

# Observatory Telescopes

## SERIES HGE & HEG LIMIT SWITCHES

### PROBLEM

The Simons Observatory is currently under construction in Chile's high Atacama Desert at 5,200 meters (17,000 ft.) elevation, making it one of the highest telescope installations in the world. It will join the operational Atacama Cosmology Telescope (ACT) and the Simons Array in the study of Cosmic Microwave Background (CMB) — the radiation signature of the Big Bang.

The observatory will include telescopes and antennas built by CPI VERTEX ANTENNENTECHNIK GmbH (CPI VA), a leading global supplier of ground stations, precision antenna systems and radio telescopes for space agencies and leading academic research projects.

### SOLUTION

CPI VA routinely utilizes Stromag geared cam limit switches to protect its highly sensitive equipment from damage in case of malfunction, for example, after component failures. For the new telescopes at the Simons Observatory, CPI VA and Stromag engineers worked closely to determine that Stromag Series HGE and HEG geared cam limit switches were the right choice to limit the axial, elevation and polarization movements of the telescopes and antenna.

Series HGE and HEG units provide two contact points at both the upper and lower (or left and right) limits. The first, for initially slowing the movement and the second for a complete stop. Each limit switch is designed to provide a certain number of turns from the upper to the lower limit, which is customized by modifying the gear ratio.

Models can be set with a switching point repeatability to 1/1000th of the travel pass, which for 20 m of travel would equate to 20 mm accuracy of limit switch adjustment. This level of precision is critically important for sensitive equipment collecting scientific data like a telescope or an antenna.

### Regal Rexnord

Hansastraße 120  
59423 Unna - Germany  
+49 2303 102-0  
customercare.eu@regalrexnord.com  
stromag.com | regalrexnord.com

The proper selection and application of products and components, including assuring that the product is safe for its intended use, are the responsibility of the customer. To view our Application Considerations, please visit <https://www.regalrexnord.com/Application-Considerations>. To view our Standard Terms and Conditions of Sale, please visit <https://www.regalrexnord.com/Terms-and-Conditions-of-Sale>.

"Regal Rexnord" is not indicative of legal entity. Refer to product purchase documentation for the applicable legal entity. Regal Rexnord and Stromag are trademarks of Regal Rexnord Corporation or one of its affiliated companies.  
© 2026 Regal Rexnord Corporation, All Rights Reserved.  
MCCSS-P-8917-SG-EN-US 02/26



### HIGHLIGHTS

- Worm gears
- Block adjustments
- Large cam disc diameter
- Easy to install and adjust
- IP65 rated aluminum housing



**Stromag**™