OMRON®

Manual Swipe Magnetic Card Reader **3S4YR-HNF**

Peripheral-type, Compact, Manually Operated Card Reader

- Connects to the PC RS-232C port just like any other peripheral
- Sits conveniently next to the PC keyboard
- Easy-to-operate protocol
- Wide range of configurations available
- No external power supply required



Ordering Information

Magnetic tracks supported (R, R/W)											
1	2	3	Center	JISII	IC contact	Interface	Communication (See Note 1,2,3)	Cover	Cable	Color	**Part Number**
R	R	R	—	—	No	RS 232C	Unidirectional	Yes	Yes	Ivory	**3S4YR-HNF1**
R	R	R	—	—	No	RS 232C	Bidirectional	Yes	Yes	Ivory	**3S4YR-HNF1-002**
—	R	—	—	—	No	RS 232C	Unidirectional	Yes	Yes	Ivory	**3S4YR-HNF4**
—	R	—	—	—	No	RS 232C	Bidirectional	Yes	Yes	Ivory	**3S4YR-HNF4-002**
R	R	—	—	—	No	RS 232C	Unidirectional	Yes	Yes	Ivory	**3S4YR-HNF6**
R	R	—	—	—	No	RS 232C	Bidirectional	Yes	Yes	Ivory	**3S4YR-HNF6-002**
—	R	R	—	—	No	RS 232C	Unidirectional	Yes	Yes	Ivory	**3S4YR-HNF7**
—	R	R	—	—	No	RS 232C	Bidirectional	Yes	Yes	Ivory	**3S4YR-HNF7-002**
—	—	—	—	R	No	RS 232C	Bidirectional	Yes	Yes	Ivory	**3S4YR-HNF2-002**
—	—	—	—	R	No	RS 232C	Bidirectional	No	No	Ivory	**3S4YR-HNF2-012**
—	R	—	—	R	No	RS 232C	Unidirectional	Yes	Yes	Ivory	**3S4YR-HNF24**
—	R	—	—	R	No	RS 232C	Bidirectional	Yes	Yes	Ivory	**3S4YR-HNF24-002**
—	R	—	—	R	No	RS 232C	Bidirectional	No	No	Ivory	**3S4YR-HNF24-012**
R	R	—	—	R	No	RS 232C	Bidirectional	Yes	Yes	Ivory	**3S4YR-HNF26-002**
R	R	—	—	R	No	RS 232C	Bidirectional	No	No	Ivory	**3S4YR-HNF26-012**

Note: 1. Communication protocol comes in two types: Unidirectional = response only, and Bidirectional = command/response
2. For information regarding keyboard wedge interface models, contact your Omron representitive.
3. Bidirectional models derive power from the keyboard port, unidirectional models derive power directly from the RS-232 port.

■ TYPICAL APPLICATIONS

- POS Systems
- Credit Card Readers
- ID Card Checkers
- PC Peripherals

Specifications

Part number		HNF
Recommended card type		ISO 7810, 7811-1 to -5, 7812 & 7813
Recording method		F2F
Swipe direction		Reads in either direction
Communication protocol		Unidirectional (response only) or Bidirectional (command/response)
Card feeding speed		100 to 1,000 mm/sec. (200 to 1,000 mm/sec. for 3 track stripe card)
Interface connector		D-sub 9-pin (female) Bidirectional units also have PS/2 connector (mini-din 6-pin)
Mounting location		Indoors; away from rain, sunlight and dust
Power supply		Unidirectional: powered from RS-232C port Bidirectional: powered from keyboard port
Current consumption		Unidirectional, 12 mA dual track, 16 mA triple track
Ambient temperature	Operation	0 to 45°C (32 to 113°F)
	Storage	-15 to 60°C (5 to 140°F)
Ambient humidity	Operation	30 to 85% RH, with no condensation and absolute air humidity of 23 g/m^3 or less
	Storage	20 to 90% RH, with no condensation and absolute air humidity of 40 g/m^3 or less
Vibration endurance		10 to 150 Hz, single vibration width of 0.15 mm or an acceleration of 19.6 m/s^2 (2 G)
Shock endurance		196 m/s^2 (20 G)
Cable length		1500 mm (59.06)
Dimensions		100 L x 38.6 W x 35.2 H mm (3.94 L x 1.52 W x 1.39 H in)
Weight		Approx. 185 g (6.53 oz)
Service life		300,000 passes minimum

I/O Information

■ INTERFACE CONNECTOR

D-Sub 9-pin (female). Bidirectional uses 6-pin mini-din (male and female)

