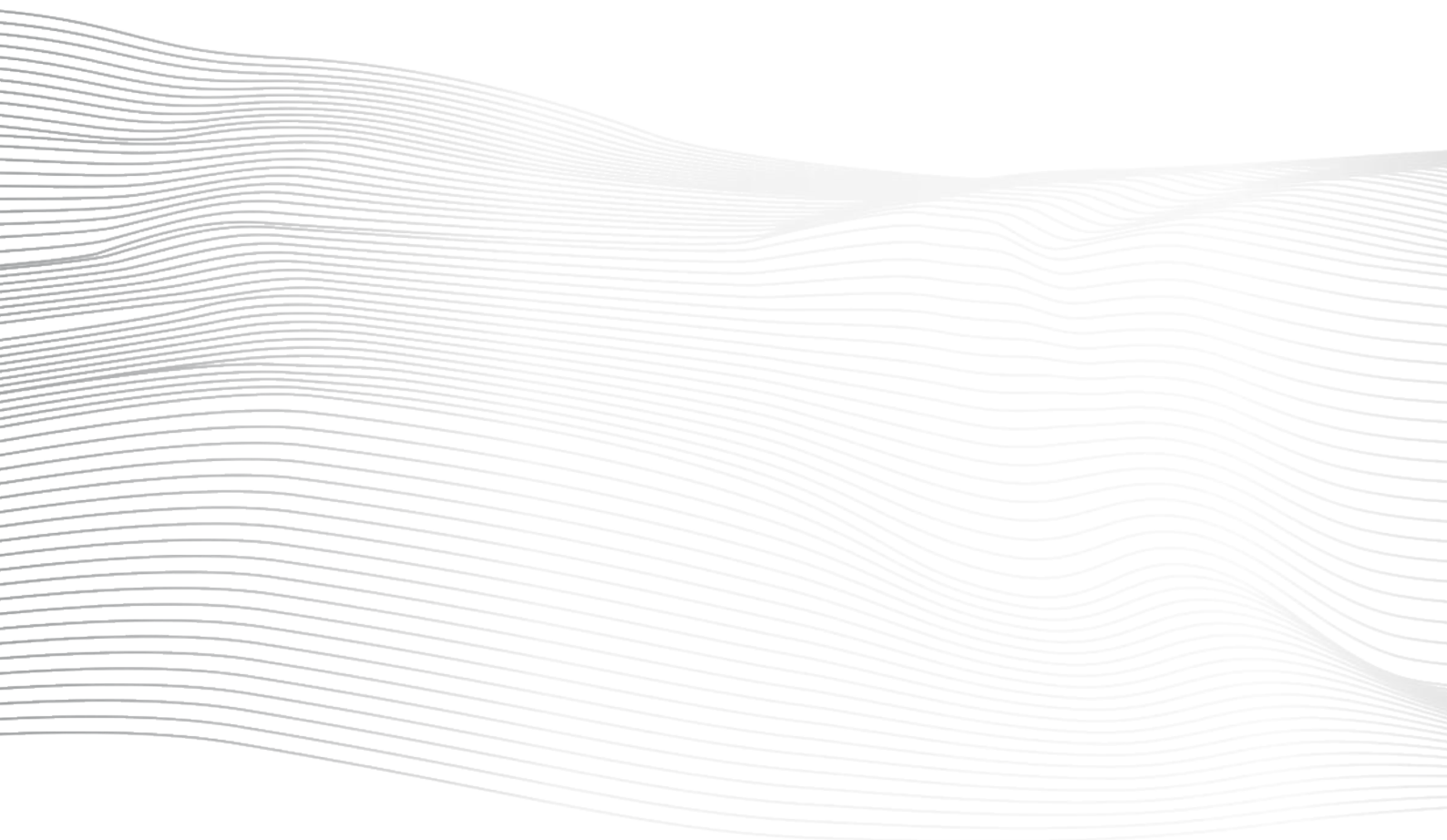

SIGNAL LIGHT COLUMN

LSAS



sm electrics



safety on board.



SIGNAL LIGHT COLUMN

LSAS

The signal light column is a mini-PLC based stand-alone, shipborne alarm system to indicate visual and audible alarms according to IMO regulations as well as classification society requirements (e.g. SRtP - Safe Return to Port). Controlled by a central unit the signal light column alarm system can also be adapted to your existing alarm and monitoring logic. The MED type approved sound generation is based on an innovative microprocessor technology and offers multiple acoustic philosophies with up to 120dB(A) sound level.

 made
in
Germany

APPLICATION

On one hand visual alarms are indicated by in-house developed LED strobe lights and on the other hand explicit symbols on LED triangular indicators are advising the specific alert type. A standard signal light column consists of six to ten alarm indicators (symbols). In case a different amount of alarm indicators is needed, the signal light column can easily be adapted to your specific requirements.

