

LIGHT SIGNAL ALARM SYSTEM for ER

with high signalling Light Signal Devices



***LED & triac
technology
available***

- ✓ ***digital sound processing***
- ✓ ***multiple acoustics philosophies***
- ✓ ***80 up to 120dB(A) sound pressure***
- ✓ ***mini-PLC based compact control unit***

acc. to IMO



available

Light Signal Control Unit (LSCU)

mini-PLC
with info display

input module with
2-pole plug terminals



basic LSCU
to serve
32 LSDs

LSCU 210.1.4.8

output module with 4 micro-fuse
secured output lines for up to
32 columns

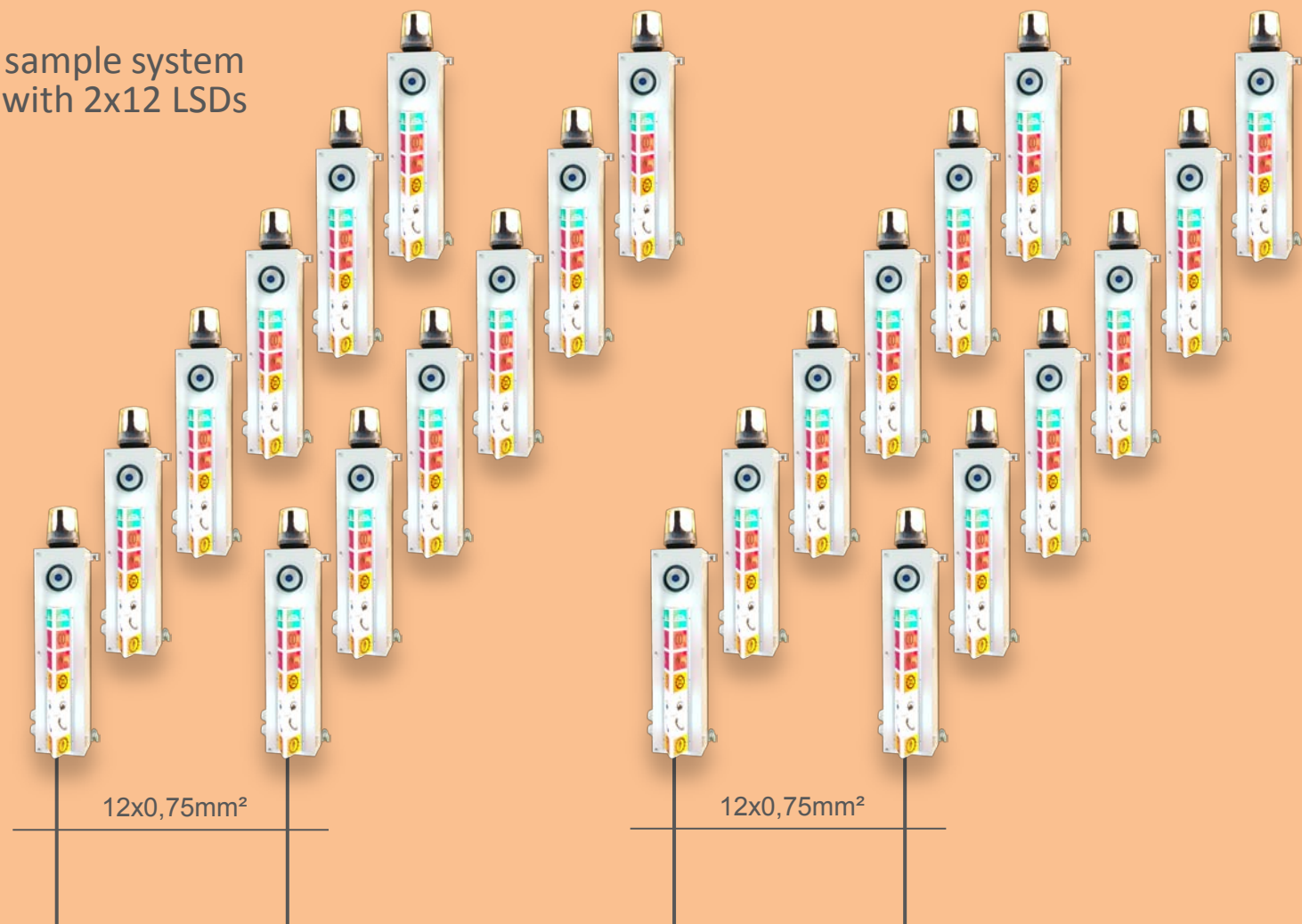
ESB / MSB power supply
change-over module (16A)
(optional)

technical data & features:

