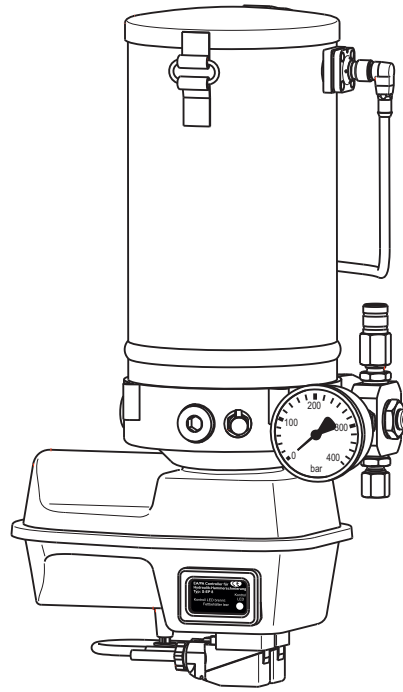




## Integrated electronic controller type S-EP 8

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Electric pump EP-1 with integrated controller S-EP 8

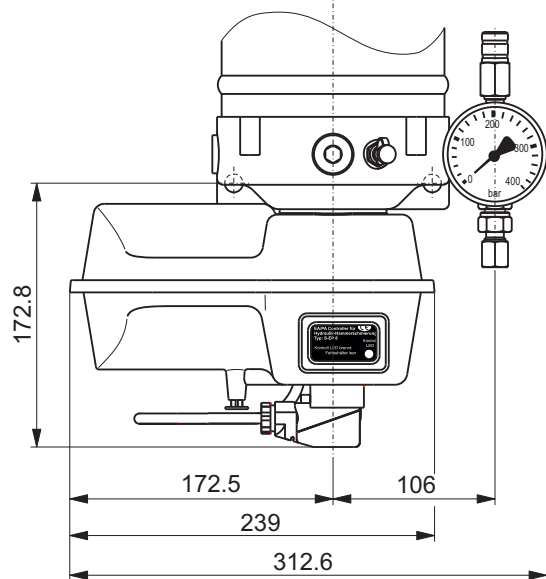


### 1. General informations:

The control unit S-EP 8 serves for monitoring a central lubrication system at a hydraulic hammer, equipped with an electronically driven pump.

### Installation dimensions:

The electrical pump EP-1 with integrated controller S-EP 8 can be equipped with various reservoir versions. For the installation dimensions of the reservoir versions, see the description EP-1 with steel reservoir.





## S-EP 8

### 2. Function sequence

Once the ignition has been switched on the yellow LED or the green signal lamp (optional) lights up on the control panel for 1.5 sec. and shows that the controller is operational (activation control).

The pump is directly connected with the foot switch of the hydraulic hammer. The pump delivers, when this switch is actuated.

A capacitive proximity switch is built into the pump's reservoir for level monitoring. As long as enough grease is available in the reservoir, the proximity switch sends a signal to the controller. When the grease level sinks below a certain level, the proximity switch turns off the signal. If the signal remains off for more than 10 sec. the reservoir is seen as empty. That no air is pumped into the system controller switches off the pump. The yellow LED starts flashing.

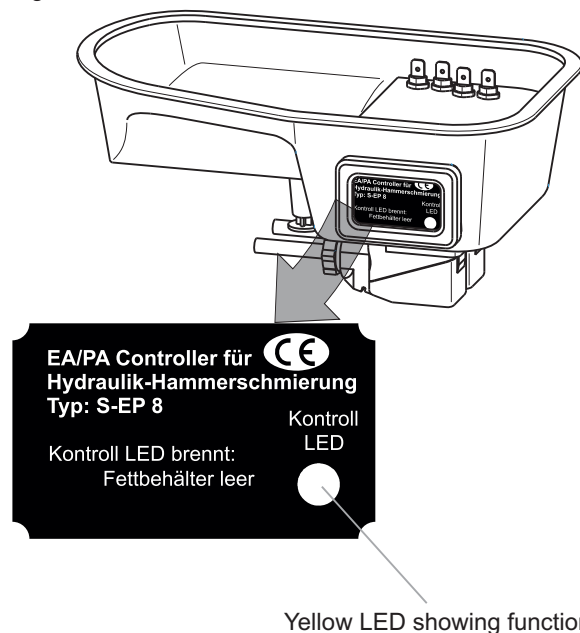
There is no malfunction when the reservoir is filled again with lubricant.

The grease level control is delivered in already condition.

#### Technical data of the capacitive proximity switch

Operation voltage:	10 to 60 V DC
Connecting method:	PNP NO (normally open contact)
Max. current load:	250 mA
Protection type:	IP 67
Ambient temperature range:	-25°C to +70°C
Connection:	4 pol. / M12x1 plug-in

Integrated electronic controller S-EP 8:



#### Technical data for the controller:

Operating voltage:	10 to 60 V DC
Max. current load:	I = 6.0 A
Fuse (not included in device):	F 6.3 A (5x20) medium
Signal lamp outlet:	I = 0.4 A
Temperature range:	-35°C to +75°C
Protection type:	IP 65



## S-EP 8

### 3. Collective disturbance report and starter enabling relay

#### Collective disturbance report:

This yellow LED function may be indicated in the driver's cap of the vehicle via a built-in signal lamp or an audible signal.

