Electromagnetic Coupling RFID System V600

Non-contact Data Communications System

- Superior environmental resistance.
- Heat-resistant type available (150°C max.).
- High memory capacity of 8 Kbytes for Built-in-battery Data Carriers and 254 bytes for Battery-less Data Carriers.
- Built-in-battery Data Carriers have a battery life detecting function.
- Data of Battery-less Data Carriers can be overwritten 300,000 times at normal temperatures.
- Thin, compact, and low-cost Data Carriers are available.
- Transmission distance of 100 mm max.



Ordering Information

■ Data Carriers

Item	Specifications/Design	/Memory capacity	Model		
Built-in-battery DCs	Rectangular compact 65 × 40 × 15 mm	8 Kbytes	•	V600-D8KR12	
	Thin rectangular 86 × 54 × 10.3 mm			V600-D8KR13	
	Intermediate-range rectangular 86 × 54 × 20 mm			V600-D8KR04	
Replaceable-battery DCs	Compact 65 × 40 × 5 mm	2 Kbytes	•	V600-D2KR16	
Battery-less DCs	Ultrathin card-type 86 × 54 × 1.5 mm	254 bytes		V600-D23P71	
	Thin half-size card-type 50 × 34 × 1.5 mm			V600-D23P72	
	Rectangular 34 × 34 × 3.5 mm			V600-D23P66N	
	Rectangular package with PFA 95 × 36.5 × 6.5 mm			V600-D23P66SP	
	Rectangular compact 32 × 24 × 6 mm			V600-D23P61	
	Round super-compact 8 dia. × 5 mm			V600-D23P53	
	Round compact 12 dia. × 6 mm			V600-D23P54	
	Round super-compact 8 dia. × 5 mm			V600-D23P55	

■ R/W Heads

Item		Specifications	/Design	Mo	odel
Rectangular type		Dimensions: 100 × 100 × 30 mm	0.5-m cable		V600-H07 (0.5 m)
			2-m cable		V600-H07 (2 m)
			5-m cable		V600-H07 (5 m)
			10-m cable		V600-H07 (10 m)
		Dimensions: 53 × 40 × 23 mm	0.5-m cable		V600-H11 (0.5 m)
			0.5-m cable		V600-H11-R (0.5 m)
			2-m cable		V600-H11 (2 m)
			5-m cable		V600-H11 (5 m)
			10-m cable		V600-H11 (10 m)
Cylinder type		Dimensions: 22 dia. × 80 mm	0.5-m cable		V600-H51 (0.5 m)
			2-m cable		V600-H51 (2 m)
			5-m cable		V600-H51 (5 m)
			10-m cable		V600-H51 (10 m)
		Dimensions: 22 dia. × 85 mm	0.5-m cable		V600-H52 (0.5 m)
			2-m cable		V600-H52 (2 m)
			5-m cable		V600-H52 (5 m)
			10-m cable		V600-H52 (10 m)
Separate-amplifier	Amplifier	73.8 × 22.6 × 36.5 mm, with 2-m of	cable		V600-HA51 (2 m)
type	section	$73.8 \times 22.6 \times 36.5$ mm, with 5-m of	cable		V600-HA51 (5 m)
		$73.8 \times 22.6 \times 36.5$ mm, with 10-m	cable		V600-HA51 (10 m)
	Sensor section	12 dia. × 35 mm deep, with 2-m cable			V600-HS51
		$30.5 \times 18 \times 10$ mm, with a 2-m cable			V600-HS61

■ ID Controllers

Item	Specification	s/Design	Mo	del
AC Power Supply	100 to 240 VAC, 50/60 Hz	RS-232C host interface		V600-CA1A-V2
	Two R/W Head connectors 200 × 100 × 100 mm	RS-422 host interface		V600-CA2A-V2
	200 × 100 × 100 mm	Parallel PNP host interface		V600-CA8A-V2
		Parallel NPN host interface		V600-CA9A-V2
DC Power Supply	ply 24 VDC R/W Head connectors 115 × 68 × 80 mm			V600-CD1D-V3
	24-VDC, 5-VDC 2-system input R/W Head connectors Board type			V600-CM1D
Handheld Controller	A Battery Charger, Ni-Cd Battery Pack, Battery Case, and Carrying Belt are included.			V600-CB-US-S
AC Power Supply	100 to 240 VAC, 50/60 Hz Relay contact output type			IDSC-C1DR-A
	150 to 240 VAC, 50/60 Hz Transistor output type			IDSC-C1DT-A
Handheld Reader/Writer	RS-232C Host Interface; use V6	00-A20 power pack.	66	V600-CH1D

■ Accessories (Order Separately)

Item	Specification	ns/Design	Model	
Extension cable for	Standard cable	3-m cable		V600-A45
R/W Heads	Non-water-resistant connectors	5-m cable		V600-A44
		10-m cable		V600-A40
		20-m cable		V600-A41
		30-m cable		V600-A42
	Robotic cable	3-m cable		V600-A56
	Non-water-resistant connectors	5-m cable		V600-A55
		10-m cable		V600-A50
		20-m cable		V600-A51
		30-m cable		V600-A52
Holder	For the V600-D2KR16	1		V600-A81
	*Mount with M3 flat countersunk h	*Mount with M3 flat countersunk head screws (at least two).		
	For the V600-D23P71/D23P72			V600-A84
	Ultrasonic deposition can be used	on the plastic container.		
Attachment	For the V600-D23P66N	the V600-D23P66N		V600-A86
Lithium battery	For the V600-D2KR16 Commercially available CR2016 b (includes replacement battery cov.	attery er seal, and cover)		V600-A82 (5 in each set)
Power pack	For the RFID CH1D Reader/Write	r		V600-A20
Monitor Unit	Special Unit for the V600-CA□A-□	☐ Controller		V600-P01

■ RS-232C Cables (Order Separately)

Cable	Compatible ID Controllers	Model
2-m cable	V600-CA1A-V2	XW2Z-200P
5-m cable		XW2Z-500P
2-m cable	V600-CD1D-V3	XW2Z-200S
5-m cable	V600-CM1D	XW2Z-500S

■ Connectors for ID Controllers (One Set per Unit)

Connector	Compatible ID Controllers	Model
Connector Plug	V600-CA2A-V2 V600-CD1D-V3	XM2A-0901
Connector Hood	V600-CM1D	XM2S-0911
Connector Plug	V600-CA1A-V2	XM2A-2501
Connector Hood		XM2S-2511
Connector Plug	V600-CA8A-V2 V600-CA9A-V2	MR-50F (Honda Tsushin Kogyo)
Connector Hood		MR-50L (Honda Tsushin Kogyo)

Specifications

■ Battery-less Data Carriers

	Description	Ultra-thin Card-type	Ultra-thin Half-size Card-type	Rectangular Compact	Chemical- resistant	Rectangular Compact	Round Super- compact	Round Compact	Round Super- compact
	Model	V600- D23P71	V600- D23P72	V600- D23P66N	V600- D23P66SP	V600- D23P61	V600- D23P53	V600- D23P54	V600- D23P55
Item									
Memory capacity	/	254 bytes							
Memory type		EEPROM (no	n-volatile mem	nory)					
Transmission dis	tance	Refer to "Trans	smission Dista	ance Specificati	ons for Battery	-less DCs" on p	page 12.		
Data retention tir (after writing data		10 years		10 years (-40 to 110°C) 1 year (-40 to 150°C)	10 years				10 years (-40 to 110°C) 1 year (-40 to 150°C)
Number of	Up to 0°C	800,000 times	;						
overwrites (per address)	Up to 25°C	400,000 times	0,000 times						
(Refer to	Up to 60°C	300,000 times	,						
separate item for ambient temperature)	Up to 85°C	100,000 times							
Transmission err	or detection	16-bit CRC in	both direction	s (CRC: Cyclic	Redundancy C	Check)			
Ambient temperature	For data storage	–20 to 110°C		-40 to 150°C (See note.)	-40 to 110°C	-40 to 85°C		-40 to 150°C (See note.)	
	For reading/ writing	–10 to 70°C		–20 to 85°C	–20 to 70°C	-25 to 70°C			–25 to 85°C
Storage tempera	ture	–20 to 110°C		-40 to 150°C (See note.)	–40 to 110°C	-40 to 85°C			-40 to 150°C (See note.)
Ambient humidity	/	Operating: 35°	% to 95%						
Degree of protect	tion	IEC 60529: IP		IEC 60529: IP68	IEC 60529: IP67	IEC 60529: IP	67		IEC 60529: IP67
Vibration resistance (destruction) 10 to 2,000 Hz, 3.0-mm double amplitude, 300 m/ acceleration for 30 min each in 3 directions (90 m total)		ide, 300 m/s² or 30 min otions (90 min	10 to 2,000 Hz, 1.5-mm double ampli- tude, 150 m/ s² accelera- tion 10 times each in 3 di- rections (15 min)	/		10 to 2,000 Hz, 1.5-mm double amplitude, 150 m/s² acceleration 10 times each in 3 directions (15 min)			
Shock resistance (destruction) 1,000 m/s² 3 times each in 3 directions (18 times total) 3 directions (18 times total) 1,000 m/s² 3 times each in 3 directions (18 times total) 1,000 m/s² 3 times each in 3 directions (18 times total)			·	·	500 m/s ² 3 times each in 3 directions (18 times total)				
Weight		Approx. 15 g	Approx. 5 g	Approx 6.5 g	Approx. 19 g	Approx. 5.8 g	Approx. 0.4	Approx. 1.0 g	Approx. 0.6 g

Note: The 150°C heat resistance was confirmed by leaving the Unit at 150°C for 1,000 continuous hours, and by a thermal shock test consisting of 1,000 -10°C/150°C cycles of 30 min each. No defect was found among the 22 test samples.

