



RSM Series Specification Comparison

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1 Specifications

	RSM 400	RSM 50
Angular Stabilization Ranges: Pitch - at 0° Roll Roll - at 0° Pitch Yaw (Drift)	$\leq \pm 15.5^\circ$ $\leq \pm 15.5^\circ$ no drift correction	$\leq \pm 20.0^\circ$ $\leq \pm 20.0^\circ$ no drift correction
Residual Deviation	$\leq 0.4^\circ \text{ rms}^1$	$\leq 0.3^\circ \text{ rms}^2$
Payload	15 kg / 12.3 kg / 10.5 kg ³	40 kg / 25 kg / 12.5 kg ⁴
Optional Payload	25 kg / 22.5 kg / 19 kg ⁵	-
Continuous Torque ⁶	8 Nm	25 Nm
Optional Continuous Torque ⁶	15 Nm ⁵	-
Dynamic Peak Torque ⁷	16 Nm	50 Nm
Optional Dynamic Peak Torque ⁷	30 Nm ⁵	-
Mass	6.6 kg	11.5 kg
Dimensions (regular leveling positions): Height Optional Height Diameter	156.5 mm ⁸ 158.0 mm ⁸ Ø 335 mm	197.5 mm Ø 306 mm
IP Class	IP 67	IP 67
Operating Temperature	-30 °C to +55 °C	-32 °C to +55 °C
Storage Temperature	-55 °C to +85 °C	-55 °C to +85 °C
Communication Interfaces	USB / RS422 / RS232	Ethernet / RS422 / RS232 (optional)
Operational Voltage	28 VDC (24... 30 VDC)	24 VDC (24... 30 VDC)
Average Power Consumption ⁹ at Operational Voltage	70 W	50 W

¹ Vehicle motion $\leq \pm 10.0^\circ / 15^\circ/\text{s} / 40^\circ/\text{s}^2$ / small lateral accelerations ($\leq 0.2 \text{ g}$) acceptable; constant lateral accelerations for more than 1 minute reduce the performance of the Mount (can be compensated by external GPS input)

² Vehicle motion $\leq \pm 18^\circ / 25^\circ/\text{s} / 40^\circ/\text{s}^2$ / small periodical lateral accelerations ($\leq 0.5 \text{ g}$) acceptable; constant lateral accelerations for more than 1 minute resulting from vehicle's turning maneuvers are compensated by internal or external GPS input. No GPS input could reduce the performance of the Mount during turning maneuvers.

³ Possible payload weight depends on lateral acceleration and CoG of payload / shown data is based on 0.3 g lateral acceleration and a CoG payload offset to the Mount surface of: 100 mm / 200 mm / 250 mm; further information is shown in the diagram below

⁴ Possible payload weight depends on lateral acceleration and CoG of payload / shown data is based on 1.0 g lateral acceleration and a CoG payload offset to the Mount surface of: 125 mm / 200 mm / 400 mm

⁵ Movement reduction in Roll and Pitch to $\leq \pm 12.5^\circ$ / Height: 158 mm

⁶ Please contact SOMAG support for continuous torque estimation

⁷ Maximum duration 90 s at 55 °C surrounding temperature / longer if temperature inside the unit is $< 55^\circ\text{C}$

⁸ Minimum: 132.5 mm / Maximum: 180.5 mm

⁹ Horizontal payload CoG offsets are not considered; without wind force and other possible external forces

	RSM 400	RSM 50
Peak Power Consumption ⁹ at Operational Voltage	130 W	250 W
Applied Standards	IACS E10, DNV GL, 2006/42/EC Machinery	IACS E10, DNV GL, 2006/42/EC Machinery
Others		Upside-down hanging application possible Failsafe braking system to securely lock payload during power outage Energy saving mode Extended diagnosis possibilities Control of multiple Mounts possible via ethernet Advanced control algorithms for increased stabilization performance

