Indication

„Please note that this catalogue is for information only. The listed products do not constitute binding purchase offers. We reserve the right to update the products and the information given herein. Please feel free to contact our sales department in case of any questions, or if you would like to receive an individual offer.”
Relay product information

Relay operating modes

**Make contact** is a relay contact that is open when a relay is in idle position and closes when the relay moves to the operating position.

**Break contact** is a relay contact that is closed when a relay is in idle position and opens when the relay moves to the operating position.

**Change over contact** (transfer contact) is a set of contacts with three electrically isolated connections, consisting of a make contact and a break contact. When the switching position changes, the previously closed contact opens first and the previously open contact then closes.
Parameter explanation

Relay applications
This catalog contains the technical specifications that a design engineer needs to select the appropriate relay to meet his requirements. Bosch d.c. relays were originally designed for automotive applications. For all other applications, particularly those with differing requirements, loads or ambient conditions, we recommend prior technical consultation.

Bosch d.c. relays can withstand extreme conditions. They meet the following requirements:
- High-power switching
- Function over a wide temperature range
- Excellent vibration and impact resistance
- Long service life and good climatic resistance

Bosch d.c. relays are used for switching electrical equipment that has a high power or is sensitive to voltage losses. Relays relieve the burden on control switches and provide low voltage drops with economical wire cross-sections. In addition, relays make it easy to set up interlock circuits.

Mini and micro relays are ideal for use where space is at a premium. Multifunction connectors allow easy assembly and extremely low fault rates on pre-tested wiring harnesses – particularly for OEMs. The same applies to servicing. The following mini and micro relay designs are available:
- Relays without mounting bracket, easy to plug into screw-on combination receptacle housings
- Relays with mounting bracket for connection to five-pole receptacle housing

Power relays allow a rated switching current of more than 50 A. They are suitable for switching motors, starters and other devices.
Terms and definitions

Characteristic quantities and terms

Terms (where standardized, based on DIN 41 215)

Various characteristic quantities and their values allow an appropriate relay to be selected to perform a specific task. Each relay type must meet specific requirements at the specified characteristic values during its service life.

**Response voltage** is the minimum excitation voltage that causes a relay to respond, taking into account the ambient temperature and self-heating.

**Response time** is the time from closure of the feed circuit until the first closure of a make contact or the first opening of a break contact.

**Operating voltage** is the value of the excitation voltage, at which the relay has the characteristic data required for operation.

**Excitation voltage** is the electrical voltage that permits the electric current that flows through the excitation winding and causes excitation. Connection is via terminals 1 and 2 and terminals 85 and 86.

**Rated value** is the value of a variable (e.g., voltage, current, resistance) for which a relay, its parts and its properties are designed or after which they are named.

**Correction factor**

Characteristic data on the excitation side relate to an ambient temperature of +20°C. If the ambient temperature is different, the winding resistance and the response and release voltages can be converted using a correction factor $K$:

$$K = [1 + \alpha(t_a - 20°C)]$$

$t_a$ = Actual ambient or coil temperature

$\alpha = 0.004\ K^{-1}$ (Average temperature coefficient for copper)

**Bounce time** is the time from the first to the last closure of a relay contract when the relay is shifting to a different position.

**Release voltage** is the value of the maximum excitation voltage that causes a relay to release, taking into account the ambient temperature and self-heating.

**Release time** (release delay) is the time from the opening of the feed circuit until the first opening of a make contact or the first closure of a break contact.

**Switching voltage** is the voltage that is present between the contacts with an open circuit, when the transient effects have subsided.

**Voltage drop** is the voltage at the relay connections for a closed relay contact, measured at a defined current.

**Total resistance of the feed circuit** is the electrical resistance between the connecting terminals 1 and 2 and terminals 85 and 86.
Protection and operating modes

Protection types and operating modes

Switching operations

Response is an operation in which a relay moves from its idle position to its operating position.

Opening is an operation that breaks the electrical contact.

Release is an operation in which a relay moves from its operating position to its idle position.

Operating cycle is one response and release of a relay.

Number of operations is the number of operating cycles.

Closing is an operation that results in contact making.

Typical load curves

1. Excitation voltage for relay coil
2. Current curve with resistance load
3. Current curve with lamp load
4. Current curve with motor load
5. Current curve with inductive load
6. Voltage curve with inductive load

For inductive loads and motors, a protective circuit is often required, which can be implemented with a freewheeling diode parallel to the load (see circuit diagram).

L Inductive load D Freewheeling diode U Supply voltage R Relay

Service life

Mechanical service life specifies the number of operating cycles with current-free relay contacts for which the relay remains operational.

Contact service life specifies the number of operating cycles with electrical contact load for which the relay remains operational.

Switching contacts

Make contact is a relay contact that is open when a relay is in idle position and closes when the relay moves to the operating position.

Break contact is a relay contact that is closed when a relay is in idle position and opens when the relay moves to the operating position.

Double changeover contact (transfer contact) is a set of contacts with three electrically isolated connections, consisting of a make contact and a break contact. When the switching position changes, the previously closed contact opens first and the previously open contact then closes.
### Product list (1)

**Quick link to each p/n**

<table>
<thead>
<tr>
<th>Power Relays</th>
<th>0 331 802 100</th>
<th>0 332 019 110</th>
<th>0 332 209 152</th>
<th>0 333 200 013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mini / Micro Relays</td>
<td>0 332 002 150</td>
<td>0 332 019 150</td>
<td>0 332 209 158</td>
<td>0 333 300 003</td>
</tr>
<tr>
<td></td>
<td>0 332 002 155</td>
<td>0 332 019 151</td>
<td>0 332 209 159</td>
<td>0 333 301 007</td>
</tr>
<tr>
<td></td>
<td>0 332 002 156</td>
<td>0 332 019 155</td>
<td>0 332 209 203</td>
<td>0 333 301 009</td>
</tr>
<tr>
<td></td>
<td>0 332 002 160</td>
<td>0 332 019 157</td>
<td>0 332 209 204</td>
<td>0 333 301 010</td>
</tr>
<tr>
<td></td>
<td>0 332 002 161</td>
<td>0 332 019 166</td>
<td>0 332 209 206</td>
<td>0 333 301 015</td>
</tr>
<tr>
<td></td>
<td>0 332 002 168</td>
<td>0 332 019 203</td>
<td>0 332 209 207</td>
<td>0 333 500 001</td>
</tr>
<tr>
<td></td>
<td>0 332 002 250</td>
<td>0 332 019 204</td>
<td>0 332 209 211</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 332 002 255</td>
<td>0 332 019 205</td>
<td>0 332 209 216</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 332 002 256</td>
<td>0 332 019 213</td>
<td>0 332 514 120</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 332 002 257</td>
<td>0 332 019 453</td>
<td>0 332 514 121</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 332 015 001</td>
<td>0 332 019 456</td>
<td>0 332 515 009</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 332 015 002</td>
<td>0 332 109 011</td>
<td>0 332 515 012</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 332 015 006</td>
<td>0 332 201 107</td>
<td>0 332 515 022</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 332 015 008</td>
<td>0 332 201 107</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 332 017 300</td>
<td>0 332 204 125</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 332 019 103</td>
<td>0 332 204 202</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 332 019 109</td>
<td>0 332 204 203</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 332 204 204</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 332 207 402</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 332 207 405</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 332 209 137</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 332 209 138</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 332 209 150</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 332 209 151</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 333 006 004</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 333 006 006</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 333 006 008</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 333 009 002</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 333 009 004</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 333 009 005</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 333 009 009</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 333 009 010</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 333 009 011</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 333 200 013</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 333 300 003</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 333 301 007</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 333 301 009</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 333 301 010</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 333 301 015</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0 333 500 001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazard-warning-signal flasher</td>
<td>0 335 200 007</td>
<td>0 335 200 038</td>
<td>0 335 200 041</td>
<td>0 335 200 160</td>
</tr>
<tr>
<td></td>
<td>0 335 200 161</td>
<td>0 335 210 063</td>
<td>0 335 210 143</td>
<td>0 335 210 148</td>
</tr>
<tr>
<td></td>
<td>0 335 210 153</td>
<td>0 335 210 164</td>
<td>0 335 210 164</td>
<td>0 335 210 164</td>
</tr>
<tr>
<td>Pico Relay</td>
<td>0986 AH0 093</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Product list (2)
Quick link to each p/n