■ INTERFACE METHOD

Conforms to EIA RS-232C

Transmission speed: 9600 bps

Communication method: Half-duplex

Synchronizing method: Start-stop synchronization

Data bit length: 8 bits

Error detection: Even parity

Stop bit: 1 bit

■ PIN ASSIGNMENT

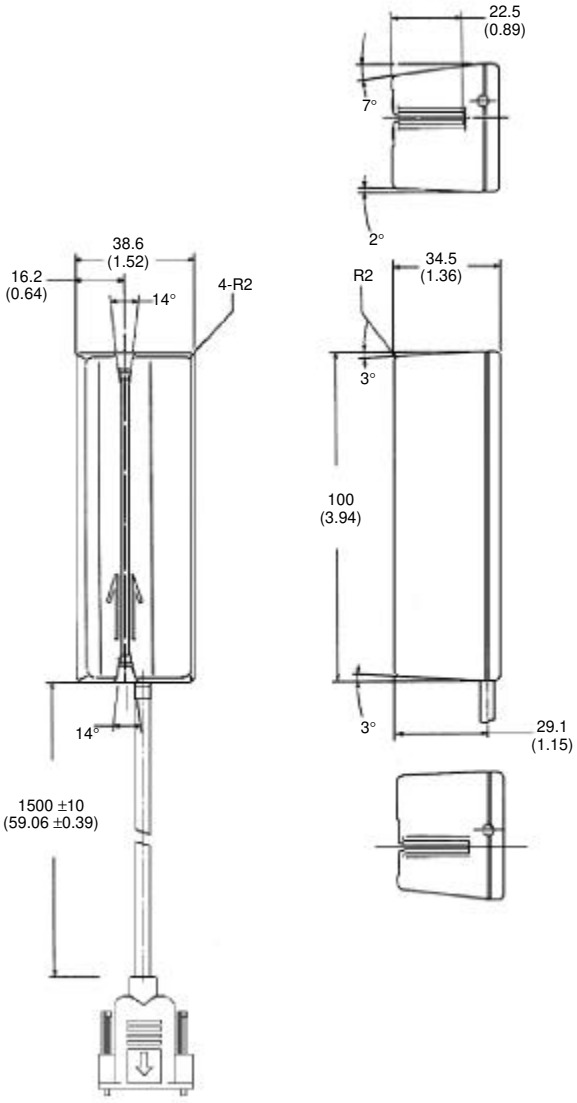
(View from PC side)

Pin number	Signal	Description	Input/output
1	CF (DCD)	Loop-back of RTS	Input
2	BB (RXD)	Card data	Input
3	BA (TXD)	Command data (bidirectional models)	Output
4	CD (DTR)	Always ON at PC side	Output
5	AB (SG)	Signal ground	—
6	CC (DSR)	Data Set Ready	Input
7	CA (RTS)	Request to send	Output
8	CB (CTS)	Loop-back of RTS	Input
9	CE (RI)	Open	Input
Frame	AA (FG)	Frame ground	—

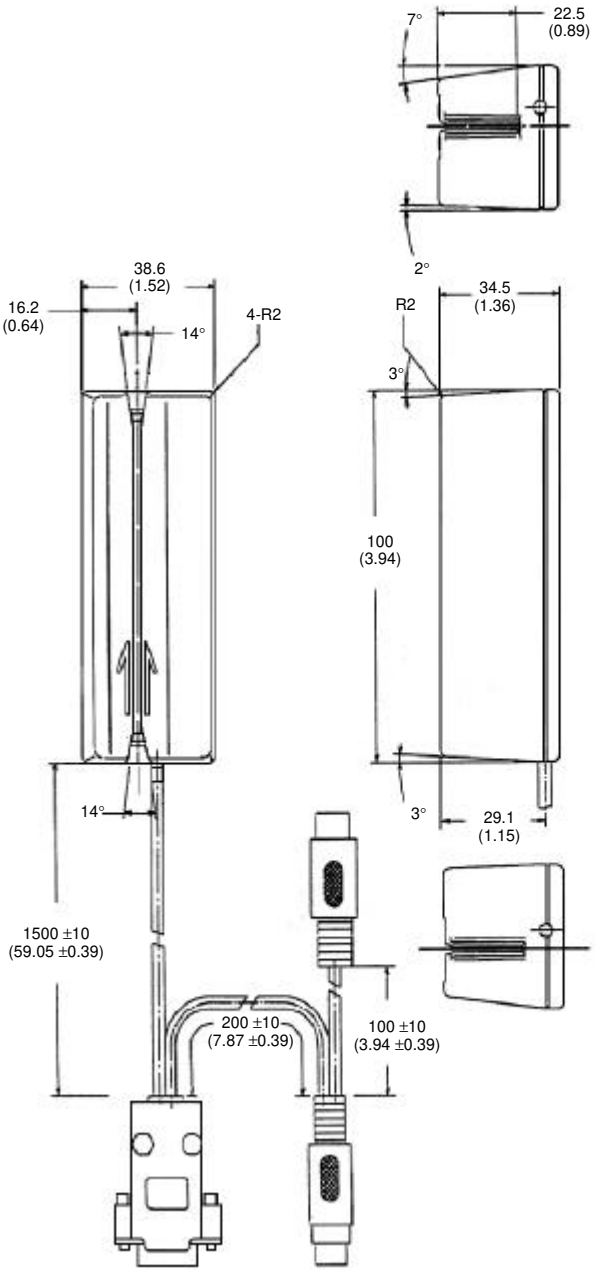
Dimensions

Unit: mm (inch)