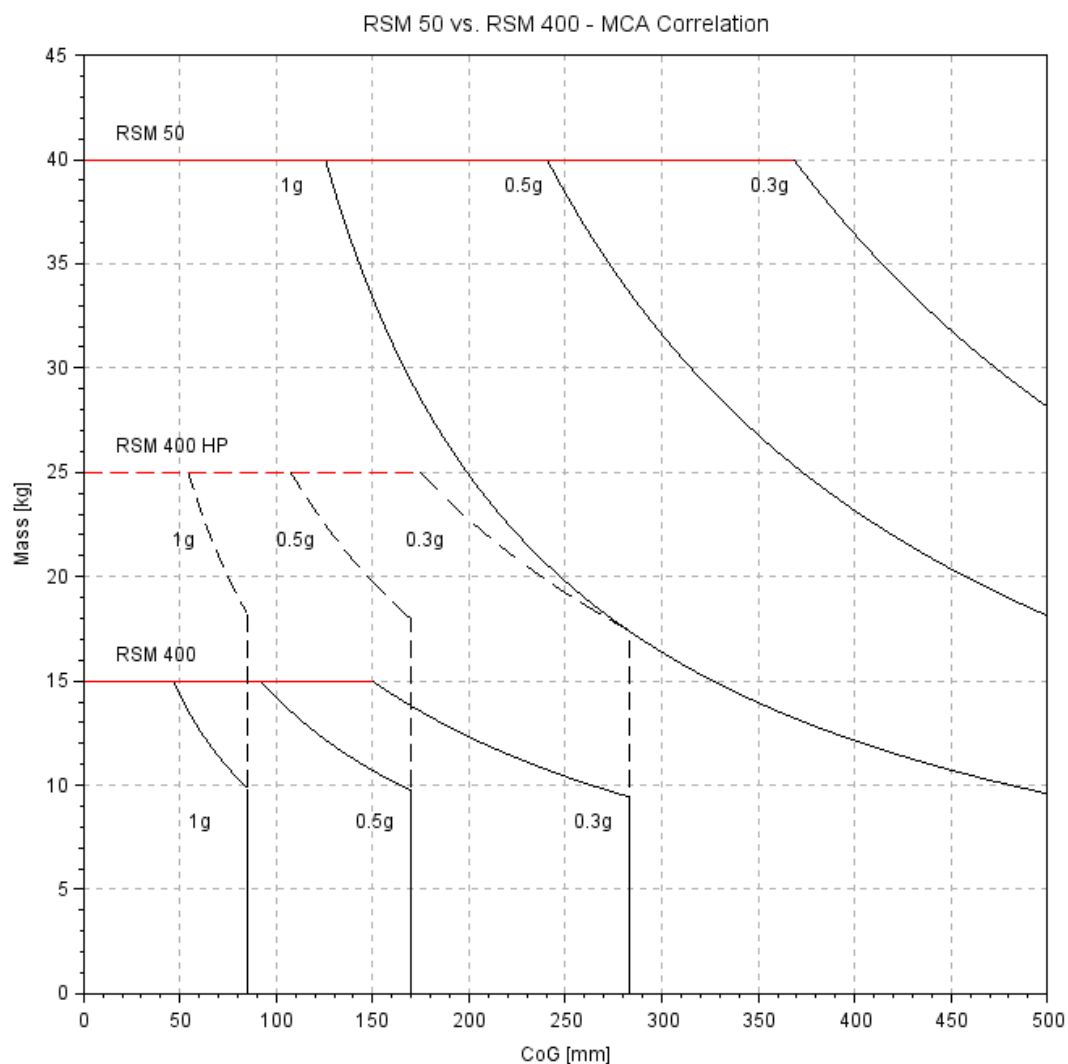


Figure 1: MCA correlation comparison

2 Dimensions

