OMRON

Card Reader Product Catalogue
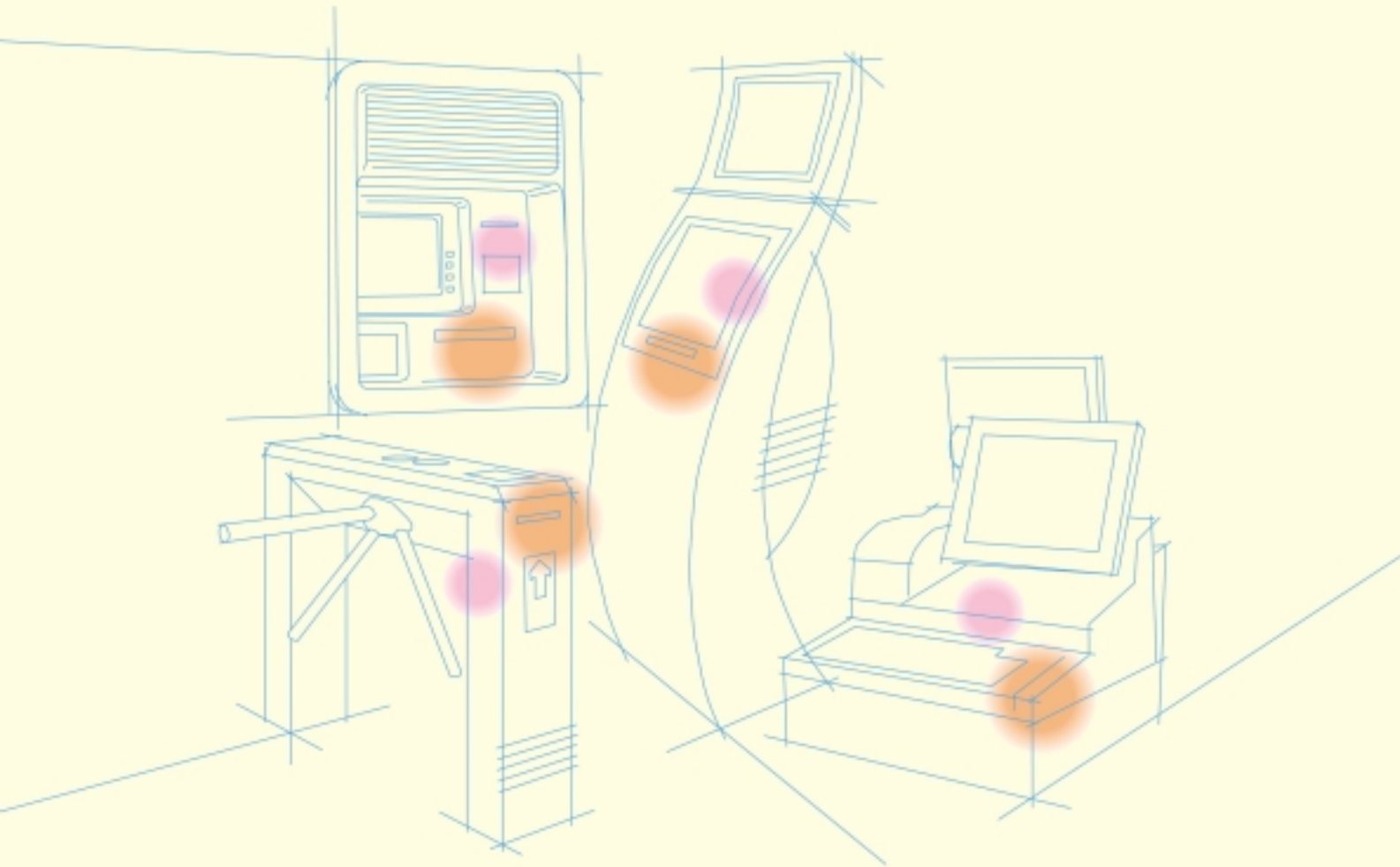
Magnetic Stripe Data Format

Card Face

Type	Track	bpi	bits/character	Number of Characters
ISO/JIS-I	TRACK 1 (IATA)	210	7	79 Alpha-Numeric
	TRACK 2 (ABA)	75	5	40 Numeric
	TRACK 3 (THRIFT)	210	5	107 Numeric
JIS-II	TRACK (NTT)	210	8	72 Alpha-Numeric

