

NEW

OMRON

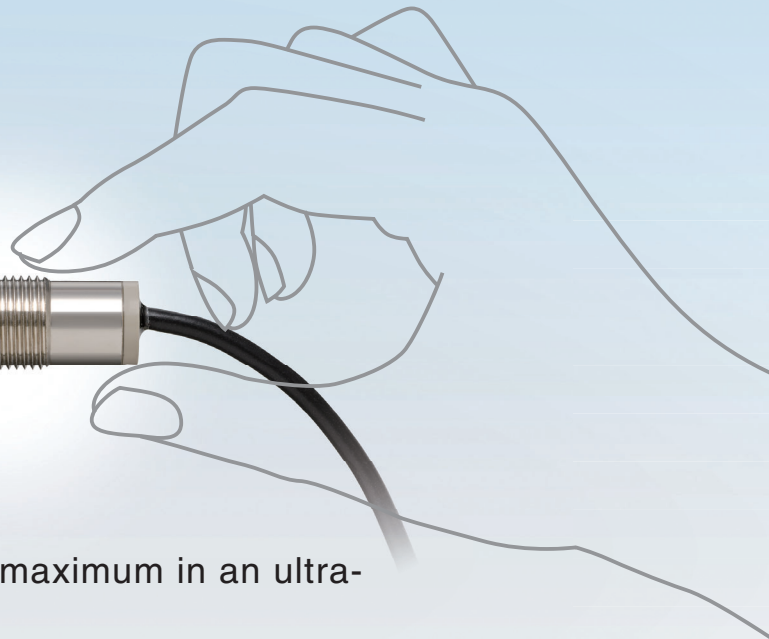
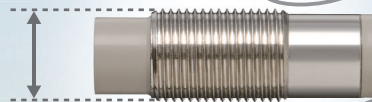
V680 RFID Series M12-size Antenna V680-HS51



The Ultra-compact Antenna that
You Can Mount Just About Anywhere

Smallest body
in the industry.

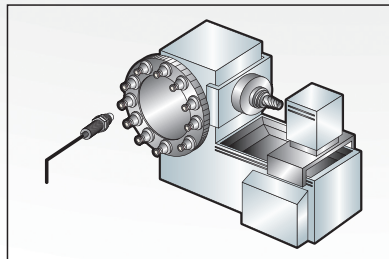
M12



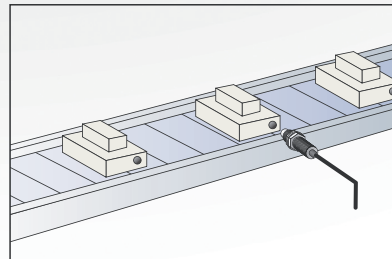
Features

- A long transmission distance of 12 mm maximum in an ultra-compact, M12 size.
- Excellent resistance to oils and water ensures reliable use under factory conditions.
- Complies with the radio laws of Europe, the U.S., Canada, and Japan.
(Applications filed for compliance certification by China, Korea, and other countries.)

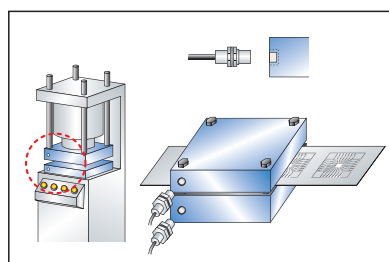
Applications



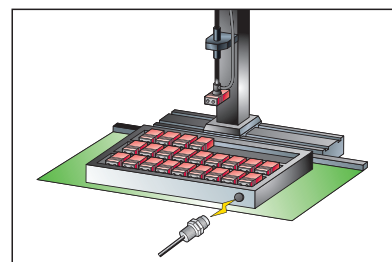
Tool management (for machining centers)



Assembly and processing lines for small object



Die control, history, and lifetime management

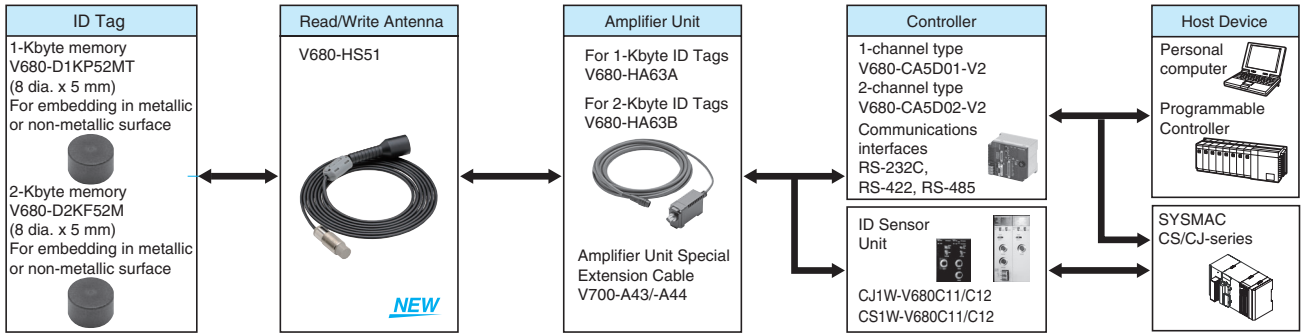


Secondary battery inspection.