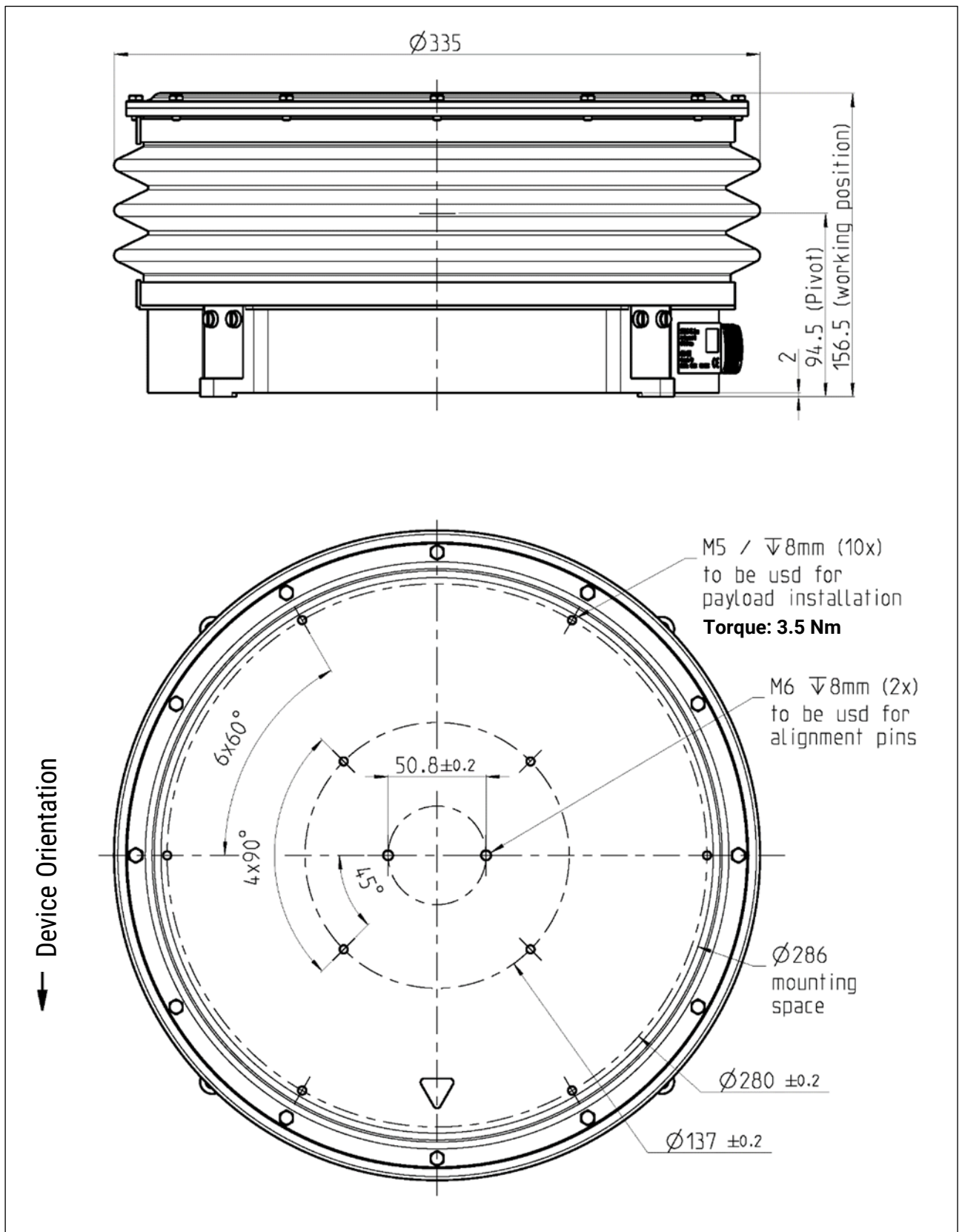


Figure 2: RSM 400 payload mounting holes, main dimensions and pivot