compact design of control unit

easy to install

digital sound processing



MED type approved



only one power supply required:
230VAC/115VAC/24VDC



IP22



IP66
(with wallbox)

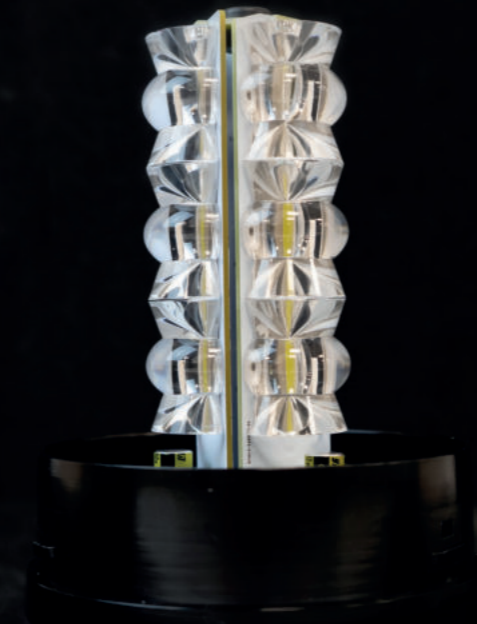
DATA & FEATURES *(control unit)*

- only one power supply 230VAC, 115VAC or 24VDC is required
- clever commissioning and test features reduce start-up work
- individual acoustics delay settings adjustable by user
- compact design (482x320mm, weight: 5,56kg, IP20)
- suitable wall box is available (600x380x210mm, IP66)
- max. output current: 1,25A (each channel)
- external wiring type: max. 2,5mm²
- numbers of controlled LSDs: unlimited
- interface to corresponding systems: dry contacts required (24VDC / 50mA)

IN A NEW LIGHT

LIGHT SIGNAL COLUMN

**NEW STROBE LIGHT
NEW SOUNDER**



The story behind the product.

The journey of our signal light column started in 2002. Until today we have constantly improved our product in terms of functionality and reliability.

After roughly 3.000 sold systems with about 30.000 signal light columns, we have gained significant insights about what is important. Based on the acquired knowledge from our long-term experience, we developed our own flash light and MED certified sounder, which allow us to meet any kind of upcoming requirements.



New Strobe Light

By developing our new warning light for the Light Signal Column we created some unique advantages:

- Lower system prices, because only one single light is needed
- Ability to display 7 different colors and 4 different flash sequences
- Low costs for potential spare parts, because of the reduced number of luminaires
- Better signaling effect thanks to smart lens arrangement and high performance LED's
- Lower operating costs result from low power consumption (up to minus 85%) and more flexible system topologies as the overall system power consumption decreases
- Expanded product life cycle due to advanced LED technology and intelligent control
- Different flash sequences allow individual adjustments if there are other devices with a similar flash sequence
- In contrast to conventional filament bulbs, there is no susceptibility to vibration and shock

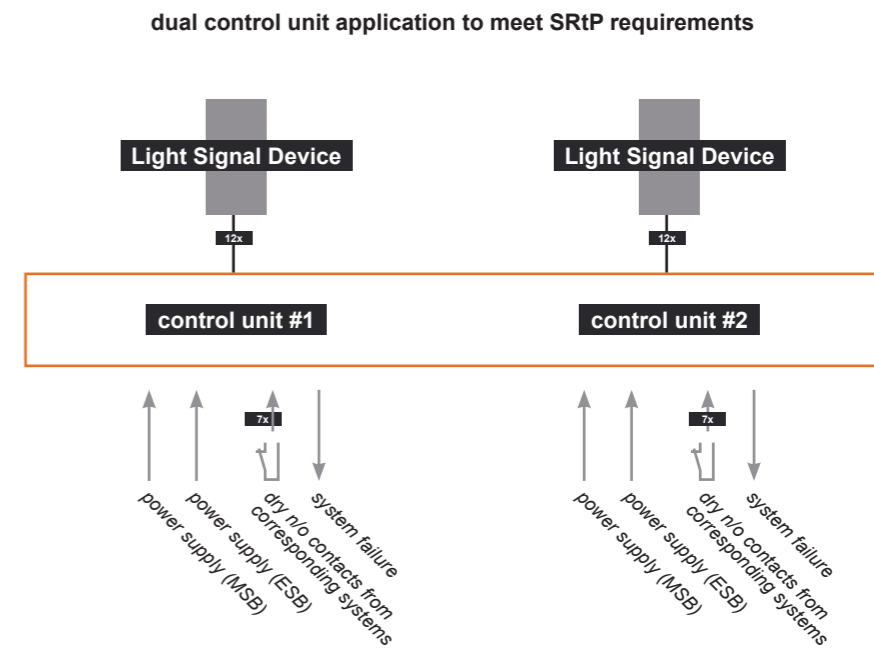
New Sounder

The MED and EN54-3 certified AGM 410.1.8.2 has been designed to generate alarm sound for various marine applications. The main field of application is the ship's engine room. An alarm sound will be generated by applying 230VAC to the specific alarm input (CH#1-CH#8) and the enable input. In case more than one alarm sound is activated at the same time, the alarm sound with the higher priority will be generated (CH#1 highest priority, CH#8 lowest priority).

