

Operating and Installation Instructions SPL-A-R1 – Light Rod for Winter Service Vehicles

Safety instructions and intended use

The SPL-A-R1 light rod is a marker light for snow ploughs on winter service vehicles with a 24 V on-board electrical system. It is slid onto the marker rod Ø25 mm at the outer edge of the plough blade and indicates the width of the plough: white to the front, red to the rear.

- Installation and connection by a qualified workshop only.
- Disconnect the power supply before working on the electrical system.
- Operate on 24 V DC only.
- Fit one light rod on each side of the plough; observe the installation regulations (UN-R48, StVZO (German road traffic licensing regulations)) and the vehicle's installation approval report.
- Do not open the light rod. It contains no parts that can be serviced or replaced by the user.
- Never let polycarbonate parts (light tube) come into contact with solvents, petrol or oils – risk of stress cracking.
- Do not continue to operate a damaged light rod (cracks in the tube, moisture inside, defective cable).

Scope of delivery and tools

The light rod is delivered fully assembled and sealed, with a permanently connected cable.

Part	Qty
Light rod SPL-A-R1 with rod adapter, 2-core connection cable, 2 m	1
Cylinder head screw ISO 4762 M5 × 8, stainless steel A4	6
Operating and installation instructions	1

Tools and materials required

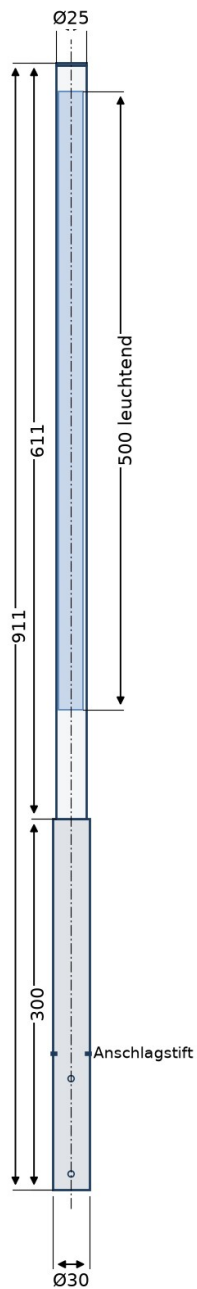
- Hexagon socket key 4 mm
- Torque wrench for 2 Nm
- Medium-strength thread-locking adhesive (e.g. Loctite 243)
- Material for the electrical connection (connector or junction box, cable ties)

Technical data

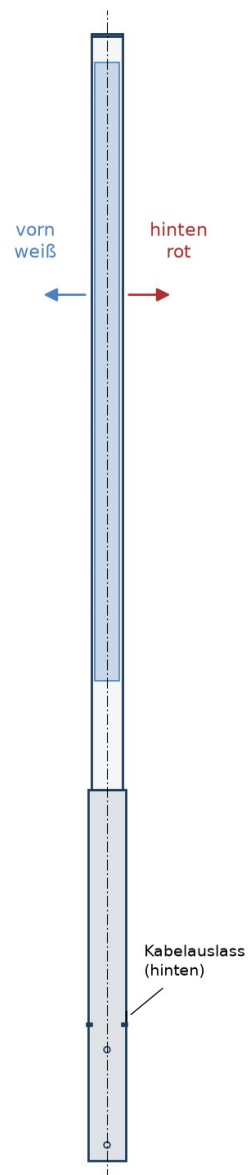
Feature	Value
Function	Marker light for snow ploughs, white to the front, red to the rear
Rated voltage	24 V DC
Power consumption	3+/-0.5 W at 24 V
Light source	LED, not replaceable
Visible lit length	50 cm
Length	911 mm
Diameter	Ø25 mm light rod , stainless steel adapter Ø30 mm
Mounting	Marker rod <Ø25.5 mm, insertion depth 108 mm
Mass	≈ 0.8 kg
Ingress protection	IP6K9K
Operating temperature	-40 ... +60 °C
Materials	Light tube polycarbonate, UV-stabilised, adapter and end caps stainless steel 1.4401

Vorderansicht (Blick gegen die Fahrtrichtung)

Seitenansicht (Fahrtrichtung links)



