OMRON

Electromagnetic Inductive RFID Data Carrier | V600-D23P66N

530 kHz Data Carrier for Use in Metal and Non-metal Applications

- Passive tag technology (no internal power source for communications)
- Operates at 530 kHz
- EEPROM memory
- 10-year data storage
- 256 Bytes memory capacity
- -40°C to 150°C storage temperature
- -25°C to 85°C operation temperature
- 100,000 read/write cycles at -20°C to 85°C
- 800,000 read/write cycles at -20°C to 0°C
- Durable PPS resin construction
- Up to 45 mm transmission distance (application dependent)
- Integrated surface mounting system
- For non-metal applications (metal applications use V600-A86 Tag Bracket)
- Capable of virtually unlimited number of Read-Only cycles

Ordering Information

■ DATA CARRIER

Item	Description		Part number
Data carrier	Type	Electromagnetic inductive	**V600-D23P66N**
	Memory	EEPROM	
		256 Bytes	
	Construction	PPS resin	
	Enclosure rating	IEC60529, IP68	
	Size	34 mm (W) x 34 mm (D) x 3.5 mm (H)	

Specifications

■ GENERAL

- The communications distance priority mode or communications time priority mode can be set on the serial interface ID controller or ID sensor unit via the communications mode DIP switches.
- The communications distance priority mode is always used for parallel interface ID controllers.
- These specifications are the certified performance when taking into consideration variations in ambient temperatures and products.

■ DATA CARRIER MEMORY

Memory capacity	Usable memory	254 Bytes; 00(H) - FD(H)
	Total memory	256 Bytes; FE(H) - FF(H)
Data storage		Data maintained after it is encoded; 10 years max.
Memory life	-20°C to 85°C (-4°F to 185°F)	100,000 times per address
	-20°C to 60°C (-4°F to 140°F)	300,000 times per address
	-20°C to 25°C (-4°F to 77°F)	400,000 times per address
	-20°C to 0°C (-4°F to 32°F)	800,000 times per address

■ CHARACTERISTICS

Vibration resistance-destruction	10 to 2000 Hz, 1.5 mm double amplitude and 150 m/s^2 for 15 min 10 times each X, Y and Z directions
Shock resistance-destruction	500 m/s^2; 3 times each in X, Y and Z directions (18 times total)

■ STORAGE CONDITIONS

Ambient temperature	-40°C to 150°C (-40°F to 302°F) (There should be no icing.)
Heat shock resistance	-10°C to 150°C (14°F to 302°F) in 30 minute cycles; 1000 cycles
High temperature resistance	150°C (302°F) continuously for 1000 hours
Ambient humidity	35% to 95% relative humidity (no condensation)
Environment	Do not apply excessive pressure, shock or corrosive gas which may deform the product

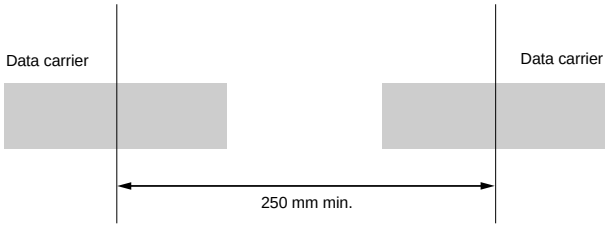
■ OPERATION CONDITIONS

Ambient temperature	-20°C to 85°C (-4°F to 185°F) (There should be no icing.)
Ambient humidity	35% to 95% relative humidity (no condensation)
Environment	Do not expose the product to corrosive gases such as hydrogen sulfide gas or organic solvents.
	Avoid exposure to direct sunlight
	Avoid any condition that could cause physical damage

