Safety instructions

DANGER

Danger caused by wrong mounting or handling!

Wrong mounting or handling of this unit can result in serious injuries or death.

- First read these instructions and, where appropriate, any other instructions and information attached to the unit!
- Please observe the warnings and notes included in the instructions and attached to the unit!

DANGER

This symbol identifies items that may directly result in serious injuries or death in case of non-observance or wrong handling.

WARNING

This symbol identifies items that may result in serious injuries or death in case of non-observance or wrong handling.

CAUTION

This symbol identifies items that may result in injuries or material damage in case of non-observance or wrong handling.

NOTICE

This symbol identifies items that may result in material damage in case of non-observance or wrong handling.

Safety instructions

DANGER

Explosion hazard!

Operating the light in rooms subject to explosion hazards can trigger an explosion.

- Operate in rooms not subject to explosion hazards only!

WARNING

Danger due to electrical shock in case of contact!

Maintenance or repair work carried out incorrectly may result in serious injuries or death.

- Disconnect the light from the mains before carrying out any maintenance or repair work!
- Maintenance and repair work must be carried out by a skilled electrician only!
- Only parts released by the manufacturer may be used as spare parts!

NOTICE

Damage caused by wrong mains voltage!

A wrong mains voltage can result in damaging or destroying the lamp.

- Operate units of protection class III with safety extra low voltage (SELV) only!
- Connection only by a skilled electrician!
- Before putting the light into operation, the user has to check whether the mains voltage is identical with the rated voltage specified on the rating plate.

Safety instructions

⚠ WARNING

Risk of blinding!

Looking directly into the light source may cause temporarily impaired vision and afterimages. This may result in irritations, inconveniences, impairments or even accidents.

- ➢ Looking directly into the light source must be avoided.
- ➢ Position light in such a way that looking directly into the light source is avoided.

NOTICE

Damage caused by the incident laser beam!

Direct or indirect incidence of a laser beam may result in the destruction of the LED.

- ➢ Use the light only outside the range of action of high-performance lasers (e.g. cutting laser, welding laser).

Description

ONE LED

The **ONE LED** supplements the **Waldmann** product range of LED machine lights. To extend the range of LED lights including standard LEDs (e.g. **SPOT LED**), which are already offered by **Waldmann,** the new **ONE LED** light series has been developed.

With the new **ONE LED** series, **Waldmann** creates a new light series that is suitable not only for the basic illumination of machine tools and machining centres but also for the direct lighting of the working area.

Using a high-power light-emitting diode provides an exceptional lighting power that is at least equal to that of other lamps.

Using a housing equipped with a large cooling surface provides a long useful life, resulting in fewer machine downtimes as a result of maintenance work.

ONE LED lights from **Waldmann** are available as stationary or swivelling mounted lights. The lights are available both for single connection (MVAL 1 S) and with through-wiring (MVAL 1 S**D**).

A housing made of die-cast aluminium and a protective safety glass pane are resistant to hot and sharp-edged chips. The housing is water-proof and resistant to coolants and lubricants. For less critical areas, a version including a protective pane made of acrylic glass is available.

Protection type:	
Safety glass pane	IP67
Acrylic glass pane	IP54

Designated use

Intended purpose:

Machine light - light to be mounted on machines

Place of use:

Exclusively suited for rooms not subject to explosion hazards.

The ambient temperature T_{Amax} must not exceed 50°C.

Not for use in the range of action of high-performance lasers.

Operating mode:

The light is designed for continuous operation.

Abbreviations and symbols


Safety or warning instructions!


Important information!


Unit corresponds to international protection class III (Operation with savety extra low voltage (SELV))


Functional earth


The light is suitable for mounting on normally inflammable surfaces


Observe the disposal instructions!

LED Light Emitting Diode


VDE Approval


ENEC Approval


SEV Approval


CE Conformity mark

The manufacturer cannot be held liable for damage caused by using the unit for purposes contrary to the designated use or by ignoring safety instructions and warnings.

Mounting

⚠ CAUTION

Danger due to insufficient fastening!

