

### 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 | <b>3S4YR-HNF1</b>      |
| R                                  | R | R | —      | —     | No         | RS 232C   | Bidirectional                  | Yes   | Yes   | Ivory | <b>3S4YR-HNF1-002</b>  |
| —                                  | R | — | —      | —     | No         | RS 232C   | Unidirectional                 | Yes   | Yes   | Ivory | <b>3S4YR-HNF4</b>      |
| —                                  | R | — | —      | —     | No         | RS 232C   | Bidirectional                  | Yes   | Yes   | Ivory | <b>3S4YR-HNF4-002</b>  |
| R                                  | R | — | —      | —     | No         | RS 232C   | Unidirectional                 | Yes   | Yes   | Ivory | <b>3S4YR-HNF6</b>      |
| R                                  | R | — | —      | —     | No         | RS 232C   | Bidirectional                  | Yes   | Yes   | Ivory | <b>3S4YR-HNF6-002</b>  |
| —                                  | R | R | —      | —     | No         | RS 232C   | Unidirectional                 | Yes   | Yes   | Ivory | <b>3S4YR-HNF7</b>      |
| —                                  | R | R | —      | —     | No         | RS 232C   | Bidirectional                  | Yes   | Yes   | Ivory | <b>3S4YR-HNF7-002</b>  |
| —                                  | — | — | —      | R     | No         | RS 232C   | Bidirectional                  | Yes   | Yes   | Ivory | <b>3S4YR-HNF2-002</b>  |
| —                                  | — | — | —      | R     | No         | RS 232C   | Bidirectional                  | No    | No    | Ivory | <b>3S4YR-HNF2-012</b>  |
| —                                  | R | — | —      | R     | No         | RS 232C   | Unidirectional                 | Yes   | Yes   | Ivory | <b>3S4YR-HNF24</b>     |
| —                                  | R | — | —      | R     | No         | RS 232C   | Bidirectional                  | Yes   | Yes   | Ivory | <b>3S4YR-HNF24-002</b> |
| —                                  | R | — | —      | R     | No         | RS 232C   | Bidirectional                  | No    | No    | Ivory | <b>3S4YR-HNF24-012</b> |
| R                                  | R | — | —      | R     | No         | RS 232C   | Bidirectional                  | Yes   | Yes   | Ivory | <b>3S4YR-HNF26-002</b> |
| R                                  | R | — | —      | R     | No         | RS 232C   | Bidirectional                  | No    | No    | Ivory | <b>3S4YR-HNF26-012</b> |

- 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 representative.  
 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<br>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 <sup>3</sup> or less |
|                        | Storage   | 20 to 90% RH, with no condensation and absolute air humidity of 40 g/m <sup>3</sup> or less |
| Vibration endurance    | 10 to 150 Hz, single vibration width of 0.15 mm or an acceleration of 19.6 m/s <sup>2</sup> (2 G) |   |
| Shock endurance        | 196 m/s <sup>2</sup> (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