When the reservoir is seen as empty, it shines steadily or a audible signal produces a steady signal until the reservoir is filled again.

Lamps resp. audible signal and cables are not included in delivery.

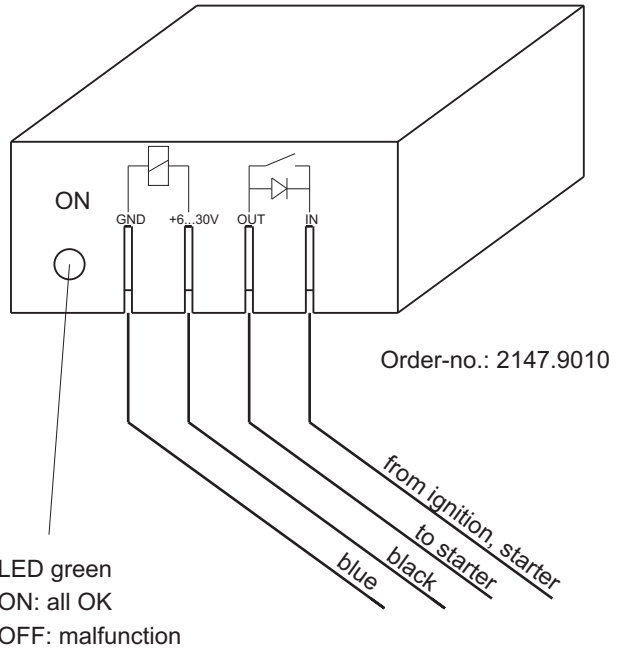
#### Starter enabling relay:

A starter enabling relay can be attached to the S-EP 8 controller. It interrupts the function of the hydraulic hammer as long as the reservoir of the pump is seen as empty.

The hydraulic hammer can be restarted when the reservoir of the pump is filled again.

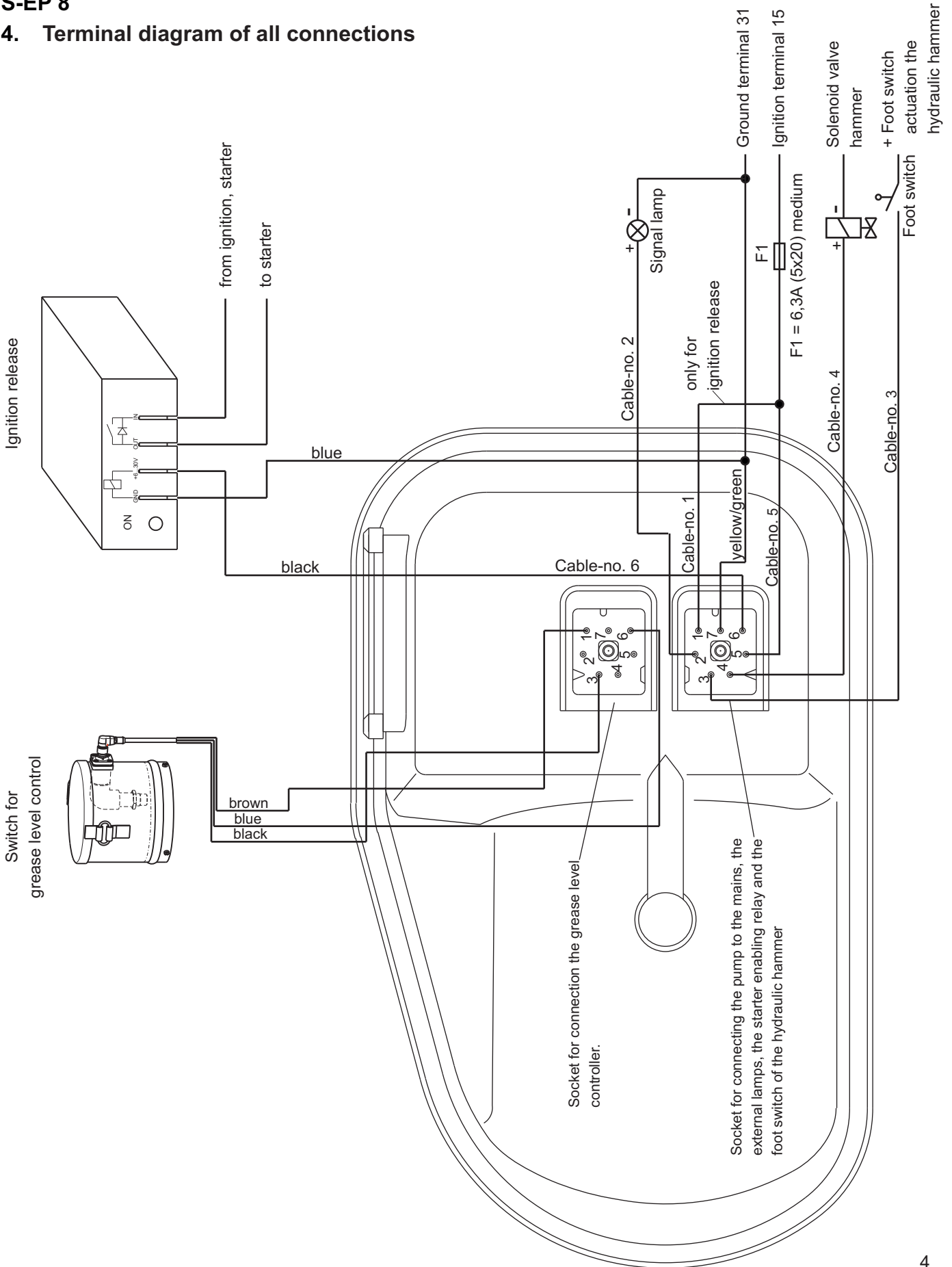
The starter enabling relay is delivered without a cable and must be build in to the vehicle in a dry area.