■ Built-in-Battery Data Carriers

	Description	Rectangular Compact	Rectangular Thin	Rectangular Intermediate Range	Rectangular Compact with Replaceable Battery	
	Model	V600-D8KR12	V600-D8KR13	V600-D8KR04	V600-D2KR16	
Item						
Memory capac	city	8 Kbytes			2 Kbytes	
Memory type		SRAM (volatile memory)				
Transmission of	distance	Refer to "Transmission Distar sheet.	nce Specifications for Bui	It-in DCs" found in the Specific	cations section of this data	
Battery life (See note 1.)		Refer to "Battery Life" found i	n the Specifications secti	on of this data sheet.	2 years (at 25°C) (See note 2.)	
Number of rea	ds/writes	Unlimited			Unlimited (Does not affect battery life)	
Transmission 6	error detection	16-bit CRC in both directions	(CRC: Cyclic Redundan	cy Check)		
Ambient temperature	For data storage	-40 to 70°C			-15 to 70°C	
	For reading/ writing	-25 to 70°C			0 to 50°C	
Storage tempe	erature	-40 to 70°C	–15 to 70°C			
Ambient humid	dity	35% to 95%			35% to 85%	
Storage humic	lity	35% to 95%				
Degree of prot	ection	IEC 60529: IP67			IEC 60529: IP50 (dustproof) (See note 3.)	
Vibration resistance (destruction) 10 to 500 Hz, 1.0-mm single amplitude, 150 m/s² acceleration for 11 min each in X, Y, and Z directions		10 to 150 Hz, 0.75-mm single amplitude, 100-m/s² acceleration for 30 min each in X, Y, and Z directions				
Shock resistar (destruction)	Shock resistance (destruction) 1,000 m/s ² 3 times each in X, Y, and Z directions (18 times total)			300 m/s ² 3 times each in X, Y, and Z directions (18 times total)		
Weight		Approx. 70 g		Approx. 160 g	Approx. 15 g	

Note: 1. A low battery detection function is built-in.

^{2.} The battery life is applicable for batteries used at a temperature of 25°C. For details on the relationship between temperature and battery life, refer to "Temperature and Battery Life," in this data sheet, found just before the "Precautions" section. The CR2016 is provided as the replacement battery (see "Accessories" in the Ordering Information of this data sheet). The Data Carrier is dustproof when the provided battery replacement cover seal is used.

■ Read/Write (R/W) Heads (with Built-in Amplifier)

Model	V600-H07	V600-H11/H11-R	V600-H51	V600-H52		
Item						
Oscillation frequency	530 kHz					
Ambient temperature	-25 to 70°C		–10 to 60°C			
Storage temperature	-40 to 85°C		–25 to 75°C			
Ambient humidity	35% to 95%					
Storage humidity	35% to 95%					
Insulation resistance	50 M Ω (at 500 VDC) between cab	le terminals and case				
Dielectric strength	1,000 VAC, 50/60 Hz for 1 min bet	ween cable terminals and ca	se (Leakage current: 1 mA n	nax.)		
Degree of protection	IEC 60529: IP67					
Vibration resistance (destruction)	10 to 500 Hz, 1.0-mm single ampli	tude, 150 m/s ² acceleration w	rith 3 sweeps of 11 min each	in X, Y, and Z directions		
Shock resistance	Destruction: 500 m/s ² 3 times each in X, Y, and Z directions (18 times total)					
Cable length (See note 1.)	Standard lengths of 0.5 m, 2 m, 5 m, and 10 m.					
Wireless transmission error detection	16-bit CRC in both directions (CRC: Cyclic Redundancy Check)					
Indicators	Power: green; transmission: orange					
Weight	Approx. 1 kg (with 10-m cable) Approx. 650 g (with 10-m cable)					

Note: 1. Extension cables are also available. The maximum cable length is 30.5 m for the V600-H07 and 50.5 m for the V600-H11/H51/H52.

2. The connectors are not water-resistant.

■ R/W Heads (with Separate Amplifier)

		Sensor	section		Amplifier section
	Model	V600-HS51	V600-HS61		V600-HA51
Item					
Oscillation free	quency	530 kHz			
Ambient temp	erature	–10 to 60°C			
Storage temper	erature	–25 to 75°C			
Ambient humi	dity	35% to 95%			
Insulation resi	stance	50 M Ω (at 500 VDC) between	en cable terminals and case		
Dielectric stre	ngth	1,000 VAC 50/60 Hz for 1 m	in between cable terminals a	nd case (Leakage cı	ırrent: 1 mA max.)
Degree of pro	tection	IEC 60529: IP67		IEC 60529: IP66	
Vibration resistance (destruction)		10 to 2,000 Hz, 1.5-mm single amplitude, 300 m/s² acceleration with 2 sweeps of 15 min each in 3 directions		Installed in panel	10 to 2,000 Hz, 1.5-mm single amplitude, 300-m/s² acceleration with 2 sweeps of 11 min each in 3 directions
				DIN Track installation	10 to 500 Hz, 1.0-mm single amplitude, 150-m/s² acceleration with 3 sweeps of 11 min each in 3 directions
Shock resistar (destruction)	nce	1,000 m/s ² 3 times each in 3	directions (18 times total)	500 m/s ² 3 times ea	nch in 3 directions (18 times total)
Cable length	Sensor to amplifier	2 m (fixed)			
	Amplifier to controller		Standard lengths of 2 m, 5 m, and 10 m (See note		
Wireless transmission error detection 16-bit CRC in both directions (CRC: Cyclic Redundancy Check)					
Indicators				Power: green; trans	mission: orange
Weight		Approx. 70 g (with 2-m cable	e)	Approx. 650 g (with	10-m cable)

Note: 1. Extension cables are also available. The maximum cable length is 50 m for the V600-HA51. Extension cables are not available for the V600-HS51/HS61.

2. The connectors are not water-resistant.

■ ID Controllers

	Series		V60	00 Series (Electron	nagnetic RFID Sys	tem)		
	Model	V600-CA1A-V2	V600-CA2A-V2	V600-CA8A-V2	V600-CA9A-V2	V600-CD1D-V3	V600-CM1D	
Item							•	
Host interface	9	RS-232C	RS-422A (Maximum of 16 Units can be connected)	Parallel PNP output	Parallel NPN output	RS-232C		
Possible num Heads	ber of R/W	2				1		
Power supply	voltage	100 to 240 VAC, 50	0/60 Hz			24 VDC	24 VDC, 5 VDC	
Acceptable po	ower supply	85 to 264 VAC				20.4 to 26.4 VDC	20.4 to 26.4 VDC 4.5 to 5.5 VDC	
Power consur	mption	35 VA max.	35 VA max. 7.2				24 VDC: 7.2 W max. 5 VDC: 1.5 W max.	
Insulation res	istance	50 M Ω min. (at 500 supply terminals at		ver terminals and ca	ise, between I/O ter	minals and case, or	between the power	
Dielectric stre	ength	1,500 VAC, 50/60 I Leakage current: 1		en the points listed a	above;	between the point	1,000 VAC, 50/60 Hz for 1 min between the points listed above; Leakage current: 10 mA max.	
Noise immun	ity	1,500-V (p-p) pulse	es of 100-ns to 1-μs	s pulse width with a	1-ns rise time	1		
Vibration	Destruction	10 to 150 Hz, 0.3-r	nm double amplitud	de for 32 min each i	n X, Y, and Z directi	ons		
resistance	Malfunction	10 to 150 Hz, 0.2-r	nm double amplitud	de for 32 min each i	n X, Y, and Z directi	ons		
Shock resista	nce	Destruction: 200 m	n/s² 3 times each in	X, Y, and Z directio	ns (18 times total)			
Ambient temp	perature	–10 to 55°C					0 to 50°C	
Ambient hum	idity	35% to 85% (with I	no condensation)					
Operating cor	nditions	No corrosive gases	3					
Storage temp	erature	-25 to 65°C -15 to 70°C					–15 to 70°C	
Memory back	(-up	A capacitor backs up the most recent error data and statistical error data for up to 20 days (at 25°C) after a power interruption. Memory backup is not available details, however, can be read for personal computer when the p turned ON.					an be read from the	
Diagnostic fu	nctions	Checks for CPU errors, memory errors, power interruptions, and transmission errors						
Ground		Ground to 100 Ω or less.						
Degree of pro	otection	IEC 60529: IP30 (panel mounted)						
Weight		Approx. 890 g	Approx. 930 g	Approx. 960 g		Approx 360 g	Approx. 180 g	

