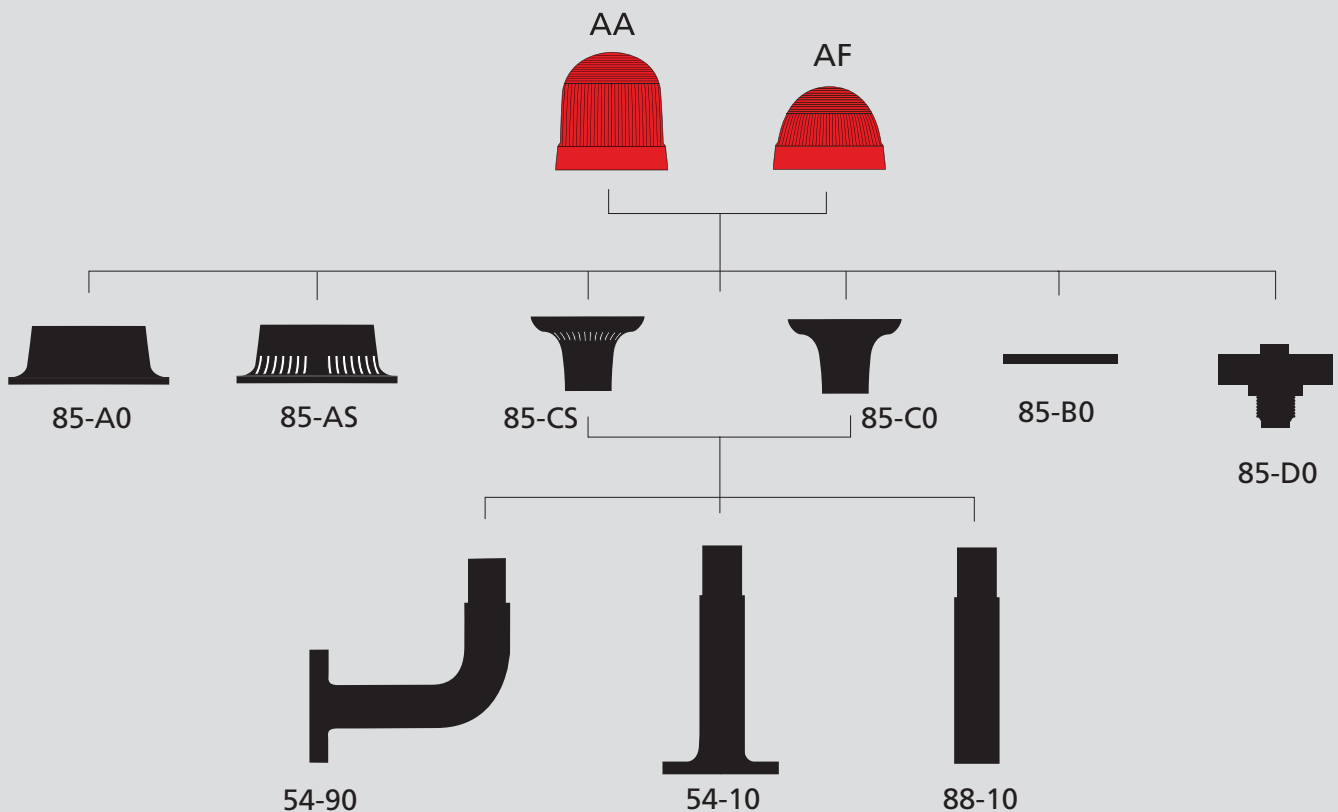
**Bulb**

Bayonet mounting, type BA 15d - 5 W max.  
with flash circuit: Xenon lamp

**Connections**

By means of screw clamps with binding post  
(gauge: max 1,5 mm<sup>2</sup>)  
The wiring unit is under the light element

## STRUCTURE



**LED LAMPS - STEADY LIGHT**

**Illumination**

by means of 6 ultra bright LEDs

**Duration**

> 50.000 working hours

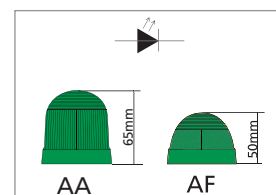
**Voltage**

24 V AC/DC - 115 V - 240 V AC

**Current consumption**

4 V AC/DC - 40 mA / 115 V - 25 mA

240 V - 18 mA



AA	ORDER CODE AND DATA		AF	ORDER CODE AND DATA	
	Color dome	Neutral dome		Color dome	Neutral dome
color	24 V DC-AC	24 V DC-AC	color	24 V DC-AC	24 V DC-AC
●	AA42-BF	AA642-BF	●	AF42-BF	AF642-BF
●	AA43-BF	AA643-BF	●	AF43-BF	AF643-BF
●	AA44-BF	AA644-BF	●	AF44-BF	AF644-BF
●	AA45-BF	AA645-BF	●	AF45-BF	AF645-BF
●	AA46-BF	AA646-BF	●	AF46-BF	AF646-BF
●	AA49-BF	AA649-BF	●	AF49-BF	AF649-BF



Complete the lamp by using one or more fittings from page 28  
To receive a complete lamp, please write first the cap code and then the base code

**LED LAMPS - FLASHING OR STEADY LIGHT**

To change the function, just move the jumper which is inside

**Illumination**

by means of 6 ultra bright LEDs

**Duration**

> 50.000 working hours

**Voltage**

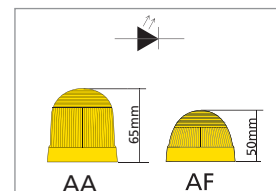
24 V AC/DC

**Current consumption**

24 V AC/DC - 40 mA

**Flash frequency**

approx. 1,4 Hz (84 flashes per minute) according to EN 60073



AA	ORDER CODE AND DATA		AF	ORDER CODE AND DATA	
	Color dome	Neutral dome		Color dome	Neutral dome
color	24 V DC-AC	24 V DC-AC	color	24 V DC-AC	24 V DC-AC
●	AA42-BL	AA642-BL	●	AF42-BL	AF642-BL
●	AA43-BL	AA643-BL	●	AF43-BL	AF643-BL
●	AA44-BL	AA644-BL	●	AF44-BL	AF644-BL
●	AA45-BL	AA645-BL	●	AF45-BL	AF645-BL
●	AA46-BL	AA646-BL	●	AF46-BL	AF646-BL
●	AA49-BL	AA649-BL	●	AF49-BL	AF649-BL



Complete the lamp by using one or more fittings from page 28  
To receive a complete lamp, please write first the cap code and then the base code

**VISUAL AND AUDIO INDICATORS (steady light)**

Combined sounder and beacon (flashing) with intermittent audio signal, **common power**.

