

### Economical, Manually Operated Card Reader

- Compact, rugged design
- Wide operating temperature range
- Stable operation with card swipe speed within a range of 10 to 150 cm/second
- Choose enclosed or open housing to match application
- Single and double track configurations
- TTL-compatible interface (clock & data)



### Ordering Information

Magnetic Tracks Supported (R, R/W)					IC Contact	Interface	Cover	Cable	Color	Part Number
1	2	3	Center	JIS II						
R	—	—	—	—	No	TTL	Yes	Yes	Black	<b>3S4YR-HSR3</b>
R	—	—	—	—	No	TTL	No	Yes	Black	<b>3S4YR-HSR3-01</b>
—	R	—	—	—	No	TTL	Yes	Yes	Black	<b>3S4YR-HSR4</b>
—	R	—	—	—	No	TTL	No	Yes	Black	<b>3S4YR-HSR4-01</b>
—	—	R	—	—	No	TTL	Yes	Yes	Black	<b>3S4YR-HSR5</b>
—	—	R	—	—	No	TTL	No	Yes	Black	<b>3S4YR-HSR5-01</b>
R	R	—	—	—	No	TTL	Yes	Yes	Black	<b>3S4YR-HSR6</b>
R	R	—	—	—	No	TTL	No	Yes	Black	<b>3S4YR-HSR6-001</b>
—	R	R	—	—	No	TTL	Yes	Yes	Black	<b>3S4YR-HSR7</b>
—	R	R	—	—	No	TTL	No	Yes	Black	<b>3S4YR-HSR7-001</b>

### ■ TYPICAL APPLICATIONS

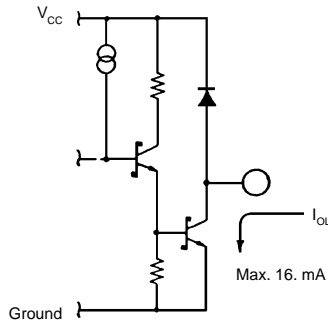
- Remote Terminals for Computers
- Credit Card Readers
- ID Card Checkers
- Electronic Locks
- Automatic Gate Machines
- Point-of-Sale Systems (POS)

# Specifications

Part number		3S4YR-HSR
Recommended card type		ISO 7810, 7811/1-5, 7812, 7813
Recording method		FM decoding (F2F)
Card feeding speed		10 to 150 cm/sec (4 to 59 in/sec)
Service life	Single track	300,000 passes min.
	Double track	600,000 passes min.
Operating power supply		5 VDC $\pm$ 10%
Current consumption	Single track	25 mA
	Double track	50 mA
Mounting location		Anywhere not directly subject to water or sunlight
Ambient temperature	Operation	-10° to 55°C (14° to 131°F) without condensation
	Storage	-30° to 70°C (-22° to 158°F)
Ambient humidity	Operation	10% to 95% RH without condensation
	Storage	10% to 95% RH
Vibration		10 to 55 Hz, 2 mm double amplitude, for 30 minutes in X, Y, and Z directions
Shock		300 m/sec <sup>2</sup> (30 G) in each of X, Y, and Z directions
Dimensions	With cover	100L x 32.5W x 32H mm (3.94L x 1.28W x 1.26H in)
	Without cover	100L x 27W x 29.5H mm (3.94L x 1.06W x 1.16H in)
Weight		Approx. 90 g (3.2 oz) enclosed; 60 g (2.1 oz) open

# Engineering Data

## ■ OUTPUT CIRCUIT DIAGRAM



### Output signal levels:

- Output high current  
V<sub>CC</sub> = 5.5 V  
I<sub>OH</sub> = 200  $\mu$ A max.
- Output sink current  
V<sub>OL</sub> = 0.4 V  
I<sub>OL</sub> = 16 mA max.

■ I/O INFORMATION

**Single Track Connector**

5-pin JAE connector part number IL-5S-S3L-N. Shipped with JAE angle pin header, part number IL-5P-S3FP2-N attached.