When mounted incorrectly, the light may fall down.

- The light must be mounted in a stable position on the mounting surface by means of screws or other suitable adapter units!
- When using mounting elements which have not been proposed by the manufacturer, the user has to verify their reliability!
- The light may only be mounted on a surface suitable for mounting!
- Mounting by a skilled electrician only!

Direct mounting

The light can be screwed directly onto the housing by means of self-tapping screws (see Fig. 51 on page 30).

Important information!

The light must be earthed (functional earth)! To this end, the light must be screwed to a surface connected to functional earth.

* self-tapping screw
M5 x 10 DIN 7500
Waldmann No. 407015112

Mounting the holders

For the drill pattern for the various holders, please refer to the drawings Fig. 52 to Fig. 54 on page 30.

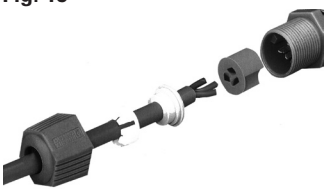
Note: For special models, the drill pattern can differ from the standard drill pattern.

Important information!

The light must be earthed on the holder (functional earth)! To this end, the light must be screwed to a surface connected to functional earth.

Connection

Fig. 15



NOTICE

Damage caused by wrong mains voltage!

A wrong mains voltage might damage or destroy the light.

- The connection must be made by a skilled electrician only!
- Before putting the light into operation, the user has to check whether the mains voltage is identical to the rated voltage specified on the rating plate!
- For the connection, the attached connection parts must be used.
- The light has to be connected according to the applicable regulations for installation.

Connection

The light is delivered with the Phoenix Quickon connection system (see Fig. 15).

Required cable

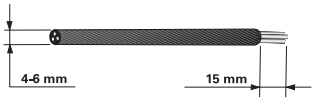
Flexible cable	0,34 - 0,75 mm²
Cable sheathing Ø	4 - 6 mm
Single strand Ø	
- with 0,34 mm²	>= 0,10 mm
- with 0,5 mm²	>= 0,15 mm
- with 0,75 mm²	>= 0,15 mm
Wire insulation:	PVC/PE

Stripping insulation

Strip insulation from cable sheathing only - do not strip insulation from wires

Length of stripped insulation 15 mm

Fig. 15a



The following connection assignment must be observed:

1 DC
2 DC
3 not used

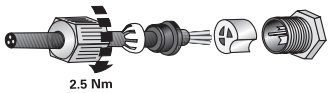
Important Information:

The light is protected against polarity reversal. Its function is guaranteed even when the DC-lines are switched.

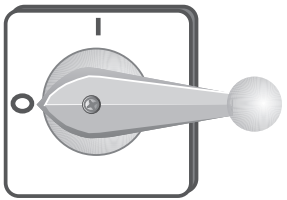
With through-wiring, a **maximum of 3 lights** may be connected in series.

When reconnecting cable (no more than 10 times), the used wire end must be cut off.

Fig. 15b



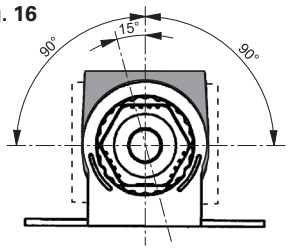
Operation



Switching the light on and off

The standard equipment of the light does not include a switch of its own. It is switched on/off via external circuit elements or connectors.

Fig. 16

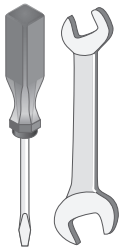


Aligning the light

When using a suitable holder, the light can be adjusted as required by the user.

The swivel range is 90° in each direction and is subdivided into locking steps of 15° each.

Maintenance and repair



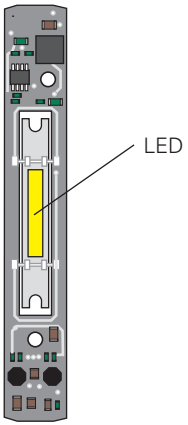
⚠ WARNING

Danger due to electrical shock upon contact!

Maintenance or repair work carried out incorrectly may result in serious injuries or death.