**Voltage**

24 V dc (ac)

**Current consumption**

with incandescent 5 W bulbs: 24 V - 210 mA

**Bulb**

with bayonet connection type BA 15d, 7W max

**Sound**

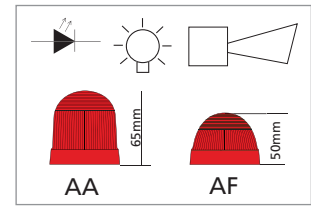
Continuous

**Sound frequency**

+/- 4000 Hz

**Weighed sound level A at one meter**

80 dB



AA	ORDER CODE AND DATA		AF	ORDER CODE AND DATA	
color	24 V DC (ac)		color	24 V DC (ac)	
	Filament	LED		Filament	LED
●	AA12-B7	AA124B7	●	A12-B7	AF124B7
●	AA13-B7	AA134B7	●	A13-B7	AF134B7
●	AA14-B7	AA144B7	●	A14-B7	AF144B7
●	AA15-B7	AA154B7	●	A15-B7	AF154B7
●	AA16-B7	AA164B7	●	A16-B7	AF164B7
●	AA19-B7	AA194B7	●	A19-B7	AF194B7



AA



AF

Complete the lamp by using one or more fittings from page 28.

To receive a complete lamp, please write first the cap code and then the base code

**VISUAL AND AUDIO INDICATORS (flashing)**

Combined sounder and beacon (steady) with continuous audio signal, **common power**.

**Voltage**

24 V dc (ac)

**Current consumption**

with incandescent 5 W bulbs: 24 V - 220 mA

**Bulb**

with bayonet connection type BA 15d, 7W max

**Flash frequency**

approx. 1,4 Hz (84 flashes per minute) according to EN 60073

**Sound**

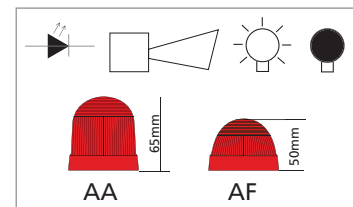
Intermittent

**Sound frequency**

+/- 4000 Hz

**Weighed sound level A at one meter**

80 dB



AA	ORDER CODE AND DATA		AF	ORDER CODE AND DATA	
color	24 V DC (ac)		color	24 V DC (ac)	
	Filament	LED		Filament	LED
●	AA22-B7	AA224B7	●	AF22-B7	AF224B7
●	AA23-B7	AA234B7	●	AF23-B7	AF234B7
●	AA24-B7	AA244B7	●	AF24-B7	AF244B7
●	AA25-B7	AA254B7	●	AF25-B7	AF254B7
●	AA26-B7	AA264B7	●	AF26-B7	AF264B7
●	AA29-B7	AA294B7	●	AF29-B7	AF294B7



AA



AF

Complete the lamp by using one or more fittings from page 28.

To receive a complete lamp, please write first the cap code and then the base code

LED LAMPS WITH AUDIO SIGNAL DEVICE

Flashing light-intermittent sound; steady light-continuous sound  
To change the function just shift the jumper which is inside

**Illumination**

by means of 6 ultra bright LEDs

**Duration** > 50.000 working hours

**Voltage** 24 V AC/DC

**Current consumption**

24 V AC/DC, 55 mA both with steady light - continuous sound and with flashing light - intermittent sound

**Flash frequency**

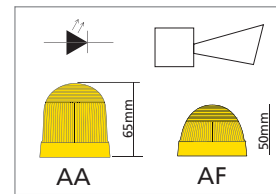
approx. 1,4 Hz (84 flashes per minute) according to EN 60073

**Sound frequency**

3500 Hz

**Weighed sound level A at one meter**

intermittent signal 75 dB - continual signal 72 dB



AA COLOR	ORDER CODE AND DATA	
	24V DC-AC flashing light intermittent sound	24V DC-AC steady light continuous sound
●	AA42ABL	AA42ABF
●	AA43ABL	AA43ABF
●	AA44ABL	AA44ABF
●	AA45ABL	AA45ABF
●	AA46ABL	AA46ABF
●	AA49ABL	AA49ABF

AA COLOR	ORDER CODE AND DATA	
	24V DC-AC flashing light intermittent sound	24V DC-AC steady light continuous sound
●	AF42ABL	AF42ABF
●	AF43ABL	AF43ABF
●	AF44ABL	AF44ABF
●	AF45ABL	AF45ABF
●	AF46ABL	AF46ABF
●	AF49ABL	AF49ABF



AA

AF

Complete the lamp by using one or more fittings from page 28.

To receive a complete lamp, please write first the cap code and then the base code

STEADY LIGHT LAMPS

Bulb with bayonet connection type BA 15d 5W max

**Voltage**

24 V - 115 V- 240 V AC/DC

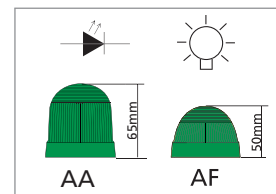
**Current consumption**

with incandescent 5 W bulbs

24 v, 210 mA - 115 V, 43 mA - 240 V, 22 mA

With LED bulbs

24 V, > 50 mA - 115 V, > 18 mA - 240 V, > 17 mA



AA COLOR	ORDER CODE AND DATA						
	without bulb	24V DC-AC with filament bulbs	115V AC with filament bulbs	240V AC	24V DC-AC with LED bulbs	115V AC with LED bulbs	240V AC
●	AA12-00	AA12-24	AA12-15	AA12-30	AA12424	AA12415	AA12430
●	AA13-00	AA13-24	AA13-15	AA13-30	AA13424	AA13415	AA13430
●	AA14-00	AA14-24	AA14-15	AA14-30	AA14424	AA14415	AA14430
●	AA15-00	AA15-24	AA15-15	AA15-30	AA15424	AA15415	AA15430
●	AA16-00	AA16-24	AA16-15	AA16-30	AA16424	AA16415	AA16430
●	AA19-00	AA19-24	AA19-15	AA19-30	AA19424	AA19415	AA19430

AF COLOR	ORDER CODE AND DATA						
	without bulb	24V DC-AC with filament bulbs	115V AC with filament bulbs	240V AC	24V DC-AC with LED bulbs	115V AC with LED bulbs	240V AC
●	AF12-00	AF12-24	AF12-15	AF12-30	AF12424	AF12415	AF12430
●	AF13-00	AF13-24	AF13-15	AF13-30	AF13424	AF13415	AF13430
●	AF14-00	AF14-24	AF14-15	AF14-30	AF14424	AF14415	AF14430
●	AF15-00	AF15-24	AF15-15	AF15-30	AF15424	AF15415	AF15430
●	AF16-00	AF16-24	AF16-15	AF16-30	AF16424	AF16415	AF16430
●	AF19-00	AF19-24	AF19-15	AF19-30	AF19424	AF19415	AF19430



AA

AF

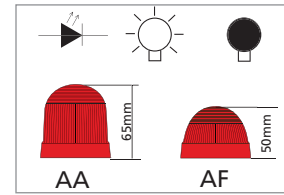
Complete the lamp by using one or more fittings from page 28.

To receive a complete lamp, please write first the cap code and then the base code

STEADY OR FLASHING LIGHT LAMPS

To change the function just move the jumper which is inside.  
Bulb with bayonet connection type BA 15d - 5W max.