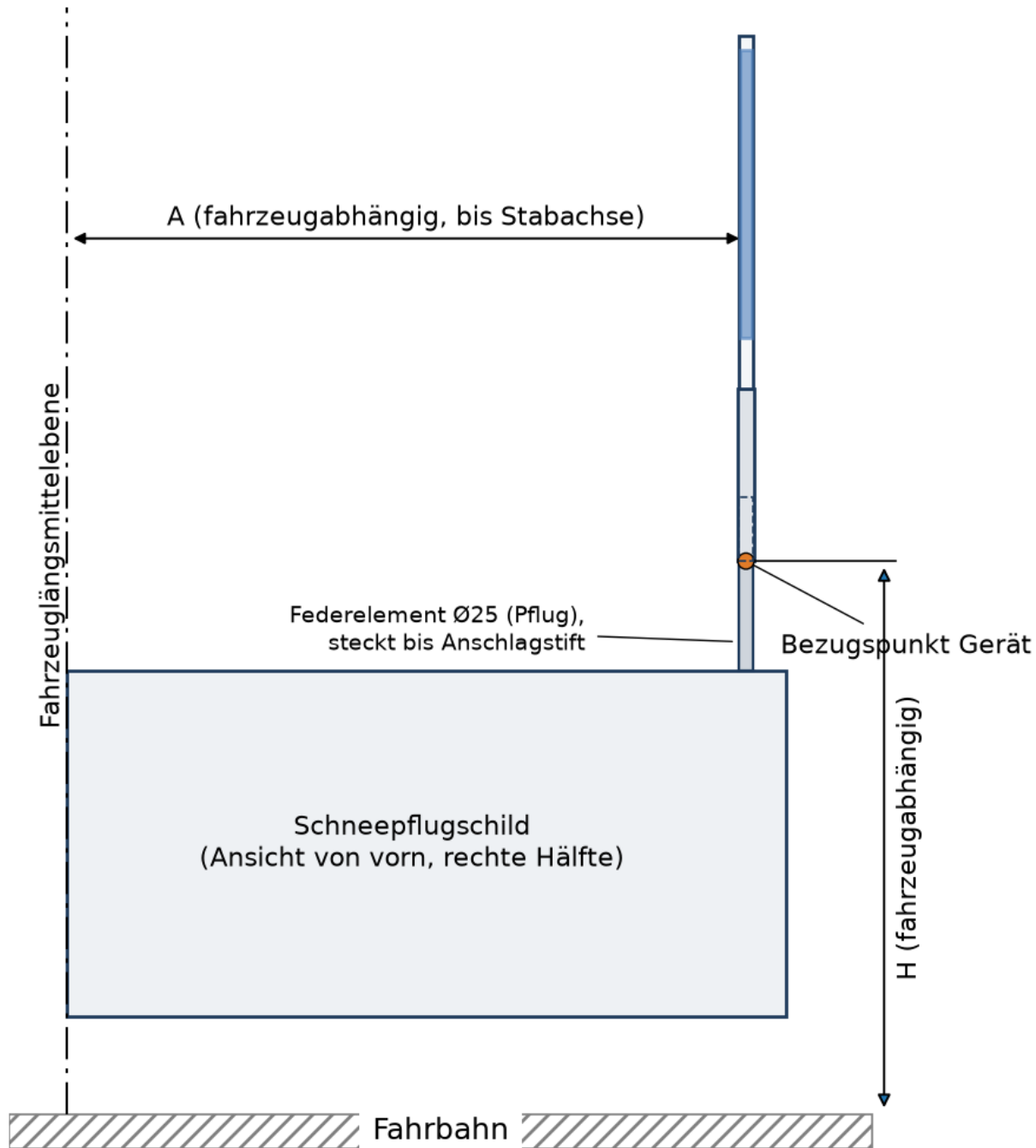
Maße in mm



Installation on the snow plough

One light rod is fitted to the left and one to the right on the marker rod at the outer edge of the plough blade. The white side faces the direction of travel, the cable outlet faces rearwards.

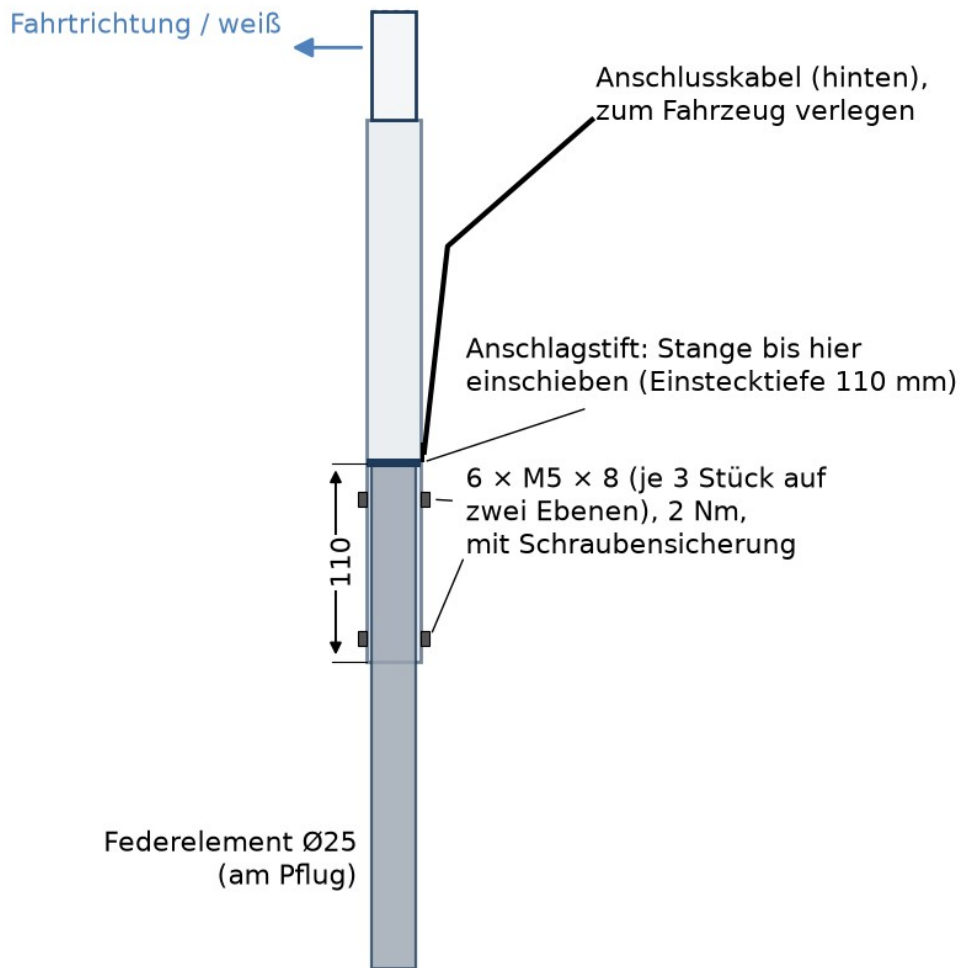
Anbauposition (schematisch)