The specific sound characteristic of each alarm input can be modified within a protected service settings menu. The alarm sounds can be chosen from a variety of 64 different maritime sound characteristics. The sounder also includes various smart features, such as a sound soft start for safety at work.



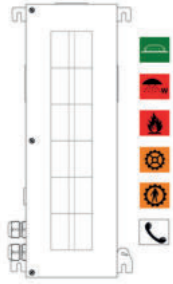
TYPICAL SYSTEM COMPOSITION



PERIPHERY EQUIPMENT

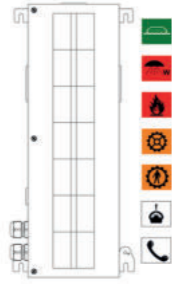
LSD STANDARD COLUMNS*

LSD 209.62.0.0x0



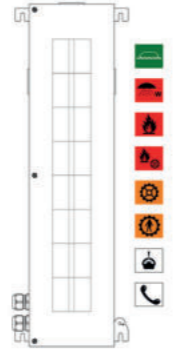
- No. of LED triangular lights: 6
- No. of LED strobe lights: 0
- sound module integrated: NO
- IP class: 55

LSD 209.72.0.0x0



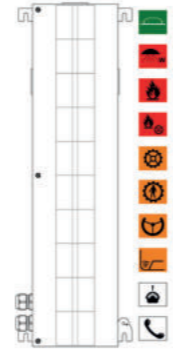
- No. of LED triangular lights: 7
- No. of LED strobe lights: 0
- sound module integrated: NO
- IP class: 55

LSD 209.82.0.0x0



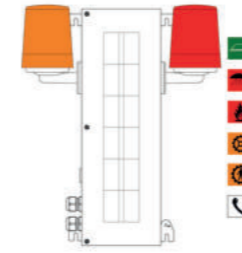
- No. of LED triangular lights: 8
- No. of LED strobe lights: 0
- sound module integrated: NO
- IP class: 55

LSD 209.102.0.0x0



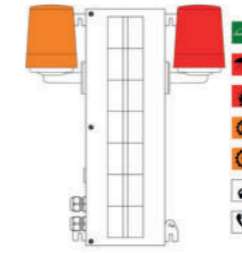
- No. of LED triangular lights: 10
- No. of LED strobe lights: 0
- sound module integrated: NO
- IP class: 55

LSD 209.62.22.0x0



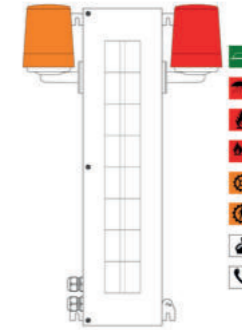
- No. of LED triangular lights: 6
- No. of LED strobe lights: 2
- sound module integrated: NO
- IP class: 55

LSD 209.72.22.0x0



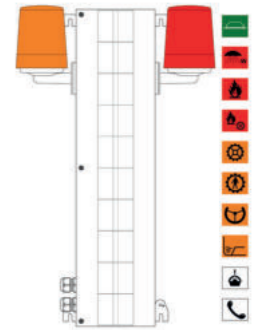
- No. of LED triangular lights: 7
- No. of LED strobe lights: 2
- sound module integrated: NO
- IP class: 55

LSD 209.82.22.0x0



- No. of LED triangular lights: 8
- No. of LED strobe lights: 2
- sound module integrated: NO
- IP class: 55

LSD 209.102.22.0x0



- No. of LED triangular lights: 10
- No. of LED strobe lights: 2
- sound module integrated: NO
- IP class: 55

LSD 209.62.12.0x0



- No. of LED triangular lights: 6
- No. of LED strobe lights (clear): 1
- sound module integrated: NO
- IP class: 55

LSD 209.72.12.0x0



- No. of LED triangular lights: 7
- No. of LED strobe lights (clear): 1
- sound module integrated: NO
- IP class: 55

LSD 209.82.12.0x0



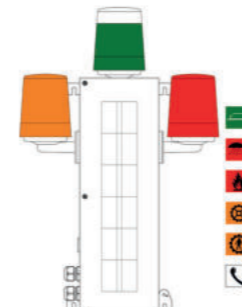
- No. of LED triangular lights: 8
- No. of LED strobe lights (clear): 1
- sound module integrated: NO
- IP class: 55

