

Manual Swipe Card Reader

3S4YR-HNR

Low Power, Compact, Manually
Operated Card Reader

- Low-power CMOS technology
- Lightweight and compact size
- Stable operation with card swipe speed within a range of 10 to 120 cm/second
- Solder pad or connector on PCB for customizing cable harness
- Current save mode
- TTL-compatible interface



Ordering Information

Magnetic Tracks Supported (R, R/W)					Enclosure	I/O	Color	Part Number
1	2	3	Center	JIS II				
R	R	R	—	—	Enclosed	Connector	Ivory	3S4YR-HNR1
R	R	R	—	—	Open (no cover)	Connector	Ivory	3S4YR-HNR1-01
—	R	—	—	R	Open (no cover)	Connector	Ivory	3S4YR-HNR24-002
R	—	—	—	—	Enclosed	Solder pad	Ivory	3S4YR-HNR3
R	—	—	—	—	Open (no cover)	Solder pad	Ivory	3S4YR-HNR3-01
—	R	—	—	—	Enclosed	Solder pad	Ivory	3S4YR-HNR4
—	R	—	—	—	Open (no cover)	Solder pad	Ivory	3S4YR-HNR4-01
—	R	—	—	—	Open (no cover)	Connector	Ivory	3S4YR-HNR4-002
—	R	—	—	—	Enclosed	Connector	Ivory	3S4YR-HNR4-102
Single track (1, 2, or 3)			—	—	Enclosed	Solder pad	Ivory	3S4YR-HNR4U
Single track (1, 2, or 3)			—	—	Open (no cover)	Solder pad	Ivory	3S4YR-HNR4U-01
—	—	R	—	—	Enclosed	Solder pad	Ivory	3S4YR-HNR5
—	—	R	—	—	Open (no cover)	Solder pad	Ivory	3S4YR-HNR5-01
R	R	—	—	—	Enclosed	Solder pad	Ivory	3S4YR-HNR6
R	R	—	—	—	Open (no cover)	Solder pad	Ivory	3S4YR-HNR6-01
R	R	—	—	—	Open (no cover)	Connector	Ivory	3S4YR-HNR6-002
R	R	—	—	—	Enclosed	Connector	Ivory	3S4YR-HNR6-102
—	R	R	—	—	Enclosed	Solder pad	Ivory	3S4YR-HNR7
—	R	R	—	—	Open (no cover)	Solder pad	Ivory	3S4YR-HNR7-01
—	R	R	—	—	Open (no cover)	Connector	Ivory	3S4YR-HNR7-002
—	R	R	—	—	Enclosed	Connector	Ivory	3S4YR-HNR7-102
R	R	R	—	—	Enclosed	Connector	Black	3S4YR-HNR1N
R	R	R	—	—	Open (no cover)	Connector	Black	3S4YR-HNR1N-01
—	R	—	—	—	Enclosed	Connector	Black	3S4YR-HNR4N
—	R	—	—	—	Open (no cover)	Connector	Black	3S4YR-HNR4N-01
R	R	—	—	—	Enclosed	Connector	Black	3S4YR-HNR6N
R	R	—	—	—	Open (no cover)	Connector	Black	3S4YR-HNR6N-01
—	R	R	—	—	Enclosed	Connector	Black	3S4YR-HNR7N
—	R	R	—	—	Open (no cover)	Connector	Black	3S4YR-HNR7N-01

Note: Contact your Omron representative for other configurations.

■ ACCESSORIES

Description	Part Number
Pair of covers	COVER FOR HNR
HNR1 cable harness	CABLE KTI-159
HNR4/6/7 (-002/102) cable harness	CABLE KTI-240

■ TYPICAL APPLICATIONS

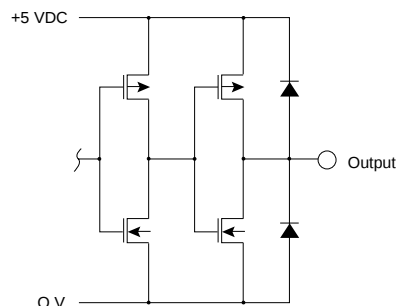
- Remote Terminals for Computers
- Credit Card Readers
- ID Card Checkers
- Electronic Locks
- Automatic Gate Machines
- Point-of-Sale Systems (POS)

Specifications

Part number		3S4YR-HNR
Recommended card type	Magnetic card	ISO 7810, 7811/1-5, 7812, 7813
Recording method		FM decoding (F2F)
Card feeding speed		10 to 120 cm/sec (4 to 47 in/sec)
Service life of magnetic head		300,000 passes min.
Operating power supply		5 VDC $\pm$ 10%
Current consumption	Single track	5.0 mA max.
	Double track	10.0 mA max.
	Triple track	15.0 mA max.
Mounting location		Anywhere not directly subject to water or sunlight
Ambient temperature	Operation	-10° to 55°C (14° to 131°F)
	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 ² (30 G) in each of X, Y, and Z directions
Dimensions	With cover	90L x 28W x 26.5H mm (3.54L x 1.10W x 1.04H in)
	Without cover	90L x 24W x 24H mm (3.54L x 0.94W x 0.94H in)
Weight		Approx. 40 g (1.42 oz) enclosed; 25 g (0.89 oz) open