realizing



System Configuration

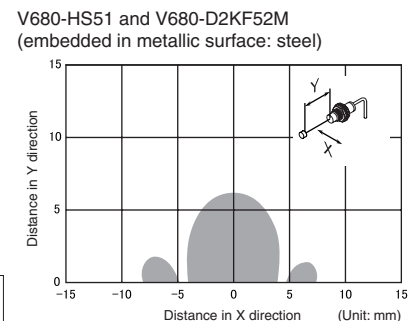
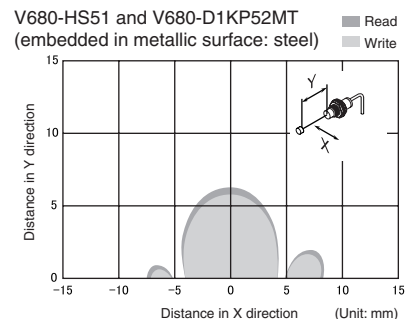
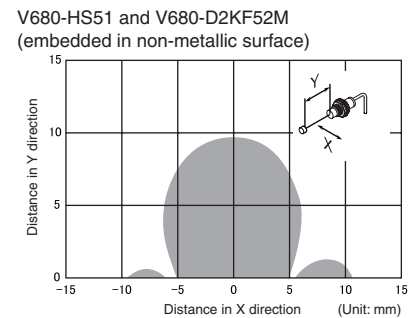
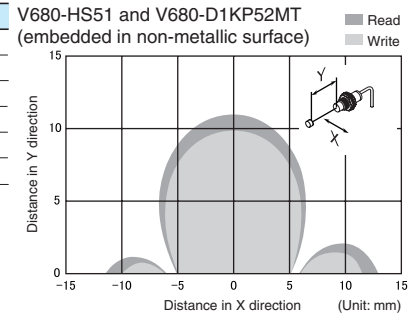


Ordering Information

Item	Model	
ID Tag	V680-D1KP52MT	1-Kbyte memory
	V680-D2KF52M	2-Kbyte memory
Antenna	V680-HS51 2M NEW	---
Amplifier Unit	V680-HA63A 5M	For 1-Kbyte tag
	V680-HA63A 10M	For 1-Kbyte tag
	V680-HA63B 5M	For 2-Kbyte tag
	V680-HA63B 10M	For 2-Kbyte tag

Item	Model	
Controller	V680-CA5D01-V2	1-channel input
	V680-CA5D02-V2	2-channel input
ID Sensor Unit	CJ1W-V680C11	1-channel input
	CJ1W-V680C12	2-channel input
	CS1W-V680C11	1-channel input
	CS1W-V680C12	2-channel input

Transmission Areas (Typical)



Ratings and Performance

Model	V680-HS51	
Ambient operating temperature	-10 to 60°C (with no icing)	
Ambient storage temperature	-25 to 75°C (with no icing)	
Ambient operating humidity	35% to 95% (with no condensation)	
Insulation resistance	20 MΩ min. (at 500 VDC) between the cable terminals and the case	
Dielectric strength	1,000 VAC (50/60 Hz) for 1 minute between the cable terminals and the case	
Degree of protection	In-house standard for antenna oil resistance (former JEM standard equivalent to IP67g) (Read/Write Antenna portion) *	
Vibration resistance	10 to 2,000 Hz variable vibration, 1.5-mm double amplitude at 150 m/s ² acceleration, with 10 sweeps in X, Y, and Z directions for 15 minutes each	
Shock resistance	1,000 m/s ² in X, Y, and Z directions 3 times each (18 times in total)	
Appearance	M12 × 35 mm	
Materials	ABS, brass, epoxy resin filling	
Weight	Approx. 55 g (with 2-m cable)	

* The Connector is not waterproof. This OMRON in-house standard confirms resistance to cutting and other oils. It is equivalent to the former JEM standard.

Note: For details, refer to the *User's Manual* (Cat. No. Z248 or Z262).

Performance Specifications

Recommended combination		Function	Transmission distance	ID Tag and Read/Write Antenna mounting conditions
ID Tag	Read/Write Antenna			
V680-D1KP52MT (embedded in non-metallic surface)	V680-HS51	Read distance	0.5 to 6.5 mm (axial deviation ±2 mm)	
		Write distance	0.5 to 6.0 mm (axial deviation ±2 mm)	
V680-D2KF52M (embedded in non-metallic surface)		Read distance	0.5 to 5.5 mm (axial deviation ±2 mm)	
		Write distance	0.5 to 5.5 mm (axial deviation ±2 mm)	
V680-D1KP52MT (embedded in metallic surface: steel)		Read distance	0.5 to 3.5 mm (axial deviation ±2 mm)	
		Write distance	0.5 to 3.0 mm (axial deviation ±2 mm)	
V680-D2KF52M (embedded in metallic surface: steel)	Read distance	0.5 to 3.5 mm (axial deviation ±2 mm)		
	Write distance	0.5 to 3.5 mm (axial deviation ±2 mm)		

This document provides information mainly for selecting suitable models. Please read the Instruction Sheet 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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Authorized Distributor:

Note: Specifications subject to change without notice.

Cat. No. Q159-E1-01