- Voltage** 24 V - 115 V - 240 V AC/ DC
- Current consumption Flashing light** with incandescent 5W bulbs  
24 V, 145 mA - 115 V, 25 mA - 230 V, 15 mA  
With LED bulbs  
24 V, <a 50 mA - 115 V, <a 18 mA - 230 V, <a 17 mA
- Steady light** with incandescent 5W bulbs  
24 V, 210 mA - 115 V, 43 mA - 240 V, 22 mA  
With LED bulbs  
24 V, <a 50 mA - 115 V, <a 18 mA - 240 V, <a 17 mA
- Flash frequency**  
approx. 1,4 Hz (84 flashes per minute) according to EN 60073



AA	ORDER CODE AND DATA							
	12-48 V AC/DC without bulb	24-230 V AC without bulb	24V DC-AC	115V AC	240V AC	24V DC-AC	115V AC	240V AC
COLOR	with filament bulbs					with LED bulbs		
●	AA22-K0	AA22-W0	AA22-24	AA22-15	AA22-30	AA22424	AA22415	AA22430
●	AA23-K0	AA23-W0	AA23-24	AA23-15	AA23-30	AA23424	AA23415	AA23430
●	AA24-K0	AA24-W0	AA24-24	AA24-15	AA24-30	AA24424	AA24415	AA24430
●	AA25-K0	AA25-W0	AA25-24	AA25-15	AA25-30	AA25424	AA25415	AA25430
●	AA26-K0	AA26-W0	AA26-24	AA26-15	AA26-30	AA26424	AA26415	AA26430
●	AA29-K0	AA29-W0	AA29-24	AA29-15	AA29-30	AA29424	AA29415	AA29430

AF	ORDER CODE AND DATA							
	12-48 V AC/DC without bulb	24-230 V AC without bulb	24V DC-AC	115V AC	240V AC	24V DC-AC	115V AC	240V AC
COLOR	with filament bulbs					with LED bulbs		
●	AF22-K0	AF22-W0	AF22-24	AF22-15	AF22-30	AF22424	AF22415	AF22430
●	AF23-K0	AF23-W0	AF23-24	AF23-15	AF23-30	AF23424	AF23415	AF23430
●	AF24-K0	AF24-W0	AF24-24	AF24-15	AF24-30	AF24424	AF24415	AF24430
●	AF25-K0	AF25-W0	AF25-24	AF25-15	AF25-30	AF25424	AF25415	AF25430
●	AF26-K0	AF26-W0	AF26-24	AF26-15	AF26-30	AF26424	AF26415	AF26430
●	AF29-K0	AF29-W0	AF29-24	AF29-15	AF29-30	AF29424	AF29415	AF29430



Complete the lamp by using one or more fittings from page 28.  
To receive a complete lamp, please write first the cap code and then the base code

LED AND FILAMENT BULBS

LED Bulbs

- Bulb BA 15d**
- Duration** > than 25.000 working hours
- No maintenance** or service costs
- Perfect operation** even in case of strong vibrations and hits
- Low current consumption** 24 V DC/AC, < 50 mA - 115 V AC, < 18 mA - 240 V, <17 mA

To be used with alarm devices whose domes have the same colors as the LEDs

COLOR	ORDER CODE AND DATA			ORDER CODE AND DATA		
	24V DC-AC	115V AC	240V AC	24V DC-AC	115V AC	240V AC
●	11TB2	11TF2	11TG2	11VB2	11VF2	11VG2
●				11VB3	11VF3	11VG3
●	11TB4	11TF4	11TG4	11VB4	11VF4	11VG4
●	11TB5	11TF5	11TG5	11VB5	11VF5	11VG5
●	11TB6	11TF6	11TG6	11VB6	11VF6	11VG6
●	11TB9	11TF9	11TG9	11VB9	11VF9	11VG9



FILAMENT LAMPS

- Bulb BA 15d**
- Filament** shock-proof
- Duration** 2000 hours

ORDER CODE AND DATA				
12V/5W	24V/5W	30V/5W	130V/5W	260V/5W
11-12	11S24	1130V	11E15	11E30

Technical diagrams → see page 40

FITTINGS



**85-A0**  
base: diameter 85 mm



**85-AS**  
base: diameter 85 mm for audio applications



**85-B0**  
thin base: diameter 60 mm



**85-D0**  
base: diameter 60 mm, for 22-mm diameter holes



**85-DS**  
base: diameter 60 mm, for 22-mm diameter holes, for audio applications



**85-C0**  
adapter element



**54-10**  
base: diameter 70 and with integrated tube H 100 mm



**88-10**  
extension tube: height 100 mm



**85-CS**  
adapter element for audio applications



**54-90**  
polycarbonate base: diameter 70mm and with extension tube for 90° fixing



**54MP9**  
metal base with polycarbonate tube for 90° fixing



**54MM9**  
metal base and tube for 90° fixing

# PRESET HOUSINGS

With audio and visual indicators

This system makes it possible to create the most varied applications and configurations



Preset for mounting bases type 85-D0 and 85-D5



The housings are already perforated and complete with a cable gland

## TECHNICAL FEATURES

### Dimensions

For indicator 70X70X51  
For two indicators 70X140X51

### Protection degree

IP65

### Material

ABS (RAL 7035)

### Operating temperature

-25°/+70° C

Include the base 85-DO or 85DS and cable gland not fixed.

ORDER CODE AND DATA	
Housing for 1 indicator	CS 1001
Housing for 2 indicators	CS 1002
Non-preset housing	CS 1101
Non-preset housing	CS 1102



Technical diagrams → see page 43



# VISUAL INDICATORS FOR PANEL APPLICATIONS



→ 180  
→ see page 22



→ 220  
→ see page 31



→ ECX20  
→ see pages 34/35

# 220 SERIES

Monobloc pilot lamps

Ultra brightness emphasized by a particularly elegant design.  
High resistance to mechanical stress and to all weather conditions



Two possible ways of wiring:  
By means of screws or faston type 2,8 mm.  
They can be wired perpendicularly and this enables to create particularly compact installations

Easy and rapid assembly, no tools required  
They can be fixed on panels with 15 mm max thickness



**TECHNICAL FEATURES**

**Conformity**

EEC Low Voltage directive nr. 2006/95  
EEC Electromagnetic Compatibility directive nr. 89/336

**Compliance with rules**

EN 60947.5.1. - EN 50007 - EN 60529 - EN 60073 - IEC 536

**Material**

Polycarbonate (gem); Later 4 G30/VO (body)

**Voltage**

240 V max

**Protection against electrical shock**

Class II, double insulation. According to IEC 536

**Operating temperature**

-20°C +40°C

**Protection degree**

IP 20 (if installed, IP 65)

**Bulb**

With connection BA 9s, 3W max

**Connections**

By means of screw clamps with auto-raising binding posts, or of Faston type 2,8 mm

**Colors of gems**

Neutral, red, amber, yellow, green, blue, white

**TYPE 220**

COLOR	ORDER CODE AND DATA		
	without bulb	LED - 24V DC-AC	
●	CD10-00	CD S124B	CD S224B
●	CD12-00	CD S134B	CD S234B
●	CD14-00	CD S144B	CD S244B
●	CD15-00	CD S154B	CD S254B
●	CD16-00	CD S164B	CD S264B
●	CD19-00	CD S194B	CD S294B