Engineering Data

■ OUTPUT CIRCUIT DIAGRAM



Output signal levels:

$$V_{OL} = 0.4 \text{ V at } 4 \text{ mA}$$

$$V_{OH} = 3.5 \text{ V at } 1 \text{ mA}$$

■ I/O INFORMATION

Single Track Connector

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

Pin #	Signal	Input/Output	Description
1	0 V	—	0 VDC
2	5 VDC	—	5 VDC
3	$\overline{\text{CSV}}$	Input	Current save
4	$\overline{\text{CLS2}}$	Output	Card load
5	$\overline{\text{RCP2}}$	Output	Read clock
6	$\overline{\text{RDP2}}$	Output	Read data
7	NC	—	No connection
8	NC	—	No connection
9	NC	—	No connection

Double Track Connector

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

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

Triple Track Connector

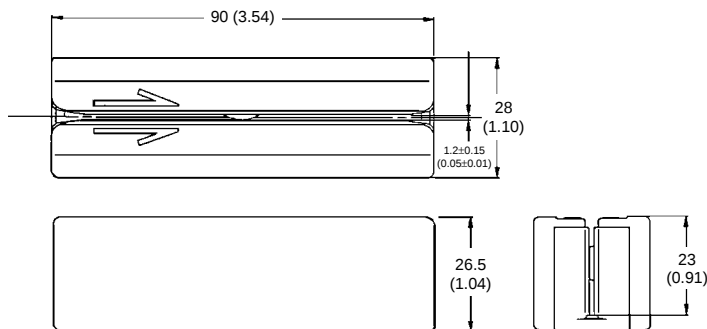
12-pin Molex connector part number 53048-1210.
Applicable Molex socket housing part number 51021-1200.

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

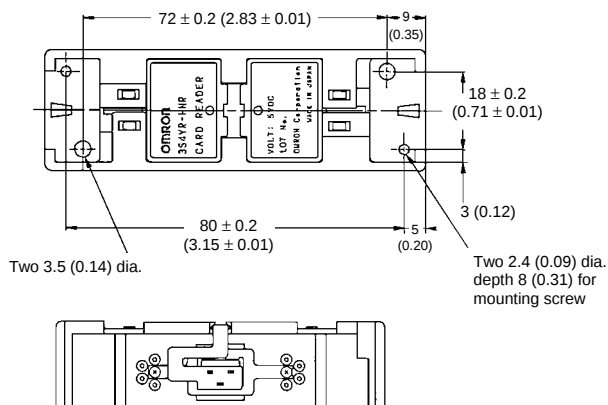
Dimensions

Unit: mm (inch)

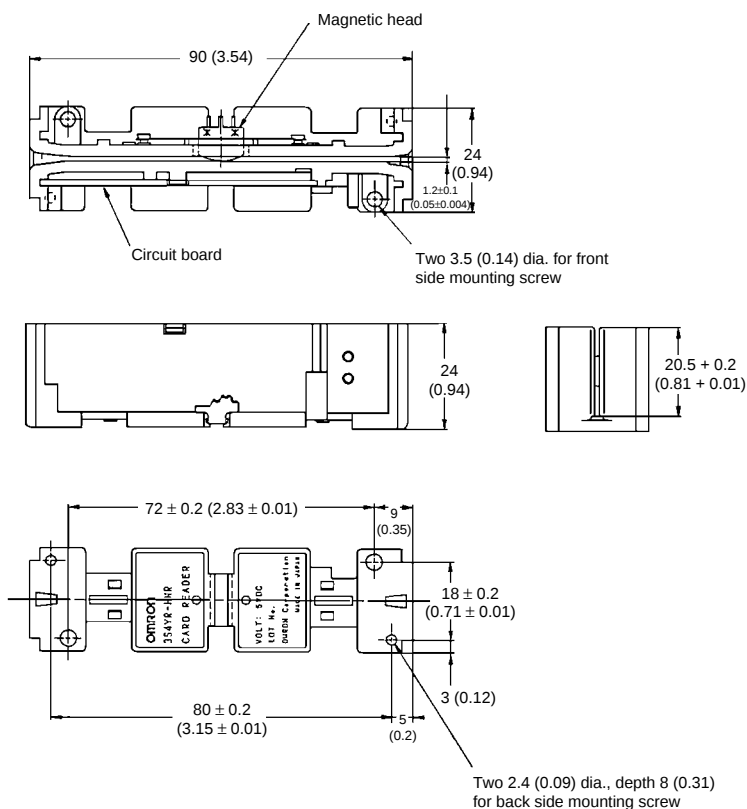
3S4YR-HNR ENCLOSED MODELS



Note: Unless otherwise indicated, tolerance is ± 0.3.



3S4YR-HNR OPEN MODELS



Note: Unless otherwise indicated, tolerance is ± 0.3.



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