- ➢ Disconnect the light from the mains before carrying out any maintenance or repair work!
- ➢ Maintenance and repair work must be carried out by a skilled electrician only!
- ➢ Only parts released by the manufacturer may be used as spare parts!

Fig. 17



Defective light source

The light is equipped with light-emitting diodes (LEDs). The useful life of LEDs exceeds by far that of conventional lamps (e.g. light bulbs). Therefore, a lamp replacement is rarely necessary.

If nevertheless the LED should break down, the light must be checked at the manufacturer's and repaired, if necessary.

Care

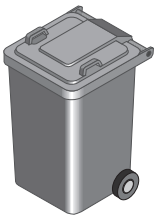
NOTICE

Risk of damage through wrong care!

Wrong care may destroy the unit.

- ➢ Clean the transparent cover at regular intervals!
- ➢ Clean the light parts only with a cloth impregnated with a standard household cleaning agent!
- ➢ Make sure the agents used are compatible with paints and plastics!

Disposal



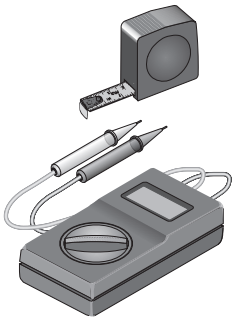
NOTICE

Environmental hazard!

Wrong disposal endangers our environment.

- ➢ Return the unit at the end of its useful life to the available recycling systems!

Technical data



General:

Protection class III
Protection type IP54/IP67
Operating mode:
Continuous operation

Technical safety check
according to EN 60598-1

Rating according to DIN 60825-1
and VDE 0837 Laser class 1

Dimensions:

Light body
approx. 134 x 30 x 29 mm

Light MVAL 1 S with holder U
approx. 168 x 57 x 36 mm

Light MVAL 1 SD with holder U
approx. 196 x 57 x 36 mm

Light MVAL 1 S with holder L
approx. 191 x 47 x 36 mm

Light MVAL 1 SD with holder L
approx. 196 x 47 x 36 mm

Light MVAL 1 S with holder A
approx. 189 x 30 x 36 mm

Light MVAL 1 SD with holder A
approx. 196 x 30 x 36 mm

Electrical values:

MVAL 1 S(D)
Operating voltage 20-28 V DC
Power consumption approx. 6 W

NOTICE

Risk of damage due to differences from the standard design.

If required, this series of units will be supplemented by further variants. The technical data may therefore be subject to modifications.

➢ Always observe the data and symbols given on the rating plate!

Appendix

Fig. 51

MVAL 1 S
without holder

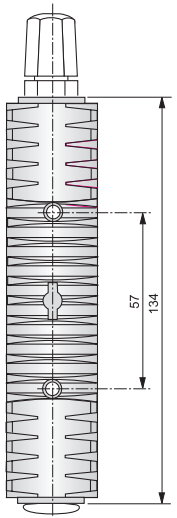


Fig. 52

MVAL 1 S
with holder U

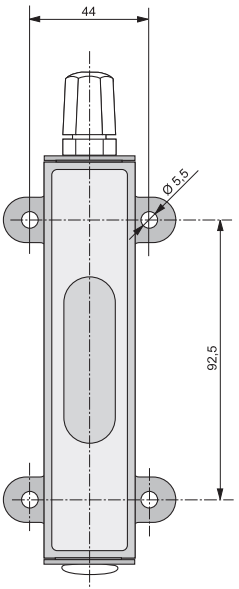


Fig. 53

MVAL 1 S
with holder L

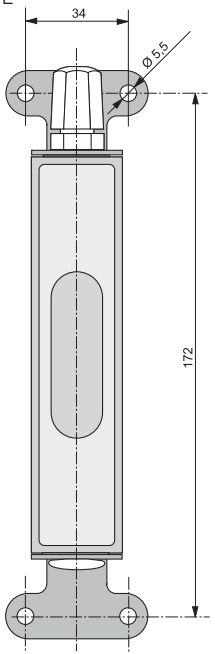


Fig. 54

MVAL 1 S
with holder A