Card thickness : 0.76mm

Card Reverse
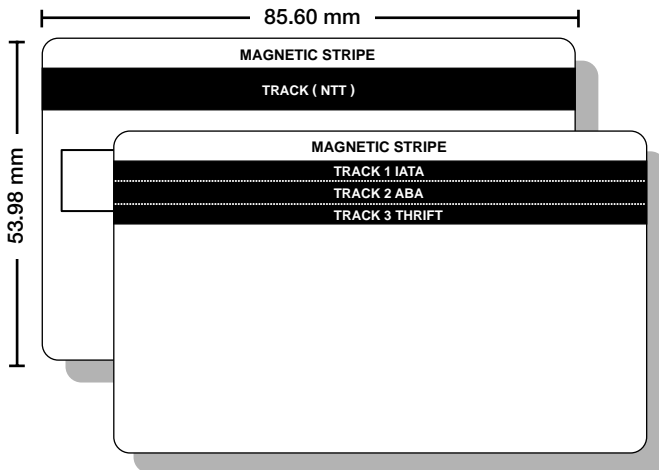
According to ISO7810, ISO7811, JIS X6301, X6302 Standards

Smart Card Pad Layout

Card Face

Pad Number	Terrminal Symbol	Abbreviation	Function
1	C1	VCC	Supply Voltage
2	C2	RST	Reset Signal
3	C3	CLK	Clock Signal
4	C4	RFU	Unused at Present Time
5	C5	GND	Ground
6	C6	VPP	Programmig Voltage
7	C7	I/O	Data Input/Output
8	C8	RFU	Unused at Present Time

Card thickness : 0.76mm
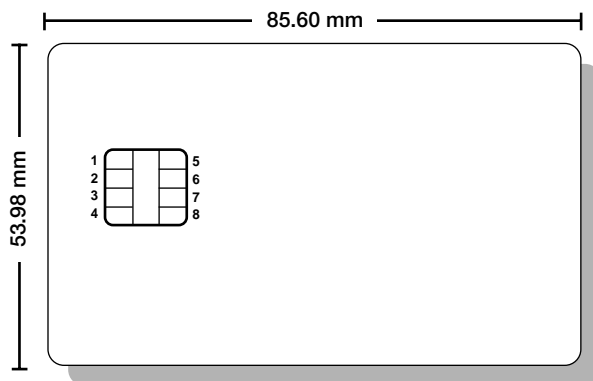
According to ISO7816 (middle position) Standards

Product Line-up

Manual Type (Swipe)

V3A Series
V3B Series
V3TU Series
3S4YR-HNFR Series
3S4YR-HNFR-002 Series

Manual Type (Insertion)

3S4YR-SGR Series
3S4YR-SBR-N Series

Motor Driven Type (with TTL interface)

3S4YR-MBR/MCR Series
3S4YR-MMW/MZW Series
3S4YR-MKW Series

Motor Driven Type (with RS232 interface)

V2AF Series
V2BF Series

Motor Driven Type (with RS232 interface, high-end)

3S4YR-MVF Series
3S4YR-MVS Series
3S6D Series

Manual Type (Swipe)

V3A Series

Low cost, compact, manual swipe reader

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

- Length is 90 mm.
- Cable Harness is optional.

V3B Series

- Length is 100 mm.
- Cable Harness is included.

V3TU Series

Compact magnetic swipe card reader with USB interface

- Connects to the PC via USB cable.
- Windows98/2000 device driver prepared.
- Software-selectable keyboard emulation or program modes
- Easy recognition with LED display

3S4YR-HNFR Series

Unidirectional RS232 interface magnetic card reader

- Connects to the PC RS232C port just like any other peripheral.
- No external power supply required.

- Protocol allows data to be transmitted immediately after a card has been swiped through the reader.

3S4YR-HNFR-002 Series

Bidirectional RS232 interface magnetic card reader

- Protocol is command-response type and controllable by the host.
- Intelligent card reader with automatic parity check function of magnetic data

Major Applications

- POS/PIN-PAD Terminals
- Access Control
- ID Card Checkers
- Cash Dispenser
- Information and Payment Kiosks
- Vending Machines