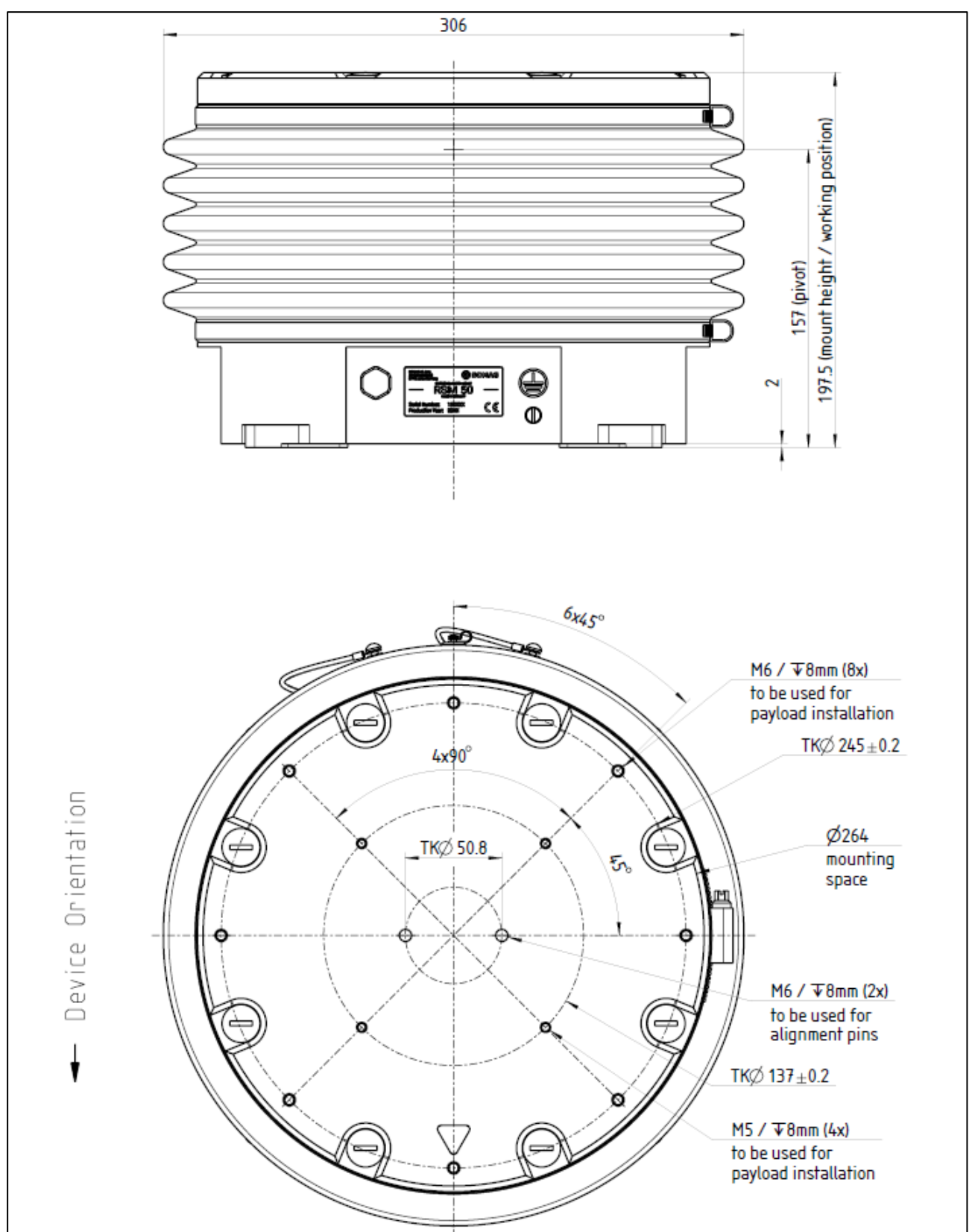


Figure 3: RSM 50 payload mounting holes, main