

### Overview

Valuable electromagnet, encapsulated coil, industry quality standard. Reliable functionality with generous reserves of saturation for overdrive use. Fitting on cooling plate turns out to be highly performance enhancing. Designed to meet requirements of industrial application. Modifications possible upon request.



1 2 3 4 5  
-5 -4 -3 -2 -1 0 1 2 3 4 5

- Function: holding when turned on
- Weight: 1,1 kg
- Rated power: 15 Watt (100%, 20°C)
- Rated force: 280 kg +/- 10% (0mm, 20°C)

### Electrical Data

Rel. DC (%)	100	50	25	10	5
Max. OT (Min.)	∞	27	15	6	3
Power (W)*	15	30	60	150	300

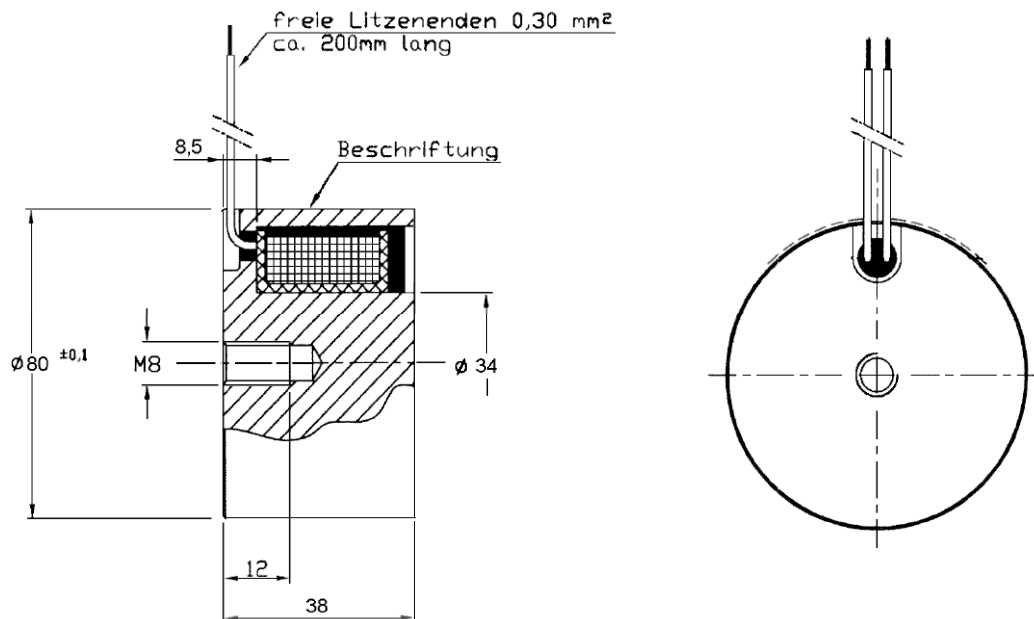
\*based on 20°C coil temperature

- Dielectric strength: as per DIN / VDE 0580
- Insulation resistance: as per DIN / VDE 0580

### Technical Data

- Insulation class: B (limit temperature 130°C)
- Ingress prot. (case): IP 65
- Ingress prot. (wire): IP 00 (exposed wire ends)
- RoHS: yes
- Phthalate free wire: yes
- ISO9001: yes
- DIN VDE 0580: yes
- Overdrive: 100% - 5% rel. duty cycle

### Drawing



### Force (20°C coil temperature)

Distance	Holding force
0,0 mm	≥ 2800 N
0,1 mm	≥ 2300 N
0,2 mm	≥ 1 500 N
0,5 mm	≥ 800 N