■ Monitor Unit

V600-P01 (for use with V600-CA□A Controllers)

The Monitor Unit is a monitoring device that can be mounted to an ID Controller. It can be used to test communications between the R/W Head and Data Carrier when the RFID System is started up, check the data in Data Carriers, and read error information or statistical error information.

The specifications conform to those of the ID Controller, except the operating temperature range is 0°C to $40^{\circ}\text{C}.$



■ Handheld ID Controllers

Model	V600-CB-US-S				
Item					
Power supply	Built-in nickel-cadmium batteries (6 VDC) or 9-V alkaline batteries (9 VDC) (See note.)				
Power consumption	700 mA max.				
Continuous operating time (See note.)	3 hrs min. when using the built-in nickel-cadmium batteries; 1.5 hrs min. when using the alkaline batteries				
Automatic power-saver	The power is turned OFF automatically if a key input or response is not received in 10 min.				
Automatic command cancellation	A command will be cancelled automatically if a response is not received from a Data Carrier within 2 min.				
Low battery indicator	This display appears when the battery voltage falls below the minimum voltage required for operation.				
User memory	32 Kbytes (Data will be retained for at least 24 hrs after batteries are removed.)				
Vibration resistance	Destruction: 10 to 150 Hz, 0.3-mm double amplitude for 32 min each in X, Y, and Z directions				
Shock resistance	Destruction: 200 m/s ² 3 times each in X, Y, and Z directions (18 times total)				
Ambient temperature	0 to 45°C				
Ambient humidity	35% to 85% (with no condensation)				
Operating conditions	No corrosive gases				
Storage temperature	-25 to 60°C (excluding the battery pack)				
Degree of protection	IEC 60529: IP30				
Weight	680 g max. (including the battery pack)				

Note: The continuous operating time is for new, fully charged nickel cadmium batteries or new alkaline batteries used at room temperature. Overseas specifications (with UL-listed Battery Charger) also available.

V600-CB-US-S Configuration

Item	Description	Model
Handheld ID Controller	Controller	V600-CB-US
Battery Charger	Accessory	V600-A14
Battery Case	Accessory (for alkaline batteries)	V600-A11
Ni-Cd Battery Pack	Accessory (built-in to ID Controller)	V600-A12
Carrying Belt	Accessory	V600-A13

Handheld V600-CH1D Wand

Power supply	5 VDC from AC adapter			
Permissible power supply voltage	5 VDC ±5%			
Current consumption	200 mA max. (See Note 1.)			
Insulation resistance	50 M Ω min. (at 500 VDC) between cable terminals and case			
Dielectric strength	1,000 VAC, 50/60 Hz for 1 min (1 mA max.) between cable terminals and case			
Noise immunity	Power supply line: 1,200 Vp-p			
	I/O line: 800 Vp-p			
Vibration resistance	Destruction: 10 to 150 Hz, 0.3-mm single amplitude, with 4 sweeps of 8 min each in 3 directions			
Shock resistance	Destruction: 294 m/S ² 3 (approx. 20G) times each in 3 directions			
Ambient temperature	Operating: -10 to 55°C with no icing; storage: -25 to 65°C with no icing			
Ambient humidity	35% to 85% (with no condensation)			
Operating conditions	No corrosive gases			
Enclosure ratings	IEC: IP63, JIS: IPX3 (waterproof) See note 2.			
Material	Case: ABS resin; nameplate: PET resin			
Cable length	2.5 m			
Weight	Approx. 180 g (including the connector and cable)			

Note: 1. This figure is for idling or stand-by. The rush current must be 250 mA max.

2. This does not include the connector section. The main unit is not resistant to chemicals or oils.

■ IDSC Series

Series	IDSC Series
Model	IDSC-C1DR-A IDSC-C1DT-A
Item	
Host interface	RS-232C
Possible number of R/W Heads	1
Power supply voltage	100 to 240 VAC, 50/60 Hz
Acceptable power supply voltage	85 to 264 VAC
Power consumption	60 VA max.
Insulation resistance	$20~\Omega$ min. (at 500 VDC) between all Power Supply Unit AC external terminals and ground terminals
Dielectric strength	2,300 VAC, 50/60 Hz for 1 min between Power Supply Unit AC external terminals and ground terminals Leakage current: 10 mA max.
Noise immunity	1,500-V (p-p) pulses of 100-ns to 1-μs pulse width with a 1-ns rise time
Vibration resistance	10 to 57 Hz, 0.075-mm amplitude, 57 to 150 Hz, 9.8 m/s² acceleration for 80 min each in X, Y, and Z directions
Shock resistance	150 m/s ² 3 times each in X, Y, and Z directions
Ambient temperature	0 to 55°C
Ambient humidity	10% to 90% (with no condensation)
Operating conditions	No corrosive gases
Storage temperature	-20 to 75°C (excluding the battery pack)
Memory back-up	The battery life is 5 years regardless of whether an RTC is provided. The period that data is retained after a power interruption depends on the ambient temperature. Replace the battery within one week of the battery low indicator flashing.
Diagnostic functions	Checks for CPU errors, memory errors, power interruptions, and transmission errors
Ground	Ground to 100 Ω or less.
Construction	Installed in panel
Weight	Approx. 1,500 g

Note: Refer to the applicable ID Controller Operation Manual (Cat. No. W250) for details.

■ Transmission Distance Specifications for Battery-less DCs

Recommended combinations		Installation		Controller	Transmission	Condition for DC and R/W head
Data Carrier	R/W Head			mode	distance	installation
V600-D23P71	V600-H07	Stationary	Read/Write distance	Irrelevant	10 to 70 mm (max. axial offset ±10 mm)	These Data Carriers are for installation on non-metallic surfaces only.
		Moving			30 to 60 mm (max. axial offset ±10 mm)	R/W Head Data Carrier
	V600-H11/-H11-R	Stationary	Read/Write distance	Irrelevant	5 to 40 mm (max. axial offset ±10 mm)	Non-metallic (Resin, plastic, wood, etc.)
		Moving			15 to 40 mm (max. axial offset ±10 mm)	Data transmission will be impossible if the DC is installed directly on a metal surface. Refer to the V600 R/W Heads and EEPROM Data Carriers Operation Manual (Cat.
V600-D23P72	V600-H07	Stationary	Read/Write distance	Irrelevant	10 to 50 mm (max. axial offset ±10 mm)	No. Z128) for details.
		Moving			30 to 40 mm (max. axial offset ±10 mm)	
	V600-H11/-H11-R	Stationary	Read/Write distance	Irrelevant	5 to 30 mm (max. axial offset ±10 mm)	
		Moving			15 to 30 mm (max. axial offset ±10 mm)	

Note: 1. The transmission distance/transmission time priority mode setting can be made using the lower-level transmission mode setting switch or memory switch only with a Serial-interface Controller or ID Sensor Unit.

- 2. With Parallel-interface Controllers, the mode setting is always transmission distance priority.
- 3. The specifications take fluctuations in ambient temperature and slight differences between products into account.

