OMRON®

Manual Swipe Magnetic Card Reader | V3A

Low Cost, Ultra-Compact, Manual Swipe Reader

- Low power C-MOS technology
- Multiple configurations
- TTL-compatible interface (clock & data)
- Available with or without cover



Ordering Information

Magnetic Tracks Supported (R, R/W)										
1	2	3	Center	JIS II	IC Contact	Interface	Cover	Cable	Color	**Part Number**
R	R	R	—	—	No	TTL	Yes	No	Ivory	**V3A-1K**
R	R	R	—	—	No	TTL	No	No	Ivory	**V3A-1**
R	—	—	—	—	No	TTL	Yes	No	Ivory	**V3A-3K**
R	—	—	—	—	No	TTL	No	No	Ivory	**V3A-3**
—	R	—	—	—	No	TTL	Yes	No	Ivory	**V3A-4K**
—	R	—	—	—	No	TTL	No	No	Ivory	**V3A-4**
—	—	R	—	—	No	TTL	Yes	No	Ivory	**V3A-5K**
—	—	R	—	—	No	TTL	No	No	Ivory	**V3A-5**
R	R	—	—	—	No	TTL	Yes	No	Ivory	**V3A-6K**
R	R	—	—	—	No	TTL	No	No	Ivory	**V3A-6**
—	R	R	—	—	No	TTL	Yes	No	Ivory	**V3A-7K**
—	R	R	—	—	No	TTL	No	No	Ivory	**V3A-7**
R	R	R	—	—	No	TTL	Yes	No	Black	**V3A-1KB**
R	R	R	—	—	No	TTL	No	No	Black	**V3A-1B**
—	R	—	—	—	No	TTL	Yes	No	Black	**V3A-4KB**
—	R	—	—	—	No	TTL	No	No	Black	**V3A-4B**
R	R	—	—	—	No	TTL	Yes	No	Black	**V3A-6KB**
R	R	—	—	—	No	TTL	No	No	Black	**V3A-6B**
—	R	R	—	—	No	TTL	Yes	No	Black	**V3A-7KB**
—	R	R	—	—	No	TTL	No	No	Black	**V3A-7B**

Note: Cable harness is included with all V3B models. It is optional for V3A.

■ ACCESSORIES

Item		**Part Number**
Cable harnesses	V3A-1	**V3A/B-1 CN Harness**
	V3A-3, 4, 5	**V3A-4 CN Harness**
	V3A-6, 7	**V3A/B-6/7 CN Harness**

■ TYPICAL APPLICATIONS

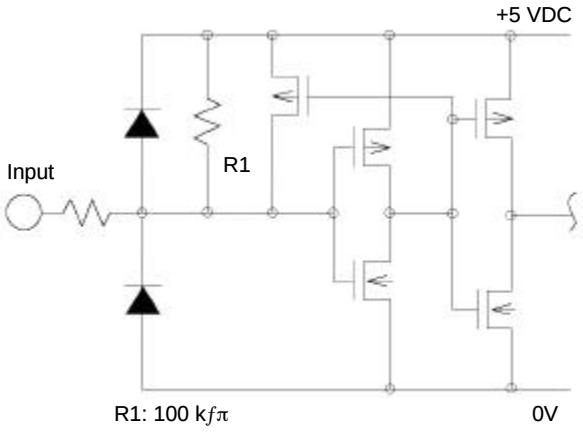
- Point-of Sale (POS) systems
- ID card checkers
- Club membership
- Access management
- Remote terminals for computers