**FITTINGS**

**LED BULBS**

Bulb BA 9s  
Duration: more than 50.000 working hours

COLOR	ORDER CODE AND DATA				
	12V DC-AC	24V DC-AC	48V DC-AC	115V AC	230V AC
●	1YMA2	1YMB2	1YMD2	1YMF2	1YMG2
●	1YMA4	1YMB4	1YMD4	1YMF4	1YMG4
●	1YMA5	1YMB5	1YMD5	1YMF5	1YMG5
●	1YMA6	1YMB6	1YMD6	1YMF6	1YMG6
●	1YMA9	1YMB9	1YMD9	1YMF9	1YMG9

**FILAMENT BULBS**

Bulb BA 9s  
Duration: 2.000 hours

ORDER CODE AND DATA	
24V	130V
1Y-24	1Y-15





# VISUAL AND AUDIO SIGNAL DEVICES



→ 370  
→ see page 4



→ 180  
→ see page 22



→ 370  
→ see page 4



→ 450  
→ see page 16

## TECHNICAL FEATURES ECX20 SERIES

Audio signal device for panel mounting (Ø 22 mm)  
Intermittent audio and visual signal

**Sound frequency** +/- 3.500 Hz

**Signal repetition frequency** +/- 1Hz

**Weighed sound level "A" at one meter** 78 dB

**Protection degree** IP20

**Voltage** 24V DC/AC or 115 V AC (+/-10%)

**Current consumption** 24V / 25mA – 115 v /15 mA

**Operating temperature** -20/+50°C

**Duration** 5.000 hours

**Connections** screw clamps with binding post

**Max gauge of the wire** 1,5 mm

**Case** ABS



### ORDER CODE AND DATA

24V DC-AC IP20	115V AC IP20
ECX2071-24R	ECX2071-127R

**Technical diagrams** → see page 42

# AUDIO SIGNAL DEVICES



→ 450 IP54  
→ See page 16

AUDIO SIGNAL DEVICE	continuous	intermittent
	ORDER CODES AND DATA	
	24V IP54	24V IP65
GREY	FA 074B1	FA 074B5
	FA 074B2	FA 074B6
BLACK	FA 974B1	FA 974B5
	FA 974B2	FA 974B6



→ 370 IP 54  
→ See page 4

	GREY		
	ORDER CODES AND DATA		
	24V DC-AC	115V AC	240V AC
IP54	07324		
IP64	07224		
IP54	075MB		
IP54	07524	07515	07530
IP64	07724	07715	07730

Technical features → See pageS11/12

	BLACK		
	ORDER CODES AND DATA		
	24V DC-AC	115V AC	240V AC
IP54	97324		
IP64	97224		
IP54	975MB		
IP54	97524	97515	97530
IP64	97724	97715	97730

Technical features → See pageS11/12

## TECHNICAL FEATURES ECX20 SERIES

Audio signal device for panel mounting (Ø 22 mm)

Intermittent audio signal

**Sound frequency** +/- 3.500 Hz

**Signal repetition frequency** +/- 1Hz

**Weighed sound level "A" at one meter** 78 dB

**Protection degree** IP20

**Voltage** 24V DC/AC or 115 V AC (+/-10%)

**Current consumption** 24V / 25mA – 115 v /15 mA

**Operating temperature** -20/+50°C

**Duration** 5.000 hours

**Connections** screw clamps with binding post

**Max gauge of the wire** 1,5 MM

ORDER CODES AND DATA	
48V DC-AC IP20	115V AC
ECX2070-24	ECX2070-127

## TECHNICAL FEATURES ECX28 SERIES

Audio signal device for panel mounting (Ø 28 mm)

Intermittent or continuous audio signal

**Sound frequency** +/- 2.900 Hz

**Signal repetition frequency** +/- 1Hz

**Weighed sound level "A" at one meter** 95 dB

**Voltage** 24V DC (+/-10%)

**Current consumption** 24V / 20mA

**Operating temperature** -20/+50°C

**Duration** 5.000 hours

**Connections** screw clamps with binding post

**Max gauge of the wire** 1,5 mm or with Faston type 6,3x0,8 mm

**Case** ABS

ORDER CODES AND DATA	
24V DC-AC	
ECX28100B	



Technical diagrams → see page 42

# LED BULBS

## Duration

more than 25.000 working hours

## No maintenance/service costs

**More safety** for machines and their operators thanks to the great reliability of the indications

**Low current consumption** simple and lasting control units

**Perfect operation** even in case of strong vibrations or hits

Use always LED bulbs with the same color as the alarm domes

Filament bulbs have a light emission with continuous spectrum, i.e. the kind of light which includes the whole range of visible wavelengths. In this case, it is the dome of the indicators which has the function of filtering and let only those emissions pass whose wavelength corresponds to the color chosen.

LED bulbs use a monochromatic light source, i.e. that kind of light consisting of electromagnetic waves which all have the same wavelength (with the exception of white LEDs, usually dichromatic). Together with these bulbs, the domes lose their function of filtering and they are used only to intensify luminosity.

If you use LED bulbs with white light together with domes of other colors, it means that the domes play again their filtering function, and it results that their luminosity is diminished.

## Voltage

12 - 24 - 48 - 115 - 230 V (other kinds on demand)

## Max current consumption

24 V DC/AC, < 50 mA - 115 V AC, < 18 mA - 230 V AC, < 17 mA

## KEY

Codice: 11**N**B2 TIPO

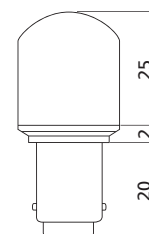
- TIPO - M = 1 LED, frontal light only
- TIPO - R = 1 LED, frontal and lateral light
- TIPO - L = 6 LED, frontal light only
- TIPO - N = 8 LED, frontal light only
- TIPO - E = 9 LED, frontal light only
- TIPO - V = 9 LED, frontal and lateral light
- TIPO - T = 12 LED, frontal and lateral light
- TIPO - K = 21 LED, frontal light only



## LED bulbs - BA 15d

COLOR	TYPE E			TYPE N			TYPE K
	24V DC-AC	115V AC	230V AC	24V DC-AC	115V AC	230V AC	24V DC-AC
●	11EB2	11EF2	11EG2	11NB2	11NF2	11NG2	11KB2
●				11NB3	11NF3	11NG3	
●	11EB4	11EF4	11EG4	11NB4	11NF4	11NG4	11KB4
●	11EB5	11EF5	11EG5	11NB5	11NF5	11NG5	11KB5
●	11EB6	11EF6	11EG6	11NB6	11NF6	11NG6	11KB6
●	11EB9	11EF9	11EG9	11NB9	11NF9	11NG9	11KB9

