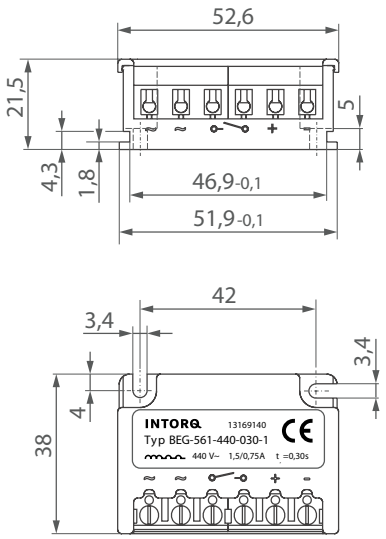
# Bridge/half-wave rectifiers

## BEG-561-□□□-□□□

Bridge/half-wave rectifiers are used to supply power to the electromagnetic DC current spring-applied brakes approved for operation with this type of rectifier. Any other use is subject to the approval of INTORQ.
Once a set overexcitation time has elapsed, the bridge/half-wave rectifiers switch from bridge rectification to half-wave rectification. This makes it possible to improve switching performance or reduce power in accordance with load dimensioning.
Terminals 3 and 4 are in the DC circuit of the brake.
With switching on the DC side, integrated overvoltage protection at terminals 5 and 6 limits the induced voltage peak (see “Reduced switch off times” diagram).

### Dimensions




### Technical data

| Rectifier type | | Bridge/half-wave rectifier |
|---|---|---|
| Output voltage with bridge rectification | | 0.9x$U_1$ |
| Output voltage with half-wave rectification | | 0.45x$U_1$ |
| Ambient temperature (storage/operation) | [°C] | -25...+70 |

$U_1$ = Eingangsspannung (40...60 Hz)

| Type | Input voltage $U_1$ (40 Hz to 60 Hz) | | | Max. current load $I_{max}$ | | Overexcitation time $t_ü$ (±20%) | | |
|---|---|---|---|---|---|---|---|---|
| | Min. [V~] | Rated [V~] | Max. [V~] | Bridge [A] | Half-wave [A] | at $U_{1min}$ [s] | at $U_{1rated}$ [s] | at $U_{1max}$ [s] |
| **BEG-561-255-030** | 160 | 230 | 255 | 3.0 | 1.5 | 0.430 | 0.300 | 0.270 |
| **BEG-561-255-130** | | | | 3.0 | 1.5 | 1.870 | 1.300 | 1.170 |
| **BEG-561-440-006-1** | 230 | 400 | 440 | 1.5 | 0.75 | 0.110 | 0.060 | 0.060 |
| **BEG-561-440-030-1** | | | | 1.5 | 0.75 | 0.500 | 0.300 | 0.270 |
| **BEG-561-440-130** | | | | 3.0 | 1.5 | 2.300 | 1.300 | 1.200 |

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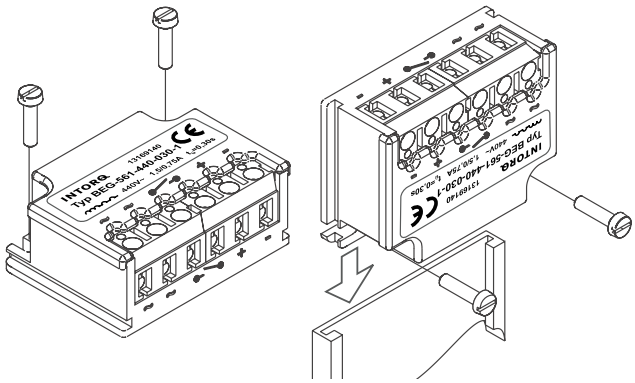
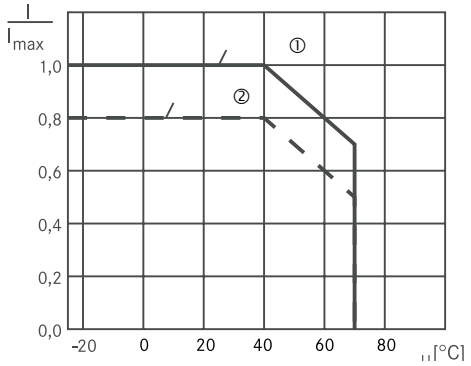
### Fastening options



### Permissible current load – ambient temperature




① Screw mounting with metal surface (good heat dissipation)
② Other mounting (e.g. adhesive)

### Reduced switch off times

During switching on the DC side (shorter switch-off times) switching must also occur on the AC side! Otherwise, overexcitation will not occur on restarting.

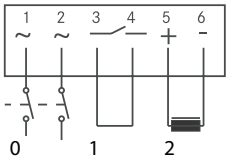
### Coil voltage selection

| Rated coil voltage | Function |
|---|---|
| $U_{Sp}$ = 0.45x$U_1$ | Maximum overexcitation<br>No reduction in holding current |
| 0.45x$U_1$ = < $U_{Sp}$ < 0.90x$U_1$ | Partial overexcitation<br>Partial reduction in holding current |
| $U_{Sp}$ = 0.90x$U_1$ | No overexcitation<br>Maximum reduction in holding current |

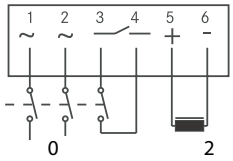
$U_{Sp}$ = Rated coil voltage  $U_1$ = Input voltage (40...60 Hz)

### Connection

***Normal switch off times***




***Reduced switch off times***




0 Mains 1 Bridge 2 Coil