■ **Basic Specification**

Type Name	Magnetic Stripe				Cover	Cable	Interface	Color	Power	Dimensions (mm)	Note
	ISO 1	ISO 2	ISO 3	JIS Ⅱ						W x D x H	
V3A-1	R	R	R		—	—	TTL	Ivory White	5VDC+/-10%	90 x 24 x 24	
V3A-4		R			—	—	TTL	Ivory White	5VDC+/-10%	90 x 24 x 24	
V3A-4K		R			Yes	—	TTL	Ivory White	5VDC+/-10%	90 x 28 x 26.5	
V3A-6	R	R			—	—	TTL	Ivory White	5VDC+/-10%	90 x 24 x 24	
V3A-7		R	R		—	—	TTL	Ivory White	5VDC+/-10%	90 x 24 x 24	
V3A-F	R	R		R	—	—	TTL	Ivory White	5VDC+/-10%	90 x 24 x 24	
V3B-4		R			—	Yes	TTL	Black	5VDC+/-10%	100 x 32.5 x 32	
V3B-4K		R			Yes	Yes	TTL	Black	5VDC+/-10%	100 x 32.5 x 32	
3S4YR-HNFR1	R	R	R		Yes	Yes	RS232	Ivory white	RS232 port	38.6 x 100 x 35.2	
3S4YR-HNFR4		R			Yes	Yes	RS232	Ivory white	RS232 port	38.6 x 100 x 35.2	
3S4YR-HNFR1-002	R	R	R		Yes	Yes	RS232	Ivory white	Keyboard port	38.6 x 100 x 35.2	
3S4YR-HNFR4-002		R			Yes	Yes	RS232	Ivory white	Keyboard port	38.6 x 100 x 35.2	
V3TU-1K	R	R	R		Yes	Yes	USB1.0	White	USB port	58.3 x 120 x 39.5	with driver (CD ROM proviede separately)
V3TU-FK	R	R		R	Yes	Yes	USB1.0	White	USB port	58.3 x 120 x 39.5	

R : Read only   R /W : Read/Write
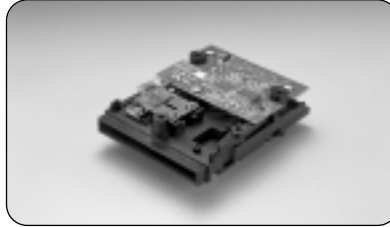
Manual Type (Insertion)

3S4YR-SGR Series

Compact size IC or magnetic card reader

- Compact, light, and robust
- Long life with landing IC contact
- Mechanical lock and solenoid controlled IC card release mechanism

3S4YR-SBR-N Series

Compact, highly reliable insert reader. Reads approx 60% of magnetic track.

- Effective stripe length of 46.6 mm max.
- Slim package and simple structure
- Lower current consumption with stand-by mode

Major Applications

- POS Terminals
- Hotel Lock System
- Access Control
- Game Machines
- Copy Machines
- Information and Payment Kiosks
- Vending Machines

■ Basic Specification

| Type Name	Magnetic Stripe				IC Card	Interface	Power	Dimensions (mm) W x D x H	Note
	ISO 1	ISO 2	ISO 3	JIS II					
3S4YR-SGR0J					R/W	TTL	5VDC+/-5%	76 x 126 x 25	IC contact signal only
3S4YR-SGR1N	R	R	R			TTL	5VDC+/-5%	76 x 126 x 30	
3S4YR-SBR3N-50	R					TTL	5VDC+/-10%	60 x 87 x 21.5	Counter Connector attached.
3S4YR-SBR4N-20		R				TTL	5VDC+/-10%	60 x 78 x 21.5	
3S4YR-SBR4N-50		R				TTL	5VDC+/-10%	60 x 87 x 21.5	Counter Connector attached.
3S4YR-SBR5N-20			R			TTL	5VDC+/-10%	60 x 78 x 21.5	

R : Read only   R /W : Read/Write

Motor Driven Type (with TTL interface)

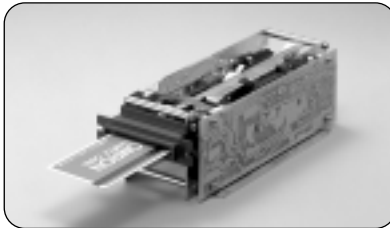## 3S4YR-MBR/MCR Series
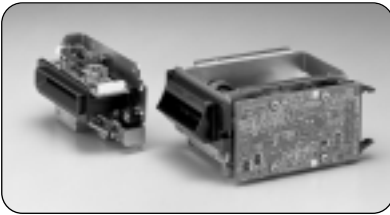
MBR : Magnetic card only
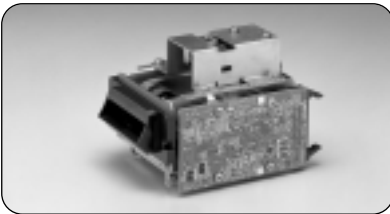
MCR : IC card only