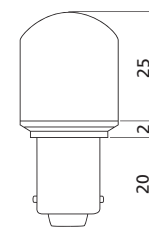
COLOR	TYPE V			TYPE L			TYPE T
	24V DC-AC	115V AC	230V AC	24V DC-AC	115V AC	230V AC	24V DC-AC
●	11VB2	11VF2	11VG2	11LB2	11LF2	11LG2	11TB2
●	11VB3	11VF3	11VG3	11LB3	11LF3	11LG3	
●	11VB4	11VF4	11VG4	11LB4	11LF4	11LG4	11TB4
●	11VB5	11VF5	11VG5	11LB5	11LF5	11LG5	11TB5
●	11VB6	11VF6	11VG6	11LB6	11LF6	11LG6	11TB6
●	11VB9	11VF9	11VG9	11LB9	11LF9	11LG9	11TB9



Ø 23X47

## LED bulbs - BA 15s

COLOR	TYPE N			TYPE V			TYPE L		
	24V DC-AC	115V AC	230V AC	24V DC-AC	115V AC	230V AC	24V DC-AC	115V AC	230V AC
●	1QNB2	1QNF2	1QNG2	1QVB2	1QVF2	1QVG2	1QLB2	1QLF2	1QLG2
●	1QNB3	1QNF3	1QNG3	1QVB3	1QVF3	1QVG3	1QLB3	1QLF3	1QLG3
●	1QNB4	1QNF4	1QNG4	1QVB4	1QVF4	1QVG4	1QLB4	1QLF4	1QLG4
●	1QNB5	1QNF5	1QNG5	1QVB5	1QVF5	1QVG5	1QLB5	1QLF5	1QLG5
●	1QNB6	1QNF6	1QNG6	1QVB6	1QVF6	1QVG6	1QLB6	1QLF6	1QLG6
●	1QNB9	1QNF9	1QNG9	1QVB9	1QVF9	1QVG9	1QLB9	1QLF9	1QLG9



Ø 23X47

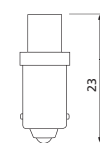
## LED bulbs - BA 9s

COLOR	TIPO M				
	12V DC-AC	24V DC-AC	48V DC-AC	115V AC	230V AC
●	1YMA2	1YMB2	1YMD2	1YMF2	1YMG2
●	1YMA3	1YMB3	1YMD3	1YMF3	1YMG3
●	1YMA4	1YMB4	1YMD4	1YMF4	1YMG4
●	1YMA5	1YMB5	1YMD5	1YMF5	1YMG5
●	1YMA6	1YMB6	1YMD6	1YMF6	1YMG6
●	1YMA9	1YMB9	1YMD9	1YMF9	1YMG9



Ø 9X28

COLOR	TIPO 1
	24V DC-AC
●	1Y1B2
●	1Y1B4
●	1Y1B5
●	1Y1B6
●	1Y1B9

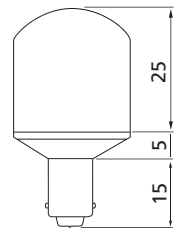


Ø 9X23



## LED bulbs - BA 9s

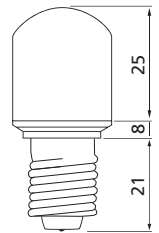
COLOR	TYPE N			TYPE V			TYPE L		
	24V DC-AC	115V AC	230V AC	24V DC-AC	115V AC	230V AC	24V DC-AC	115V AC	230V AC
●	1YNB2	1YNF2	1YNG2	1YVB2	1YVF2	1YVG2	1YLB2	1YLF2	1YLG2
●	1YNB3	1YNF3	1YNG3	1YVB3	1YVF3	1YVG3	1YLB3	1YLF3	1YLG3
●	1YNB4	1YNF4	1YNG4	1YVB4	1YVF4	1YVG4	1YLB4	1YLF4	1YLG4
●	1YNB5	1YNF5	1YNG5	1YVB5	1YVF5	1YVG5	1YLB5	1YLF5	1YLG5
●	1YNB6	1YNF6	1YNG6	1YVB6	1YVF6	1YVG6	1YLB6	1YLF6	1YLG6
●	1YNB9	1YNF9	1YNG9	1YVB9	1YVF9	1YVG9	1YLB9	1YLF9	1YLG9



Ø 23X45

## LED bulbs - E 14

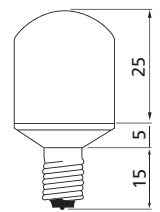
COLOR	TYPE N			TYPE V			TYPE L		
	24V DC-AC	115V AC	230V AC	24V DC-AC	115V AC	230V AC	24V DC-AC	115V AC	230V AC
●	1HNB2	1HNF2	1HNG2	1HVB2	1HVF2	1HVG2	1HLB2	1HLF2	1HLG2
●	1HNB3	1HNF3	1HNG3	1HVB3	1HVF3	1HVG3	1HLB3	1HLF3	1HLG3
●	1HNB4	1HNF4	1HNG4	1HVB4	1HVF4	1HVG4	1HLB4	1HLF4	1HLG4
●	1HNB5	1HNF5	1HNG5	1HVB5	1HVF5	1HVG5	1HLB5	1HLF5	1HLG5
●	1HNB6	1HNF6	1HNG6	1HVB6	1HVF6	1HVG6	1HLB6	1HLF6	1HLG6
●	1HNB9	1HNF9	1HNG9	1HVB9	1HVF9	1HVG9	1HLB9	1HLF9	1HLG9



Ø 23X54

## LED bulbs - E 10

COLOR	TYPE N			TYPE V			TYPE L		
	24V DC-AC	115V AC	230V AC	24V DC-AC	115V AC	230V AC	24V DC-AC	115V AC	230V AC
●	1TNB2	1TNF2	1TNG2	1TVB2	1TVF2	1TVG2	1TLB2	1TLF2	1TLG2
●	1TNB3	1TNF3	1TNG3	1TVB3	1TVF3	1TVG3	1TLB3	1TLF3	1TLG3
●	1TNB4	1TNF4	1TNG4	1TVB4	1TVF4	1TVG4	1TLB4	1TLF4	1TLG4
●	1TNB5	1TNF5	1TNG5	1TVB5	1TVF5	1TVG5	1TLB5	1TLF5	1TLG5
●	1TNB6	1TNF6	1TNG6	1TVB6	1TVF6	1TVG6	1TLB6	1TLF6	1TLG6
●	1TNB9	1TNF9	1TNG9	1TVB9	1TVF9	1TVG9	1TLB9	1TLF9	1TLG9

