Solenoid coil M.35/16 x 53 to VDE 0580
Protection class IP65/IP67

DESCRIPTION
The slip-on solenoid coil M.35/16 x 53 is available with different types
of electric connections. The AC voltage type incorporates a rectifier.
The available AC voltages are listed in the type code section. The
construction corresponds to standard VDE 0580. The steel housing is
zinc-nickel-coated as standard.

FUNCTION
In combination with the corresponding armature tube the function of an
on-off solenoid or proportional solenoid will be obtained.

TYPE CODE
<table>
<thead>
<tr>
<th>Metal housing, square</th>
<th>M S35/16 x 53 -</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection execution:</td>
<td></td>
</tr>
<tr>
<td>Connector socket EN175301-803/ISO4400</td>
<td>J</td>
</tr>
<tr>
<td>Connector socket AMP Junior-Timer</td>
<td>J (only DC)</td>
</tr>
<tr>
<td>Connector Deutsch DT04-2P</td>
<td>E</td>
</tr>
<tr>
<td>Connector socket AMP Junior-Timer</td>
<td>K</td>
</tr>
<tr>
<td>Connector Deutsch DT04-2P</td>
<td>L (only DC)</td>
</tr>
<tr>
<td>Connector Deutsch DT04-2P</td>
<td>N</td>
</tr>
<tr>
<td>Connector Deutsch DT04-2P</td>
<td>S</td>
</tr>
<tr>
<td>Connector Deutsch DT04-2P</td>
<td>X</td>
</tr>
<tr>
<td>Connector Deutsch DT04-2P</td>
<td>Z</td>
</tr>
<tr>
<td>Connector Deutsch DT04-2P</td>
<td></td>
</tr>
</tbody>
</table>

FUNCTION
In combination with the corresponding armature tube the function of an
on-off solenoid or proportional solenoid will be obtained.

SPECIFICATIONS
<table>
<thead>
<tr>
<th>Coil winding min. H (180 °C)</th>
<th>12 VDC</th>
<th>24 VDC</th>
<th>115 VAC</th>
<th>230 VAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal power (W) (Switching function)</td>
<td>23</td>
<td>22</td>
<td>25.5</td>
<td>28</td>
</tr>
<tr>
<td>Limiting power (W) (Proportional function)</td>
<td>15.5</td>
<td>15</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Limiting current (50 °C)(A) (Proportional function)</td>
<td>1.285</td>
<td>0.625</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Nominal resistance (Ω)</td>
<td>6.3</td>
<td>26.1</td>
<td>413</td>
<td>1500</td>
</tr>
<tr>
<td>Number of windings (–)</td>
<td>815</td>
<td>1666</td>
<td>5930</td>
<td>12000</td>
</tr>
<tr>
<td>Weight of solenoid coil (kg)</td>
<td>0.37</td>
<td>0.37</td>
<td>0.37</td>
<td>0.37</td>
</tr>
</tbody>
</table>

SAFE OPERATION
Caution: To avoid overheating the coil may only be energised
when mounted on an armature tube and valve.

NOTE!
The effective heat emissions depends on the installation
conditions (heat emission surface, air circulation, etc.), these
influence the described area of application.
TYPE LISTE / DIMENSIONS / GENERAL SPECIFICATIONS

**Execution: M [ ] S35/16 x 53-...**

- 3 pole 2 P+E
- DC- and AC-execution available
- Connector socket plastic
- Protection class IP65

With corresponding mating connector (not included in delivery) and professional assembly

**Execution: M [ ] S35/16 x 53-...**

- 2 pole 2P
- DC-execution available
- only for \( U_{dc} \leq 75 \) VDC
- Connector socket plastic
- Protection class IP67

With corresponding mating connector (not included in delivery) and professional assembly

**Execution: M [ ] S35/16 x 53**

- 2 pole 2P
- DC-execution available
- only for \( U_{dc} \leq 75 \) VDC
- Protection class IP 67 and 69 K

With corresponding mating connector (not included in delivery) and professional assembly

**Execution: M [ ] S35/16 x 53-...**

- 2 pole 2P (2x 0.25 mm\(^2\)) Radox 155
- Cable length 500 mm
- DC-execution available
- nur für \( U_{dc} \leq 75\)VDC
- Protection class IP65

With professional assembly

**Execution: M [ ] S35/16 x 53-...**

- 3 pole 2P+E 3x 0,75 mm\(^2\) Thermoplast
- Cable length 1500 mm
- Cable diameter 6 mm
- DC- and AC-execution available
- Cable housing plastic
- Protection class IP67

With professional assembly
**Execution:** M \[\text{K}\] S35/16x53—... \[M28\]

- 3 pole 2P+E 2x 1 mm² [E]
- (acc. to IEC 332)
- Cable length 1500 mm
- DC- and AC-execution available
- Connector housing steel
- Protection class IP67
- With professional assembly

**Execution:** M \[\text{E}\] S35/16x53—... \[M209\]

- 3 pole 2P+E
- MIL VG 95234
- DC- and AC-execution available
- Connector housing steel
- Protection class IP67
- With corresponding mating connector (not included in delivery) and professional assembly

**Execution:** M \[\text{M}\] S35/16x53—... \[M35\]

- With pressure equalising bore for underwater applications in oil bath
- Oil tank separated from water by a membrane
- With connection type «D», «L», «X»
- DC-execution available

**Attention:**
In case of the connection execution «D» only plugs with the additional designation «Z23» must be utilised (not included in the scope of supply of the solenoid)
Execution: M [X] 35/16x53... [M222]

- 2 pole
- DC-version available up to 28 VDC
- Screw clamp plastic
- Plug housing clamp plastic, transparent, removable
- Printed circuit board protected with conformal coating
- Protection type IP40 with plastic hood installed

\[ I_{\text{max}} = \begin{cases} 1.0 \text{ A at } 130 \text{ °C} \\ 1.5 \text{ A at } 120 \text{ °C} \\ 2.0 \text{ A at } 110 \text{ °C} \end{cases} \]

**PARTS LIST**

<table>
<thead>
<tr>
<th>Position</th>
<th>Article</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>219.2802</td>
<td>Mating connector (M209 und M222)</td>
</tr>
<tr>
<td>20</td>
<td>088.1116</td>
<td>Plastic hood (only M222)</td>
</tr>
</tbody>
</table>

**NOTE!**

Technical explanation see data sheet 1.1-400/410/430

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**DUTY FACTOR / TEMPERATURE**

**TEMPERATURE / VOLTAGE**

1. Duty factor at nominal voltage
2. Duty factor at 100% nominal voltage
3. Max. voltage in % for 100% duty factor
4. Min. voltage in % for proportional limiting current at 100% duty factor