Starter enabling relay



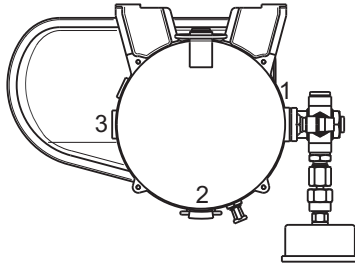
**S-EP 8**

**4. Terminal diagram of all connections**



**S-EP 8**

**5. Ordering key EP-1 with integrated controller**

<b>Construction type</b>	2144 . XX . XX . XX . XX									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2"><b>Motor voltage</b></td> </tr> <tr> <td style="width: 50%;">12 V</td> <td style="width: 50%;">24 V</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> </table>		<b>Motor voltage</b>		12 V	24 V	1	2			
<b>Motor voltage</b>										
12 V	24 V									
1	2									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Pump elements</th> <th style="width: 30%;">Code</th> </tr> </thead> <tbody> <tr> <td>1 PE-120 V installed in outlet position 1</td> <td style="text-align: center;">41</td> </tr> <tr> <td>1 PE-120 V installed in outlet position 2</td> <td style="text-align: center;">51</td> </tr> <tr> <td>1 PE-120 V installed in outlet position 3</td> <td style="text-align: center;">61</td> </tr> </tbody> </table>		Pump elements	Code	1 PE-120 V installed in outlet position 1	41	1 PE-120 V installed in outlet position 2	51	1 PE-120 V installed in outlet position 3	61	
Pump elements	Code									
1 PE-120 V installed in outlet position 1	41									
1 PE-120 V installed in outlet position 2	51									
1 PE-120 V installed in outlet position 3	61									
<p>Order sample pump elements:</p> <div style="text-align: center;">  </div> <p>1 PE-120 V installed in outlet position 1</p>										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;"><b>Size of reservoir (kg)</b></td> <td style="width: 10%; text-align: center;">2</td> <td style="width: 10%; text-align: center;">4</td> </tr> <tr> <td>Steel reservoir</td> <td></td> <td></td> </tr> <tr> <td><b>Code</b></td> <td style="text-align: center;">31</td> <td style="text-align: center;">26</td> </tr> </table>		<b>Size of reservoir (kg)</b>	2	4	Steel reservoir			<b>Code</b>	31	26
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<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td><b>Special types</b></td> <td style="text-align: center;">00</td> </tr> </table>		<b>Special types</b>	00							
<b>Special types</b>	00									

Special types: 03 = with pump element PE-120 V with manometer with pressure outlet dia. 6 and grease level control  
 48 = with pump element PE-120 V with manometer with pressure outlet dia. 8 and grease level control

Further special models on enquiry!



## S-EP 8

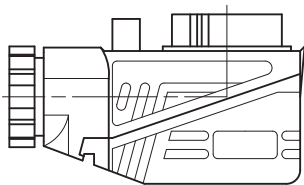
### Replacement and order numbers Integrated controller

#### 6. Replacement:

The integrated controller S-EP 8, installed in the lower motor casing, is also available separately to replace an existing controller.

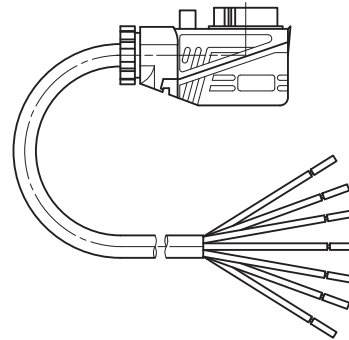
Controllers delivered individually are not provided with connection cable, as this is normally available. Should the controller be installed in a pump which had been equipped so far with a controller with a different connector, the connection cable must be ordered separately.

Should the connector for the additional connection be damaged, it can be reordered.



Order-no.: 1000 91 212

7-wire connecting cable, with Hirschmann connector



Length 10 m: Order-no.: FAZ02499-01

#### 7. Order-no. for integrated control unit installed in the motor protection housing

For retrofitting at already existing pumps:

2144.9000.00

The pump has to be equipped with level control.