Recommend	led combinations	Insta	allation	Controller	Transmission	Condition for DC and R/W head
Data Carrier	R/W Head			mode	distance	installation
V600-D23P66N	V600-H07	Stationary	Read distance	Transmission distance priority	5 to 45 mm (max. axial offset ±10 mm)	R/W Head Data Carrier
				Transmission time priority	5 to 35 mm (max. axial offset ±10 mm)	
			Write distance	Irrelevant	5 to 35 mm (max. axial offset ±10 mm)	Non-metallic (Resin, plastic, wood, etc.)
		Moving	Read distance	Transmission distance priority	25 to 40 mm (max. axial offset ±10 mm)	Data transmission will be impossi- ble if the DC is installed directly on
				Transmission time priority	25 to 30 mm (max. axial offset ±10 mm)	a metal surface. Refer to the V600 R/W Heads and EEPROM Data
			Write distance	Irrelevant	25 to 30 mm (max. axial offset ±10 mm)	Carriers Operation Manual (Cat. No. Z128) for details.
	V600-H11/-H11-R	Stationary	Read distance	Transmission distance priority	5 to 30 mm (max. axial offset ±10 mm)	
				Transmission time priority	5 to 25 mm (max. axial offset ±10 mm)	
			Write distance	Irrelevant	5 to 25 mm (max. axial offset ±10 mm)	
		Moving	Read distance	Transmission distance priority	15 to 25 mm (max. axial offset ±10 mm)	
				Transmission time priority	15 to 20 mm (max. axial offset ±10 mm)	
			Write distance	Irrelevant	15 to 20 mm (max. axial offset ±10 mm)	
V600- D23P66SP		Stationary	Read distance	Transmission distance priority	5 to 40 mm (max. axial offset ±10 mm)	
				Transmission time priority	5 to 30 mm (max. axial offset ±10 mm)]
			Write distance	Irrelevant	5 to 30 mm (max. axial offset ±10 mm)	
		Moving	Read distance	Transmission distance priority	20 to 40 mm (max. axial offset ±10 mm)	
				Transmission time priority	20 to 30 mm (max. axial offset ±10 mm)	
			Write distance	Irrelevant	20 to 30 mm (max. axial offset ±10 mm)	
	V600-H11/-H11-R	Stationary	Read distance	Transmission distance priority	5 to 25 mm (max. axial offset ±10 mm)	
				Transmission time priority	5 to 20 mm (max. axial offset ±10 mm)	
			Write distance	Irrelevant	5 to 20 mm (max. axial offset ±10 mm)	
		Moving	Read distance	Transmission distance priority	10 to 25 mm (max. axial offset ±10 mm)	
				Transmission time priority	10 to 20 mm (max. axial offset ±10 mm)	
			Write distance	Irrelevant	10 to 20 mm (max. axial offset ±10 mm)	

Note: 1. The transmission distance/transmission time priority mode setting can be made using the lower-level transmission mode setting switch or memory switch only with a Serial-interface Controller or ID Sensor Unit.

- 2. With Parallel-interface Controllers, the mode setting is always transmission distance priority.
- 3. The specifications take fluctuations in ambient temperature and slight differences between products into account.

Recommend	Recommended combinations		allation	Controller	Transmission	Condition for DC and R/W head
Data Carrier	R/W Head			mode	distance	installation
V600-D23P61	V600-H11/-H11-R	Stationary	Read distance	Transmission distance priority	2 to 19 mm (max. axial offset ±10 mm)	These Data Carriers can be installed on metallic surfaces.
				Transmission time priority	2 to 16 mm (max. axial offset ±10 mm)	Data Carrier
			Write distance	Irrelevant	2 to 16 mm (max. axial offset ±10 mm)	V600-H5 R/W Head
		Moving	Read distance	Transmission distance priority	12 to 19 mm (max. axial offset ±10 mm)	Iron Iron (SC SS)
				Transmission time priority	13 to 16 mm (max. axial offset ±10 mm)	Iron (SC, SS)
			Write distance	Irrelevant	12 to 16 mm (max. axial offset ±10 mm)	
	V600-H51	Stationary	Read distance	Transmission distance priority	1 to 16 mm (max. axial offset ±10 mm)	Iron
				Transmission time priority	1 to 14 mm (max. axial offset ±10 mm)	Iron (SC, SS)
			Write distance	Irrelevant	1 to 14 mm (max. axial offset ±10 mm)	also apply for installation on non- metallic surfaces. Refer to the <i>V600</i>
	Moving	Moving Read distance	Transmission distance priority	7 to 16 mm (max. axial offset ±10 mm)	R/W Heads and EEPROM Data Carriers Operation Manual (Cat.	
				Transmission time priority	7 to 14 mm (max. axial offset ±10 mm)	No. Z128) for details.
			Write distance	Irrelevant	7 to 14 mm (max. axial offset ±10 mm)	

Note: 1. The transmission distance/transmission time priority mode setting can be made using the lower-level transmission mode setting switch or memory switch only with a Serial-interface Controller or ID Sensor Unit.

- 2. With Parallel-interface Controllers, the mode setting is always transmission distance priority.
- 3. The specifications take fluctuations in ambient temperature and slight differences between products into account.

Recommend	led combinations	Insta	allation	Controller		nission ance	Condition for DC and R/W head
Data Carrier	R/W Head			mode	aist	ance	installation
V600-D23P53	V600-HS51 (See note 4.)	Stationary	Read distance	Transmission distance priority	0.5 to 4.0 mm (max. axial offset ±2 mm)	0.5 to 4.5 mm (max. axial offset ±1 mm)	These Data Carriers are for flush mounting in metallic bases only. Data Carrier V600-HS61
				Transmission time priority	0.5 to 3.0 mm (max. axial offset ±2 mm)	0.5 to 3.5 mm (max. axial offset ±1 mm)	RW Head
			Write distance	Irrelevant	0.5 to 3.0 mm (max. axial offset ±2 mm)	0.5 to 3.5 mm (max. axial offset ±1 mm)	Iron Iron
	V600-HS61 (See note 4.)	Stationary	Read distance	Transmission distance priority	0.5 to 4.0 mm (max. axial offset ±2 mm)	0.5 to 4.5 mm (max. axial offset ±1 mm)	(SC, SS) Data Carrier **///////////////////////////////////
				Transmission time priority	0.5 to 3.0 mm (max. axial offset ±2 mm)	0.5 to 3.5 mm (max. axial offset ±1 mm)	V600-HS51 R/W Head
			Write distance	Irrelevant	0.5 to 3.0 mm (max. axial offset ±2 mm)	0.5 to 3.5 mm (max. axial offset ±1 mm)	Iron Iron(SC, SS)
	V600-H52	Stationary	Read distance	Transmission distance priority	0.5 to 4.0 mm (max. axial offset ±2 mm)	0.5 to 4.5 mm (max. axial offset ±1 mm)	Data Carrier
				Transmission time priority	0.5 to 3.0 mm (max. axial offset ±2 mm)	0.5 to 3.5 mm (max. axial offset ±1 mm)	V600-H52 R/W Head
			Write distance	Irrelevant	0.5 to 3.0 mm (max. axial offset ±2 mm)	0.5 to 3.5 mm (max. axial offset ±1 mm)	The listed transmission distances also apply for installation on non-
V600-D23P54	V600-HS51 (See note 4.)	Stationary	Read distance	Transmission distance priority	0.5 to 6.0 mm (max. axial offset ±2 mm)	0.5 to 6.5 mm (max. axial offset ±1 mm)	metallic surfaces. Refer to the V600 R/W Heads and EEPROM Data Carriers Operation Manual (Cat. No. Z128) for details.
				Transmission time priority	0.5 to 5.5 mm (max. axial offset ±2 mm)	0.5 to 6.0 mm (max. axial offset ±1 mm)	
			Write distance	Irrelevant	0.5 to 5.0 mm (max. axial offset ±2 mm)	0.5 to 5.5 mm (max. axial offset ±1 mm)	
	V600-HS61 (See note 4.)	Stationary	Read distance	Transmission distance priority	0.5 to 6.5 mm (max. axial offset ±2 mm)	0.5 to 7.0 mm (max. axial offset ±1 mm)	
			Transmission time priority	0.5 to 5.5 mm (max. axial offset ±2 mm)	0.5 to 6.0 mm (max. axial offset ±1 mm)		
			Write distance	Irrelevant	0.5 to 5.5 mm (max. axial offset ±2 mm)	0.5 to 6.0 mm (max. axial offset ±1 mm)	
	V600-H52	Stationary	Read distance	Transmission distance priority	0.5 to 6.5 mm (max. axial offset ±2 mm)	0.5 to 7.0 mm (max. axial offset ±1 mm)	
				Transmission time priority	0.5 to 5.5 mm (max. axial offset ±2 mm)	0.5 to 6.0 mm (max. axial offset ±1 mm)	
			Write distance	Irrelevant	0.5 to 5.5 mm (max. axial offset ±2 mm)	0.5 to 6.0 mm (max. axial offset ±1 mm)	

Note: 1. The transmission distance/transmission time priority mode setting can be made using the lower-level transmission mode setting switch or memory switch only with a Serial-interface Controller or ID Sensor Unit.