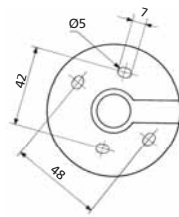
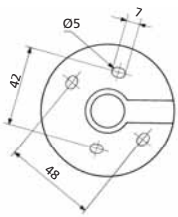
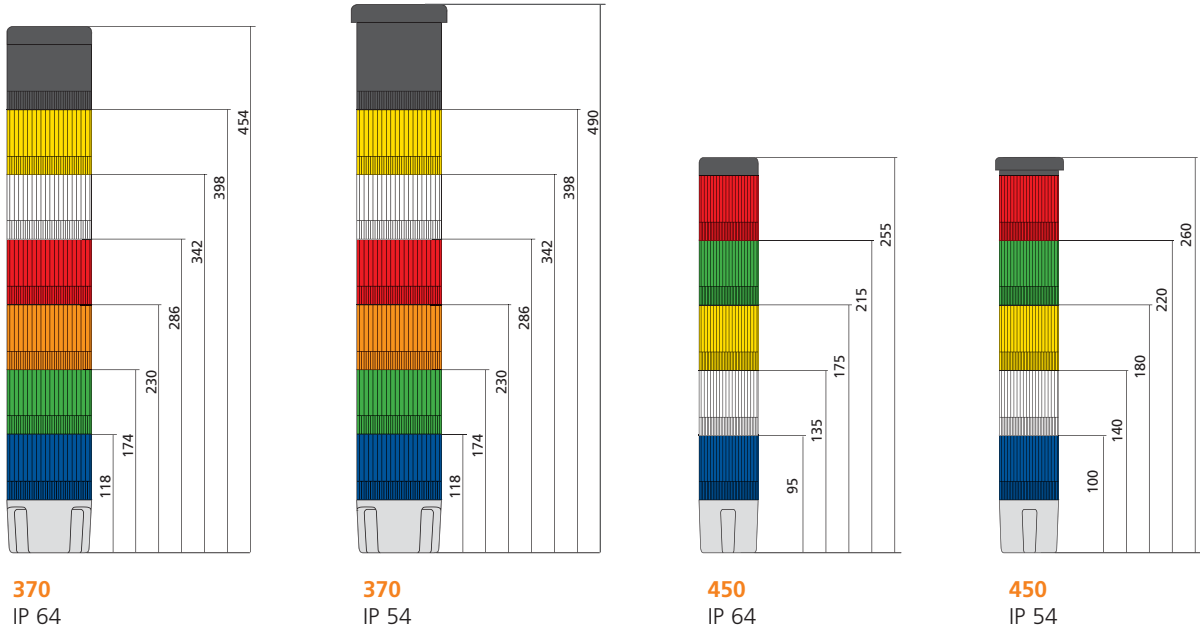


Ø 23X45

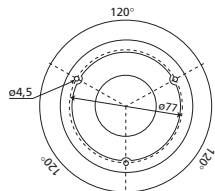
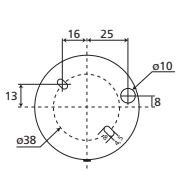
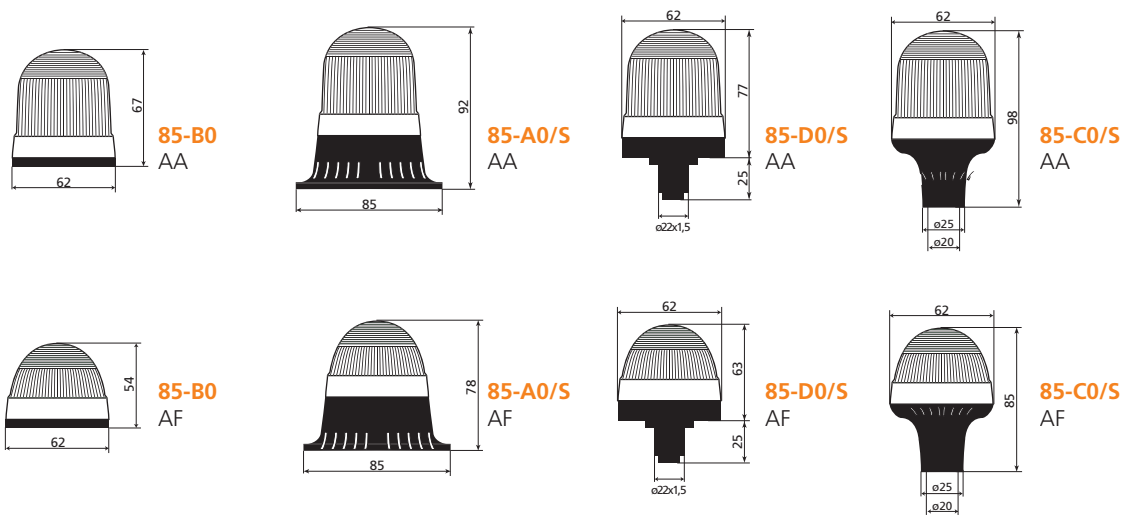