dimensions and pivot

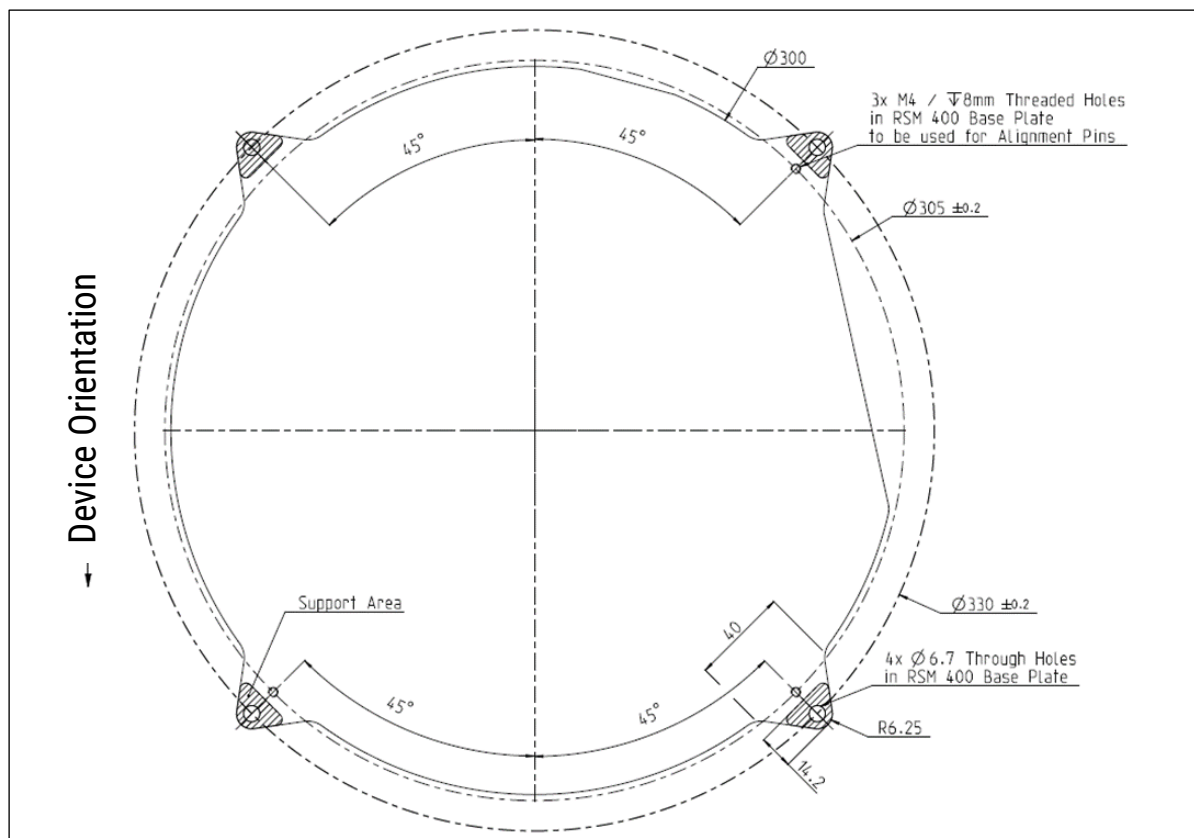


Figure 4: Dimensions of fastening holes