- 0 335 215 043
- 0 335 215 113
- 0 335 215 123
- 0 335 215 134
- 0 335 215 143
- 0 335 215 144
- 0 335 215 145
- 0 335 215 154
- 0 335 215 155
- 0 335 215 164
- 0 335 215 168
- 0 335 215 169
- 0 335 232 001
- 0 335 233 001
- 0 335 233 003
- 0 335 300 801
- 0 335 300 802
- 0 336 101 004
- 0 336 100 047
- 0 336 200 049
- 0 336 200 051
- 0 336 202 001
- 0 336 203 005
- 0 336 203 006
- 0 336 206 003
- 0 336 206 004
- 0 336 207 006
- 0 336 208 001
- 0 336 851 004
- 0 336 851 008

- 0 336 900 000

Mini / Micro Relays
- 0 986 332 001
- 0 986 332 002
- 0 986 332 021
- 0 986 332 022
- 0 986 332 030
- 0 986 332 040
- 0 986 332 041
- 0 986 332 050
- 0 986 332 053
- 0 986 332 071
- 0 986 332 072
- 0 986 332 073
- 0 986 332 080
- 0 986 332 086
- 0 986 332 087
- 0 986 332 091
- 0 986 335 058
- 0 986 AH0 080
- 0 986 AH0 081
- 0 986 AH0 082
- 0 986 AH0 083
- 0 986 AH0 113
- 0 986 AH0 114
- 0 986 AH0 115
- 0 986 AH0 116
- 0 986 AH0 135
- 0 986 AH0 150
- 0 986 AH0 151

- 0 986 AH0 204
- 0 986 AH0 206
- 0 986 AH0 237
- 0 986 AH0 250
- 0 986 AH0 251
- 0 986 AH0 253
- 0 986 AH0 282
- 0 986 AH0 285
- 0 986 AH0 288
- 0 986 AH0 296
- 0 986 AH0 297
- 0 986 AH0 300
- 0 986 AH0 302
- 0 986 AH0 304
- 0 986 AH0 305
- 0 986 AH0 306
- 0 986 AH0 307
- 0 986 AH0 308
- 0 986 AH0 309
- 0 986 AH0 320
- 0 986 AH0 321
- 0 986 AH0 322
- 0 986 AH0 323
- 0 986 AH0 328
- 0 986 AH0 404
- 0 986 AH0 405
- 0 986 AH0 453
- 0 986 AH0 602
- 0 986 AH0 603
- 0 986 AH0 605
- 0 986 AH0 611

- 0 986 AH0 612
- 0 986 AH0 613
- 0 986 AH0 614
- 0 986 AH0 615
- 0 986 AH0 617
- 0 986 AH0 622
- 0 986 AH0 625
- 0 986 AH0 803
- 0 986 AH0 811

Nano Relays
- 0 986 AH0 090
- 0 986 AH0 091
- 0 986 AH0 092

Sockets
- 3 334 485 007
- 3 334 485 008
- 3 334 485 010
- 3 334 485 041
- 3 334 485 045
- 3 334 485 046
- 3 334 486 049
PH A7743
Product Family Relays - Overview

Micro Nano Pico Relays
Chapter
Slide 11 to 30

Mini Relays
Chapter
Slide 32 to 106

Starter Relays
Chapter
Slide 108 to 109

Battery Relays
Chapter
Slide 111 to 115

Lamp Relays
Chapter
Slide 117 to 119

Power Relays
Chapter
Slide 121 to 144
## Micro Relays 24 V, 10 A

**0 986 AH0 302**

### Specifications

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>✓</td>
<td>100.000</td>
<td>10 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Diagrams

- Mounting bracket diagram
- Resistor diagram
- Diode diagram
- Connection diagram

**Change over** | **Normal close** | **Normal open**
---|---|---
✓ | | |
## Micro Relays 12 V, 20 A

### 0 986 AH0 304

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>✓</td>
<td>100.000</td>
<td>20 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- **Change over**: ✓
- **Normal close**: 
- **Normal open**: 

---

Back to general overview
### Micro Relays 24 V, 10/5 A
0 986 AH0 305

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>10/5 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- **Change over**: ✓
- **Normal close**: —
- **Normal open**: —

[Back to general overview]
# Micro Relays

**12 V, 30/10 A**

**0 986 AH0 307**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>✓</td>
<td>100.000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Relay Diagram](image-1)

![Relay Diagram](image-2)

![Relay Diagram](image-3)

Back to general overview
# Micro Relays 12 V, 30 A

**0 986 AH0 308**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>100,000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Image of micro relay](image_url)

Back to general overview
## Micro Relays 24 V, 10 A

0 986 AH0 309

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>10 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Change over | Normal close | Normal open
--- | --- | ---
✔️ |  |  

Back to general overview
## Micro Relays 12 V, 20 A

### 0 986 AH0 320

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>20 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Specifications
- **Current**: 20 A
- **Voltage**: 12 V
- **Number of Pins**: 4
- **Housing type**: Plastic housing
- **Temperature range**: -40...+100°C
- **Degree of protection housing**: IP5K4
- **Degree of protection connection**: IP20

### Diagrams
1. **Mounting bracket diagram**
2. **Resistor diagram**
3. **Diode diagram**
4. **Relay diagram**

---

**Back to general overview**
**Micro Relays** 24 V, 10 A

0 986 AH0 321

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>10 A</td>
<td>24 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over**

<table>
<thead>
<tr>
<th>Normal close</th>
<th>Normal open</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
# Micro Relays 12 V, 10 A

**0 986 AH0 322**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housin g type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>✓</td>
<td>100,000</td>
<td>10 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40°...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>
# Micro Relays  24 V, 10 A

**0 986 AH0 323**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>✓</td>
<td>100,000</td>
<td>10 A</td>
<td>24 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- **Change over**: Normal close, Normal open

---

**Back to general overview**
## Micro Relays 24 V, 10 A

**0 986 AH0 328**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>10 A</td>
<td>24 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Changeover

- Normal close
- Normal open

- ✓

---

**Change over**

- **Normal close**
- **Normal open**

- ✓

---

**Back to general overview**
Mini Relays

Slide 32 to 106
**Mini Relays 12 V, 30 A**

**0 332 014 112**

Replacement: 0 986 AH 0 602

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>✓</td>
<td>250.000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

2 x 87 terminal

---

**Change over** | **Normal close** | **Normal open**
---|---|---
| ✓ | | |
**Mini Relays 12 V, 30 A**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>x</td>
<td>x</td>
<td>250,000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Replacement: 0 986 AH0 605

2 x 87 terminal

---

**Change over**

- Normal close
- Normal open

**Back to general overview**
# Mini Relays 12 V, 15 A

## 0 332 015 001

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>15 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- **Change over**: Normal close
- **Normal open**: ✓

- **2 x make contact**
Mini Relays 24 V, 2x15 A 0 332 015 002

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>100,000</td>
<td>2x15 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

2 x make contact

Back to general overview
## Mini Relays 12 V, 2x15 A

### 0 332 015 006

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>2x15 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

*2 x make contact*
# Mini Relays

12 V, 2x10 A

0 332 015 008

## Specifications

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>2x15 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- Change over
- Normal close
- Normal open

