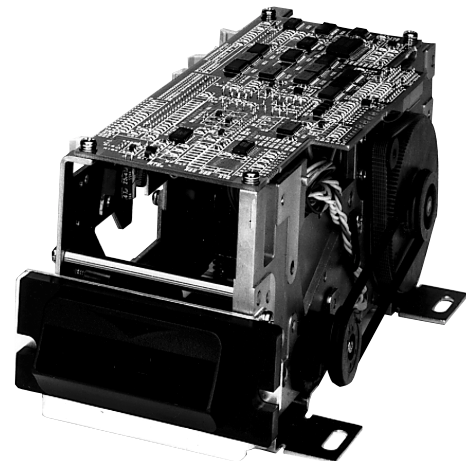


Versatile Hybrid Reader/Writer Handles Both Magnetic and IC Cards

- Durable 4-wheel, 2-belt drive with roller accommodates discrepancies in card thickness to accept warped or bent cards
- Metal blade shutter prevents tampering
- Compact size and light weight allow easy installation in any terminal
- Two integrated chip station positions available
- Adjustable to card thicknesses of 0.20 mm, 0.40 mm, and 0.76 mm (PET, paper, or PVC cards)
- HiCo write capability available
- Watermark capability available



Ordering Information

Magnetic Tracks Supported (R, R/W)					IC Contact	Interface	Shutter	Cover	Cable	Color	Part Number
1	2	3	Center	JIS II							
R/W	R/W	R/W	—	—	ISO 7816	TTL	Yes	No	No	Black	3S4YR-MKW1JD
R/W	R/W	R/W	—	—	ISO 7816/CP8	TTL	Yes	No	No	Black	3S4YR-MKW1XD
R/W	R/W	R/W	—	—	Option	TTL	Option	No	No	Black	3S4YR-MKW1PC
R/W	R/W	R/W	—	—	Option	TTL	Option	No	No	Black	3S4YR-MKW1PCH
R/W	R/W	R/W	—	—	Option	TTL	Yes	No	No	Black	3S4YR-MKW1PD
R/W	—	—	—	—	Option	TTL	Option	No	No	Black	3S4YR-MKW3PC
—	R/W	—	—	—	Option	TTL	Option	No	No	Black	3S4YR-MKW4PC
—	R/W	—	—	—	Option	TTL	Option	No	No	Black	3S4YR-MKW4PCH
—	R/W	—	—	—	Option	TTL	Yes	No	No	Black	3S4YR-MKW4PD
—	—	R/W	—	—	Option	TTL	Option	No	No	Black	3S4YR-MKW5PC
R/W	R/W	—	—	—	Option	TTL	Option	No	No	Black	3S4YR-MKW6PC
—	R/W	R/W	—	—	Option	TTL	Option	No	No	Black	3S4YR-MKW7PC

Note: Only the MKW1PCH and MKW4PCH are capable of writing HiCo cards. All models can read HiCo cards.

■ **TYPICAL APPLICATIONS**

- Cash Dispensers
- Automatic Teller Machines (ATM)
- POS Terminals
- Credit Card Checkers
- ID Card Checkers
- Electronic Lock Systems
- Medical Patient Systems
- Health Control Systems

■ **ACCESSORIES**

Description	Part Number
IC Contact, chip on the front, lower position	IC CONTACT J (See note 1)
IC Contact, chip on the front, upper and lower positions	IC CONTACT X (See note 1)
Shutter for MKW1PC, MKW1PCH, MKFW1PC	SHUTTER MKD1
Shutter for MKW3PC	SHUTTER MK3
Shutter for MKW4PC, MKW4PCH	SHUTTER MK4
Shutter for MKW5PC	SHUTTER MK5
Shutter for MKW6PC	SHUTTER MK6
Shutter for MKW7PC	SHUTTER MK7
MM Sensor Holder (MM sensor itself must be purchased from the manufacturer.)	MM HOLDER
Watermark Reader Head. Cannot be used to write track 1.	WATERMARK HEAD (See note 2)
Watermark Circuit Board. Cannot be used to write track 1.	WATERMARK PCB (See note 2)

Note 1: Consult your Omron sales representative for IC contact accessories. Special configurations can be supplied.