LSD 209.102.12.0x0



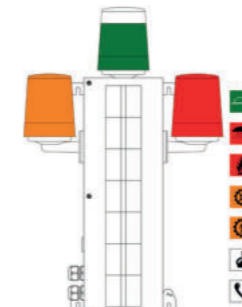
- No. of LED triangular lights: 10
- No. of LED strobe lights (clear): 1
- sound module integrated: NO
- IP class: 55

LSD 209.62.32.0x0



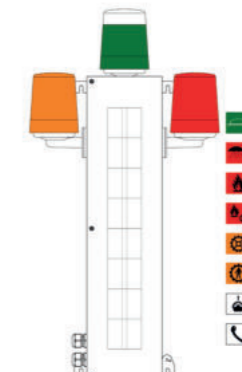
- No. of LED triangular lights: 6
- No. of LED strobe lights: 3
- sound module integrated: NO
- IP class: 55

LSD 209.72.32.0x0



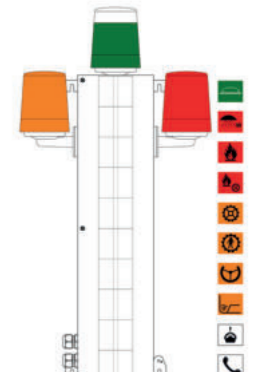
- No. of LED triangular lights: 7
- No. of LED strobe lights: 3
- sound module integrated: NO
- IP class: 55

LSD 209.82.32.0x0



- No. of LED triangular lights: 8
- No. of LED strobe lights: 3
- sound module integrated: NO
- IP class: 55

LSD 209.102.32.0x0



- No. of LED triangular lights: 10
- No. of LED strobe lights: 3
- sound module integrated: NO
- IP class: 55