- 2 x make contact

---

**Back to general overview**
# Mini Relays

12 V, 30 A

0 332 019 103

## Specifications

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>250,000</td>
<td>30 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

## Changeover

<table>
<thead>
<tr>
<th>Normal close</th>
<th>Normal open</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
## Mini Relays 12 V, 50 A

0 332 019 109

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>✓</td>
<td>50,000</td>
<td>50 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- **2 x 87 terminal**
- **Change over Normal close Normal open**

![Relay Diagram]

**Back to general overview**
## Mini Relays 12 V, 30 A

### Part Number
0 332 019 110

### Specifications

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>250,000</td>
<td>30 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Temperature Range
-40... +100°C

### Degree of Protection
- Housing: IP5K4
- Connection: IP20

---

**Change over**

- Normal close: Yes
- Normal open: No

---

---

---

---
## Mini Relays 12 V, 30 A

**Part Number:** 0 332 019 150

### Specifications

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>250,000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Changeover

- **Normal close:**
- **Normal open:** ✓

**2 x 87 terminal**

---

**Back to general overview**
## Mini Relays 12 V, 30 A

0 332 019 151

### Mounting bracket
- Mounting bracket
- Resistor
- Diode
- Life durability
- Current
- Voltage
- Number of Pins
- Housing type
- Temperature range
- Degree of protection housing
- Degree of protection connection

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>250.000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

2 x 87 terminal
Mini Relays 12 V, 30 A
0 332 019 155

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>x</td>
<td>✓</td>
<td>100.000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

2 x 87 terminal
# Mini Relays 12 V, 30 A

0 332 019 157

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>x</td>
<td>x</td>
<td>250.000</td>
<td>30 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>
Mini Relays 12 V, 0 A
0 332 019 166
phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>250.000</td>
<td>30 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
# Mini Relays 24 V, 20 A

**0 332 019 203**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>250.000</td>
<td>20 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

2 x 87 terminal

---

**Change over** | **Normal close** | **Normal open**
--- | --- | ---
| | | ✓

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
### Mini Relays 24 V, 30 A

**Part Number:** 0 332 019 204

#### Mounting bracket | Resistor | Diode | Life durability | Current | Voltage | Number of Pins | Housing type | Temperature range | Degree of protection housing | Degree of protection connection
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
✓ | ✓ | X | 250,000 | 30 A | 24 V | 5 | Plastic housing | -40°C...+100°C | IP5K4 | IP20

**Change over:** Normal close, Normal open

- Normal close: ✓
- Normal open: 

**2 x 87 terminal**

---

**Dimensions:**

- Width: 28.5 mm
- Height: 28.5 mm
- Depth: 11.5 mm

**Temperature range:**

- Operating: -40°C...+100°C

---

Back to general overview
# Mini Relays 24 V, 20 A

**0 332 019 205**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>250.000</td>
<td>20 A</td>
<td>24 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- **Change over**: ✓
- **Normal close**: 
- **Normal open**: 

![Relay Diagram](image1)

![Relay Diagram](image2)

![Relay Image](image3)

[Back to general overview](#)
**Mini Relays 24 V, 20 A**

**0 332 019 213**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>250.000</td>
<td>20 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- 2 x 87 terminal

**Change over**

- Normal close
- Normal open

**Normal open** - ✓

**Changeover**

- Normal close
- Normal open

**Normal close**

- Normal close

**Normal open** - ✓

**Back to general overview**
## Mini Relays 12 V, 20 A

0 332 019 453

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>250.000</td>
<td>20 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Specifications:

- **Current**: 20 A
- **Voltage**: 12 V
- **Number of Pins**: 4
- **Housing type**: Plastic housing
- **Temperature range**: -40...+100°C
- **Degree of protection housing**: IP5K4
- **Degree of protection connection**: IP20

---

**Back to general overview**
## Mini Relays 12 V, 30 A

**Part Number:** 0 332 019 456

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✗</td>
<td>✓</td>
<td>✗</td>
<td>250,000</td>
<td>30 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- **Change over**: ✓
- **Normal close**: 
- **Normal open**: ✗
### Mini Relays 12 V, 30 A 0 332 019 801

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>250,000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

2 x 87 terminal

![Relay Diagram](image)

![Relay Image](image)

---

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
## Mini Relays 12 V, 20 A

**0 332 109 011**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>50.000</td>
<td>20 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over** | **Normal close** | **Normal open**
--- | --- | ---

---

**Back to general overview**
## Mini Relays 12 V, 30 A

**0 332 204 125**

Replacement: 0 986 AH0 625

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>250.000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over**

- ✓

**Normal close**

- 

**Normal open**

- 

---

**Back to general overview**
## Mini Relays 24 V, 20 A

**0 332 204 202**

Replacement: 0 986 AH0 615

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>250.000</td>
<td>20 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over** | **Normal close** | **Normal open** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Back to general overview
## Mini Relays 24 V, 20 A

### 0 332 204 203

Replacement: 0 986 AH0 613

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>250.000</td>
<td>20 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40… +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Specifications:

- **Change over**: ✓
- **Normal close**: 
- **Normal open**: 

**Change over**: Normal close

**Normal close**: Normal open

**Normal open**: 

**Replacement**: 0 986 AH0 613

---

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
## Mini Relays 12 V, 30/20 A

**Part Number:** 0 332 209 137

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>250,000</td>
<td>30/20 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40 to +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over:** ✓

**Normal close:**

**Normal open:**

---

*Back to general overview*
# Mini Relays 12 V, 30/20 A

0 332 209 138

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔</td>
<td>✔</td>
<td>X</td>
<td>250.000</td>
<td>30/20 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

---

Change over | Normal close | Normal open
---|---|---
✔ | | |

Back to general overview
## Mini Relays 12 V, 30/20 A

0 332 209 150

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>250.000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Image of relay](image-url)
# Mini Relays 12 V, 30/20 A

0 332 209 151

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>250,000</td>
<td>30/20 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- **Change over**: ✓
- **Normal close**: 
- **Normal open**: 

## Terminal Configuration

![Terminal Configuration Diagram](image)

## Back to general overview
# Mini Relays 12 V, 30/20 A

**0 332 209 152**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>✓</td>
<td>250.000</td>
<td>30/20 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over**: ✓

**Normal close**: 

**Normal open**: 

---

**Back to general overview**
## Mini Relays 12V, 30A / 20A

**0 332 209 158**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>✓</td>
<td>250.000</td>
<td>30A / 20A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Specifications
- **Change over**: Normal close
- **Normal open**: 

![Relay Diagram](image)

© Bosch 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
## Mini Relays 12V, 30A / 20A

### 0 332 209 159

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>250.000</td>
<td>30A / 20A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Diagrams

- [Diagram 1](#)
- [Diagram 2](#)
- [Diagram 3](#)
### Mini Relays 24V, 20A / 10A

**0 332 209 203**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>✓</td>
<td>250,000</td>
<td>20A / 10A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- **Change over**: ✓
- **Normal close**: 
- **Normal open**: 

**Back to general overview**
## Mini Relays 24V, 20A / 10A

### 0 332 209 204

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>✓</td>
<td>250.000</td>
<td>20A / 10A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40°...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Technical Details
- **Change over:** ✓
- **Normal close:**
- **Normal open:**

### Diagrams
- Electrical diagram
- Mechanical diagram

---

**Back to general overview**

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
## Mini Relays 24V, 20A / 10A

**0 332 209 206**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>250.000</td>
<td>20A / 10A</td>
<td>24 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Diagram of Mini Relays 24V, 20A / 10A](image)

**Back to general overview**
### Mini Relays 24V, 20A / 10A

**0 332 209 207**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>250.000</td>
<td>20A / 10A</td>
<td>24 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Diagram:**
- **Mini Relay Diagram**
  - Dimensions: 28.5 x 28.5 mm
  - Pins: 85, 86, 87
  - Connector: 4-pin plug

