

Ultra-Small 530 kHz Flush Mount 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 LCP resin construction
- Up to 10 mm transmission distance (application dependent)
- Ultra small — 8 mm diameter x 5 mm
- For metal/non-metal flush-mount applications
- Capable of virtually unlimited number of Read-Only cycles



Ordering Information

■ DATA CARRIER

Item	Description		Part number
Data carrier	Type	Electromagnetic inductive	V600-D23P55
	Memory	EEPROM	
		256 Bytes	
	Construction	Case: LCP resin; Fill: epoxy resin	
	Enclosure rating	IEC60529, IP67	
Size	8 mm dia. x 5 mm		

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

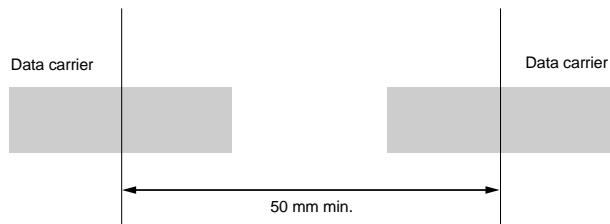
OPERATION CONDITIONS

Ambient temperature	-25°C to 85°C (-13°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

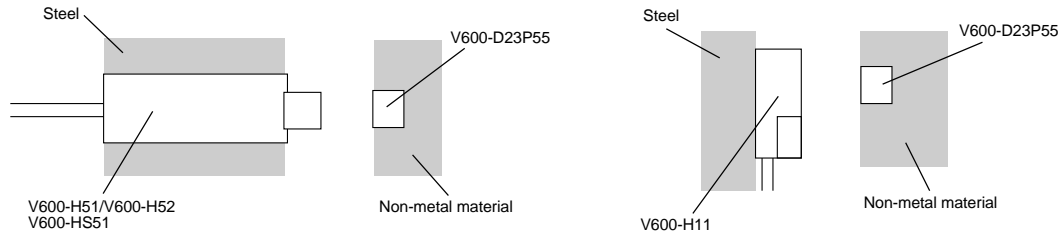
Installation

MUTUAL INTERFERENCE

Data carriers must be at least 50 mm apart.



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



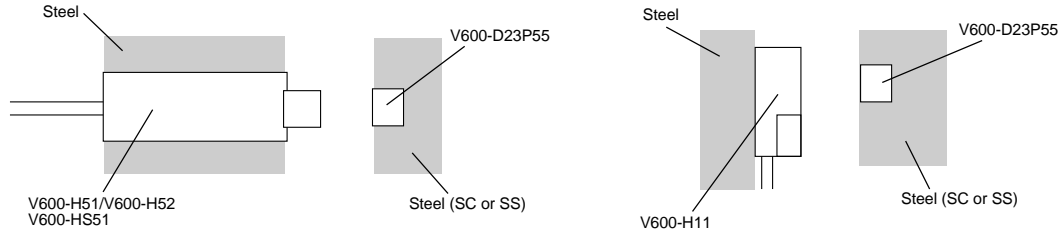
Transmission Distance Specifications for Non-metal Applications

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 ± 2 mm)
V600-H52	Stationary	Read distance	Transmission distance priority	0.5 to 9.0 mm
			Transmission time priority	0.5 to 8.5 mm
		Write distance	Transmission distance priority	0.5 to 8.5 mm
			Transmission time priority	0.5 to 8.5 mm
V600-H51	Stationary	Read distance	Transmission distance priority	0.5 to 9.5 mm
			Transmission time priority	0.5 to 8.0 mm
		Write distance	Transmission distance priority	0.5 to 9.0 mm
			Transmission time priority	0.5 to 8.0 mm
V600-H11	Stationary	Read distance	Transmission distance priority	0.5 to 10.0 mm
			Transmission time priority	0.5 to 7.5 mm
		Write distance	Transmission distance priority	0.5 to 10.0 mm
			Transmission time priority	0.5 to 7.5 mm

Sensor and amplifier	Installation		Controller mode	Transmission distance (max. axial offset ± 2 mm)
V600-HS51 and V600-HA51	Stationary	Read distance	Transmission distance priority	0.5 to 6.5 mm
			Transmission time priority	0.5 to 6.0 mm
		Write distance	Transmission distance priority	0.5 to 6.5 mm
			Transmission time priority	0.5 to 6.0 mm
V600-HS51 and V600-HAM91	Stationary	Read distance	Irrelevant	0.5 to 7.0 mm
		Write distance	Irrelevant	0.5 to 7.0 mm
V600-HS61 and V600-HA51	Stationary	Read distance	Transmission distance priority	0.5 to 7.0 mm
			Transmission time priority	0.5 to 6.0 mm
		Write distance	Transmission distance priority	0.5 to 7.0 mm
			Transmission time priority	0.5 to 6.0 mm
V600-HS61 and V600-HAM91	Stationary	Read distance	Irrelevant	0.5 to 7.0 mm
		Write distance	Irrelevant	0.5 to 7.0 mm
V600-HS63 and V600-HA51	Stationary	Read distance	Transmission distance priority	0.5 to 9.5 mm
			Transmission time priority	0.5 to 7.5 mm
		Write distance	Transmission distance priority	0.5 to 9.5 mm
			Transmission time priority	0.5 to 7.5 mm
V600-HS63 and V600-HAM91	Stationary	Read distance	Irrelevant	0.5 to 10.0 mm
		Write distance	Irrelevant	0.5 to 9.5 mm

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



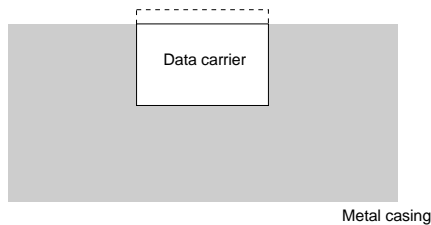
Transmission Distance Specifications for Metal Applications

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

Read/write head	Installation		Controller mode	Transmission distance (max. axial offset ±2 mm)
V600-H52	Stationary	Read distance	Transmission distance priority	0.5 to 3.0 mm
			Transmission time priority	0.5 to 3.0 mm
		Write distance	Transmission distance priority	0.5 to 3.0 mm
			Transmission time priority	0.5 to 3.0 mm

Sensor and amplifier	Installation		Controller mode	Transmission distance (max. axial offset ±2 mm)
V600-HS51 and V600-HA51	Stationary	Read distance	Transmission distance priority	0.5 to 1.5 mm
			Transmission time priority	0.5 to 1.5 mm
		Write distance	Transmission distance priority	0.5 to 1.5 mm
			Transmission time priority	0.5 to 1.5 mm
V600-HS51 and V600-HAM91	Stationary	Read distance	Irrelevant	0.5 to 2.5 mm
		Write distance	Irrelevant	0.5 to 2.5 mm
V600-HS61 and V600-HA51	Stationary	Read distance	Transmission distance priority	0.5 to 1.0 mm
			Transmission time priority	0.5 to 1.0 mm
		Write distance	Transmission distance priority	0.5 to 1.0 mm
			Transmission time priority	0.5 to 1.0 mm
V600-HS61 and V600-HAM91	Stationary	Read distance	Irrelevant	0.5 to 1.5 mm
		Write distance	Irrelevant	0.5 to 1.5 mm

INSTALLATION IN SURROUNDING METALS



Note: Keep the data carrier detection surface flush with (or slightly above) the height of the metal mounting area, so that no metal interferes with data detection.



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