*available in 115VAC, 230VAC, 24VDC

PERIPHERY EQUIPMENT

LSD COLUMNS WITH MED TYPE APPROVED MULTI-TONE SOUNDER*



LSD 313.62.0.1x1

LSD 313.72.0.1x1

LSD 313.82.0.1x1

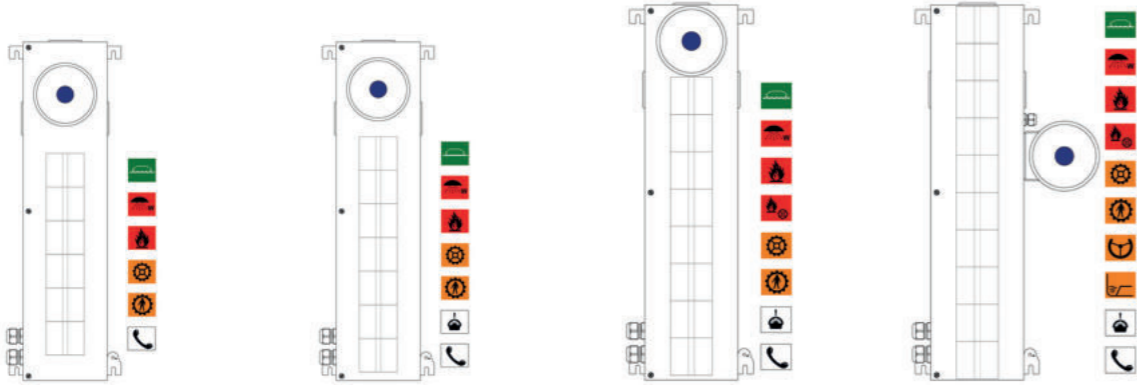
LSD 313.102.0.1x1

LSD 313.62.22.1x1

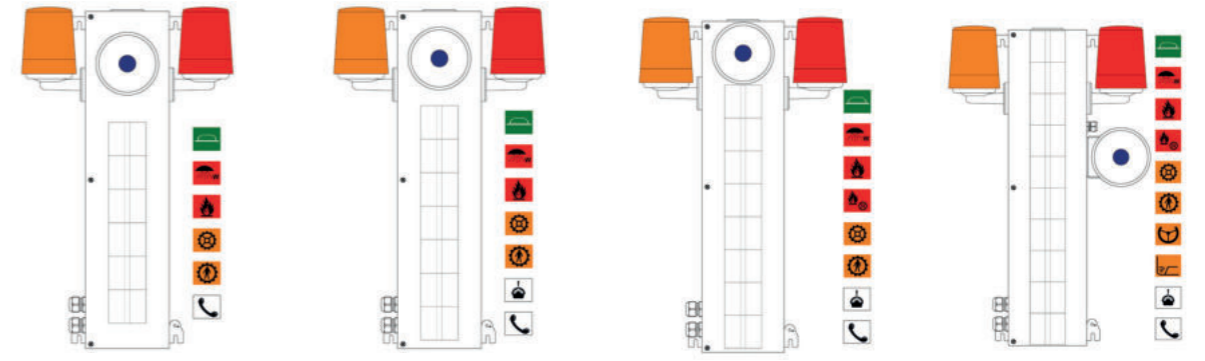
LSD 313.72.22.1x1

LSD 313.82.22.1x1

LSD 313.102.22.1x1



- | | | | |
|--|--|--|---|
| <ul style="list-style-type: none"> No. of LED triangular lights: 6 No. of LED strobe lights: 0 smart sounder with multiple frequencies (64 different sound pattern) IP class: 55 local telephone input processing | <ul style="list-style-type: none"> No. of LED triangular lights: 7 No. of LED strobe lights: 0 smart sounder with multiple frequencies (64 different sound pattern) IP class: 55 local telephone input processing | <ul style="list-style-type: none"> No. of LED triangular lights: 8 No. of LED strobe lights: 0 smart sounder with multiple frequencies (64 different sound pattern) IP class: 55 local telephone input processing | <ul style="list-style-type: none"> No. of LED triangular lights: 10 No. of LED strobe lights: 0 smart sounder with multiple frequencies (64 different sound pattern) IP class: 55 local telephone input processing |
|--|--|--|---|



- | | | | |
|---|--|--|---|
| <ul style="list-style-type: none"> No. of LED triangular lights: 6 No. of LED strobe lights : 2 smart sounder with multiple frequencies (64 different sound pattern) IP class: 55 local telephone input processing | <ul style="list-style-type: none"> No. of LED triangular lights: 7 No. of LED strobe lights: 2 smart sounder with multiple frequencies (64 different sound pattern) IP class: 55 local telephone input processing | <ul style="list-style-type: none"> No. of LED triangular lights: 8 No. of LED strobe lights: 2 smart sounder with multiple frequencies (64 different sound pattern) IP class: 55 local telephone input processing | <ul style="list-style-type: none"> No. of LED triangular lights: 10 No. of LED strobe lights: 2 smart sounder with multiple frequencies (64 different sound pattern) IP class: 55 local telephone input processing |
|---|--|--|---|

