

Machine/Manufacturing

Recording and Monitoring of Conveyor Speeds

Record and monitor conveyor speeds after the installation of new or additional conveyors and maintenance.

■ Background

Accurate and reliable measurement of conveyor belt speed is critical for many production and manufacturing facilities for ensuring continuous transport of production materials, work in progress or finished goods. Large conveyor belts are particularly effective and often required for moving heavy bulk materials such as iron ore, coal, fertilizer, or grain because of their high efficiency and ease of use. In mass production, many manufacturers use multiple conveyor belts, with some belts traveling at higher speeds and some slower depending on the nature of the production at that particular step.

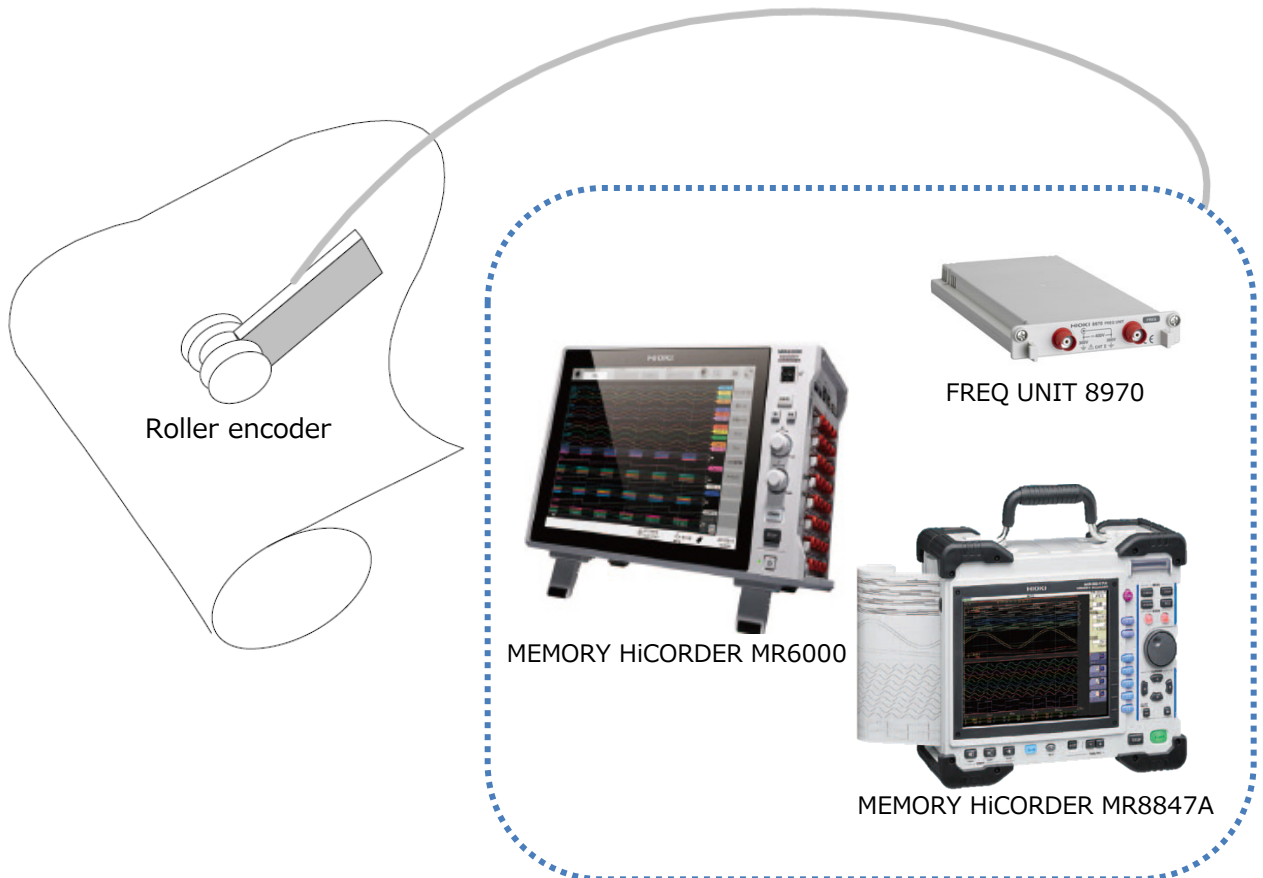
■ Reasons for Speed Changes

Oftentimes, the cause of problems can simply be dirt-buildup in the rollers or pulleys. At other times, speed can be affected by the wear and tear on the belts themselves. When the speed of a conveyor belt differs from the required speed, production yield changes and production steps can be misaligned, so maintaining proper speed and taking periodic measurements to prevent interruptions or failures are essential for maintaining production throughput. In addition, when conveyor facilities are installed, conveyor speed is also recorded in order to set the appropriate conveyance volume and belt width.



■ Highlights

- There is no need for any troublesome wiring work - simply connect a MEMORY HiCORDER and roller encoder to measure conveyor speed.
- Since the wiring is simple, line maintenance is easy.



■ How to Measure

- Connect the roller encoder and MEMORY HiCORDER (using FREQ UNIT 8970 as option) with CONNECTION CORD L9198.
- Bring the roller encoder into contact with the conveyor and then monitor the conveyor speed.
- Calculate the conveyor speed from the circumferential length of the roller encoder and the measurement frequency.
- A roller encoder is to be supplied by the user.

Products used

- MEMORY HiCORDER MR6000 (1GW memory)
- MEMORY HiCORDER MR8847-51 (MR8847A, 64MW memory)
- MEMORY HiCORDER MR8847-52 (MR8847A, 256MW memory)
- MEMORY HiCORDER MR8847-53 (MR8847A, 512MW memory)
- FREQ UNIT 8970