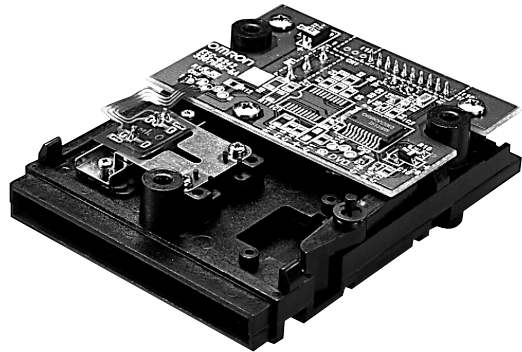


Compact, Highly Reliable Insert Reader  
Reads 62% of Magnetic Track

- Effective strip length of 46.6 mm max.
- Microswitches incorporated for card detection
- Wide operating temperature range
- Low power CMOS technology
- Current save mode
- Housing compatible with SCR type for easy conversion to IC cards
- TTL-compatible interface (clock & data)



### Ordering Information

Magnetic Tracks Supported (R, R/W)											Part Number
1	2	3	Center	JIS II	IC Contact	Interface	Cable	Cover	Color		
R	—	—	—	—	No	TTL	No	No	Black	<b>3S4YR-SBR3N-50</b>	
—	R	—	—	—	No	TTL	No	No	Black	<b>3S4YR-SBR4N-50</b>	
—	—	R	—	—	No	TTL	No	No	Black	<b>3S4YR-SBR5N-50</b>	

Note: Consult the *IC Card Basics* section of this catalog for IC contact descriptions.

### TYPICAL APPLICATIONS

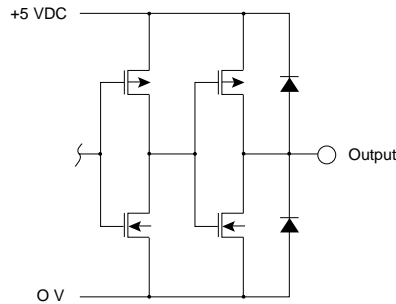
- Access Control
- Remote Terminals for Computers
- Electronic Locks
- ID Card Checkers
- Time and Attendance
- Telephones
- Vending
- Gaming Machines

### Specifications

Part number	3S4YR-SBRN	
Recommended card type	Magnetic head	ISO 7810, 7811/1-5, 7812, 7813. Please inquire if using high-coercivity cards.
Card feeding speed	10 to 100 cm/sec (4 to 39 in/sec)	
Service life	Magnetic head	300,000 passes (one round trip)
	PCB	50,000 hours
Operating power supply	5 VDC $\pm$ 10%	
Current consumption	Operation	5 mA max., 3 mA mean
	Standby	1.5 mA max., 1 mA mean
Mounting location	Indoors away from wind, rain and 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 without condensation
Vibration	10 to 55 Hz, 2 mm double amplitude, for 30 minutes in X, Y, and Z directions.	
Shock	Storage	300 m/sec <sup>2</sup> (30 G) three times in each of X, Y, and Z directions for a total of 18 times.
Dimensions	78L x 60W x 21.5H mm (3.07L x 2.36W x 0.85H in)	
Weight	50 g (1.8 oz)	

# 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

### 3S4YR-SBR4N-50

10-pin JAE single-pin header part number IL-10P-S3FP2-1.

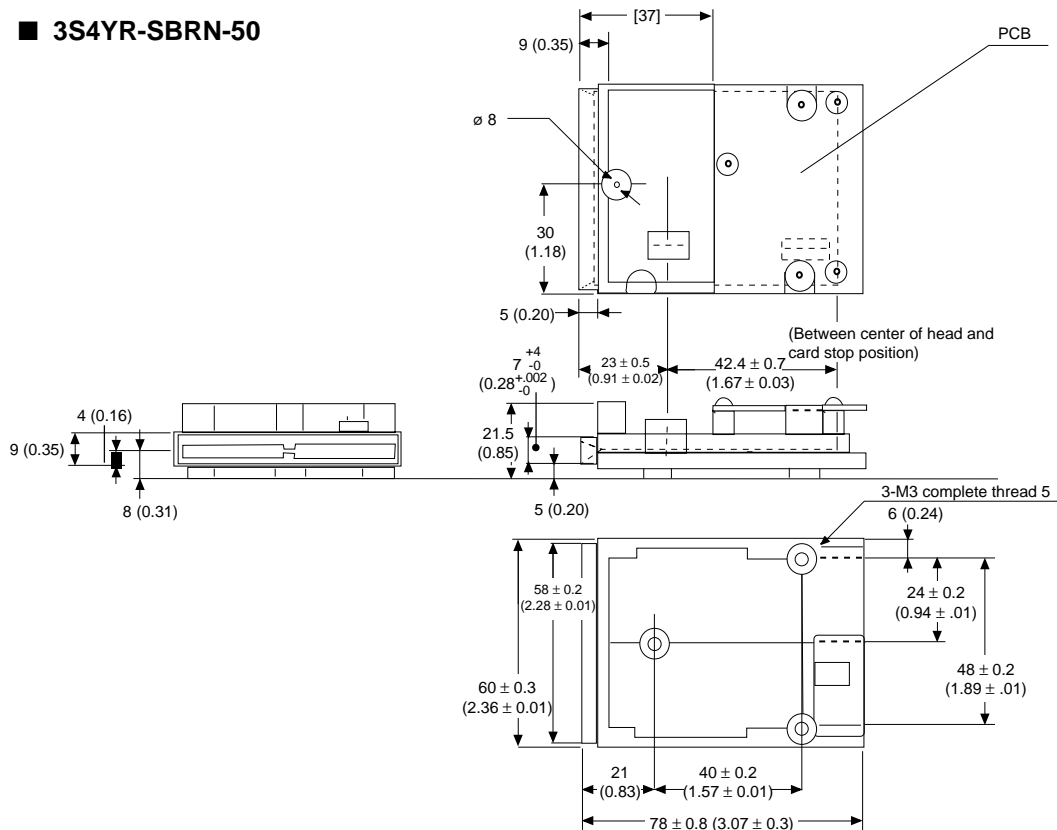
Connector JAE part number IL-10S-S3L-N.

Pin #	Signal	Input/Output	Description
1	NC	—	Not connected
2	$\overline{\text{RDP}}$	Output	Read data
3	$\overline{\text{RCP}}$	Output	Read clock
4	$\overline{\text{CLS}}$	Output	Card load
5	SW1-COM	Output	Card detection for rear
6	SW1-NO	Input	Card detection for rear
7	SW2-COM	Output	Card detection for front
8	SW2-NO	Input	Card detection for front
9	5 VDC	—	$V_{CC}$
10	0 V	—	Ground

## Dimensions

Unit: mm (inch)

### 3S4YR-SBRN-50



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

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