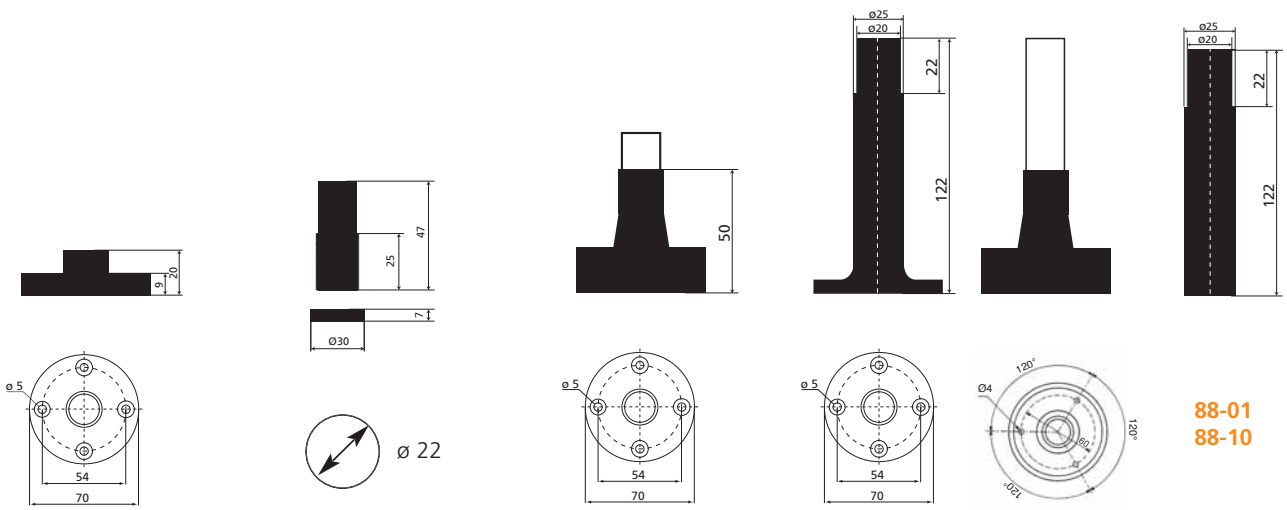
# TECHNICAL DIAGRAMS

## TECHNICAL DIAGRAMS / SIGNAL TOWERS



## TECHNICAL DIAGRAMS / LAMPS





54M65

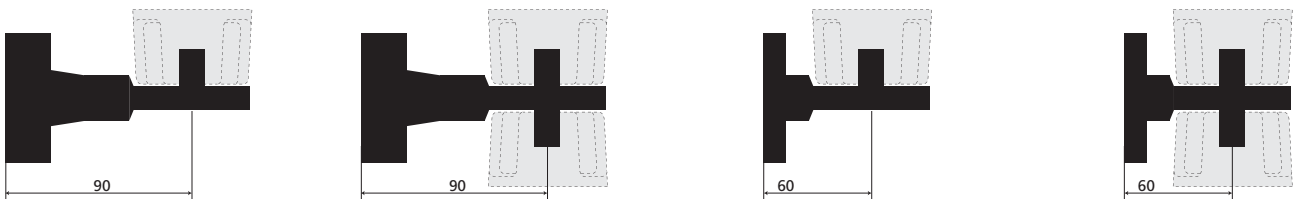
88A22

54M0X

54-XX  
80-XX

54MXX  
80MXX

88-01  
88-10

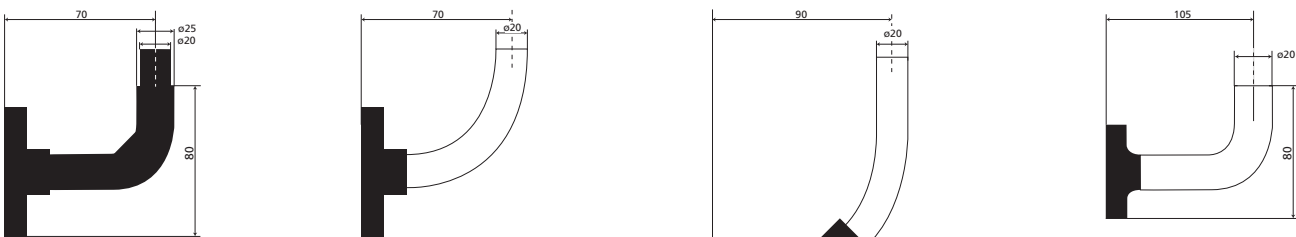


54T19  
54T91

54T29  
54T92

54TC1

54TC2



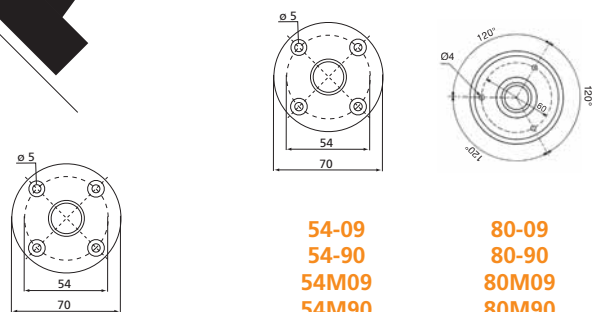
54MP9

54MM9

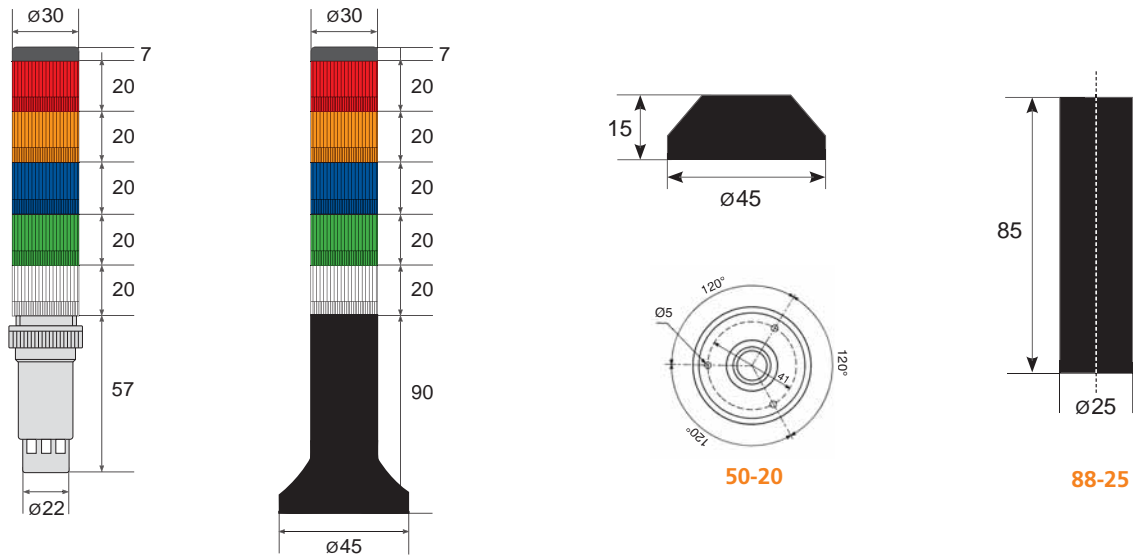
54M59  
54M95

54-09  
54-90  
54M09  
54M90

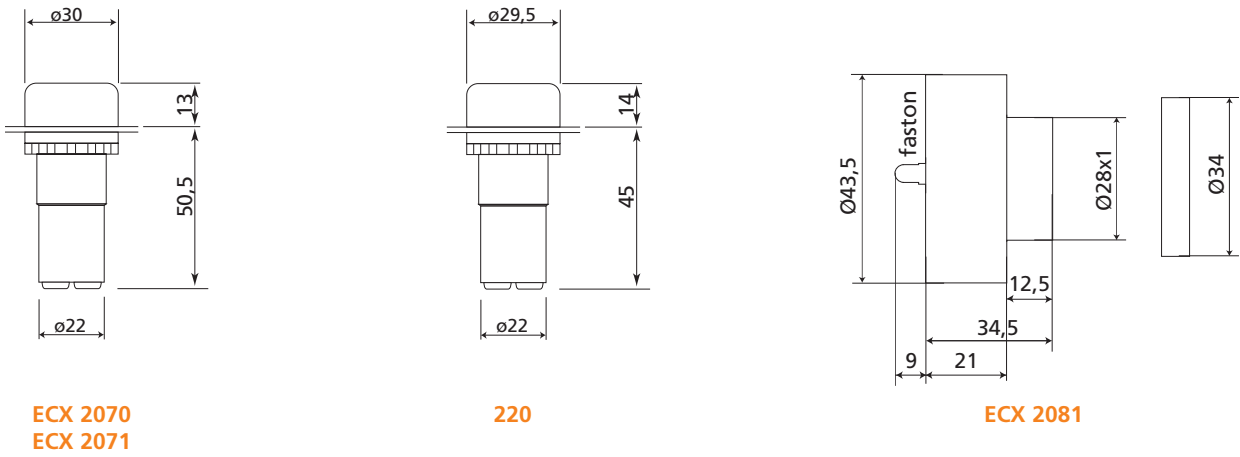
80-09  
80-90  
80M09  
80M90



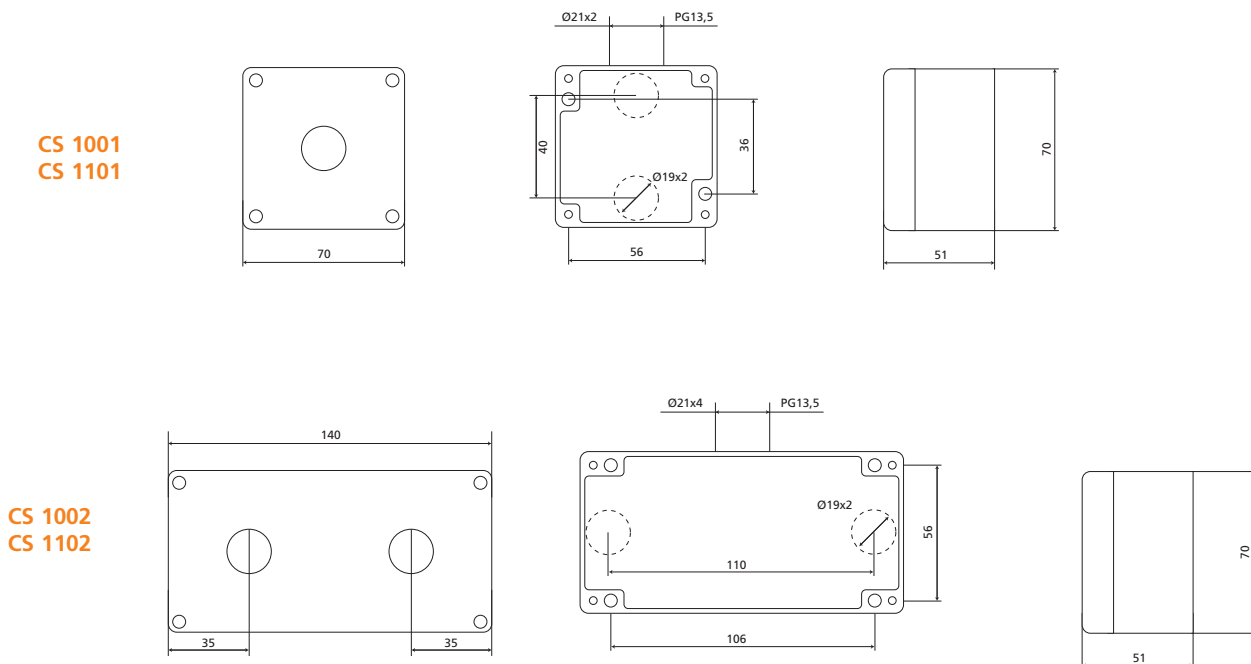
## TECHNICAL DIAGRAMS / SIGNAL TOWERS



## TECHNICAL DIAGRAMS / AUDIO AND VISUAL SIGNAL DEVICES








## TECHNICAL DIAGRAMS / HOUSING










EN 60073 - Table 5

MEANING OF COLORS OF THE INDICATORS IN REFERENCE TO THE CONDITION OF A PROCESS				
COLOR	MEANING	EXPLANATION	ACTION OF THE OPERATOR	EXAMPLES OF APPLICATION
<b>RED</b> 	Emergency	Dangerous conditions	Immediate action to deal with a dangerous condition, e. g. by: <ul style="list-style-type: none"> <li>operating emergency stop</li> <li>opening safety valve</li> <li>starting cooling pump</li> </ul>	<ul style="list-style-type: none"> <li>pressure/temperature out of safe limits</li> <li>voltage drop</li> <li>breakdown of a main unit</li> <li>stoppage of necessary machines, service systems</li> <li>deep-freezer temperature too high</li> <li>over-travelling of a stop position of a hoist</li> </ul>
<b>YELLOW</b> 	abnormal	<ul style="list-style-type: none"> <li>abnormal conditions</li> <li>impending critical condition</li> </ul>	Monitoring and/or intervention (e.g. by reestablishing the intended function)	<ul style="list-style-type: none"> <li>pressure/temperature different from normal level</li> <li>tripping of a protecting device or of auxiliary unit</li> <li>conveyor overloaded</li> <li>overtravelling of a limit switch</li> <li>position change of a valve or conveyor belt</li> <li>deep-freezer on super freezing</li> </ul>
<b>GREEN</b> 	normal	normal conditions	optional	<ul style="list-style-type: none"> <li>authorisation to proceed</li> <li>indication of normal working limits</li> </ul>
<b>BLUE</b> 	mandatory	indication of a conditions which requires action	mandatory action	<ul style="list-style-type: none"> <li>instruction to the operator to enter preselected values</li> </ul>
<b>WHITE</b> <b>GREY</b> <b>BLACK</b> 	no specific meaning assigned	any meaning; may be used whenever doubt exists about the application of Red, Yellow, Green, Blue	monitoring	<ul style="list-style-type: none"> <li>general information (e.g.: confirmation of a command, indication of measured values)</li> </ul>