- 2. With Parallel-interface Controllers, the mode setting is always transmission distance priority.
- 3. The specifications take fluctuations in ambient temperature and slight differences between products into account.
- **4.** This is the transmission distance when using the V600-HS□1 and V600-HA51 combination.

Recommend	Recommended combinations		allation	Controller	Transmission	Condition for DC and R/W head	
Data Carrier	R/W Head			mode	distance	installation	
V600-D23P55	V600-HS51 (See note 4.)	Stationary	Read distance	Transmission distance priority	0.5 to 6.5 mm (max. axial offset ±2 mm)	These Data Carriers are for flush mounting in non-metallic bases	
				Transmission time priority	0.5 to 6.0 mm (max. axial offset ±2 mm)	only. Data Carrier	
			Write distance	Transmission distance priority	0.5 to 6.5 mm (max. axial offset ±2 mm)		
				Transmission time priority	0.5 to 6.0 mm (max. axial offset ±2 mm)	V600-HS51 R/W Head	
	V600-HS61 (See note 4.)	Stationary	Read distance	Transmission distance priority	0.5 to 7.0 mm (max. axial offset ±2 mm)	Iron	
				Transmission time priority	0.5 to 6.0 mm (max. axial offset ±2 mm)	Non-metallic (Resin, plastic, wood, etc.)	
			Write distance	Transmission distance priority	0.5 to 7.0 mm (max. axial offset ±2 mm)	V600-HS61 Data Carrier	
				Transmission time priority	0.5 to 6.0 mm (max. axial offset ±2 mm)	R/W Head	
V600-H52	V600-H52	Stationary	Stationary Read distance	Transmission distance priority	0.5 to 9.0 mm (max. axial offset ±2 mm)	Iron	
			Transmission time priority	0.5 to 8.5 mm (max. axial offset ±2 mm)	Non-metallic		
		Write distance	Transmission distance priority	0.5 to 8.5 mm (max. axial offset ±2 mm)	(Resin, plastic, wood, etc.)		
			Transmission time priority	0.5 to 8.5 mm (max. axial offset ±2 mm)	Data Carrier		
						V600-H52 R/W Head	
						(Resin, plastic, wood, etc.) The transmission distance decreas-	
						es considerably when flush mount- ed in non-metallic bases. Refer to the V600 R/W Heads and EEPROM Data Carriers Operation Manual	
						(Cat. No. Z128) for details.	

Note: 1. The transmission distance/transmission time priority mode setting can be made using the lower-level transmission mode setting switch or memory switch only with a Serial-interface Controller or ID Sensor Unit.

- 2. With Parallel-interface Controllers, the mode setting is always transmission distance priority.
- 3. The specifications take fluctuations in ambient temperature and slight differences between products into account.
- **4.** This is the transmission distance when using the V600-HS□1 and V600-HA51 combination.

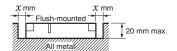
■ Transmission Distance Specifications for Built-in-Battery DCs

Recommend	led combinations	Insta	Illation	Controller	Transmission	Condition for DC and R/W head
Data Carrier	R/W Head			mode	distance	installation
V600-D8KR12	V600-H07	Stationary	Flush- mounted in metal	Irrelevant	10 to 50 mm (max. axial offset ±10 mm)	R/W Head
			Surface- mounted on metal		10 to 60 mm (max. axial offset ±10 mm)	All metal////////
		Moving	Flush- mounted in metal		25 to 50 mm (max. axial offset ±10 mm)	Data Carrier Surface-mounted on metal /
			Surface- mounted on metal		25 to 60 mm (max. axial offset ±10 mm)	All metal
	V600-H11	Stationary	Flush- mounted in metal	Irrelevant	5 to 40 mm (max. axial offset ±10 mm)	Data Carrier Flush-mounted in metal
			Surface- mounted on metal		5 to 45 mm (max. axial offset ±10 mm)	Ali metal
		Moving	Flush- mounted in metal		25 to 40 mm (max. axial offset ±10 mm)	The listed transmission distances also apply for installation on non-metallic surfaces. Refer to the V600 R/W Heads and SRAM Data Carri-
			Surface- mounted on metal		25 to 45 mm (max. axial offset ±10 mm)	ers Operation Manual (Cat. No. Z127) for details.
V600-D8KR13	V600-H07	Stationary	Flush- mounted in metal	Irrelevant	10 to 30 mm (max. axial offset ±10 mm)	
			Surface- mounted on metal		10 to 35 mm (max. axial offset ±10 mm)	
		Moving	Flush- mounted in metal		20 to 30 mm (max. axial offset ±10 mm)	
			Surface- mounted on metal		20 to 35 mm (max. axial offset ±10 mm)	
	V600-H11	Stationary	Flush- mounted in metal	Irrelevant	10 to 30 mm (max. axial offset ±10 mm)	
			Surface- mounted on metal			
		Moving	Flush- mounted in metal		15 to 30 mm (max. axial offset ±10 mm)	
			Surface- mounted on metal			

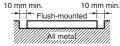
Recommend	led combinations	Insta	Installation		Transmission	Condition for DC and R/W head
Data Carrier	R/W Head			mode	distance	installation
V600-D8KR04 (unsealed)	V600-H07	Stationary	Flush- mounted in metal	Irrelevant	See note1.	The listed transmission distances also apply for installation on non-metallic surfaces. Refer to the <i>V600</i>
			Surface- mounted on metal		10 to 100 mm (max. axial offset ±10 mm)	R/W Heads and SRAM Data Carriers Operation Manual (Cat. No. Z127) for details.
		Moving	Flush- mounted in metal		See note1.	
			Surface- mounted on metal		50 to 100 mm (max. axial offset ±10 mm)	
	V600-H11	Stationary	Flush- mounted in metal	Irrelevant	See note1.	
			Surface- mounted on metal		10 to 65 mm (max. axial offset ±10 mm)	
		Moving	Flush- mounted in metal		See note1.	
			Surface- mounted on metal		30 to 65 mm (max. axial offset ±10 mm)	
V600-D2KR16	V600-H11	Stationary	Flush- mounted in metal	Irrelevant	2 to 15 mm (max. axial offset ±10 mm) (See note 2.)	
			Surface- mounted on metal		2 to 15 mm (max. axial offset ±10 mm)	
		Moving	Flush- mounted in metal		6 to 15 mm (max. axial offset ±10 mm) See note 2.)	
			Surface- mounted on metal		10 to 15 mm (max. axial offset ±10 mm)	

Note: 1. When Data Carriers are flush-mounted in metal, the read/write distance will depend on the distance (x) between the side of the DC and the metal surface.

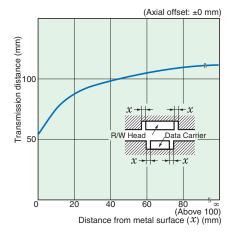
Refer to the V600 R/W Heads and SRAM Data Carriers Operation Manual (Cat. No. Z127) for details.



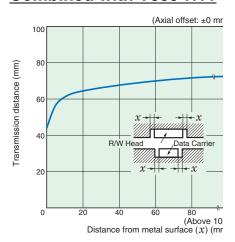
2. Use the following method for flush mounting into a metallic base



Combined with V600-H07



Combined with V600-H11



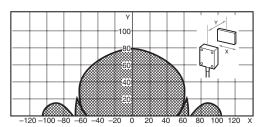
Characteristic Data (Typical)

■ Transmission Range

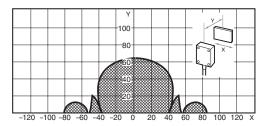
Note: The values shown in the following graphs are in millimeters. Refer to the previous six pages for details on Data Carrier and R/W Head mounting conditions.

