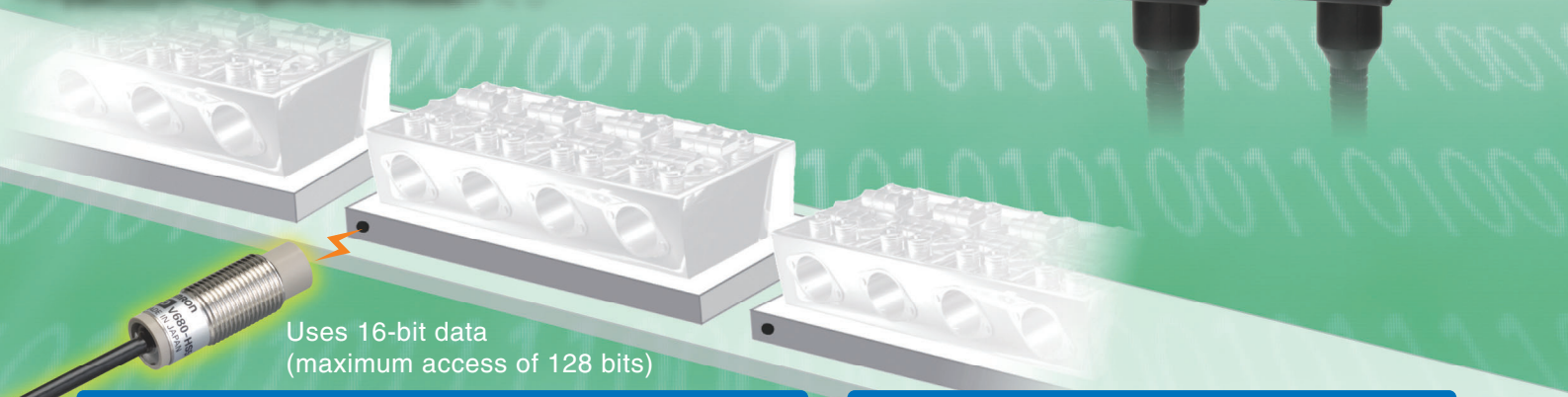
Conforms to ISO/IEC 18000-3 (ISO/IEC 15693) Standards

OMRON

V680 RFID ID Flag Sensors

V680-HAM91/HAM81

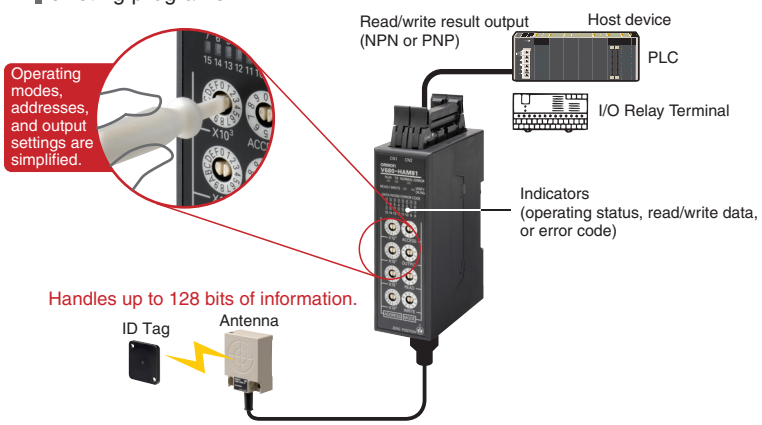
The RFID System Can Be Used Just Like a Sensor.
Read or Write 16 Bits at a Time with One Unit
Useful in Applications from Simple Line Sorting or Product Identification to Managing Work Progress or Inspection Data



Uses 16-bit data
(maximum access of 128 bits)

Easy Setup

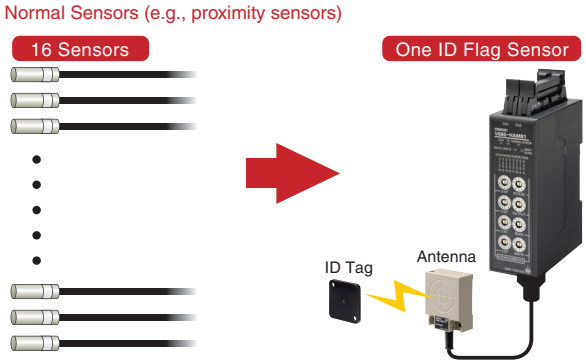
- Settings are simple using the switches on the front of the unit. Complex programming is not necessary.
- Select an NPN or PNP open-collector output to support your host device.
- Indicators on the front panel display the ambient noise level, access data, and error code. Easy startup and maintenance.
- V600-HAM/HAR-compatible Access Modes to enable application of existing programs.



The Functionality of 16 Sensors

- Communications with ID Tags is done in 16-bit units to enable up to approximately 64,000 IDs. Read or write up to 128 bits by using the address shift function.
- High-speed processing of 43 ms✻ for a wide variety of applications.

✻High-speed processing at 43 ms is applicable when reading a 1-KB ID Tag. This is the communications time between the Antenna and ID Tag plus the processing time in the ID Flag Sensor.



A Complete Lineup to Meet the Needs of Most Installation Environments and Application Needs

- The ID Flag Sensor can be used with ID Tags and Antennas that comply with ISO/IEC 18000-3 (ISO/IEC 15693).
- A wide variation of products, including Antennas with IP67 protection for use in FA environments, and long-life ID Tags capable of 10 billion accesses.
- Take the V680 Overseas. The V680 complies with international standards and radio wave regulations.
  Radio wave regulation compliance is applicable to Japan, Europe, the U.S.A., and Canada. Radio wave regulation compliance for China, Taiwan, South Korea, and Southeast Asia is pending.