**Change over:** ✓

**Normal close:**

**Normal open:**

---

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
## Mini Relays 24V, 20A / 10A

**0 332 209 211**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>250.000</td>
<td>20A / 10A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40… +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Technical Specifications

- **Change over**: ✓
- **Normal close**: 
- **Normal open**: 

![Mini Relay Diagram](image)

*Back to general overview*
## Mini Relays 24V, 20 A

**Part Number:** 0 332 209 216

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-BAR</td>
<td>✓</td>
<td>X</td>
<td>250.000</td>
<td>20 A</td>
<td>24 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Changeover:**
- Normal close
- Normal open

**Specifications:**
- **Life durability:** 250,000
- **Current:** 20 A
- **Voltage:** 24 V
- **Number of Pins:** 4
- **Housing type:** Plastic housing
- **Temperature range:** -40…+100°C
- **Degree of protection housing:** IP5K4
- **Degree of protection connection:** IP20

Back to general overview
Mini Relays 12 V, 70 A
0 986 332 001

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>250.000</td>
<td>45 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40°C ... + 85°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
### Mini Relays 12 V, 70 A

**0 986 332 002**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>✗</td>
<td>100.000</td>
<td>70 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over**: Normal close  ✔

Back to general overview
## Mini Relays 12 V, 10 A

0 986 332 021

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>10 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40°C ... +125°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Specifications
- **Change over**: ✓
- **Normal close**: 
- **Normal open**: ✓

---

**Back to general overview**
**Mini Relays 12 V, 40A / 60A**  
**0 986 332 022**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>100,000</td>
<td>40A / 60A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over** | **Normal close** | **Normal open**

![Relay Diagram](image1)

![Relay Diagram](image2)

Back to general overview
## Mini Relays 12 V, 60 A

**Part number:** 0 986 332 030

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>60 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over:** Normal open

### Features
- **Current:** 60 A
- **Voltage:** 12 V
- **Number of Pins:** 4
- **Housing type:** Plastic housing
- **Temperature range:** -40…+100°C
- **Degree of protection housing:** IP5K4
- **Degree of protection connection:** IP20

---

**Back to general overview**
## Mini Relays 12 V, 40 A

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>40 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Specifications
- Change over: ✓
- Normal close: 
- Normal open: ✓
## Mini Relays 12 V, 40 A

0 986 332 041

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>40 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Change over
- ✓ Normal close
- Normal open

### Back to general overview
## Mini Relays 12 V, 40/60 A

**0 986 332 053**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100,000</td>
<td>40 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over**: ✓

**Normal close**: 

**Normal open**: 

---

Back to general overview
## Mini Relays 12 V, 40 A

0 986 332 071

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>40 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over**

<table>
<thead>
<tr>
<th>Normal close</th>
<th>Normal open</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
## Mini Relays 12 V, 40 A

**0 986 332 072**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>40 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over**

<table>
<thead>
<tr>
<th>Normal close</th>
<th>Normal open</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

*Back to general overview*
**Mini Relays 12 V, 40/60 A**

**0 986 332 073**

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100,000</td>
<td>40 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
## Mini Relays 24 V, 50 A

**0 986 332 080**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>200.000</td>
<td>50 A</td>
<td>24 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over**

<table>
<thead>
<tr>
<th>Normal close</th>
<th>Normal open</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

**Back to general overview**
## Mini Relays 12 V, 70 A

0 986 AH0 080

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>70 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

---

### Change over | Normal close | Normal open

- ✓

---

### Mounting Bracket Diagram

![Mounting Bracket Diagram]

### Relays Connections

![Relays Connections]

---

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
**Mini Relays**  24 V, 30 A  
*0 986 AH0 081*

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>✓</td>
<td>100,000</td>
<td>30 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over** | **Normal close** | **Normal open**
--- | --- | ---
| | | ✔

---

Back to general overview
**Mini Relays 12 V, 70 A**

**0 986 AH0 082**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>70 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over**: ✓

**Normal close**: 

**Normal open**: ✓

---

*Back to general overview*
## Mini Relays 24 V, 30 A

**0 986 AH0 083**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100,000</td>
<td>30 A</td>
<td>24 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

---

### Change over

Normal close: ✗

Normal open: ✓

---

*Back to general overview*
## Mini Relays 12 V, 20 / 30 A

**Part Number:** 0986 AH0 135

### Specifications

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>✓</td>
<td>50,000</td>
<td>50 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Change over

- ✓

---

![Mini Relay Diagram](image)

*Back to general overview*
## Mini Relays 12 V, 30 A

**0 986 AH0 150**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Diagram of the relay](image)

[Back to general overview](#)
# Mini Relays 12 V, 30 A

**0 986 AH0 151**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>100,000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Mini Relay Diagram]

![Mini Relay Image]

---

**Back to general overview**
Mini Relays 24 V, 20 A
0 986 AH0 204

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>20 A</td>
<td>24 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

2 x 87 terminal

Back to general overview
## Mini Relays 24 V, 20 A

**0 986 AH0 206**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>20 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over**: ✓

**Normal close**: 

**Normal open**: 

---

**Back to general overview**
## Mini Relays: 12 V, 20 A

**0 986 AH0 237**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>✗</td>
<td>75.000</td>
<td>20 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Diagrams
- [Diagram 1](#): [Image of diagram 1]
- [Diagram 2](#): [Image of diagram 2]
- [Diagram 3](#): [Image of diagram 3]
- [Diagram 4](#): [Image of diagram 4]
## Mini Relays 12 V, 30 A

### 0 986 AH0 250

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- **Change over**: ✔
- **Normal close**:
- **Normal open**: ✔

2 x 87 terminal

---

**Back to general overview**
## Mini Relays 12 V, 30 A

**0 986 AH0 251**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

2 x 87 terminal

**Back to general overview**
**Mini Relays 24 V, 20 A**

0986 AH0 253

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>20 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

2 x 87 terminal

![Mini Relay Diagram](image)

**Change over** | **Normal close** | **Normal open**
---|---|---

---

Back to general overview
# Mini Relays 12 V, 30 A

**0 986 AH0 453**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>30 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Back to general overview**
**Mini Relays** 12 V, 30 A

**0 986 AH0 602**

Replacement for: 0 332 014 112

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>✓</td>
<td>100.000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

2 x 87 terminal

**Change over** | **Normal close** | **Normal open**
---|---|---
| | | ✓ |

**Diagram**

- Dimensions:
  - 25.60 x 24.10
  - 25.70 x 17.60
  - 8.80 x 6.30

- Terminal numbers:
  - 85, 87, 87, 86, 30

- Made in Taiwan

**Back to general overview**

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
# Mini Relays

**24 V, 20 A**

**0 986 AH0 603**

Replacement for: 0 332 014 213

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>20 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Change over</th>
<th>Normal close</th>
<th>Normal open</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

2 x 87 terminal

---

**Back to general overview**
## Mini Relays 12 V, 30 A
### 0 986 AH0 605
Replacement for: 0 332 014 125

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- Change over: ✓
- Normal close: 
- Normal open: ✓

2 x 87 terminal

![Diagram of Mini Relays 0 986 AH0 605](image)

Back to general overview
### Mini Relays 6 V, 20/30 A

**0 986 AH0 611**

Replacement for: 0 332 204 001

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>x</td>
<td>x</td>
<td>100.000</td>
<td>20/30 A</td>
<td>6 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Change over: Normal close: Normal open:

![Mini Relay Diagram](image)

---

Back to general overview
## Mini Relays 24 V, 10 A

**0 986 AH0 612**

Replacement for: 0 332 204 212

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>✓</td>
<td>100.000</td>
<td>10 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over**