LSD 313.62.12.1x1

LSD 313.72.12.1x1

LSD 313.82.12.1x1

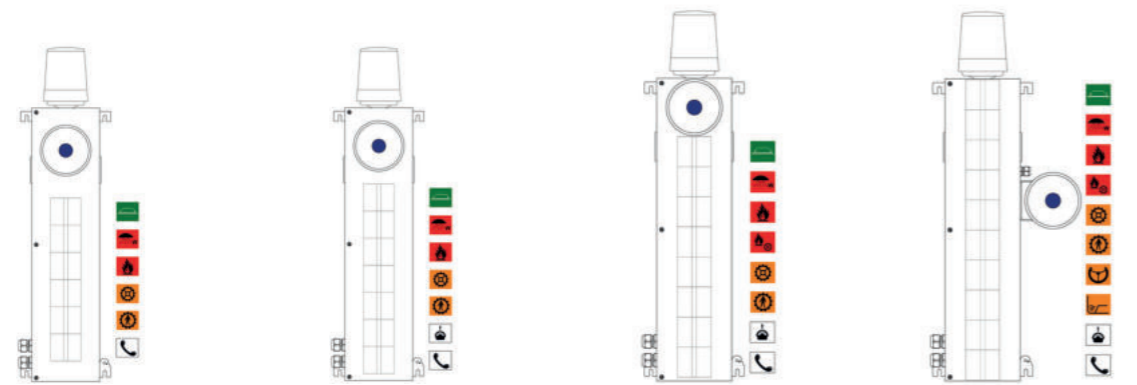
LSD 313.102.12.1x1

LSD 313.62.32.1x1

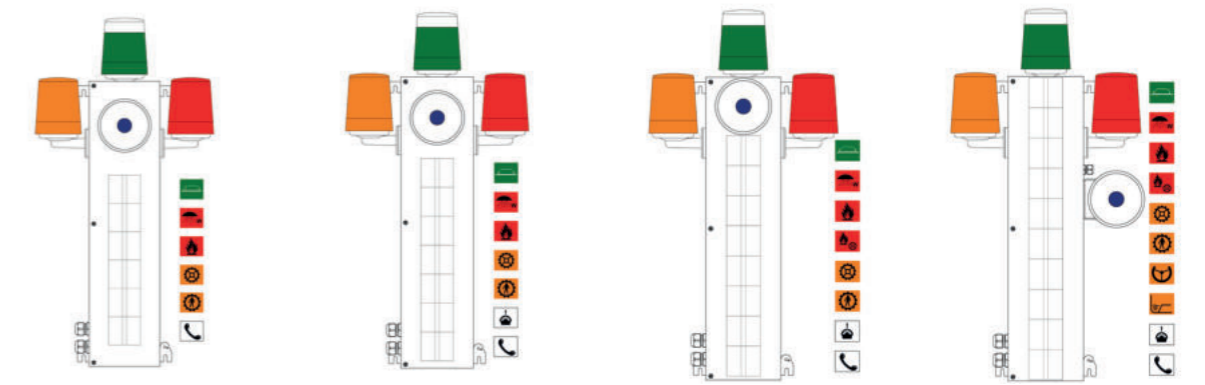
LSD 313.72.32.1x1

LSD 313.82.32.1x1

LSD 313.102.32.1x1



- | | | | |
|--|--|--|---|
| <ul style="list-style-type: none"> No. of LED triangular lights: 6 No. of LED strobe lights (clear): 1 smart sounder with multiple frequencies (64 different sound pattern) IP class: 55 local telephone input processing | <ul style="list-style-type: none"> No. of LED triangular lights: 7 No. of LED strobe lights (clear): 1 smart sounder with multiple frequencies (64 different sound pattern) IP class: 55 local telephone input processing | <ul style="list-style-type: none"> No. of LED triangular lights: 8 No. of LED strobe lights (clear): 1 smart sounder with multiple frequencies (64 different sound pattern) IP class: 55 local telephone input processing | <ul style="list-style-type: none"> No. of LED triangular lights: 10 No. of LED strobe lights (clear): 1 smart sounder with multiple frequencies (64 different sound pattern) IP class: 55 local telephone input processing |
|--|--|--|---|



- | | | | |
|--|--|--|--|
| <ul style="list-style-type: none"> No. of LED triangular lights: 6 No. of LED strobe lights: 3 smart sounder with multiple frequencies (64 different sound pattern) IP class: 55 local telephone input processing | <ul style="list-style-type: none"> No. of LED triangular lights: 7 No. of LED strobe lights: 3 smart sounder with multiple frequencies (64 different sound pattern) IP class: 55 local telephone input processing | <ul style="list-style-type: none"> No. LED of triangular lights: 8 No. of LED strobe lights: 3 smart sounder with multiple frequencies (64 different sound pattern) IP class: 55 local telephone input processing | <ul style="list-style-type: none"> No. LED of triangular lights: 10 No. of LED strobe lights : 3 smart sounder with multiple frequencies (64 different sound pattern) IP class: 55 local telephone input processing |
|--|--|--|--|

*available in 115VAC, 230VAC, 24VDC

PERIPHERY EQUIPMENT

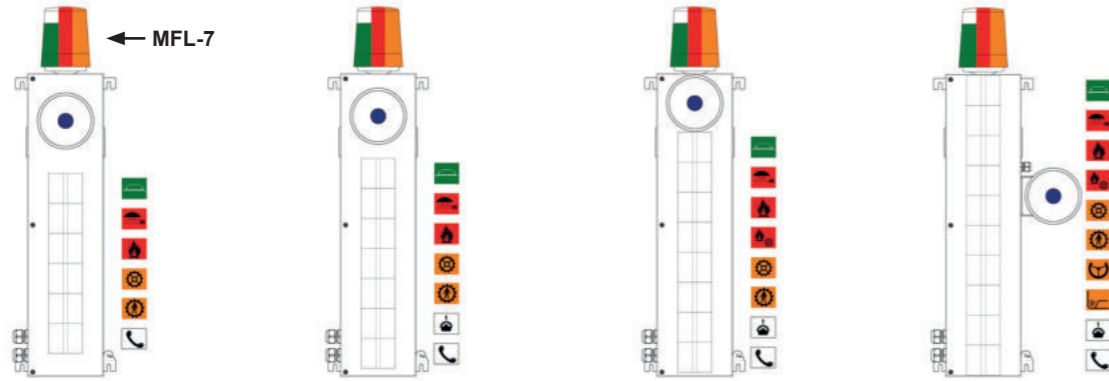
LSD COLUMNS WITH MED TYPE APPROVED MULTI-TONE SOUNDER AND MULTI-COLORED STROBE LIGHT (7 COLORS)*

LSD 315.62.12.1x1

LSD 315.62.12.1x1

LSD 315.62.12.1x1

LSD 315.62.12.1x1



- | | | | |
|--|--|--|---|
| <ul style="list-style-type: none"> • No. of triangular lights: 6 • No. of multi-color LED strobe lights: 1 • smart sounder with multiple frequencies (64 different sound pattern) • IP class: 55 • local telephone input processing | <ul style="list-style-type: none"> • No. of triangular lights: 7 • No. of multi-color LED strobe lights: 1 • smart sounder with multiple frequencies (64 different sound pattern) • IP class: 55 • local telephone input processing | <ul style="list-style-type: none"> • No. of triangular lights: 8 • No. of multi-color LED strobe lights: 1 • smart sounder with multiple frequencies (64 different sound pattern) • IP class: 55 • local telephone input processing | <ul style="list-style-type: none"> • No. of triangular lights: 10 • No. of multi-color LED strobe lights: 1 • smart sounder with multiple frequencies (64 different sound pattern) • IP class: 55 • local telephone input processing |
|--|--|--|---|

