

## A wealth of test and measurement functions

MELSEC IQ-R

MELSEC-Q

CC-Link IE Field

CC-Link

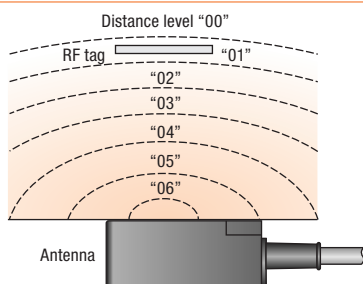
Diagnosis, such as "communication test" and "noise level measurement", between the antenna and an RF tag can be performed during start-up and maintenance.

### Communication test

This function reads data from an RF tag without running a program. If an error occurs while the data is read from the RF tag, this function shows whether the error is caused by the program, antenna, or RF tag.

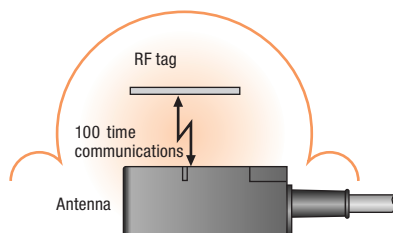
### Distance level measurement

This function measures distance (level) at which an RF tag is present in the antenna communication area. Measurement results are shown with seven levels, 00 to 06.



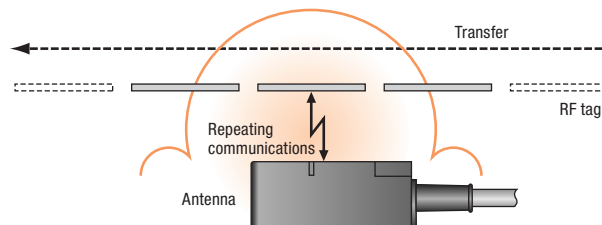
### Communication success rate calculation

This function calculates the communication success rate that communications are performed 100 times with an RF tag stationary. Measurement results are shown with 0 to 100%.



### Speed level measurement

This function measures the number of times that an RF tag can communicate continuously while it is moving. Measurement results are shown with 0 to 99 (times).

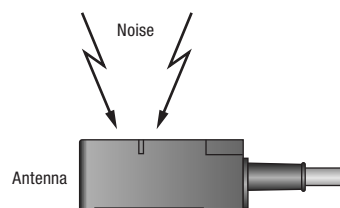


### Noise level measurement

This function measures a noise level around an antenna. Measurement results are shown with 0 to 99. (Regard them as a guide value.)

The measurement results show current noise levels at antenna installation sites. This function allows users to monitor any changes in noise reduction measures for the occurrence of an RF tag communication error. Noise levels measured do not guarantee the communication performance.

\*: The measurement results can be checked by reading them on HMI (Human Machine Interface) of the amplifier, from buffer memory in the RFID interface module, or from a remote register.



### Function list

Function			Description	MELSEC IQ-R	MELSEC-Q	CC-Link IE Field	CC-Link
				ER-1V680D1 ER-1V680D2	EQ-V680D1 EQ-V680D2	ECLEF-V680D2	ECL2-V680D1
Command	Read	Read	Reads data from an RF tag.	○	○	○	○
		Read with error correction	Reads data and check codes from an RF tag, inspects data reliability, and corrects any 1-bit errors.	○	○	—	—
		Read UID	Reads the UID (unit identification number) of an RF tag.	○	○	○	○
		Read initial data setting value	Reads setting values set for the initial data setting.	—	—	○	○
	Write	Write	Writes data to an RF tag.	○	○	○	○
		Set bit	Sets 1 to the specified bit in data of an RF tag.	○	○	—	—
		Clear bit	Sets 0 to the specified bit in data of an RF tag.	○	○	—	—
		Write mask bit	Protects the RF tag data that you do not want overwritten and writes other data.	○	○	—	—
		Write calculation	Writes an addition or subtraction calculation result (data) to data of an RF tag.	○	○	—	—
		Write with error correction	Writes data and check codes for inspecting data reliability to an RF tag.	○	○	—	—
	Duplicate	Copy	Copies data of an RF tag between the channel 1 and channel 2. (Available with ER-1V680D2, EQ-V680D2, and ECLEF-V680D2 only)	○	○	○	—
	Initialize	Fill data	Initializes data of an RF tag by using specified data.	○	○	○	○
	Management	Check data	Checks whether or not an error occurred in data of an RF tag.	○	○	—	—
Manage number of writes		Judges whether or not the number of RF tag writes exceeds the specified number of EEPROM-type RF tag writes.	○	○	—	—	
Noise level		Measures the noise level around an antenna.	○	○	○	○	
Test function	Test/measure	Communication test	Reads data from RF tag.	○	○	○	○
		Distance level	Measures distance (level) at which an RF tag is present in the antenna communication area.	—	○	—	○
		Communication success rate	Performs communications 100 times, and calculates a success rate.	○	○	—	—
		Speed level	Measures the number of times that an RF tag passing through an antenna communication area can communicate continuously.	○	○	—	—
		Noise level	Measures the noise level around an antenna.	○	○	○	○