NEW

OMRON

Integrating Products and Information

V670

RFID System using Electromagnetic Coupling

Ideal for Distributed Control and Data Processing of High-speed Production and Transfer Lines

Accumulated FA ID Technology
Noise resistance
Reliability

High-speed communications
128-byte R/W
in 4 ms

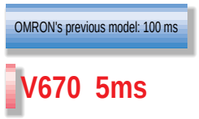
FeRAM
Number of reads/writes:
1,000 million times

The OMRON V670 Provides Extremely High-speed R/W Control with Operation as Easy as an ON/OFF Sensor

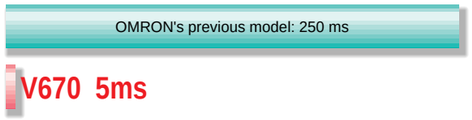
The V670 ensures extremely high-speed R/W (Read/Write) control that makes it possible to read data 20 times and write data 50 times as quick as OMRON's previous models. And, there is no difference in the communications time between reading and writing. The V670 controls a large quantity of R/W data at extremely high speed as easily as a sensor in ON/OFF operation.

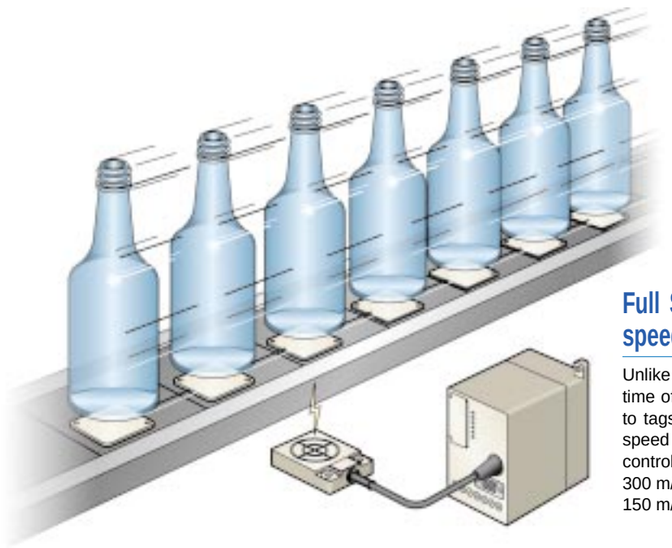
- Approximately 5 ms for 12-byte read/write
- Approximately 14 ms for 128-byte read/write

■ 12-byte Read Operation



■ 12-byte Write Operation





Full Support for Production Data Control of High-speed Moving Objects

Unlike previous models, the required communications processing time of the V670 is so short that data can be read from and written to tags without stopping the tags. The V670 is thus ideal for high-speed production lines, as well as process and inspection stages, to control moving objects.
300 m/minute max. (in 12-byte read/write)
150 m/minute max. (in 128-byte read/write)

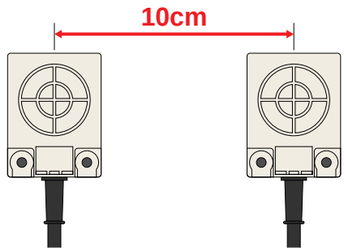
Reduced Maintenance with no Battery or Tag Replacement

The ID Tags for the V670 use a long-life FeRAM (ferroelectric RAM) to eliminate the need for tag replacement, battery replacement, or other such maintenance. Data can be written to and read from an ID Tag at least 1,000 million times. For example, an ID Tag can be accessed 116 times a second under continuous operation 12 hours a day for a total of 200 days a year for 10 years.

1,000 million times min.

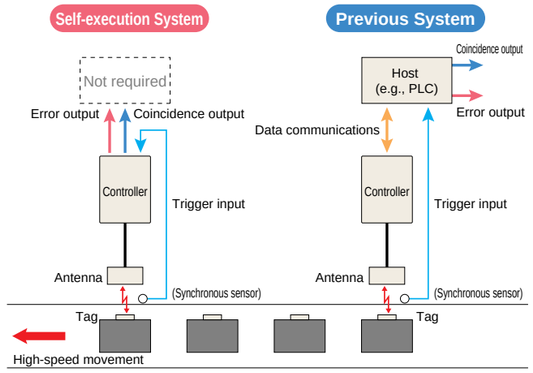
* FeRAM =ferroelectric RAM

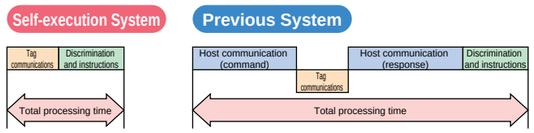
Antennas can be located in parallel with a space of 10 cm between them with no mutual interference that will result in malfunctions.