- ✓ Normal close
- Normal open

---

**Back to general overview**
**Mini Relays** 24 V, 20 A

0 986 AH0 613

Replacement for: 0 332 204 203

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>20 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Change over

Normal close

Normal open

![Relay Diagram](image)

Replace for: 0 332 204 203

Back to general overview
## Mini Relays 24 V, 20/10 A

**0 986 AH0 614**

Replacement for: 0 332 204 204

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>✓</td>
<td>100,000</td>
<td>20/10 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over** | Normal close | Normal open

- ✓

---

**Back to general overview**
Mini Relays 24 V, 20 A
0 986 AH0 615
Replacement for: 0 332 204 202

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>20 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
## Mini Relays 24 V, 20/10 A
### 0 986 AH0 617

Replacement for: 0 332 204 207

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>100,000</td>
<td>20/10 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- **Change over**: ✓
- **Normal close**: 
- **Normal open**: 

![Diagram of Mini Relays 0 986 AH0 617](image)

**Back to general overview**
### Mini Relays 12 V, 30 A
#### 0 986 AH0 622

Replacement for: 0 332 204 402

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over**

<table>
<thead>
<tr>
<th>Normal close</th>
<th>Normal open</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

Back to general overview
## Mini Relays 12 V, 30 A

**0 986 AH0 625**

Replacement for: 0 332 204 125

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>30 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Technical Specifications
- **Number of Pins:** 5
- **Temperature Range:** -40...+100°C
- **Degree of Protection Housing:** IP5K4
- **Degree of Protection Connection:** IP20

### Diagrams
- Illustrated size and pin layout of the relay.

### Changeover Options
- **Normal close**
- **Normal open**

- **Changeover:** ✓
## Mini Relays 24 V, 20 A

0 986 AH0 803

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>20 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Other Specifications
- Change over: ✓
- Normal close: 
- Normal open: 

![Relay Diagram]

Back to general overview

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
# Mini Relays

24 V, 20 A

**0 986 AH0 811**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>100,000</td>
<td>20 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over**: Normal close

**Normal close**: Normal open

---

**Back to general overview**
Starter Relays

Slide 108 to 109
## Starter Relays 12 V, 30 A

0 331 802 100

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>30 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Technical Specifications
- **Current Density**: 30 A
- **Voltage**: 12 V
- **Housing Type**: Plastic housing
- **Temperature Range**: -40... +100°C
- **Degree of Protection Housing**: IP5K4
- **Degree of Protection Connection**: IP20
**Double-Starting Relay 24 V**

0 333 500 001

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Dimensions</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>232 x 180 x 45</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

---

Back to general overview
Battery Relays

Slide 111 to 115
**Battery Relays**  12V, 75 A  
**0 333 300 003**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>20,000</td>
<td>75 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over** | **Normal close** | **Normal open** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

**Back to general overview**
## Battery Relays 12V, 60 A

0 333 301 007

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>20.000</td>
<td>60 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Battery Relay Diagram](image)
### Battery Relays 24V, 200 A

**0 333 301 009**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>20.000</td>
<td>200 A</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over**

<table>
<thead>
<tr>
<th>Normal close</th>
<th>Normal open</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
# Battery Relays 24V, 300 A

**0 333 301 010**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>20,000</td>
<td>300 A</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40°C to +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Changeover

- **Normal close**: Blank
- **Normal open**: ✓
# Battery Relays

## 24V, 200 A

**0 333 301 015**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>20.000</td>
<td>200 A</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Change-over

- Normal close
- Normal open

- [ ]

![Battery Relay Diagram](image)

**Back to general overview**
Lamp Relays

Slide 117 to 119
# Headlamp Relays 12V

**0 332 515 009**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✅</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>150 W</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Diagram of headlamp relay](image)

**Change over** | **Normal close** | **Normal open**
---|---|---
✅ | | ✅

Back to general overview
# Headlamp Relays 24V

0 332 515 012

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>150 W</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

---

**Change over** | **Normal close** | **Normal open**
---|---|---
✓ | | ✓

---

**Back to general overview**
# Headlamp Relays

12V

0 332 515 022

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>150 W</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Change over: ✓
Normal close: ✓
Normal open: ✓
Power Relays

Slide 121 to 144
Power Relays 12 V, 75 A
0 332 002 150
Replaced by: 0 332 002 168

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>125.000</td>
<td>75 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Change over | Normal close | Normal open

Pre contact

Change over
Normal close
Normal open

Pre contact

Back to general overview
# Power Relays 12 V, 75 A

**0 332 002 155**

Replaced by: 0 332 002 168

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>100,000</td>
<td>75 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Pre contact

---

![Diagram of Power Relay](image1)

---

![Diagram of Power Relay](image2)

---

![Image of Power Relay](image3)
### Power Relays 12 V, 75 A

0 332 002 156

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>✓</td>
<td>100,000</td>
<td>75 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- **Mounting bracket**: ✓
- **Resistor**: X
- **Diode**: ✓
- **Life durability**: 100,000
- **Current**: 75 A
- **Voltage**: 12 V
- **Housing type**: Plastic housing
- **Temperature range**: -40...+100°C
- **Degree of protection housing**: IP5K4
- **Degree of protection connection**: IP20

**Back to general overview**
Power Relays 12 V, 75 A
0 332 002 160
Replaced by: 0 332 002 168

Change over | Normal close | Normal open
--- | --- | ---
| | | ✓

Pre contact

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>75 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

---

Back to general overview
## Power Relays 12 V, 75 A

### 0 332 002 161

Replaced by: 0 332 002 168

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>125.000</td>
<td>75 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over** | **Normal close** | **Normal open**

- ✓

---

![Power Relay Diagram](image1)

![Power Relay Diagram](image2)

![Power Relay Image](image3)

---

*Back to general overview*
# Power Relays 12 V, 75 A

**0 332 002 168**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>75.000</td>
<td>75 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

---

**Change over** | **Normal close** | **Normal open**
---|---|---
| | | ✓ |

---

Back to general overview

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
## Power Relays 24 V, 50 A

**0 332 002 250**

Replaced by: 0 332 002 258

### Specifications

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>100,000</td>
<td>50 A</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Changeover

- **Normal close**
- **Normal open**

- **Pre contact**

### Technical Details

- **Part Number:** 0 332 002 250
- **Current:** 50 A
- **Voltage:** 24 V
- **Housing Type:** Plastic housing
- **Temperature Range:** -40...+100°C
- **Degree of Protection Housing:** IP5K4
- **Degree of Protection Connection:** IP20

### Diagrams

- **Mechanical Diagram:**
- **Electrical Diagram:**
- **3D Image:**

---

Back to general overview
## Power Relays 24 V, 50 A

**0 332 002 255**

Replaced by: 0 332 002 258

---

### Change over | Normal close | Normal open
---|---|---
| | | ✓

---

### Pre contact

---

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>100.000</td>
<td>50 A</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Pre contact</th>
</tr>
</thead>
</table>

---

---

© Bosch

---

Back to general overview

---

121 Automotive Aftermarket | AA-TR/PAC | 2/28/2018
© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
## Power Relays 24 V, 50 A

**0 332 002 256**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>✓</td>
<td>50.000</td>
<td>50 A</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Changeover

- **Normal close**: ✔
- **Normal open**: ✔

---

**Back to general overview**
### Power Relays 24 V, 50 A

**0 332 002 257**

Replaced by: 0 332 002 258

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>50.000</td>
<td>50 A</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Diagram](image_url)
### Power Relays 24 V, 50 A

**0 332 002 258**

<table>
<thead>
<tr>
<th>Mounting</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️</td>
<td>✔️</td>
<td>✘</td>
<td>50,000</td>
<td>50 A</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over** | **Normal close** | **Normal open**

