This is a “Type A” – Cross barrier

See page 12 in “Module Manual” for mounting instructions:
Digitisation of trains leads to longer service intervals.

However, a pilot project taking place at Swedish railway operator SJ has shown that the SKF Insight Rail wireless condition monitoring system can be used to service trains based on need rather than on mileage or time intervals.

For more than 100 years, the bearings have made things spin without really making much fuss about it. They are found in almost all machines that have moving parts. It was the founder of the Swedish company SKF who invented the double-row self-aligning ball bearing in 1907. And now, thanks to digitisation, the bearings have been given another task.

SKF Insight Rail is a small box that is mounted on the train's axlebox. The system uses GPS modules, accelerometers, motion detectors, temperature sensors, high-frequency vibration sensors and real-time clocks. Among other things, they can detect the tiniest vibration changes.

By continuously analysing the condition of wheel bearings, the Insight Rail detects wear at an early stage. The sensor data can be transmitted to a remote diagnostic centre with cloud-based monitoring and consulting support. Train maintenance is then scheduled for when a wheel actually needs to be replaced. In addition to cutting direct costs, unexpected breakdowns are also avoided. The result is that national railway services can operate with greater economic efficiency—trains are left at depots less frequently and for reduced periods of time.