2: Watermark Reader Head and Watermark Circuit Board must be ordered together.

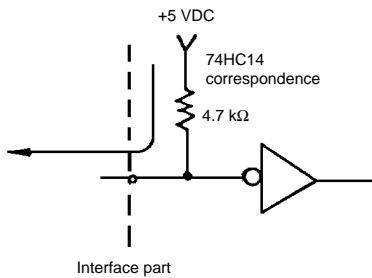
Specifications

Part number	3S4YR-MKW	
Recommended card type	Magnetic card	ISO 7810-7813
	IC card	ISO 7816/1, 2
Recording method	FM decoding (F2F)	
Card feeding speed	20 cm/sec ± 10% (7.87 in/sec)	
Motor type	DC motor	
Service life (See note)	1,200,000 passes min.	
Operating power supply	Amplifier	24 VDC ± 10%
	Motor	24 VDC ± 10%
	Control logic	5 VDC ± 5%
Current consumption	Amplifier	260 mA max.
	Motor	1.7 A max.
	Control logic	330 mA max.
Mounting location	Anywhere not directly subject to water or rain	
Mounting orientation	Stripe top or stripe bottom	
Ambient temperature	Operation	-5° to 55°C (23° to 131°F)
	Storage	-25° to 70°C (-13° to 158°F)
Ambient humidity	Operation	45% to 85% RH without condensation
	Storage	30% to 90% 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 shutter	247L x 106W x 92H mm (9.72L x 4.17W x 3.62H in)
	Without shutter	222L x 98W x 92H mm (8.74L x 3.86W x 3.62H in)
Weight	Approx. 1.9 kg (4.2 lbs) when fully equipped	

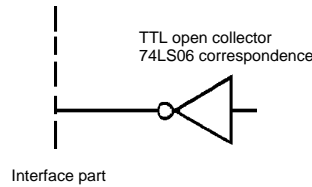
Note: One pass denotes one round trip.

Engineering Data

INPUT CIRCUIT DIAGRAM



OUTPUT CIRCUIT DIAGRAM



I/O INFORMATION

3S4YR-MKW Connector of Magnetic Card (CN1 Signal)

3M 3433-5302JL. Mate: 3M 3425-6550EL.

Pin #	Signal	Input/Output	Pin #	Signal	Input/Output
1	+5 VDC	—	26	$\overline{S1}$	Output
2	+5 VDC	—	27	$\overline{S2}$	Output
3	0 V	—	28	$\overline{S3}$	Output
4	0 V	—	29	$\overline{S4}$	Output
5	P24V	—	30	\overline{STW}	Output
6	P24V	—	31	$\overline{RCP1}$	Output
7	P0V	—	32	$\overline{RDP1}$	Output
8	P0V	—	33	$\overline{RCP2}$	Output
9	\overline{MFW}	Input	34	$\overline{RDP2}$	Output
10	\overline{MRV}	Input	35	$\overline{RCP3}$	Output
11	$\overline{SOL1}$	Input	36	$\overline{RDP3}$	Output
12	—	—	37	$\overline{RCP4}$	Output
13	—	—	38	$\overline{RDP4}$	Output
14	—	—	39	$\overline{WCP1}$	Output
15	—	—	40	$\overline{WCP2}$	Output
16	—	—	41	$\overline{WDT1}$	Input
17	\overline{WEN}	Input	42	$\overline{CNT1}$	Input
18	—	—	43	$\overline{WDT2}$	Input
19	\overline{RCPS}	—	44	$\overline{CNT2}$	Input
20	$\overline{RDP5}$	—	45	$\overline{WDT3}$	Input
21	$\overline{SHD1}$	Output	46	$\overline{CNT3}$	Input
22	\overline{WDV}	Output	47	$\overline{WDT4}$	Input
23	\overline{SHE}	Output	48	$\overline{CNT4}$	Input
24	\overline{WID}	Output	49	+24 VDC	—
25	$\overline{S0}$	Output	50	+24 VDC	—

3S4YR-MKW Connector of IC Card (CN2 Signal)

3M 3408-5302JL. Mate: 3M 3452-6516EL.