Specifications

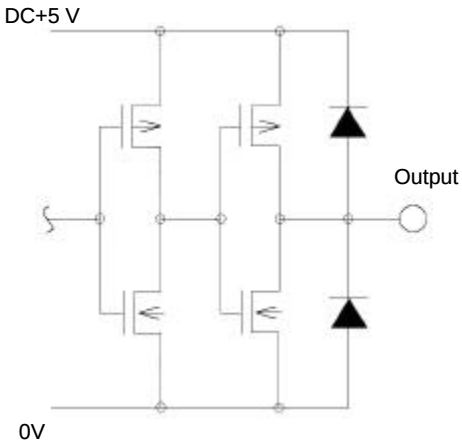
Part Number		V3A-□□
Recommended card type	Magnetic card	ISO 7810, 7811/1-6
Recording method		FM decoding (F2F)
Card feeding speed		10 to 120 cm/second (10 to 100 cm/sec triple track)
Service life of magnetic head		300,000 passes
Operating power supply		+5 VDC ±10%
Current consumption	Single track	3 mA typical, 5 mA maximum
	Dual track	6 mA typical, 10 mA maximum
	Triple track	9 mA typical, 15 mA maximum
Mounting location		Indoors—away from direct sunlight or wet, humid environment
Ambient temperature	Operation	−10° to 55°C (14°F to 131°F)
	Storage	−30° to 70°C (−22°F to 158°F)
Ambient humidity	Operation	30% to 85% RH
	Storage	20% to 90% RH
Vibration		10 to 150 Hz, single vibration width of 0.15 mm
Shock		Peak acceleration 19.6 m/sec^2
Dimensions	With cover	90 W x 26.5 H x 28 D mm (3.54 W x 1.04 H x 1.10 D in)
	Without cover	90 W x 24 H x 24 D mm (3.54 W x 0.94 H x 0.94 D in)
Weight		Approx. 45g with cover (30g without cover)

Engineering Data

■ INPUT CIRCUIT DIAGRAM



■ OUTPUT CIRCUIT DIAGRAM



■ I/O INFORMATION

Single Track Connector

9-pin Molex connector part number 53261-0990. Applicable Molex socket housing part number 51021-0900.

Pin #	Signal	Input/Output	Description
1	0 V	—	—
2	+5 VDC	—	—
3	$\overline{\text{CSV}}$	Input	Current save
4	$\overline{\text{CLS}}$	Output	Card loaded
5	$\overline{\text{RCP}}$	Output	Read clock
6	$\overline{\text{RDP}}$	Output	Read data
7	Not used	—	—
8	Not used	—	—
9	Not used	—	—

Double Track Connector

9-pin Molex connector part number 53261-0990. Applicable Molex socket housing part number 51021-0900.

Pin #	Signal	Input/Output	Description
1	0 V	—	—
2	+5 VDC	—	—
3	$\overline{\text{CSV}}$	Input	Current save
4	$\overline{\text{CLS2}}$	Output	Card loaded 2
5	$\overline{\text{RCP2}}$	Output	Read clock 2
6	$\overline{\text{RDP2}}$	Output	Read data 2
7	$\overline{\text{CLS1/3}}$	Output	Card loaded 1/3
8	$\overline{\text{RCP1/3}}$	Output	Read clock 1/3
9	$\overline{\text{RDP1/3}}$	Output	Read data 1/3

Triple Track Connector

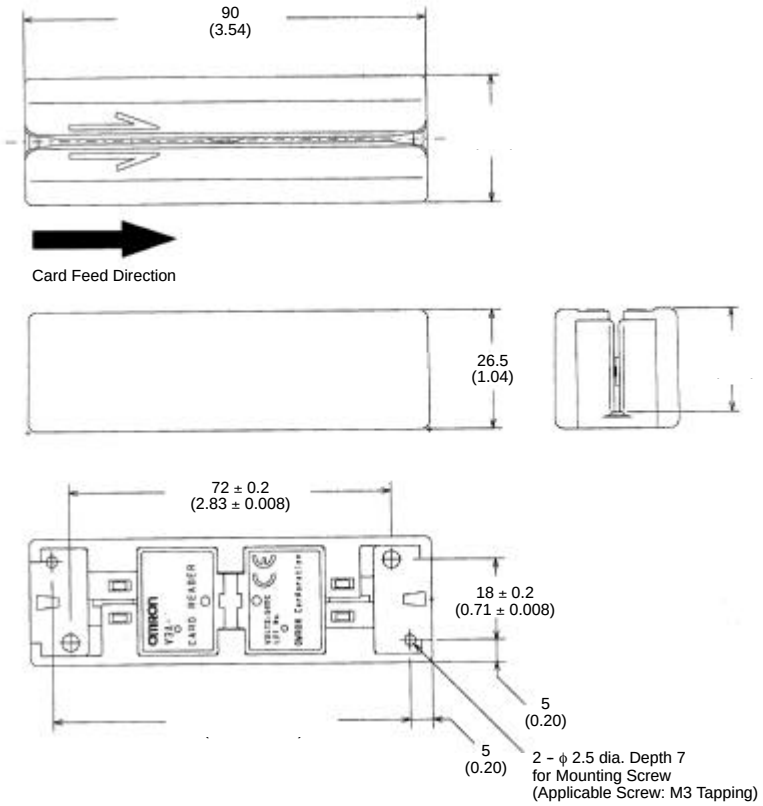
12-pin Molex connector part number 53048-1210. Applicable Molex socket housing part number 51021-1200.