for the RSM 400

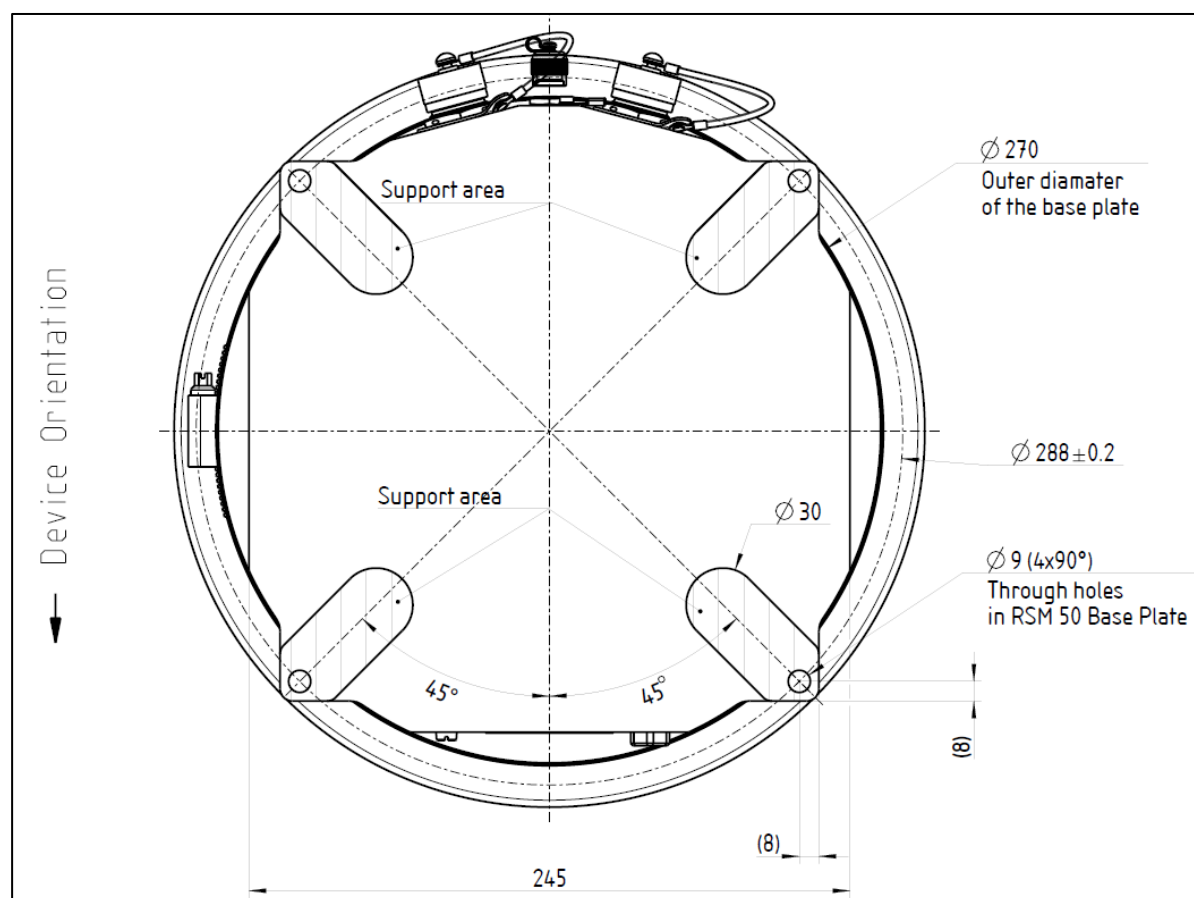
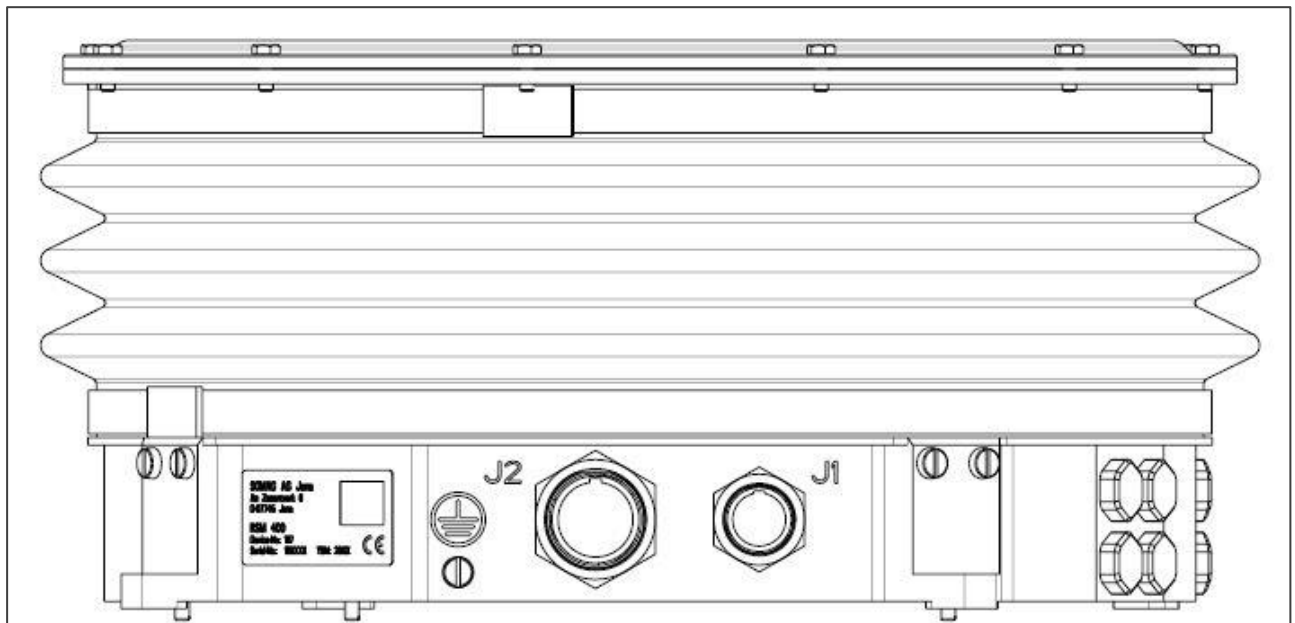