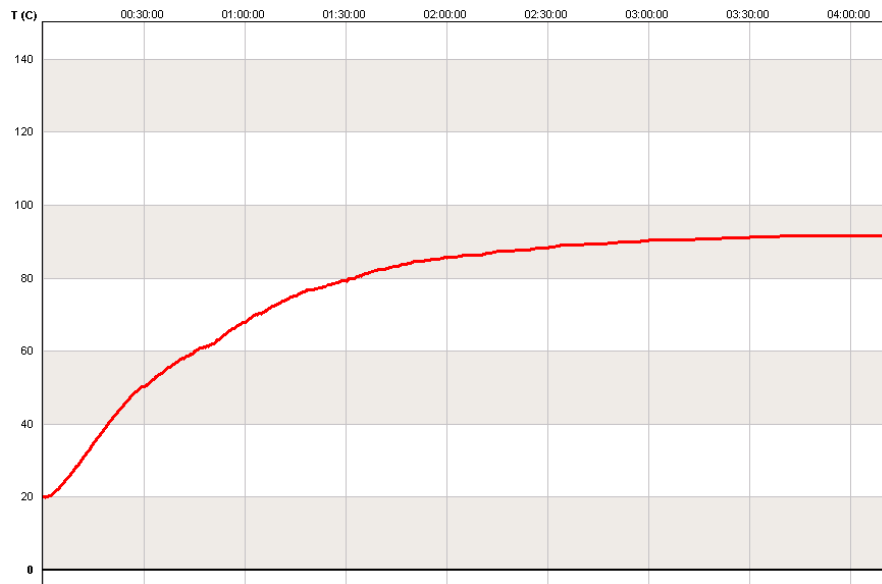
Thickness of counter plate: 9,0 mm  
Rel. duty cycle: 100%  
General tolerances: +/- 10%

### Force (operating temperature)

Distance	Holding force
0,0 mm	≥ 2160 N
0,1 mm	≥ 1780 N
0,2 mm	≥ 1210 N
0,5 mm	≥ 640 N

Thickness of counter plate: 9,0 mm  
Rel. duty cycle: 100%  
General tolerances: +/- 10%

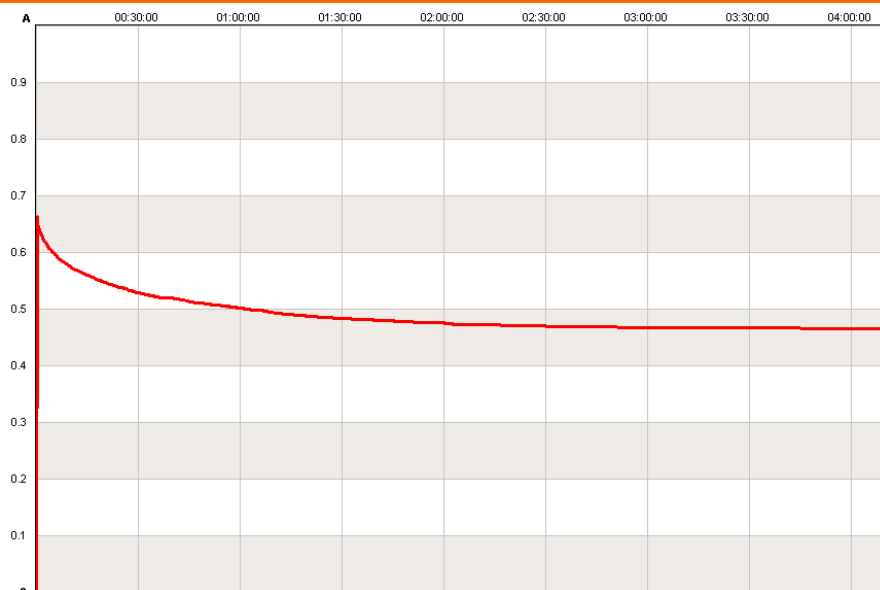
### Temperature curve



Exemplary measurement at room temperature without additional heat sink.

- time: 4,0 hours
- rel. duty cycle: 100%

### Ampere curve



Exemplary measurement at room temperature without additional heat sink.

- time: 4,0 hours
- rel. duty cycle: 100%
- rated current: 24 VDC

### Terms

OT: on time: time between power on and power off.  
rel. DC: relative duty cycle: percentage value between on time and cycle time. Also used to describe overdrive (the smaller the rel. DC the higher the overdrive).  
max. OT: max. on time: time until saturation temperature is reached (starting at 20°C).

### Application notes

- Protect from moisture and condensate
- Protect from corrosive substances
- Avoid overheating
- Avoid deformations on the holding area
- Apply recovery diode
- Electrical values can be calculated on [www.tremba.de](http://www.tremba.de)

### Environment protection



Electronic parts and components are not allowed to be disposed as residual waste or solid waste.

### Hazard notes

- Risk of overheating in case of misusing
- Voltage peak when turning off
- Injury caused by mechanical forces or small parts
- Magnetic fields effect electronic systems and magnetic storage systems.
- Electromechanical components are no toys