Pin #	Signal	Input/Output	Description
1	$\overline{RDP}$	Output	Read data
2	$\overline{RCP}$	Output	Read clock
3	$\overline{CLS}$	Output	Card load
4	DC5	—	+5 VDC
5	GND	—	Ground

**Double Track Connector**

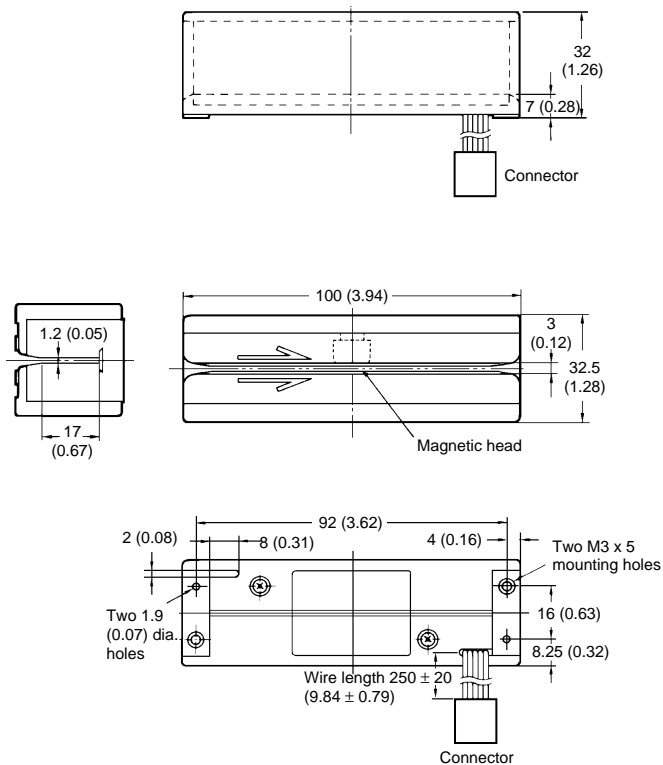
9-pin JAE connector part number IL-9S-S3L-N. Shipped with JAE angle pin header, part number IL-9P-S3FP2-N attached.

Pin #	Signal	Input/Output	Description
1	$\overline{RDP1}$	Output	Read data, track 1 or 3
2	$\overline{RCP1}$	Output	Read clock, track 1 or 3
3	$\overline{CLS1}$	Output	Card load, track 1 or 3
4	$\overline{RDP2}$	Output	Read data, track 2
5	$\overline{RCP2}$	Output	Read clock, track 2
6	$\overline{CLS2}$	Output	Card load, track 2
7	—	—	Not used, no connection
8	DC5	—	+5 VDC
9	GND	—	Ground

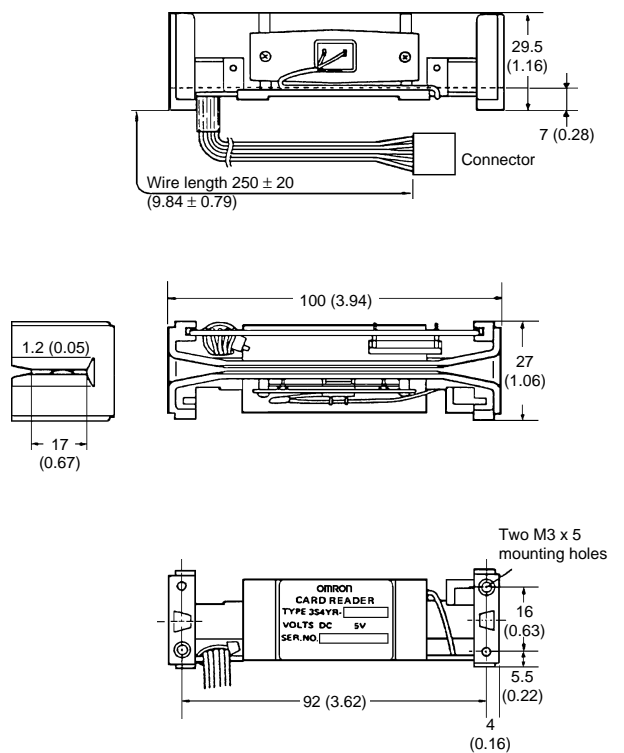
**Dimensions**

Unit: mm (inch)

■ 3S4YR-HSR ENCLOSED MODELS



■ 3S4YR-HSR OPEN MODELS



Note: Unless otherwise specified, tolerance is  $\pm 0.3$ .

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

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