Self-execution Mode supporting High-speed Processing

In the previous system, data is always processed by the host controller, which requires a long time. In self-execution mode, the V670 communicates with tags, discriminates data, and gives instructions, thus greatly reducing the time of R/W data processing.

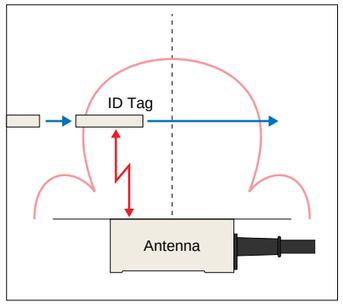




Data Communications with High-speed Moving Objects

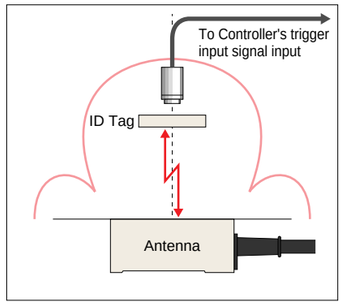
The V670 communicates with tags without any timing sensors or tag detection sensors to achieve high-speed data process control.

● Auto Repeat Function



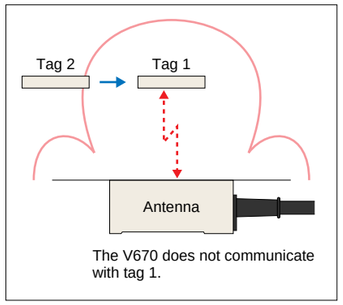
The V670 is in repeated communications with tags coming into the communications range. The V670 does not, however, communicate with the same tag more than once.

● Repeat Input Trigger



Whenever the V670 detects an input signal rise, the V670 will check the existence of the corresponding tag repeatedly and communicate with the tag. An error will result if the tag cannot be detected.

● Tag Specification

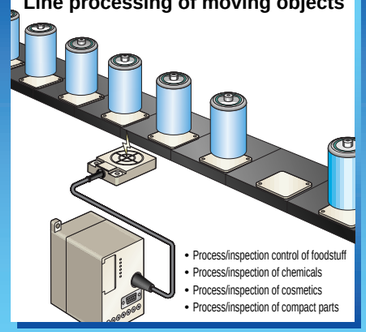


The V670 can communicate only with either of two specified tags (i.e., the tags with which the V670 previously communicated or a tags other than the previous ones.)

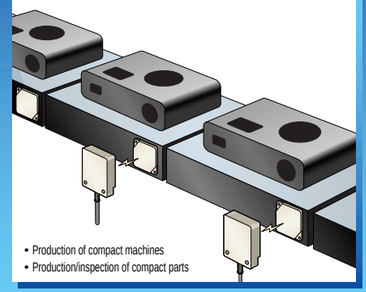
Application

Process and inspection performed on moving production lines.

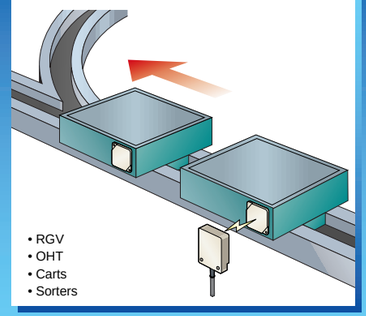
Line processing of moving objects



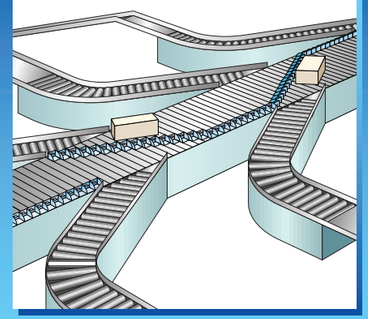
Line with high-speed (short tact time) process control



Flow Control of Moving Objects



Surfing Sorter Distribution Control



Component Mounting Control