- ✔️

**Back to general overview**
## Power Relays 12 V, 150 A

0 986 332 050

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>70 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40°C ... +85°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Relay Diagram](image_url)
### Power Relays 12 V, 150 A

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>100,000</td>
<td>150 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Back to general overview**
## Power Relays 12 V, 150 A

0 986 332 087

### Specifications

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>100,000</td>
<td>150 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Diagrams

- [Diagram 1](image1)
- [Diagram 2](image2)
- [Diagram 3](image3)

### Notes
- Change over: ✓
- Normal close: 
- Normal open: 

[Back to general overview](#)
Power Relays 24 V, 150 A
0 986 332 091

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>100,000</td>
<td>150 A</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

2 x make contact

Back to general overview
## Power Relay 12 V, 80 A

### 0 333 006 004

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>100,000</td>
<td>80 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Technical Specifications

- Change over: ✓
- Normal close: -
- Normal open: -

---

**Back to general overview**
## Power Relay 24 V, 80 A

**0 333 006 006**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>100.000</td>
<td>80 A</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Specifications

- **Change over**: ✓
- **Normal close**: 
- **Normal open**: 

### Diagrams

- **Mounting Bracket Diagram**
- **Resistor and Diode Diagram**
- **LifeDurability Diagram**

### Additional Information

- **Power Relay**
- **Current**: 80 A
- **Voltage**: 24 V
- **Housing Type**: Plastic
- **Temperature Range**: -40...+100°C
- **Degree of Protection Housing**: IP5K4
- **Degree of Protection Connection**: IP20

---

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
# Power Relay 24 V, 100 A

0 333 006 008

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>100,000</td>
<td>100 A</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- Change over: ✓
- Normal close: 
- Normal open: 

![Diagram of Power Relay](image)

Back to general overview
## Power Relay 24 V, 150 A

**0 333 009 002**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>100.000</td>
<td>150 A</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- **Change over**: ✓
- **Normal close**: 
- **Normal open**: 

---

Image 1: Diagram of the Power Relay

Image 2: Diagram of the wiring connections

Back to general overview
# Power Relay 12 V, 150 A

**0 333 009 004**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>100.000</td>
<td>150 A</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40… +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

---

### Change over

- Normal close
- Normal open

---

**Back to general overview**
# Power Relay 24 V, 150 A

**0 333 009 005**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>✓</strong></td>
<td>-</td>
<td>-</td>
<td>100.000</td>
<td>150 A</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

## Change over
- Normal close
- Normal open

**Normal open**

---

*Back to general overview*
**Power Relay 24 V, 150 A**

0 333 009 009

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>100.000</td>
<td>150 A</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Diagram of Power Relay](image)

**Change over**

Normal close

Normal open

✓
## Power Relay 12 V, 150 A

**0 333 009 010**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>100,000</td>
<td>150 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Changeover

- Normal close
- Normal open

![Diagram of Power Relay](image)

---

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
## Power Relay 24 V, 150 A

**0 333 009 011**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>100.000</td>
<td>150 A</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Diagram of Power Relay](attachment:diagram.png)

**Change over** | **Normal close** | **Normal open**

- ✓

Back to general overview

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
## Power Relay 80 V, 230 A

**0 333 200 013**

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>100,000</td>
<td>230 A</td>
<td>80 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Changeover

<table>
<thead>
<tr>
<th>Normal close</th>
<th>Normal open</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

---

**Back to general overview**
## Socket

### 3 334 485 007

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>12 V/24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Diagrams

[Socket Diagram](#)  
[Dimensions Diagram](#)  

[Back to general overview](#)
## Socket

**3 334 485 008**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>x</td>
<td>x</td>
<td>-</td>
<td>-</td>
<td>12V/24V</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Diagrams

- Socket 3 334 485 008
- Technical drawings of the mounting bracket and housing
- Close-up image of the socket

**Back to general overview**
## Socket

**3 334 485 010**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>12/24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Additional Information

**Socket Image**

[Image of the socket with dimensions and product information]

**Diagram**

[Diagram showing the connection and design of the socket]

**Image**

[Image of the physical socket with a black plastic housing]

[Back to general overview]
### Socket 3 334 485 041

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>12/24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

---

**Back to general overview**
### Socket 3 334 485 045

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>12/24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Socket Diagram]

---

Back to general overview
## Socket

**3 334 485 046**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>12/24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Back to general overview**
## Socket

### 3 334 485 049

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>12/24 V</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>
Hazard-warning-signal flasher 24V 0 336 900 000

Replaced by F 011 T00 012

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>8x 21 W</td>
<td>24 V</td>
<td>metal housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
Hazard-warning-signal flasher 12V
0 336 851 004
replaced by F 011 T00 011

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperatur range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>8x 21 W</td>
<td>12 V</td>
<td>metal housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
## Hazard-warning-signal flasher 12V

**0 336 851 008**

Replaced by F 011 T00 011

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>8x 21 W</td>
<td>12 V</td>
<td>metal housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
Hot-wire Flashers

Slide 158 to 171
## Turn-Signal Flasher 12 V

**0 336 208 001**  
phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>-</td>
<td>2+1+ 1x21 W</td>
<td>12 V</td>
<td>Metal housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

*Back to general overview*
Turn-Signal Flasher 12 V

0 336 207 006
phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>-</td>
<td>2+ 1x21 W</td>
<td>12 V</td>
<td>Metal housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
Turn-Signal Flasher 6 V
0 336 206 004
phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>-</td>
<td>2 x 21 W</td>
<td>12 V</td>
<td>Metal housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
## Turn-Signal Flasher 6 V

0 336 206 003

phased out part

### Specifications

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>-</td>
<td>2 x 21 W</td>
<td>6 V</td>
<td>Metal housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Diagrams

- **Diagram 1**: Exterior view of the flasher unit
- **Diagram 2**: Internal wiring diagram
- **Diagram 3**: Cross-sectional view

**Back to general overview**
Turn-Signal Flasher 6 V
0 336 203 006
phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>-</td>
<td>2 x 18 W</td>
<td>6 V</td>
<td>Metal housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
# Turn-Signal Flasher 12 V

**0 336 203 005**

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>-</td>
<td>2 x 18 W</td>
<td>12 V</td>
<td>Metal housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

---

## Mounting Brackets

- **Part Number:** 0 336 203 005
- **Rated Voltage:** 12 V
- **Rated Temperature:** -40°C to +100°C
- **Rated Protection:** IP5K4

---

## Life Durability

- **Rated Load:** 2 x 18 W
- **Rated Protection:** IP20

---

## Mounting Bracket Diagram

- **Dimensions:** 33 mm x 24.2 mm
- **Features:**
  - **Kontaktkörper (K):** CONTACT BODY (K)
  - **C:** CONTACT (C)
  - **49:** TERMINAL (49)
  - **54:** TERMINAL (54)
  - **(K):** CONTACT BODY (K)
  - **(54):** TERMINAL (54)

---

## Resistance and Diode

- **Diode:** Present
- **Resistor:** Present
- **Suppression:** X

---

## Housing Details

- **Material:** Metal
- **Protection Rating:** IP5K4
- **Temperature Range:** -40°C to +100°C

---

## Connection Diagram

- **Connections:**
  - **C:** CONTACT (C)
  - **49:** TERMINAL (49)
  - **54:** TERMINAL (54)

---

## Back to general overview
Turn-Signal Flasher 12 V
0 336 202 001
phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td></td>
<td>2+1+ 1x 18 W</td>
<td>12 V</td>
<td>Metal housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>
# Turn-Signal Flasher 24 V

**0 336 200 051**

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>-</td>
<td>2+ 1x 18 W</td>
<td>24 V</td>
<td>Metal housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Diagram of Turn-Signal Flasher 24 V](image)