Battery-less Compact DCs

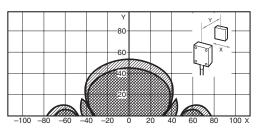
V600-D23P71 & V600-H07



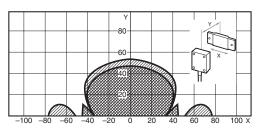
V600-D23P72 & V600-H07



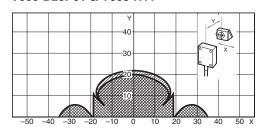
V600-D23P66N & V600-H07



V600-D23P66SP & V600-H07

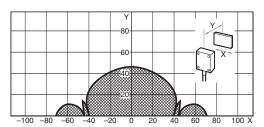


V600-D23P61 & V600-H11

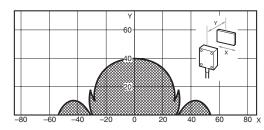


Read range (in transmission distance priority mode)

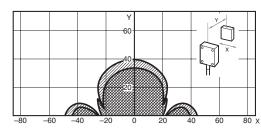
V600-D23P71 & V600-H11



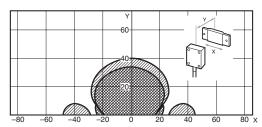
V600-D23P72 & V600-H11



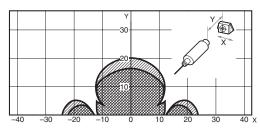
V600-D23P66N & V600-H11



V600-D23P66SP & V600-H11

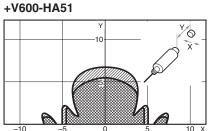


V600-D23P61 & V600-H51

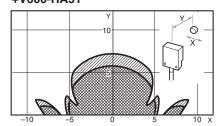


Write range (in transmission distance or transmission time priority mode) Read range (in transmission time priority mode)

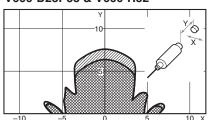
V600-D23P53 & V600-HS51



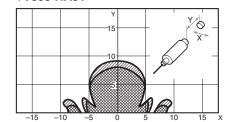
V600-D23P53 & V600-HS61 +V600-HA51



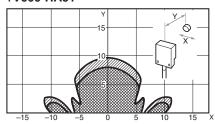
V600-D23P53 & V600-H52



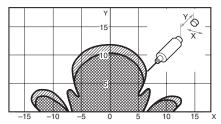
V600-D23P54 & V600-HS51 +V600-HA51



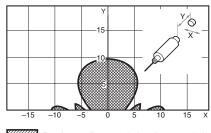
V600-D23P54 & V600-HS61 +V600-HA51



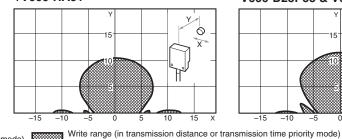
V600-D23P54 & V600-H52



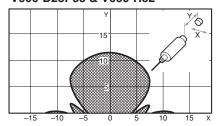
V600-D23P55 & V600-HS51 +V600-HA51



V600-D23P55 & V600-HS61 +V600-HA51



V600-D23P55 & V600-H52

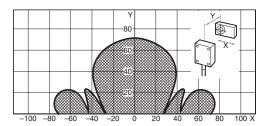


Read range (in transmission distance priority mode)

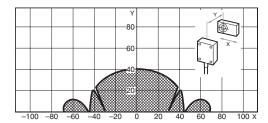
Read range (in transmission time priority mode)

Built-in-Battery DCs

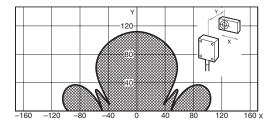
V600-D8KR12 & V600-H07



V600-D8KR13 & V600-H07

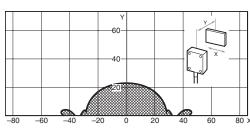


V600-D8KR04 & V600-H07



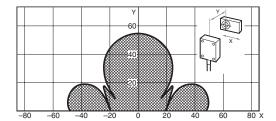
Replaceable-Battery DCs

V600-D2KR15 & V600-H11

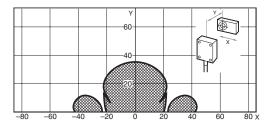


Read/Write range (in transmission distance or transmission time priority mode)

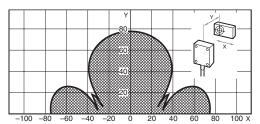
V600-D8KR12 & V600-H11



V600-D8KR13 & V600-H11



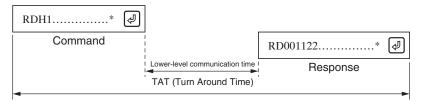
V600-D8KR04 & V600-H11



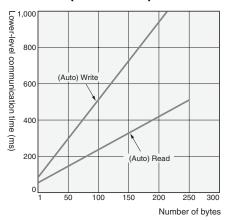
■ Transmission Time

- The transmission time does not depend on the model of R/W Head or Data Carrier, although transmission times differ between Data Carriers with and without batteries.
- The turn around time (TAT) is the total time required from the issuance of a command from the host device (for example, a host computer) until the reception of a response.
- The lower-level communications time does not include the host communications; it is the time required for communications between the R/W Head and Data Carrier. The lower-level communications time is used in the equation for the DC speed.

DC Speed = (Distance travelled in the transmission range)/ (Lower-level communications time)



Transmission Time with Built-in-Battery Data Carriers (Reference)

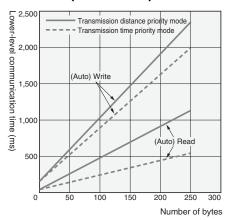


Calculation (Reference)

	Lower-level communications time (ms)
READ	t = 1.8 N + 48.4
WRITE	t = 4.2 N + 86.5

N is the number of processing bytes.

Transmission Time with Battery-less Data Carriers (Reference)



Calculation (Reference)

	R/W	Lower-level communications time (ms)
Distance priority	READ	t = 4.3 N + 64.6
mode	WRITE	t = 8.7 N + 167.1
Time priority	READ	t = 1.8 N + 79.0
mode	WRITE	t = 7.1 N + 180.4

N is the number of processing bytes.

■ Lower-Level Communications Mode Setting (Distance/Time Priority)

The lower-level communications mode setting is made with a DIP Switch or memory switch on the Serial-interface Controller (V600-CA1A-□/-CA2A-□, V600-CD1D-V3, V600-CMID) or ID Sensor Unit. (Refer to the Controller's Operation Manual for more details on this setting.)

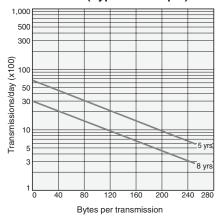
With Parallel-interface Controllers (V600-CA8A-V2/CA9A-V2) the mode is fixed to transmission distance priority.

■ Battery Life

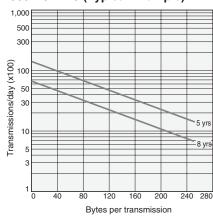
The Data Carrier has a built-in lithium battery.

The following graphs show the relationship between the number of bytes per transmission, the number of transmissions per day, and the battery life.

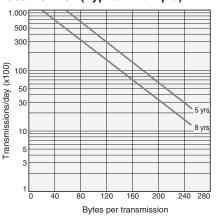
V600-D8KR12 (Typical Example)



V600-D8KR13 (Typical Example)



V600-D8KR04 (Typical Example)

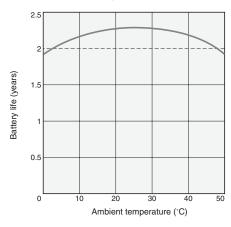


■ Temperature and Battery Life

V600-D2KR16

The battery life is two years at 25°C regardless of the relationship between the number of bytes read/written and the number of transmissions.

Examples Showing Relationship Between Battery Life and Temperature



The following table shows the standard values.

Temperature	Battery consumption rate in one year
20°C	1%
30°C	2%
40°C	4%
50°C	8%
60°C	16%
70°C	32%

Note: If the battery is stored at 70°C and is not installed, the battery life is calculated as follows:

2 (years) (1 - 0.32) = 1.36 years

If the battery is stored at 25°C after one year's storage, the battery life will be approximately 1 year and 4 months. (The battery life will be shortened if the battery is used at temperatures close to 0°C or 50°C.)

The values in the above graph are based on the battery being installed (i.e., the insulation sheet is removed). If the battery is not installed, the values shown in the above table will apply.

Precautions

■ Correct Use

Data Carrier Batteries

Built-in-Battery Data Carriers

Do not disassemble, deform by applying pressure, heat at temperatures exceeding 100°C, or burn. Doing so may cause the built-in lithium batteries to combust or explode.

Replaceable-Battery Data Carriers

Never short-circuit the positive and negative terminals of the batteries, charge the batteries, disassemble them, deform them, or throw them into a fire. Doing so may cause the batteries to explode, combust, or leak liquid.

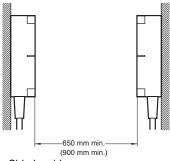
■ Mutual Interference

Mutual Interference Between R/W Heads

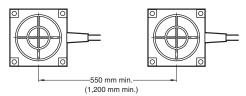
When using more than one set of R/W Heads, mutual interference between the Heads can be avoided by mounting the Heads at the specified distance as shown below.