Compact and short size motor-driven magnetic card reader or IC card reader/writer

- Compact size and light weight
- High speed card transport (400mm/s)
- Heavy duty shutter available to prevent insertion of foreign objects and improper cards
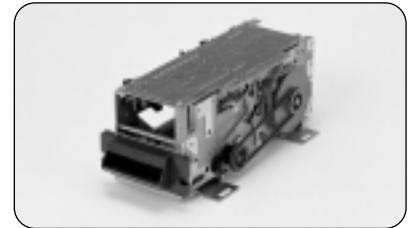
3S4YR-MMW/MZW Series

Compact size and light weight

- Installation in any terminal
- Simple shutter for dust protection equipped
- User-selectable bit recording density (75/105/150/210 bpi)
- Center stripe version available (MZW)

(Note : This series is applicable for closed system)

Major Applications

- ATM/Cash Dispenser
- Vending Machines
- Information and Payment Kiosks
- Parking System
- Access Control

3S4YR-MKW Series

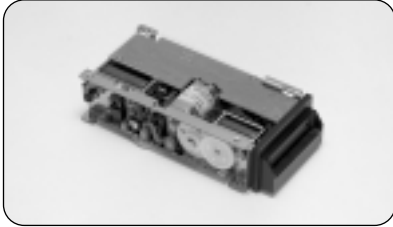

Versatile hybrid reader/writer handles both magnetic and IC cards

- High reliability and high performance, suitable for ATM/encoder application
- Strong card transportation ability with durable 4-wheel, belt drive with roller
- Accurate encoding with card guide mechanism

■ Basic Specification

Type Name	Magnetic Stripe				IC Card	Shutter	Interface	Power	Dimensions (mm) W x D x H	Note
	ISO 1	ISO 2	ISO 3	JIS II						
3S4YR-MMW1	R/W	R/W	R/W			Dust Protection	TTL	24VDC+/-10%	94 x 211 x 90	
3S4YR-MMW2-262				R/W		Dust Protection	TTL	24VDC+/-10%	90 x 211 x 65	
3S4YR-MMW4		R/W				Dust Protection	TTL	24VDC+/-10%	90 x 211 x 65	
3S4YR-MZW9T	Center Stripe (Non-ISO)			R/W		Dust Protection	TTL	24VDC+/-10%	90 x 211 x 65	Thin card
3S4YR-MBR1	R					Option	TTL	24VDC+/-10%	90 x 122 x 62	
3S4YR-MBR1D	R	R	R			Blade	TTL	24VDC+/-10%	90 x 147 x 62	
3S4YR-MCR0JCB					R/W	Option	TTL	24VDC+/-10%	90 x 122 x 95	
3S4YR-MCR0JDB					R/W	Blade	TTL	24VDC+/-10%	105 x 147 x 95	
3S4YR-MKW1PC-01	R/W	R/W	R/W		Option	Option	TTL	24VDC+/-10%	98 x 222 x 92	
3S4YR-MKW4PC-01		R/W			Option	Option	TTL	24VDC+/-10%	98 x 222 x 92	
3S4YR-MKW1PCH	R/W	R/W	R/W		Option	Option	TTL	24VDC+/-10%	106 x 247 x 92	Write HICO Card
3S4YR-MKWAPC-100	R/W	R/W	R/W	R/W			TTL	24VDC+/-10%	98 x 200 x 85.5	Encoder Spec.

R : Read only   R /W : Read/Write

Motor Driven Type (with RS232 interface)

V2AF Series

V2BF Series

Major Applications

- Information and Payment Kiosks
- Electronic Purse
- Vending Machines
- Royalty Card Terminal
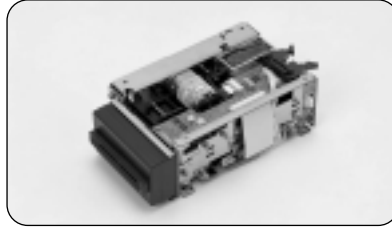
### Compact hybrid reader handles both magnetic and IC cards

- Reads magnetic stripe, and Reads/writes both smart and memory cards
  (V2AF : EMV3.1.1 Approved, V2BF : EMV4.0 to be approved)
- Single-port RS232C interface with user friendly command protocol for easy integrationa
- Downloadable firmware specification updates, firmware updates, and new smart cards support
  without exchanging hardware

- Highly compact motorized reader
- Pin shutter prevents another card insertion.