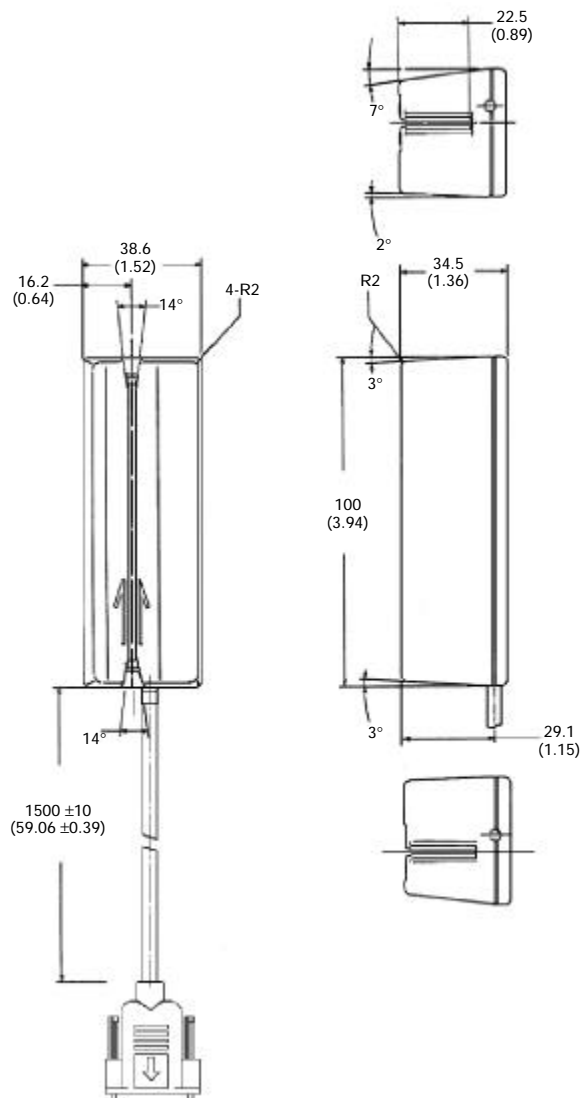
(View from PC side)

| 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                        | —            |

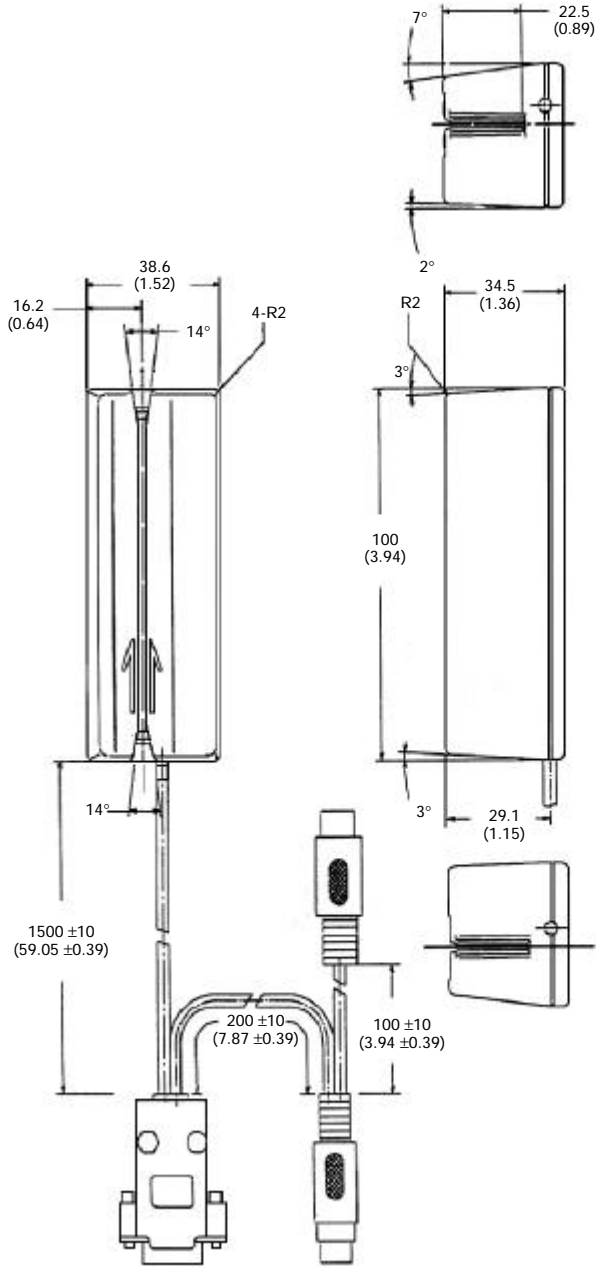
## Dimensions

Unit: mm (inch)