*available in 115VAC, 230VAC, 24VDC

LIGHT SIGNAL CONTROL UNIT



LSCU 250.1.6.8

- on mounting plate 483 x 320mm
- 12 logical inputs
- 12 logical outputs distributed to 6x11 single fused output channels
- integrated test mode
- individual sound delay parameter
- 6 physical lines
- 6 columns per line
- total columns LSDs 36

also available with PSDM (Power Source Detection Module)

- incl. automatic power supply change-over module - 2x24VDC, 2x8A (MSB & ESB)
- incl. automatic power supply change-over module - 2x115VAC, 2x8A (MSB & ESB)
- incl. automatic power supply change-over module - 2x230VAC, 2x8A (MSB & ESB)

PERIPHERY EQUIPMENT

770011



- wall box for LSCU
- with 17 cable glands
- 600 x 600 x 210mm

770733



- wall box for LSCU
- with 17 cable glands
- 600 x 380 x 210mm

770050



- 4- lines output module (to connect further 24 LSDs)

770295



- 2x16A power supply change-over module

770873



- 2x32A power supply change-over device

770397



- speaker, bulkhead mounted
- DKSM 15-120 (120db)
- low impedance

099337



- speaker, built-in
- sme 133
- low impedance

999507



- LED bulbs for triangular lights (each light)
- (MOQ - 25pcs)
- 230 VAC
- especially designed for marine application

999770



- LED bulbs for triangular lights (each light)
- (MOQ - 25pcs)
- 24 VDC
- especially designed for marine application

999769



- LED bulbs for triangular lights (each light)
- (MOQ - 25pcs)
- 115 VAC
- especially designed for marine application



- individual paint finish (industrial standard)



- individual paint finish (yacht standard, high glossy)

770675



- individual symbol for triangular lights (adhesive foil)

770674



- FL-1 cover (amber)

770676



- FL-1 cover (clear)



- FL-1 cover (blue)

770679



- FL-1 cover (green/clear)

770678



- FL-1 cover (green)

770677



- FL-1 cover (red)

201222



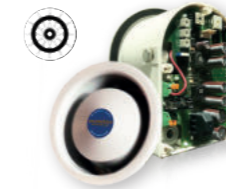
- 6-lines output module

201200



- PSDM 210.2.8.1, 230VAC
- 2x8A power supply change-over module
- time delayed change over

991527



- Fire Alarm Sounder - AGM 410.1.8.2 (230VAC)
- System Voltage 24VDC (19-29 VDC)
- Alarm input voltage 110...230VAC (50/60Hz)
- 64 different sound characteristics
- MED certified

777777



MFL-7

- MFL-7, stroboscopic LED light (100...240VAC)
- 7 different colours in one lamp (red, green/white, amber, yellow, green, blue, clear)
- selectable flash pattern
- priority based alarm inputs

099787



- FL-1, strobe LED light green (20-300VDC, 100-240VAC)
- System voltage 20...300VDC, 100...240VAC 50/60Hz
- Flashing frequency 2Hz
- Power consumption 2,5W – 9W

099786



- FL-1, strobe LED light blue (20-300VDC, 100-240VAC)
- System voltage 20...300VDC, 100...240VAC 50/60Hz
- Flashing frequency 2Hz
- Power consumption 2,5W – 9W

099785



- FL-1, strobe LED light amber (20-300VDC, 100-240VAC)
- System voltage 20...300VDC, 100...240VAC 50/60Hz
- Flashing frequency 2Hz
- Power consumption 2,5W – 9W

099784



- FL-1, strobe LED light red (20-300VDC, 100-240VAC)
- System voltage 20...300VDC, 100...240VAC 50/60Hz
- Flashing frequency 2Hz
- Power consumption 2,5W – 9W

099783



- FL-1, strobe LED light gn/wh (20-300VDC, 100-240VAC)
- System voltage 20...300VDC, 100...240VAC 50/60Hz
- Flashing frequency 2Hz
- Power consumption 2,5W-9W

099777



- FL-1, strobe LED light clear (20-300VDC, 100-240VAC)
- System voltage 20...300VDC, 100...240VAC 50/60Hz
- Flashing frequency 2Hz
- Power consumption 2,5W – 9W

099334



- Wall bracket for FL-1/MFL-7 incl. Seals & screws

PERIPHERY EQUIPMENT

INDICATOR PANEL FOR CONSOLE MOUNTING

LSD 210.902.0.120 (230 VAC)

991260



- indication panel for console mounting
- 144 x 144 x 75mm
- max. 9 symbols
- electronic buzzer included
- LED technology
- IP23

LSD 210.902.0.130 (24 VDC)

770774



- indication panel for console mounting
- 144 x 144 x 75mm
- max. 9 symbols
- electronic buzzer included
- LED technology
- IP23