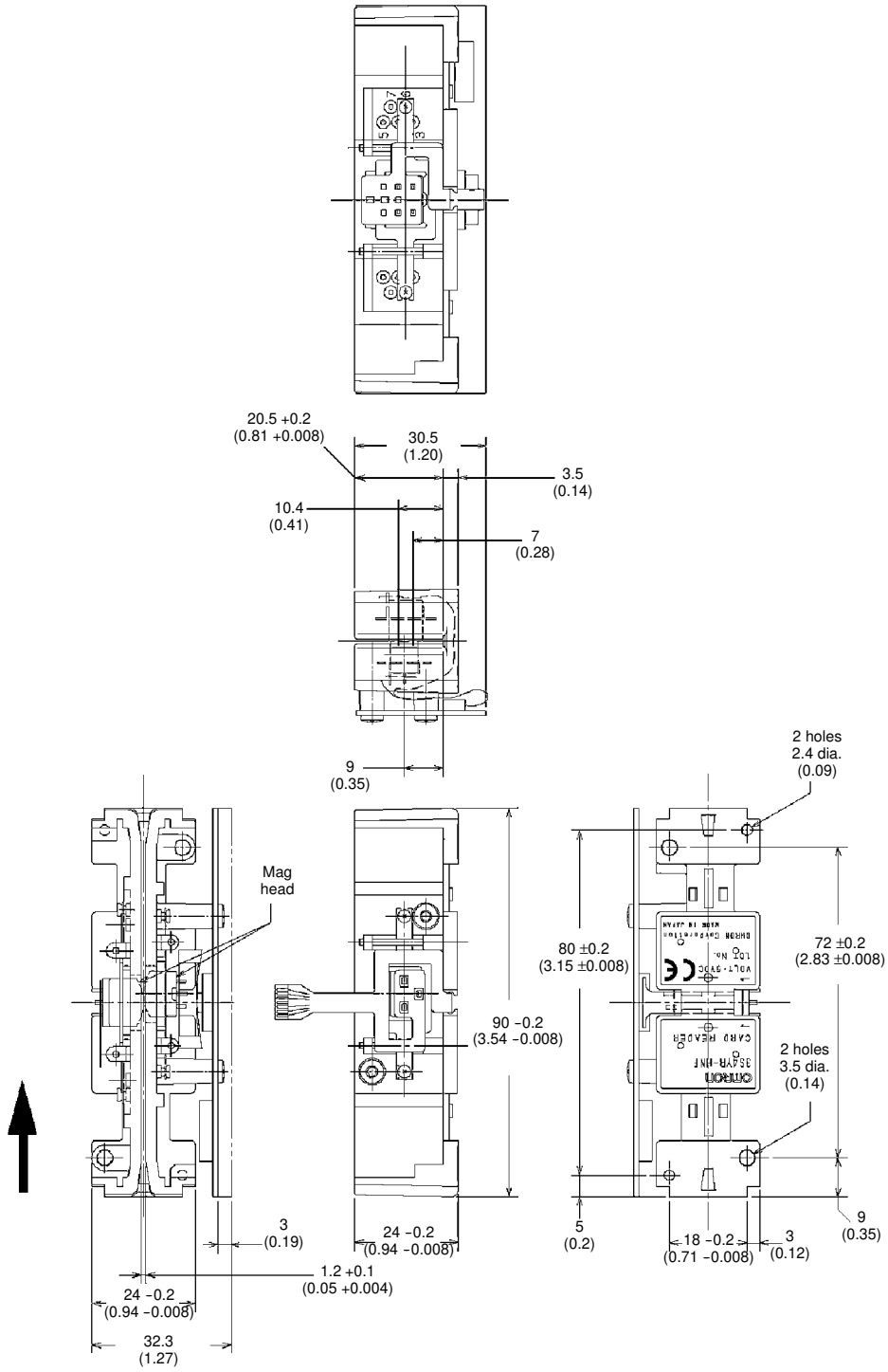
HNF-□



HNF-□-002


7°
22.5
(0.89)
2°
38.6
(1.52)
16.2
(0.64)
14°
4-R2
R2
34.5
(1.36)
3°
100
(3.94)
14°
3°
29.1
(1.15)
1500 ±10
(59.05 ±0.39)
200 ±10
(7.87 ±0.39)
100 ±10
(3.94 ±0.39)

HNF-□-012


20.5 +0.2
(0.81 +0.008)
30.5
(1.20)
3.5
(0.14)
10.4
(0.41)
7
(0.28)
9
(0.35)
2 holes
2.4 dia.
(0.09)
Mag
head
90 -0.2
(3.54 -0.008)
80 ±0.2
(3.15 ±0.008)
72 ±0.2
(2.83 ±0.008)
2 holes
3.5 dia.
(0.14)
3
(0.19)
24 -0.2
(0.94 -0.008)
1.2 +0.1
(0.05 +0.004)
24 -0.2
(0.94 -0.008)
32.3
(1.27)
5
(0.2)
18 -0.2
(0.71 -0.008)
3
(0.12)
9
(0.35)

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

OMRON®

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