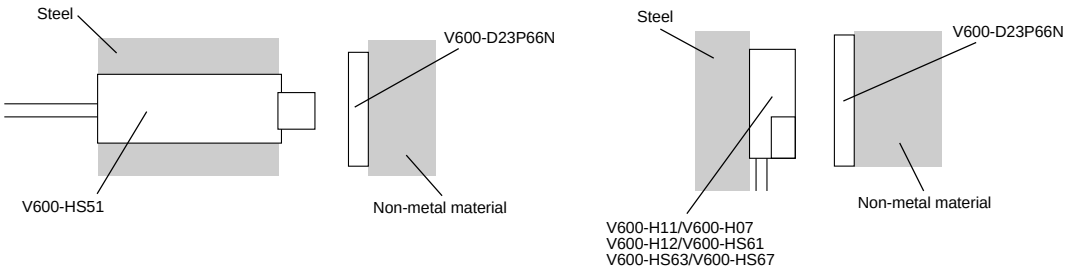
Installation

■ MUTUAL INTERFERENCE

Data carriers must be at least 250 mm apart.



■ DATA CARRIER AND READ/WRITE HEAD INSTALLATION CONDITIONS FOR NON-METAL APPLICATIONS



Transmission Distance Specifications for Non-metal Applications

Data carrier and read/write head transmission distances (with installation conditions) are provided in this table.

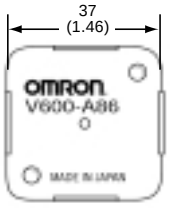
Read/write head	Installation		Controller mode	Transmission distance (max. axial offset ±10 mm)
V600-H07	Stationary	Read distance	Transmission distance priority	5 to 45 mm
			Transmission time priority	5 to 35 mm
		Write distance	Irrelevant	5 to 35 mm
	Moving	Read distance	Transmission distance priority	25 to 40 mm
			Transmission time priority	25 to 30 mm
		Write distance	Irrelevant	25 to 30 mm
V600-H11	Stationary	Read distance	Transmission distance priority	5 to 30 mm
			Transmission time priority	5 to 25 mm
		Write distance	Irrelevant	5 to 25 mm
	Moving	Read distance	Transmission distance priority	15 to 25 mm
			Transmission time priority	15 to 20 mm
		Write distance	Irrelevant	15 to 20 mm
V600-H12	Stationary	Read distance	Transmission distance priority	10 to 35 mm
			Transmission time priority	10 to 30 mm
		Write distance	Irrelevant	10 to 30 mm
	Moving	Read distance	Transmission distance priority	15 to 30 mm
			Transmission time priority	15 to 25 mm
		Write distance	Irrelevant	15 to 25 mm
V600-HS63 and V600-HAM91	Stationary	Read and write distance	Irrelevant	5 to 30 mm
	Moving	Read and write distance	Irrelevant	15 to 30 mm
V600-HS67 and V600-HAM91	Stationary	Read and write distance	Irrelevant	5 to 35 mm
	Moving	Read and write distance	Irrelevant	25 to 35 mm

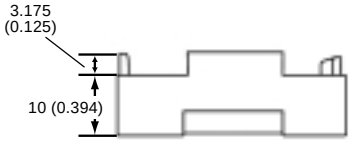
Read/write head	Installation		Controller mode	Transmission distance (max. axial offset ±2 mm)
V600-HS51 and V600-HA51	Stationary	Read distance	Transmission distance priority	2 to 19 mm
			Transmission time priority	2 to 16 mm
		Write distance	Irrelevant	2 to 16 mm
	Moving	Read distance	Transmission distance priority	10 to 19 mm
			Transmission time priority	10 to 16 mm
		Write distance	Irrelevant	10 to 16 mm
V600-HS61 and V600-HA51	Stationary	Read distance	Transmission distance priority	2 to 16 mm
			Transmission time priority	2 to 14 mm
		Write distance	Irrelevant	2 to 14 mm
	Moving	Read distance	Transmission distance priority	8 to 16 mm
			Transmission time priority	8 to 14 mm
		Write distance	Irrelevant	8 to 14 mm

■ DATA CARRIER AND READ/WRITE HEAD INSTALLATION CONDITIONS FOR METAL APPLICATIONS

Note: 1. When mounting the data carrier on a metal surface, use V600-A86 tag mounting bracket (sold separately). Do not mount it directly on a metal surface, or performance will be adversely affected.
2. Measurements are approximate.

Unit: mm (inch)





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