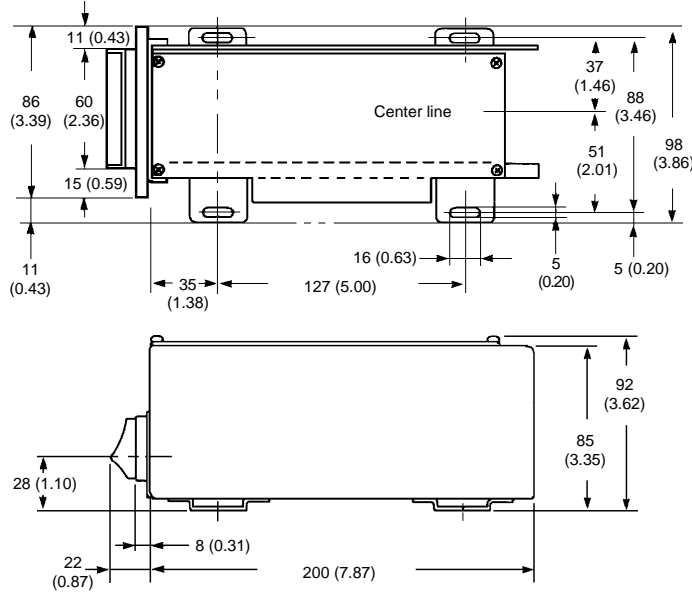
Pin #	Signal	Input/Output	Pin #	Signal	Input/Output
1	IVCC	◆	9	IRS1	◆
2	IRST	◆	10	IRS2	◆
3	ICIO	◆	11	\overline{IECO}	Input
4	IGND	◆	12	—	—
5	—	—	13	\overline{IMSL}	Input
6	ICKL	◆	14	\overline{ISOL}	Input
7	IVCC	◆	15	+5 VDC	—
8	IVPP	◆	16	0 V	—

◆ = Direct IC Contact

Dimensions

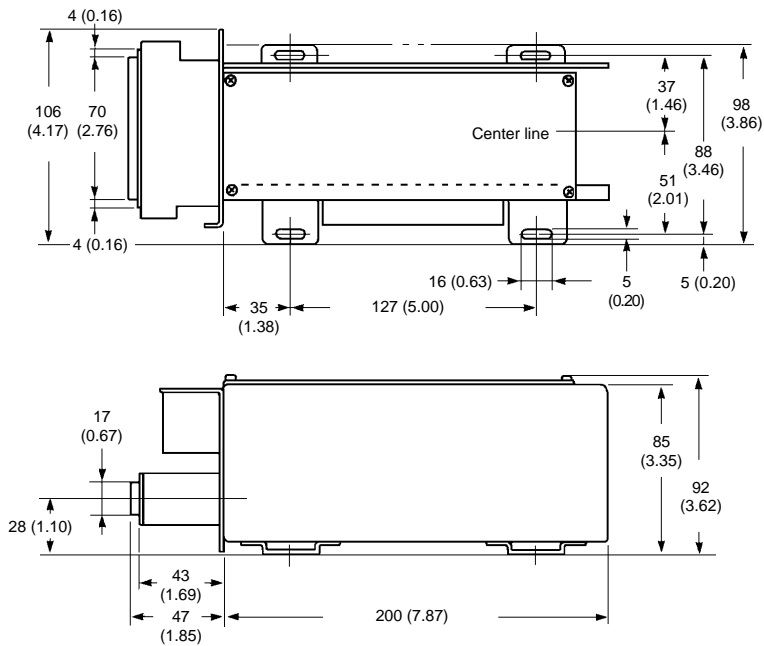
Unit: mm (inch)

■ 3S4YR-MKW WITHOUT SHUTTER



Stripe down shown.
Can be mounted with
stripe up.

■ 3S4YR-MKW WITH SHUTTER



Stripe down shown.
Can be mounted with
stripe up.

Note: Unless otherwise specified, tolerance is ± 0.3 .