Pin #	Signal	Input/Output	Description
1	0V	—	—
2	+5 VDC	—	—
3	$\overline{\text{CSV}}$	Input	Current save
4	$\overline{\text{CLS3}}$	Output	Card loaded 3
5	$\overline{\text{RCP3}}$	Output	Read clock 3
6	$\overline{\text{RDP3}}$	Output	Read data 3
7	$\overline{\text{CLS2}}$	Output	Card loaded 2
8	$\overline{\text{RCP2}}$	Output	Read clock 2
9	$\overline{\text{RDP2}}$	Output	Read data 2
10	$\overline{\text{CLS1}}$	Output	Card loaded 1
11	$\overline{\text{RCP1}}$	Output	Read clock 1
12	$\overline{\text{RDP1}}$	Output	Read data 1

Dimensions

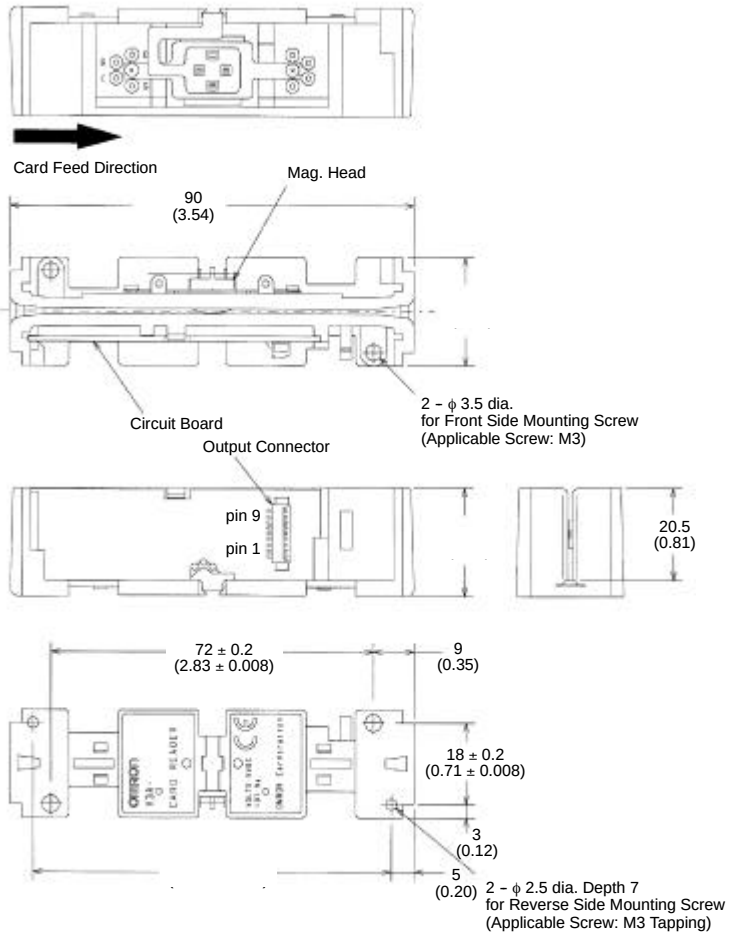
Unit: mm (inch)

■ V3A-4K



Note: Tolerances ±0.3mm unless specified

■ V3A-4



Note: Tolerances ±0.3mm unless specified

NOTE: DIMENSIONS SHOWN ARE IN MILLIMETERS. To convert millimeters to inches divide by 25.4.

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