Figure 5: Dimensions of fastening holes for the RSM 50

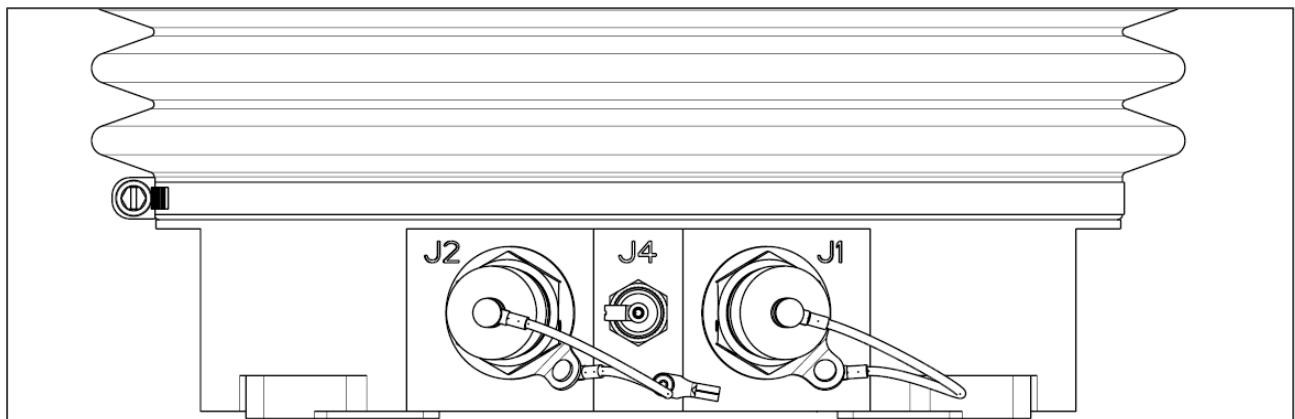
3 Interfaces

3.1 RSM 400



J1	Power
	MAIN – RS422 – D-SUB 9P female
J2	AUX – RS232 – D-SUB 9P female
	Tablet port – USB

3.2 RSM 50



J1 ¹⁰	Power
	Ethernet – RJ45
J2 ¹⁰	Combi – RS422 – D-SUB 9P female
	Optional: AUX – RS232 – D-SUB 9P female
J4	TNC antenna port for GNSS – support

¹⁰ No plug-in compatibility with RSM 400