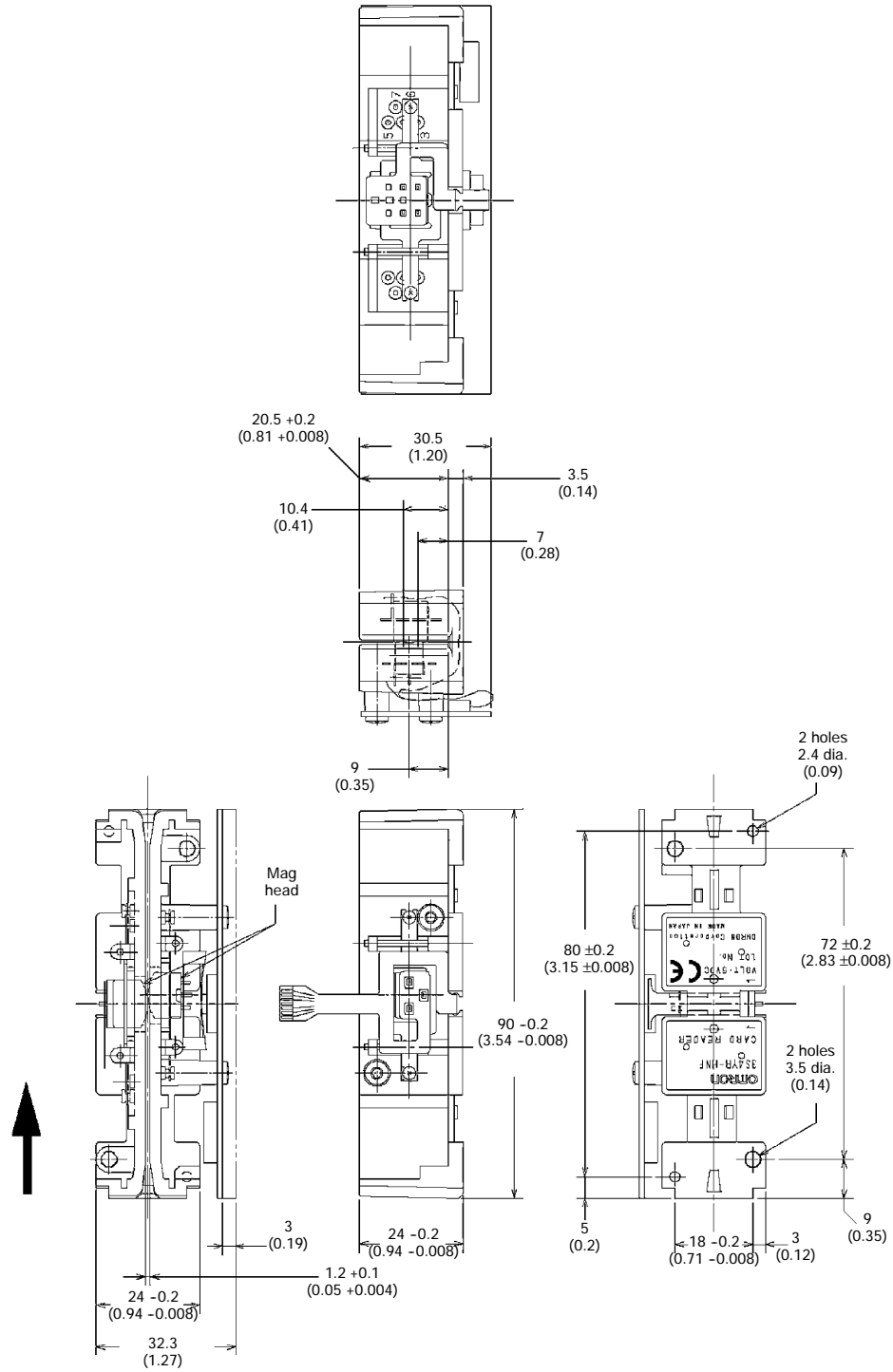
HNF-□



HNF-□-002



HNF-□-012



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

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