- ✓ 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
- ✓ corresponding systems: dry n/o contacts (24VDC / 50mA) required
- ✓ online user manual @ www.sm-electrics.de

redundant system configuration

sample system
with 2x12 LSDs

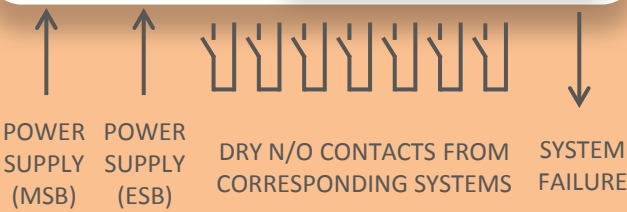


LSCU #1

two independant
control units
(LSCUs) do service
one half each of
installed alarm
devices



LSCU #2



Light Signal Devices LSD 209 – standard

*no internal wiring due to common PCB which serves all triangular lights!
system voltage: 230VAC, 115VAC or 24VDC, degree of enclosure: real IP55*

LSD 209.x.3.1



- acc. to SeeBG (German flag)
- 1 sounder with 2 frequencies
- 4 different sound characteristics
- max. 117dB(A) sound level
- sound level adjustable
- x = 3...10 triangular lights
- 3 high signalling 3-lense rotating lights

LSD 209.x.2.1



- traditional type
- 1 sounder with 2 frequencies
- 4 different sound characteristics
- max. 117dB(A) sound level
- sound level adjustable
- x = 3...10 triangular lights
- 2 high signalling 3-lense rotating lights

LSD 209.x.1.1



- acc. to IMO / SOLAS
- 1 sounder with 2 frequencies
- 4 different sound characteristics
- max. 117dB(A) sound level
- sound level adjustable
- x = 3...10 triangular lights
- 1 high signalling 3-lense rotating light

Light Signal Devices LSD 309 dac, dynamic acoustics control

*µp based acoustics controller w. digital signal processing generates individually sounder's soft start
system voltage: 230VAC, 115VAC or 24VDC, degree of enclosure: real IP55*

LSD 309.x.3.1 dac



- acc. to SeeBG (German flag)
- 1 sounder with 10 individual tone pattern
- 32 different maritime sound characteristics
- max. 118dB(A) sound level
- digital signal processing with soft start
- x = 3...10 triangular lights
- 3 high signalling 3-lense rotating lights

LSD 309.x.2.1 dac



- traditional type
- 1 sounder with 10 individual tone pattern
- 32 different maritime sound characteristics
- max. 118dB(A) sound level
- digital signal processing with soft start
- x = 3...10 triangular lights
- 2 high signalling 3-lense rotating lights

LSD 309.x.0.1 dac



- acc. to IMO / SOLAS
- 1 sounder with 10 individual tone pattern
- 32 different maritime sound characteristics
- max. 118dB(A) sound level
- digital signal processing with soft start
- x = 3...10 triangular lights
- 1 high signalling 3-lense rotating light

Light Signal Devices LSD 210 – special edition

twin bulbs for all triangular lights

system voltage: 230VAC, 115VAC or 24VDC, degree of enclosure: real IP55

LSD 210.4.3.1



- acc. to SeeBG (German flag)
- 1 sounder with 4 frequencies
- 4 different sound characteristics
- max. 118dB(A) sound level
- sound level adjustable
- 3 high signalling 3-lense rotating lights

LSD 210.x.0.0



- acc. to IMO / SOLAS
- x = 3...10 triangular lights

LSD 210.80.0.1
indication panel



- power supply: 230VAC, 115VAC or 24VDC
- panel for console mounting
- up to 9 symbols
- twin bulbs or LEDs
- integrated electronic buzzer (rear side)
- 144x144x70mm, IP 23

Acoustics Generator Module AGM dac dynamic acoustics control

LSD 309 / 310 series with intelligent acoustics features dac – dynamic acoustics control (soft start)

A compact sound module to be mounted on TS35 terminal rail inside each alarm column is based upon a 40W digital amplifier unit. A RISP processor is generating 32 maritime specific sound characteristics which can be allocated individually to 9 physical input channels. That world wide unique module allows audible minor alarms to start with a reduced sound level increasing automatically to the maximum level within a defined period. This "soft start" will help raise health and safety levels for personnel working in low noise level environments that do not require ear protection and where standard alarm systems generating maximum sound levels that could damage hearing.

- starting sound level between 70...110dB
- ending sound level between 80...118dB
- sound level's rising speed (period) 1...120sec



triangular light symbols

- ✓ listed symbols are in stock
- ✓ all individual symbols are available



CO2 ALARM



GENERAL ALARM



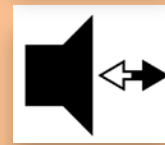
EOT CALL



FIRE ALARM



HOSPITAL CALL



INTERCOM CALL



FIRE ALARM ER



ENGINEER CALL



ABANDON SHIP



HI FOG ALARM



STEERING GEAR



MAN OVER BOARD



FOAM ALARM



SPRINKLER ALARM



TELEPHONE CALL



NOVEC ALARM



WATCH ALARM ER



SPT CALL



WATER FOG



BILGE ALARM



BRIDGE ALARM



WATER MIST



ENGINE ALARM



WATCH ALARM



TOXIC GAS



COMBUSTIBLE GAS



COLD STORE ALARM