AUTOSTOP automatic train protection system based on INDUSI (PZB) principle is designed in order to increase the safety of railway traffic. If the driver doesn’t comply with safety regulations, the system activates brakes (initiates automatic braking).

**General**

- Automatic train protection system consists of central device RAS 8385, locomotive and track ballises (magnets) and signalling and operating elements located in the locomotive cabin.
- Dead man's control system and the event recorder are optionally installed into RAS 8385 device or in the driver’s cabin.

**Application**

- AUTOSTOP system is used by many public and private rail operators across Europe and the world.
- For speeds up to 160 km/h.
- Development, design, and installation for different vehicles and training of technical staff.
- Test equipment for the complete ATP system as well as its single components.

**Quality**

- High quality level provides safe operation of the system in various climatic and environmental conditions.
- Track and Locomotive Ballises certified in TÜV Rheinland according to S0121-3, S0121-4, and S0125-3. RAS8385 and Dead Man’s Control System (SIFA) tested according to ENS0155, EN 50121-3 and EN 61373.

**Order codes**

- Central Device RAS8385 .......................................................... AP108170
- Locomotive Balise LLC0512 ................................................. AP108120
- Track Balise PM1020 .......................................................... AP215400
- Track Ballise PM500 .......................................................... AP215401
Device input voltage 15 - 150 VDC
Water and dust protection (Locomotive and track balises) IP68
Time control 4, 16, 20, 26, 34 s
Nominal value of resonant current of locomotive balise 500 Hz, 1000 Hz and 2000 Hz: 270 mA (±10%)
Influence current threshold of a locomotive balise 500 Hz, 1000 Hz and 2000 Hz: 148 mA (±10%)
Operating temperature range -25°C - +70°C
Event recorder Recording: speed, pressure, 16 digital signals (6 of ATPS)

Time required for the system to return to initial state after forced stopping: 5 - 7 s.
Air line pressure needed for switching off the light indication after forced stopping: 1.0 - 1.2 bar.

Speed check at 500Hz for running mode

<table>
<thead>
<tr>
<th>Speed</th>
<th>km/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>90</td>
</tr>
<tr>
<td>1</td>
<td>65</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>40</td>
</tr>
</tbody>
</table>

Speed check at 1000Hz for running mode

<table>
<thead>
<tr>
<th>Speed</th>
<th>km/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>130 km/h, after 16 s</td>
</tr>
<tr>
<td>1</td>
<td>90 km/h, after 20 s</td>
</tr>
<tr>
<td>2</td>
<td>65 km/h, after 26 s</td>
</tr>
<tr>
<td>3</td>
<td>50 km/h, after 34 s</td>
</tr>
</tbody>
</table>

Dimensions (w x l x h) 660 × 460 × 220 mm