EN 981 Table 1

MEANING OF COMBINED SIGNALS FOR GENERAL PURPOSES, LISTED ACCORDING TO EMERGENCY LEVEL			
VISUAL SIGNAL	MESSAGE TYPE	AUDIO SIGNAL	
		character available for "ON" phase	configuration of time
<b>RED</b> 	DANGER urgent intervention to save or protect	<ul style="list-style-type: none"> <li>with variable frequency</li> <li>series of sounds</li> <li>alternate tone (two or three frequency intervals)</li> </ul> Note: urgency can be underlined by a rapid rhythm, dissonance or high tone	<ul style="list-style-type: none"> <li>ON/OFF continuous or alternating</li> <li>ON/OFF alternating</li> <li>ON/OFF continuous or alternating</li> </ul> Any danger signal must possess a configuration of time clearly different from EMERGENCY EVACUATION
<b>YELLOW OR AMBER</b> 	ATTENTION intervention when necessary	<ul style="list-style-type: none"> <li>one sound only with a constant spectrum, min. duration: 0,3 s</li> </ul>	Alternating ON/OFF, which must be clearly different from EMERGENCY EVACUATION. Max 2 different "ON" segment lengths can be in the configuration; the first one is to be long.
<b>BLUE</b> 	COMMAND compulsory intervention to be done	<ul style="list-style-type: none"> <li>two or three different sounds, each of them with a constant spectrum</li> </ul>	ON/OFF continuous or alternating
<b>WHITE</b> 	ANNOUNCEMENT/ INFORMATION instruction to public	<ul style="list-style-type: none"> <li>ringing-tone consisting of two tones</li> </ul>	non-repetitive high - low (followed by instructions)
<b>GREEN</b> 	END OF ALARM situation: out of danger	<ul style="list-style-type: none"> <li>sound with constant spectrum</li> </ul>	Continuous, at least 30s Signal which follows one previous alarm signal

Note: generally it is not necessary to synchronise sound and light, but this can improve perception.

EN 457

• Audio signals

-Identification: the certain identification of an audio signal of danger requires that the signal is clearly audible, is sufficiently different from other

-Audibility: the audio signal must be clearly audible. Masking level must be overcome. This is usually obtained when "A" weight audio pressure





# notes

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

**TEXELCO s.r.l.**

Via Cristoforo Colombo, 90 - 21054 FAGNANO OLONA - Varese - Italy

Tel. +39.0331.610111 r.a. - Fax +39.0331.612312

**e-mail: [info@texelco.it](mailto:info@texelco.it)**

**web site: [www.texelco.it](http://www.texelco.it)**