Back to general overview
**Turn-Signal Flasher 12 V**

0 336 200 049

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>-</td>
<td>2+ 1x 18 W</td>
<td>12 V</td>
<td>Metal housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
### Turn-Signal Flasher 24 V

**0 336 200 047**

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>3 x 18 W</td>
<td>24 V</td>
<td>Metal housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
# Turn-Signal Flasher 6 V

0 336 101 004

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>1 x 15W/18W</td>
<td>6 V</td>
<td>Metal housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
## Turn-Signal Flasher 12 V

0 986 AH0 282

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>200 h</td>
<td>400 W</td>
<td>12 V DC</td>
<td>Plastic housing</td>
<td>-30°C ... +85°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Diagram](http://www.bosch.com)
Turn-Signal Flasher 12 V
0 986 AH0 285

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>200 h</td>
<td>400 W</td>
<td>12 V DC</td>
<td>Plastic housing</td>
<td>-30°C ... +85°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
## Turn-Signal Flasher 12 V

0 986 AH0 288

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>200 h</td>
<td>250 W</td>
<td>12 V DC</td>
<td>Plastic housing</td>
<td>- 30 °C ... + 85 °C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Specifications

- **Model**: 0 986 AH0 288
- **Voltage**: 12 V DC
- **Load**: 250 W
- **Life durability**: 200 h
- **Housing type**: Plastic
- **Temperature range**: -30 °C to +85 °C
- **Degree of protection housing**: IP5K4
- **Degree of protection connection**: IP20

### Diagrams

- **PBT and PA materials**
- **EF41 35AMP 16LAMPS**
  - 12V 3P

[Back to general overview](http://www.st RelayRelay.com)
## Turn-Signal Flasher 24 V

**0 986 AH0 296**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>200 h</td>
<td>400 W</td>
<td>24 V DC</td>
<td>Plastic housing</td>
<td>- 30 °C ... + 85 °C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

---

**Back to general overview**
## Turn-Signal Flasher 24 V

**0 986 AH0 297**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>200 h</td>
<td>400 W</td>
<td>24 V DC</td>
<td>Plastic housing</td>
<td>-30 °C ... +85 °C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Technical Specifications
- **X** indicates a requirement.
- **X** indicates an option.
- **200 h** indicates the life durability in hours.
- **400 W** indicates the load in watts.
- **24 V DC** indicates the voltage type.
- **Plastic housing** indicates the housing type.
- **-30 °C ... +85 °C** indicates the temperature range.
- **IP5K4** indicates the degree of protection for housing.
- **IP20** indicates the degree of protection for connection.

### Diagrams
- **Diagram 1**: Schematic drawing of the Turn-Signal Flasher.
- **Diagram 2**: Cross-sectional view of the Turn-Signal Flasher.

### Additional Information
- [http://www.bosch-sensortec.com](http://www.bosch-sensortec.com)

### Back to general overview

---

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
## Turn-Signal Flasher 12 V

**Part Number:** 0 986 AH0 404

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>&gt; 200 h</td>
<td>6 x 10 W</td>
<td>12 V DC</td>
<td>Plastic housing</td>
<td>-20 °C ... +60 °C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Technical Specifications

- **Load:** 6 x 10 W
- **Voltage:** 12 V DC
- **Temperature range:** -20 °C ... +60 °C
- **Degree of protection housing:** IP5K4
- **Degree of protection connection:** IP20

### Diagrams

- **Diagram 1:** Dimensions of the flasher component.
- **Diagram 2:** Schematic representation of the flasher.
- **Diagram 3:** Actual physical image of the flasher.

### Additional Information

- **12V 2P**
- **10W*2+3.4W**
- **(10W*2+A.P.)**
- **Silent Flasher**

---

**Back to general overview**
## Turn-Signal Flasher 12 V

**0 986 AH0 405**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>&gt; 200 h</td>
<td>6 x 10 W</td>
<td>12 V DC</td>
<td>Plastic housing</td>
<td>- 20°C ... + 60°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Diagram:**

- **12V 2P**
- **10W*2+3.4W**
- **(10W*2+A.P.)**
- **Silent Flasher**

**Back to general overview**
Electronic hazard-warning/turn-signal flashers 12 V
0 335 200 038

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>-</td>
<td>2 (4)x 21 W + 0-4 W</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
## Electronic hazard-warning/turn-signal flashers 12 V

### 0 335 200 041

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>2+ 1(6) x 21 W</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
</tr>
</tbody>
</table>

### Diagrams

- Electronic hazard-warning/turn-signal flashers diagram
- Mounting bracket diagram
- Life durability diagram

### Additional Information
- Degree of protection housing: IP5K4
- Degree of protection connection: IP20

**Back to general overview**
Electronic hazard-warning/turn-signal flashers  12 V

0 335 200 007

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>w/w</td>
<td>w/w</td>
<td>-</td>
<td>2(4) x 21W + 2W</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
Others

Slide 173 to 200
# Micro Relay (GM Footprint) 12 V, 30/10 A

**0 986 AH0 113**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100,000</td>
<td>30/10 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

*Change over* | *Normal close* | *Normal open* |
---|---|---|
✓ | | |

---

**Back to general overview**
## Micro Relay (GM Footprint) 24 V, 10/5 A

**Part Number:** 0 986 AH0 114

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>10/5 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Changeover:** ✔️

### Specifications
- **Current:** 10/5 A
- **Voltage:** 24 V
- **Number of Pins:** 5
- **Housing:** Plastic
- **Temperature Range:** -40…+100°C
- **Protection Housing:** IP5K4
- **Protection Connection:** IP20

### Diagrams
- [Micro Relay Diagram](image)
- [Micro Relay Footprint](image)

*Back to general overview*
# Micro Relay (GM Footprint) 12 V, 30 A

0 986 AH0 115

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100,000</td>
<td>30 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- **Change over**: ✓

---

![Diagram of Micro Relay](image)

**Back to general overview**
# Micro Relay (GM Footprint) 24 V, 10 A 0 986 AH0 116

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>10 A</td>
<td>24 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

[Back to general overview](#)
**Fuel pump Relays 12V, 15 A**

0 332 514 121

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Relay Diagram](image1)

![Relay Diagram](image2)

Back to general overview
## Fuel pump Relays 12V, 15 A

**0 332 514 120**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

---

**Back to general overview**
## Time-lag Relay 12 V, 10A / 15A

**0 335 330 801**

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10 A / 15 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over** | Normal close | Normal open

### Technical Specifications

- **Current**: 10 A / 15 A
- **Voltage**: 12 V
- **Housing type**: Plastic housing
- **Temperature range**: -40...+100°C
- **Degree of protection housing**: IP5K4
- **Degree of protection connection**: IP20

---

**Back to general overview**
### Time-lag Relay 12 V, 20 A / 25 A

**0 335 330 802**

*phased out part*

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>20 A / 25 A</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over** | **Normal close** | **Normal open**

☑

---

**Back to general overview**
# Pulse Generator 24 V

**0 335 323 001**

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>50 W</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Diagram](image)

Back to general overview
Pulse Generator 24 V
0 335 323 003
Replaced by F 026 T00 031

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>50 W</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
### Pulse Generator 12 V, 20 A

**0 986 335 058**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>75,000</td>
<td>20 A</td>
<td>12 V</td>
<td>6</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over** | **Normal close** | **Normal open**
- | - | √
Pulse Generator **12 V**

**0 335 322 001**

Replaced by F 026 T00 030

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>50 W</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
Warning & Turn Signal Flasher 24 V
0 335 215 164
phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2+1+1(8)x 21 W</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>
Warning & Turn Signal Flasher 24 V
0 335 215 155
phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3+1(8)x 21 W + 2-4W</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
### Warning & Turn Signal Flasher 24 V

#### 0 335 215 154

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3 + 1(8)x 21 W</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Diagrams:**

1. Mounting bracket diagram
2. Resistor diagram
3. Diode diagram
4. Life durability diagram
5. Load diagram
6. Voltage diagram
7. Housing type diagram
8. Temperature range diagram
9. Degree of protection housing diagram
10. Degree of protection connection diagram

**Back to general overview**
### Warning & Turn Signal Flasher 24 V

**0 335 215 145**

Phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2+1(6)x 21 W + 1,2-2W</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Diagram**: 3D model and electrical schematic of the flasher unit.