Requirements for the spring element

- Outside diameter 25.5 mm, upper end cut off square and deburred.
- The upper 108 mm straight, clean and undamaged.
- Choose the component height so that the lit area is at the prescribed height above the road surface. The lit area is 278 mm to 778 mm above the end of the rod.

Anbau am Stangenadapter (Seitenansicht, Fahrtrichtung links)



Installation steps

1. Disconnect the vehicle's power supply.
2. Slide the light rod from above onto the spring element until the spigot visibly rests against the stop pin (max. insertion depth 108 mm).
3. Align the light rod: cable outlet exactly to the rear, white side in the direction of travel, rod vertical.
4. Apply medium-strength thread-locking adhesive to the 6 screws M5 x 8 and screw them into the threads of the adapter (3 screws per level).
5. Tighten the screws crosswise to 2 Nm. Do not overtighten, so that the plastic of the spring element does not break.
6. Check the alignment again.
7. Route the connection cable to the vehicle and secure it (see Electrical connection).
8. Proceed in the same way on the other side of the plough.

The light rod is positively locked against rotation on the inside: when the cable outlet is at the rear, the white side automatically shines to the front.

Electrical connection and function check

The light rod is connected to the marker light circuit (24 V) and lights up together with the parking light. It is protected against reverse polarity and overvoltage.

Core	Core number	Colour marking	Connection
+	1	Red	Marker light 24 V, switched and fused
-	2	Black (or none)	Vehicle ground

Routing the cable

- Do not kink, pull or move the cable at the cable outlet. It must sit firmly there, free of tension.
- Secure the cable safely as far as the plough frame, e.g. with cable ties at intervals of no more than 30 cm.
- For detachable ploughs, provide a waterproof plug connector at the plough mounting.
- When routing, take into account the raising, lowering and swivelling of the plough: sufficient cable length in a loop, no chafing points.
- Make connections watertight (e.g. heat-shrink connectors with adhesive). Moisture must not reach uninsulated strands or contacts, as it could otherwise be drawn through the cable into the light
- If shortening the cable is necessary, the wire numbering can be used for orientation.

Function check

- ☐ Switch on the marker light: both light rods shine white to the front and red to the rear.
- ☐ Lit area uniform, without dark sections.
- ☐ Cable free in all plough positions, without tension and chafing points.
- ☐ Screws tight, rod vertical, cable outlet at the rear.

Operation, care and faults

In operation the light rod needs no operating action; it switches with the marker light. Before every journey, check that both rods light up and are not dirty or iced over.

Care and maintenance

- Clean the light tube with water, a mild detergent and a soft cloth. No solvents, no petrol, no harsh cleaners.
- High-pressure cleaner: keep a distance of at least 30 cm, do not aim the jet directly at the cable outlet.
- After the winter season, check the screws (2 Nm), cable and plug connector are secure and wash off any road-salt residue.
- The light rod is maintenance-free and must not be opened.

Fault	Possible cause	Remedy
Light rod does not light up	no voltage, fuse defective, connection loose, + and - swapped	Check voltage and fuse, check plug connector, correct connection
Light rod fails at high voltage	Overvoltage in the on-board electrical system	Have the on-board electrical system checked
White side does not face forwards	Rod fitted rotated	Loosen screws, turn cable outlet to the rear, retighten
Moisture in the tube, crack, flickering light	Damage	Replace the light rod, contact the manufacturer
Rod loose	Screws loosened	Retighten to 2 Nm with thread-locking adhesive

Disposal

The light rod contains electronics and must not be disposed of with household waste. Dispose of it via a collection point for waste electrical equipment or through the manufacturer.

Manufacturer

LED-Emotion GmbH · Hannoversche Str. 39A · 31275 Lehrte