SHIPS ALARM INDICATOR

LSD 288.12.0.010	1 symbol 115 VAC	099889
LSD 288.12.0.020	1 symbol 230 VAC	099890
LSD 288.12.0.030	1 symbol 24 VDC	099891
LSD 288.22.0.010	2 symbol 115 VAC	099892
LSD 288.22.0.020	2 symbol 230 VAC	099893
LSD 288.22.0.030	3 symbol 24 VDC	099894
LSD 288.32.0.010	3symbol 115 VAC	099895
LSD 288.32.0.020	2 symbol 230 VAC	099896
LSD 288.32.0.030	3 symbol 24 VDC	099897
LSD 288.12.0.110	1 symbol 1 sounder 115 VAC	099898
LSD 288.12.0.120	1 symbol 1 sounder 230 VAC	099899
LSD 288.12.0.130	1 symbol 1 sounder 24 VDC	099900
LSD 288.22.0.110	2 symbol 1 sounder 115 VAC	099991
LSD 288.22.0.120	2 symbol 1 sounder 230 VAC	099992
LSD 288.22.0.130	2 symbol 1 sounder 24 VDC	099993



e.g. LSD 288.12.0.110

TRIANGULAR LAMP SET

(incl. triangular cover, bracket, sealing, bulb holder and LED bulb)

Triangular Light Kit	LED 24 VDC	099888
Triangular Light Kit	LED 230 VAC	099887

TRIANGULAR LIGHT SYMBOLS



CO₂ ALARM
099034



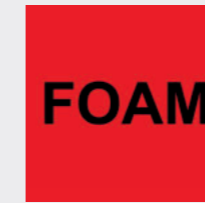
FIRE ALARM
099333



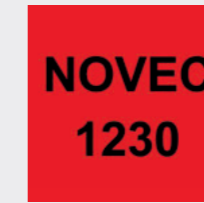
FIRE ALARM ER
099035



HI FOG ALARM
099244



FOAM ALARM
099245



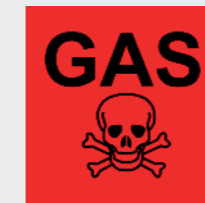
NOVEC ALARM
099400



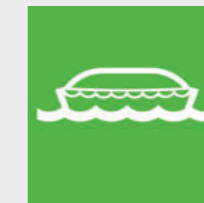
WATER FOG
099332



WATER MIST
099407



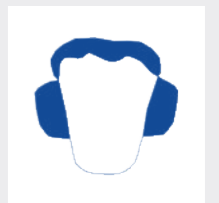
TOXIC GAS
0991253



GENERAL ALARM
099033



HOSPITAL CALL
099043



ENGINEER CALL
099404



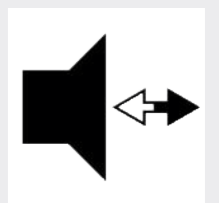
ABANDON SHIP
099666



MAN OVER BOARD
099671

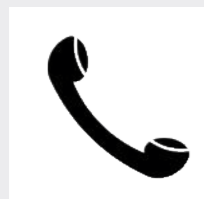
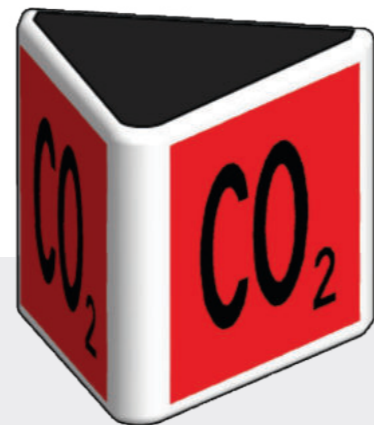


EOT CALL
099038



INTERCOM CALL
099219

PERIPHERY EQUIPMENT



TELEPHONE CALL
099037



SPT CALL
099338



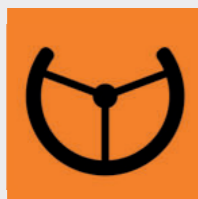
BRIDGE ALARM
099065



WATCH ALARM
099066



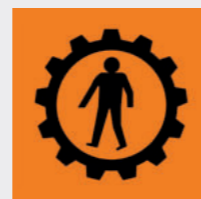
COLD STORE ALARM
099042



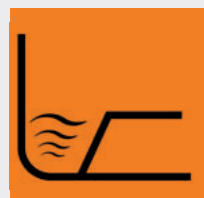
STEERING GEAR
099140



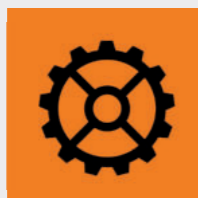
SPRINKLER ALARM
099075



WATCH ALARM ER
099039



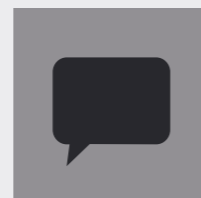
BILGE ALARM
099139



ENGINE ALARM
099036



COMBUSTIBLE GAS
991251



INDIVIDUAL SYMBOL
(on request)

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