Back to general overview.
## Warning & Turn Signal Flasher 24 V

**0 335 215 144**

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2+1(6)x 21 W + 5 W (10W)</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Diagrams

- [Diagram 1](#)
- [Diagram 2](#)
- [Diagram 3](#)
### Warning & Turn Signal Flasher 24 V

**0 335 215 143**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2+1(6)x 21 W</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Warning & Turn Signal Flasher 24 V**

- **Mounting bracket**: ✓
- **Resistor**: -
- **Diode**: -
- **Life durability**: -
- **Load**: 2+1(6)x 21 W
- **Voltage**: 24 V
- **Housing type**: Plastic housing
- **Temperature range**: -40...+100°C
- **Degree of protection housing**: IP5K4
- **Degree of protection connection**: IP20

**Back to general overview**
Warning & Turn Signal Flasher 24 V
0 335 215 134
phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4(8)x 21 W + 2-4 W</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
**Warning & Turn Signal Flasher 24 V**

0 335 215 123

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3(6)x 21 W + 2-4W</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
Warning & Turn Signal Flasher 24 V
0 335 215 113
phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2(4)x 21 W + 2-4W</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Diagram of the device](image)

Back to general overview
# Warning & Turn Signal Flasher 24 V

## 0 335 215 043

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2 + 1(6)x 18 W</td>
<td>24 V</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
# Warning & Turn Signal Flasher 12 V

## 0 335 210 164

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2+1+1(8)x 21 W</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Back to general overview**
Warning & Turn Signal Flasher 12 V
0 335 210 153
phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3+ 1(8)x 21 W</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Back to general overview
# Warning & Turn Signal Flasher 12 V

0 335 210 148

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2 + 1(6)x 21 W</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Diagram of the flasher module](image.png)

Back to general overview
Electronic hazard-warning/turn-signal flashers 12 V

0 335 210 143

phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2+ 1(6)x 21W</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>
Electronic hazard-warning/turn-signal flashers 12 V

0 335 210 063
phased out part

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2+1+1 (8)x18 W</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>
**Electronic hazard-warning/turn-signal flashers**

**0 335 200 160**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2+1 + 1(8)x 21W+ 1,2 – 2W</td>
<td>12 V</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

![Diagram of the electronic hazard-warning/turn-signal flasher](image)

Back to general overview
## Electronic hazard-warning/turn-signal flashers

12 V

0 335 200 161

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td></td>
<td>2+1+1x21W (8x21W)</td>
<td>12 V DC</td>
<td>Plastic housing</td>
<td>-30°C ... +70°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- **Housing type**: Plastic housing
- **Temperature range**: -30°C ... +70°C
- **Degree of protection housing**: IP5K4
- **Degree of protection connection**: IP20

![Diagram of electronic hazard-warning/turn-signal flashers](image)

---

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
## Electronic hazard-warning/turn-signal flashers

24 V

### 0 335 215 168

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3+1x21W (8x21W)</td>
<td>24 V DC</td>
<td>Plastic housing</td>
<td>-30°C ... +70°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

---

### Diagrams

- Electronic hazard-warning/turn-signal flashers diagram
- Mounting bracket and connection diagram
- Housing and connection diagram

---

*Back to general overview*
### Electronic hazard-warning/turn-signal flashers 24 V

**0 335 215 169**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Load</th>
<th>Voltage</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4+1x21W (10x21W)</td>
<td>24V DC</td>
<td>Plastic housing</td>
<td>-30°C ... +70°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

- **Data-code (MMYY) on side**
  - ISO 8092
  - 6.3 x 0.8-0H
- **ISO 7588-1**

**Back to general overview**
Bosch-Relais: Verwendungsübersicht

- Mikro
- Mini
- Power Typ 1
- Power Typ 2
- Power Typ 3

Nennstrom der unterschiedlichen Relais

- Elektron. Einspritzanlage
- Zusatzschmierwasser
- Benzinpumpe
- Fahrertrichtungsanzeige
- Rundumkennleuchte
- Fantaro
- Scheinwerfer

Sockel für Mikrorelais

- 3 334 485 007
- 3 334 485 009
- 3 334 485 041

Sockel für Mikrorelais

- 3 334 485 045
- 3 334 485 046
- 3 334 485 049

Schaltbild
Anschlussbild
Micro Relays

Slide 11 to 30
# Micro Relays 12 V, 30 A

0 332 011 007

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>200.000</td>
<td>30 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over**

- ✓ Normal close
- Normal open

Back to general overview
## Micro Relays 12 V, 20 A

**0 332 017 300**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>250.000</td>
<td>20 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Specifications
- **Changeover:**
  - Normal close: [ ]
  - Normal open: [✓]

### Diagrams
- **Mounting Bracket**
- **Resistor Diagram**
- **Diode Diagram**
- **Life Durability**
- **Current**
- **Voltage**
- **Number of Pins**
- **Housing Type**
- **Temperature Range**
- **Degree of Protection Housing**
- **Degree of Protection Connection**

[Back to general overview]
# Micro Relays 12 V, 30/10 A

**Part Number:** 0 332 201 107

## Specifications

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>200,000</td>
<td>30/10 A</td>
<td>12 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40… +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

## Changeover

<table>
<thead>
<tr>
<th>Changeover</th>
<th>Normal close</th>
<th>Normal open</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Back to general overview**
### Micro Relays 24 V, 10/5 A

**0 332 207 402**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>✓</td>
<td>250.000</td>
<td>10/5 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

**Change over** | **Normal close** | **Normal open** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Back to general overview*
## Micro Relays 24 V, 10/5 A
0 332 207 405

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>250.000</td>
<td>10/5 A</td>
<td>24 V</td>
<td>5</td>
<td>Plastic housing</td>
<td>-40... +100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.
# Micro Relays

12 V, 20 A

0986 AH0 300

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100,000</td>
<td>20 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

© Robert Bosch GmbH 2018. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.

Back to general overview
## Nano Relays 12 V, 20 A

**0 986 AH0 090**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>20 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40…+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Diagrams
- **Diagram 1:** Schematic diagram of the relay
- **Diagram 2:** Illustration of the relay
- **Diagram 3:** Close-up image of the relay

---

**Back to general overview**
Nano Relays 12 V, 20 A
0 986 AH0 091

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>20 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

Change over | Normal close | Normal open
---|---|---
| | ✓ | |

Back to general overview
## Nano Relays

### 12 V, 20 A

**0 986 AH0 092**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>20 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+100°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

### Change over

- Normal close
- Normal open: ✓

---

**Back to general overview**
### Pico Relay 12 V, 30 A

**0 986 AH0 093**

<table>
<thead>
<tr>
<th>Mounting bracket</th>
<th>Resistor</th>
<th>Diode</th>
<th>Life durability</th>
<th>Current</th>
<th>Voltage</th>
<th>Number of Pins</th>
<th>Housing type</th>
<th>Temperature range</th>
<th>Degree of protection housing</th>
<th>Degree of protection connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>100.000</td>
<td>20 A</td>
<td>12 V</td>
<td>4</td>
<td>Plastic housing</td>
<td>-40...+125°C</td>
<td>IP5K4</td>
<td>IP20</td>
</tr>
</tbody>
</table>

#### Change over
- Normal close: 
- Normal open: ✓