V600-H07

 Facing RD/WT command: 650 mm min. Auto command: 900 mm min.

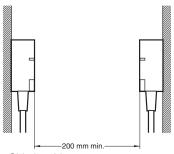


 Side-by-side RD/WT command: 550 mm min. Auto command: 1,200 mm min.

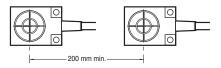


V600-H11

 Facing RD/WT command: 200 mm min. Auto command: 200 min.



 Side-by-side RD/WT command: 200 min. Auto command: 200 mm min.

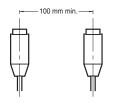


V600-H51

• Facing: 120 mm min.

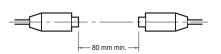


• Side-by-side: 100 mm min.

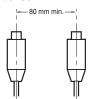


V600-H52

• Facing: 80 mm min.

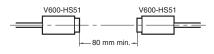


• Side-by-side: 80 mm min.

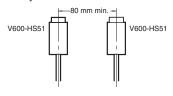


V600-HS51

• Facing: 80 mm min.

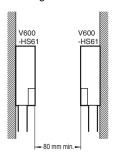


• Side-by-side: 80 mm min.

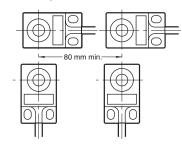


V600-HS61

• Facing: 80 mm min.



• Side-by-side: 80 mm min.



Note: If the two R/W Heads are not transmitting simultaneously (i.e., independent read/write), mutual interference will not occur. Therefore, the restriction on the distance between the Heads will not be applicable.

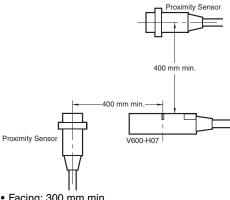
The commands will be received by the R/W Heads and transmission will oscillate between them.

Mutual Interference Between Proximity Sensors

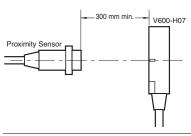
The V600-series Units use electromagnetic coupling (frequency: 530 kHz). When a V600 Unit is wired close to R/W Heads, Proximity Switches, and Sensors that have an oscillating frequency between 400 and 600 kHz, the Proximity Sensor may malfunction, so be sure to install the Units according to the distance restrictions specified in the following diagrams. Make sure to thoroughly test that the mounting positions and the fixed positions of the Sensors are correct before putting them into actual operation.

V600-H07

• Vertical: 400 mm min.

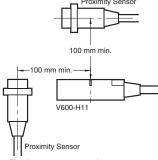


• Facing: 300 mm min.

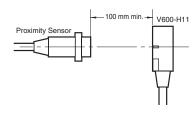


V600-H11

• Vertical: 100 mm min.



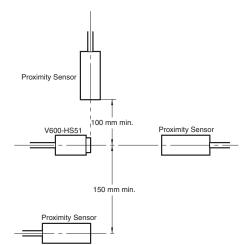
• Facing: 100 mm min.



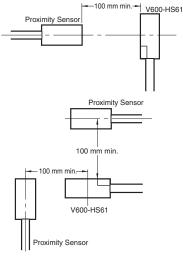
V600-H51/H52

Proximity Sensor 100 mm min. Proximity Sensor 150 mm min.

V600-HS51



V600-HS61



Mutual Interference Between Data Carriers

When more than one Data Carrier is used, mutual interference between the DCs can be avoided by making sure that they are mounted apart at the distances specified below.

(Reading/writing)

V600-D23P53

R/W Head: V600-H52, V500-HS51 + V600-HA51, V600-HS61 + V600-HA51



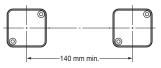
V600-D23P55

R/W Head: V600-H52, V600-HS51 + V600-HA51, V600-HS61 + V600-HA51



V600-D23P66N

R/W Head: V600-H11



R/W Head: V600-H07



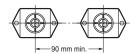
V600-D23P54

R/W Head: V600-H52, V600-HS51 + V600-HA51, V600-HS61 + V600-HA51



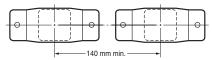
V600-D23P61

R/W Head: V600-H11/-H51

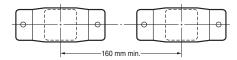


V600-D23P66SP

R/W Head: V600-H11



R/W Head: 600-H07

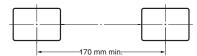


V600-D23P72

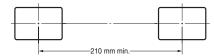
R/W Head: V600-H51

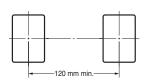


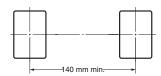
R/W Head: V600-H11



R/W Head: V600-H07





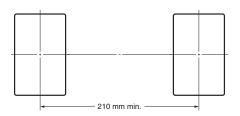




V600-D23P66SP

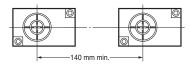
R/W Head: V600-H07

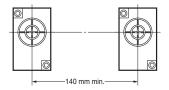




V600-D8KR12

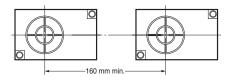
R/W Head: V600-H11

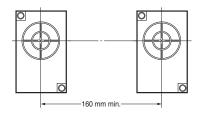




V600-D8KR13

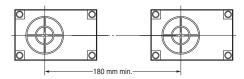
R/W Head: V600-H11

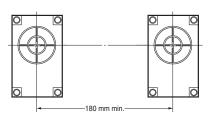




V600-D8KR04

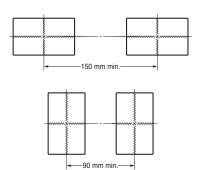
R/W Head: V600-H11



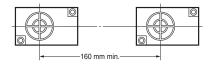


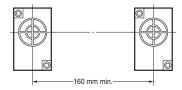
V600-D2KR16

R/W Head: V600-H11

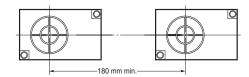


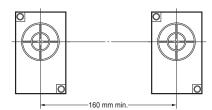
R/W Head: V600-H07



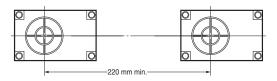


R/W Head: V600-H07





R/W Head: V600-H07



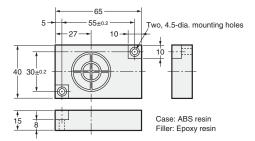
Dimensions

Note: All units are in millimeters unless otherwise indicated.