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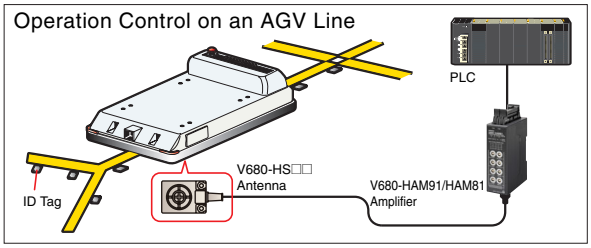
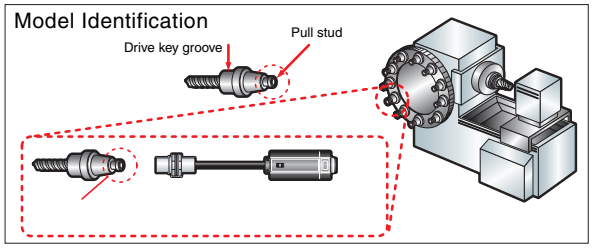
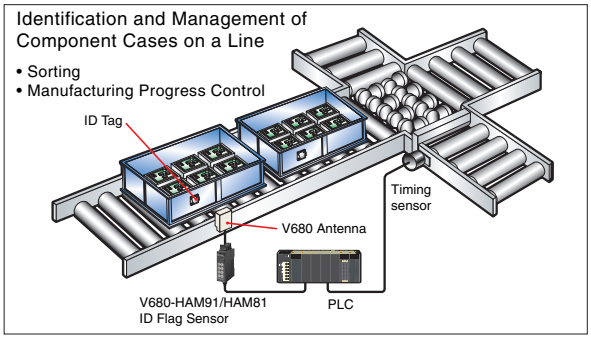
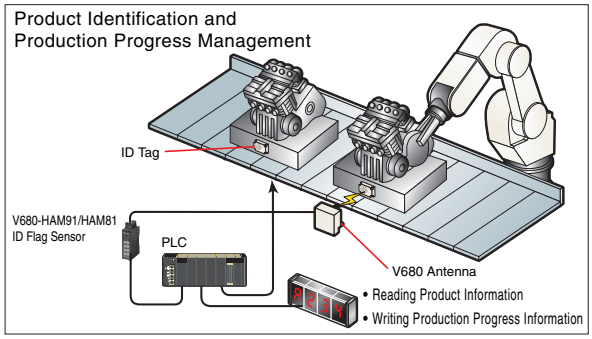
Applications









Ordering Information

Type	Size	Model
NPN output	90 × 30 × 65 mm (excluding protrusions)	**V680-HAM91** *NEW*
PNP output		**V680-HAM81** *NEW*

Note: For details on connectable V680 Antennas, V680 ID Tags, and V680-HAM91/HAM81 ID Flag Sensors, refer to the *Datasheet* (Cat. No. Q160) and *User's Manual* (Cat. No. Z279).

Interface Cable (for V680-HAM91/81)

Cable length	Model	Appearance
2 m	**V680-A60 2M** *NEW*	
5 m	**V680-A60 5M** *NEW*	
10 m	**V680-A60 10M** *NEW*	

Note 1. The connectors are not water resistant.
2. The cables can be extended to a maximum length of 10 m.
3. Normally two Interface Cables are required for 1 Unit. If you do not need to write to ID Tags, or use the address shift or noise check functions, then one Interface Cable is sufficient.

Ratings and Performance

Item / Model	V680-HAM91/V680-HAM81
Rated voltage	24 VDC (–15% to +10%) including 10% ripple (p-p)
Power consumption	3.5 W (24 VDC, 150 mA max. except external I/O line current)
Ambient operating temperature	–10 to 55°C (with no icing)
Ambient storage temperature	–25 to 65°C (with no icing)
Ambient operating humidity	25% to 85% (with no condensation; ambient operating temperature is 40°C max. at humidity of 85%)
Insulation resistance	20 MΩ min. (at 500 VDC) between all terminals excluding the FG terminal and the case
Dielectric strength	1,000 VAC (50/60 Hz) applied for 1 minute between all terminals excluding the FG terminal and the case
Vibration resistance	10 to 150 Hz, 0.2-mm double amplitude at 15 m/s² acceleration with 10 sweeps in X, Y and Z directions for 8 minutes each
Shock resistance	150 m/s² in X, Y, and Z directions 3 times each (18 times in total)
Degree of protection	IEC 60529, IP40
Materials	Polycarbonate (PC) resin, ABS resin
Weight	Approx. 130 g
Mounting	DIN Track

Note 1. For details, refer to the *User's Manual* (Cat. No. Z279).
2. The connectors are not water resistant. If there is a possibility that water will be splashed onto the ID Sensor Unit, mount it inside of a control box. Also, be sure to use the V680 as a set with the V680-A60 Interface Cable (sold separately).

I/O Specifications

Item / Model	V680-HAM91	V680-HAM81
Input specifications	Transistor output Short-circuit current: 3 mA (TYP) OFF voltage: 15 to 30 VDC, ON voltage: 0 to 5 VDC	(input terminal and 0-V terminal shorted) Input impedance: 8.2 kΩ Applied voltage: 30 VDC max.
Output specifications	NPN open-collector output 30 VDC, 20 mA max Residual voltage: 2 V max.	PNP open-collector output 30 VDC, 20 mA max Residual voltage: 2 V max.

This document provides information mainly for selecting suitable models. Please read the *User's Manual* (Cat. No. Z279) carefully for information that the user must understand and accept before purchase, including information on warranty, limitations of liability, and precautions.

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