- Highly compact motorized reader with rear ejection function and mechanical shutter

■ Basic Specification

Type Name	Magnetic Stripe				IC Card	Memory Card (SLE4418/28/32/42)	Shutter	Interface	Power	Dimensions (mm) W x D x H	Note
	ISO 1	ISO 2	ISO 3	JIS Ⅱ							
V2AF-01JP	R	R	R		R/W	R/W	Pin	RS232	12VDC+/-10%	70 x 145 x 36	
V2AF-02				R				RS232	12VDC+/-10%	70 x 145 x 36	
V2AF-04JP		R			R/W	R/W	Pin	RS232	12VDC+/-10%	70 x 145 x 36	
V2AF-0F	R	R		R				RS232	12VDC+/-10%	70 x 145 x 36	
V2AF-0FJP	R	R		R	R/W	R/W	Pin	RS232	12VDC+/-10%	70 x 145 x 36	
V2BF-01JS	R	R	R		R/W	R/W	Mechanical	RS232	12VDC+/-10%	89 x 143 x 48	
V2BF-04JS		R			R/W	R/W	Mechanical	RS232	12VDC+/-10%	89 x 143 x 48	
V2BF-0FJS	R	R		R	R/W	R/W	Mechanical	RS232	12VDC+/-10%	89 x 143 x 48	

R : Read only   R /W : Read/Write

Motor Driven Type (with RS232 interface, high-end)
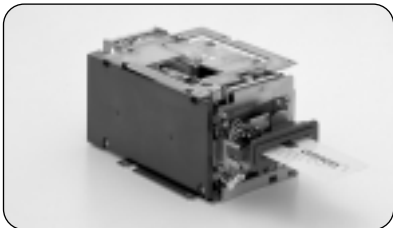
3S4YR-MVF Series

3S4YR-MVS Series

3S6D Series

Reliably handles read/write functions for both magnetic and IC cards

- Strong transportation ability with roller transportation method
- User-friendly interface with multifunction of mag/IC card by single port (EMV3.1.1 Approved)
- Downloadable firmware specification updates, firmware updates, and new smart cards support without
  exchanging hardware

- Heavy duty shutter available to prevent insertion of foreign objects and improper cards

- Built-in 100 to 240VAC power supply, 4 LEDs indicate various power and software-controlled status conditions

Card stacker and feeder based on MVF

- Available for various application to use multiple cards
  (Pool unit can handle 2 cards)
- Single-port RS232 interface for both card reader and other units
- Cartridge method with cassette (100 pcs.)

Major Applications

- ATM/Cash Dispenser
- Information and Payment Kiosks
- Electronic Purse
- Vending Machines
- Hotel System

■ Basic Specification

Type Name	Magnetic Stripe				IC Card	Shutter	Interface	Power	Dimensions (mm) W x D x H	Note
	ISO 1	ISO 2	ISO 3	JIS Ⅱ						
3S4YR-MVFW1JD-051	R/W	R/W	R/W		R/W	Blade	RS232	24VDC+/-10%	124 x 210 x 90	
3S4YR-MVFW1JDH-074	R/W	R/W	R/W		R/W	Blade	RS232	24VDC+/-10%	124 x 210 x 90	Write HICO card
3S4YR-MVFW1JD-081	R/W	R/W	R/W		R/W	Blade	RS232	24VDC+/-10%	124 x 210 x 90	1 SAM board equipped.
3S4YR-MVFWAJD-073	R/W	R/W	R/W	R/W	R/W	Blade	RS232	24VDC+/-10%	124 x 210 x 90	
3S4YR-MVFWAJC-N73	R/W	R/W	R/W	R/W	R/W	—	RS232	24VDC+/-10%	124 x 210 x 90	
3S4YR-MVS1JD	R/W	R/W	R/W		R/W	Blade	RS232	100 to 240VAC	130 x 271 x 154	
3S4YR-MVSAJD-002	R/W	R/W	R/W	R/W	R/W	Blade	RS232	100 to 240VAC	130 x 271 x 154	
3S6D-VPS100	R/W	R/W	R/W		R/W	Blade	RS232	24VDC+/-10%	126 x 434 x 260	* Reference spec. data

R : Read only   R /W : Read/Write

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