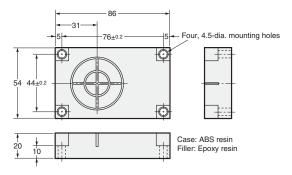
Data Carriers

Built-in-Battery DCs

V600-D8KR12



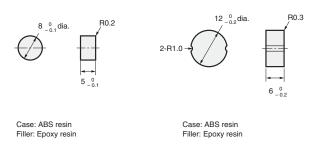
V600-D8KR04



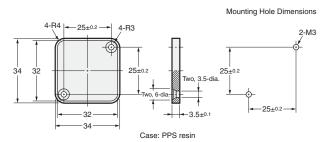
Battery-less DCs

V600-D23P53

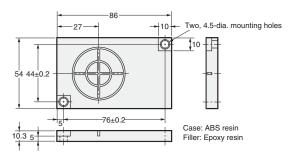
V600-D23P54



V600-D23P66N

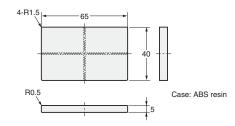


V600-D8KR13

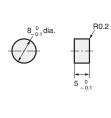


Replaceable-Battery DCs

V600-D2KR16

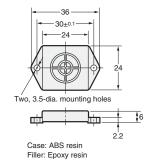


V600-D23P55

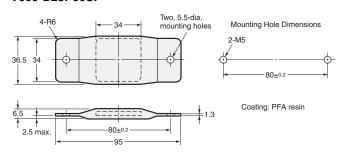


Case: PPS resin Filler: Epoxy resin

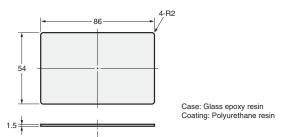
V600-D23P61



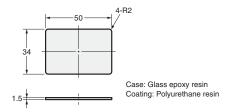
V600-D23P66SP



V600-D23P71

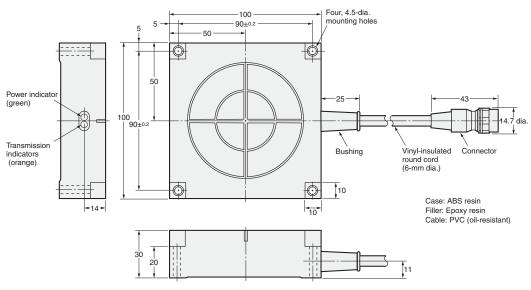


V600-D23P72

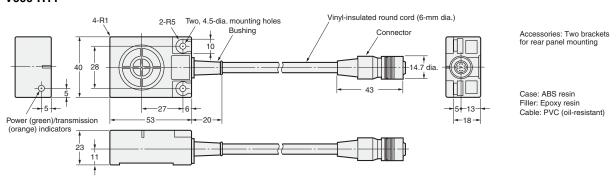


R/W Heads

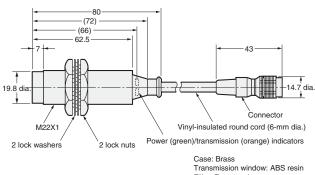
V600-H07



V600-H11

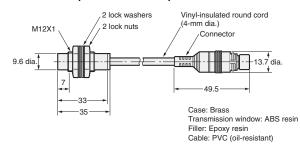


V600-H51



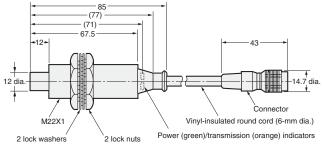
Filler: Epoxy resin Cable: PVC (oil-resistant)

V600-HS51 (Sensor Section)



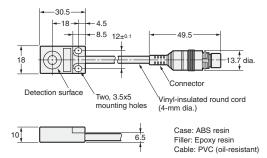
OMRON

V600-H52

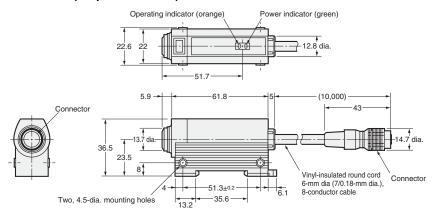


Case: Brass Transmission window: ABS resin Filler: Epoxy resin Cable: PVC (oil-resistant)

V600-HS61 (Sensor Section)



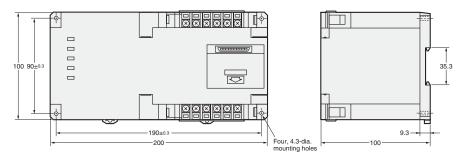
V600-HA51 (Amplifier Section)



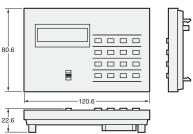
Case: ABS resin Filler: Epoxy resin Cable: PVC (oil-resistant)

ID Controllers

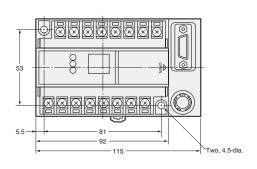
V600-CA□A-□ (Multi-purpose)

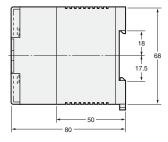


V600-P01 Monitor Unit (For use with V600-CA□A-□)

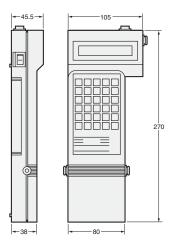


V600-CD1D-V3 (Compact)

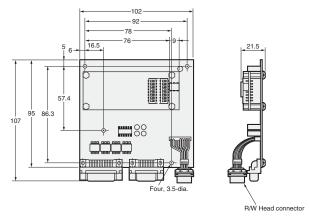




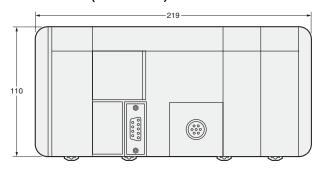
V600-CB-US Handheld ID Controller

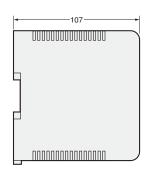


V600-CM1D (Board-Mounted)



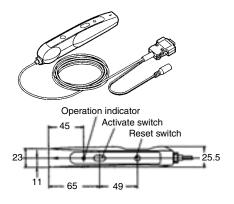
IDSC-C1D□-A (Stand-alone)

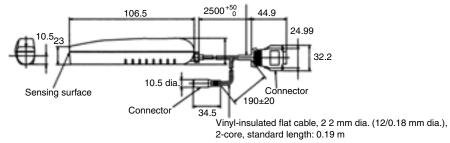




■ Accessories

V600-CH1D Handheld Reader/Writer

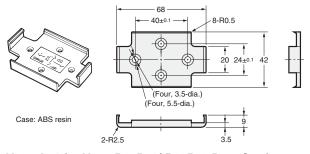




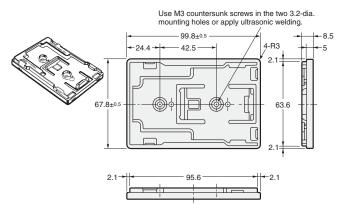
Note: Requires EIAJ Class 2 plug (4.0 x 1.7 mm) from power source

Holder

V600-A81 for V600-D2KR16 Data Carriers

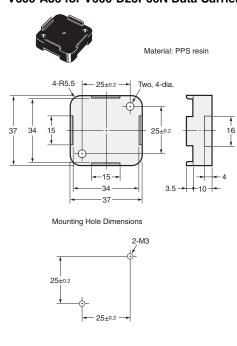


V600-A84 for V600-D23P71/-D23P72 Data Carriers



Attachment

V600-A86 for V600-D23P66N Data Carriers



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Terms and Conditions

WARRANTY, LIMITATIONS OF LIABILITY

WARRANTY OMRON's exclusive warranty is that the products are free from defects in materials and workmanship for a period of one year (or other period if specified) from date of sale by OMRON.

OMRON MAKES NO WARRANTY OR REPRESENTATION. EXPRESS OR IMPLIED, REGARDING NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE OF THE PRODUCTS. ANY BUYER OR USER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE. OMRON DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED.

LIMITATIONS OF LIABILITY OMRON SHALL NOT BE RESPONSI-BLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR COMMERCIAL LOSS IN ANY WAY CON-NECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED ON CONTRACT, WARRANTY, NEGLIGENCE OR STRICT

In no event shall responsibility of OMRON for any act exceed the individual price of the product on which liability is asserted.

IN NO EVENT SHALL OMRON BE RESPONSIBLE FOR WAR-RANTY, REPAIR OR OTHER CLAIMS REGARDING THE PROD-UCTS UNLESS OMRON'S ANALYSIS CONFIRMS THAT THE PRODUCTS WERE PROPERLY HANDLED, STORED, INSTALLED AND MAINTAINED AND NOT SUBJECT TO CONTAMINATION, ABUSE, MISUSE, OR INAPPROPRIATE MODIFICATION OR REPAIR.

APPLICATION CONSIDERATIONS

SUITABILITY FOR USE OMRON shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the product in the customer's application or use of the product.

At the customer's request, OMRON will provide applicable third party certification documents identifying ratings and limitations of use which apply to the product. This information by itself is not sufficient for a complete determination of the suitability of the product in combination with the end product, machine, system, or other application or

The following are some examples of applications for which particular attention must be given. This is not intended to be an exhaustive list

of all possible uses of this product, nor is it intended to imply that the uses listed may be suitable for this product:

- Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this
- · Nuclear energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
- · Systems, machines and equipment that could present a risk to life or property.

Please know and observe all prohibitions of use applicable to this

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

PROGRAMMABLE PRODUCTS OMRON shall not be responsible for the user's programming of a programmable product, or any consequence thereof.

DISCLAIMERS

PERFORMANCE DATA Performance data given in this catalog is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of OMRON's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the OMRON Warranty and Limitations of Liability.

CHANGE IN SPECIFICATIONS Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your OMRON representative at any time to confirm actual specifications of purchased product.

ERRORS AND OMISSIONS The information in this catalog has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors, or omissions.

Complete terms and conditions for product purchase and use are on Omron's website at www.omron.com/oei - under the "About Us" tab, in the Legal Matters section.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS. To convert millimeters into inches, divide by 25.4

OMRON ELECTRONICS LLC

One Commerce Drive Schaumburg, IL 60173

847-843-7900

For US technical support or other inquiries:

800-556-6766

Cat. No. GC RFID 4

OMRON CANADA, INC.

885 Milner Avenue Toronto, Ontario M1B 5V8

416-286-6465

OMRON ON-LINE

Global - http://www.omron.com USA - http://www.omron.com/oei Canada - http://www.omron.ca

5/03 Specifications subject to change without notice Printed in USA