OMRON®

Insert Magnetic/IC Card Reader | 3S4YR-SGR

Compact Insert Reader with Magnetic and IC Card Interface

- Ideally suited for applications using hybrid magnetic stripe and IC cards
- Landing-style IC contact supports both ISO and CP8 chip contact locations
- Red and green LEDs for operation status indication
- Solenoid-controlled IC card release mechanism
- Configurations available to read on card push or pull
- TTL-compatible interface

Ordering Information

Magnetic Tracks Supported (R, R/W)					IC Contact	Interface	Mag Read Direction	Solenoid	Cover	Cable	Color	Part Number
1	2	3	Center	JIS II								
—	—	—	—	—	ISO 7816	TTL	—	Yes	No	No	Black	**3S4YR-SGR0J**
R	R	R	—	—	ISO 7816	TTL	Push	Yes	No	No	Black	**3S4YR-SGR1J**
R	R	R	—	—	ISO 7816, CP8	TTL	Push	Yes	No	No	Black	**3S4YR-SGR1X**
R	R	R	—	—	—	TTL	Push/pull	No	No	No	Black	**3S4YR-SGR1N**
—	R	—	—	—	ISO 7816	TTL	Push	Yes	No	No	Black	**3S4YR-SGR4J**
—	R	—	—	—	—	TTL	Push/pull	No	No	No	Black	**3S4YR-SGR4N**
R	R	—	—	—	ISO 7816	TTL	Push	Yes	No	No	Black	**3S4YR-SGR6J**
R	R	—	—	—	—	TTL	Push/pull	No	No	No	Black	**3S4YR-SGR6N**
—	R	R	—	—	ISO 7816	TTL	Push	Yes	No	No	Black	**3S4YR-SGR7J**
—	R	R	—	—	—	TTL	Push/pull	No	No	No	Black	**3S4YR-SGR7N**

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

■ TYPICAL APPLICATIONS

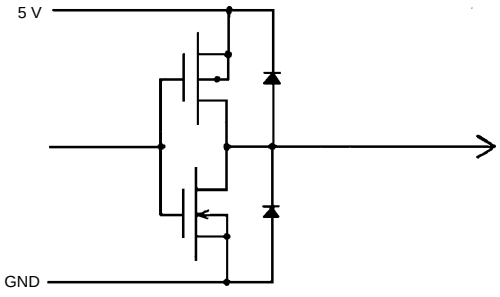
- Remote Terminals for Computers
- Credit Card Readers
- ID Card Checkers
- Electronic Locks
- Automatic Gate Machines
- POS Terminals
- ATMs
- Gas Pump Control
- Vending Machines
- Pre-Paid Systems
- Kiosks

Specifications

Part number		3S4YR-SGR (except 0J)	3S4YR-SGR0J
Recommended card type	Magnetic card	ISO 7810 - 7813	
	IC card	ISO 7816/1-2	
Service life	Mag head	300,000 passes (preliminary)	
	IC contact	500,000 passes (preliminary)	
Operating power supply		5 VDC ± 5%	
Card feed speed		100 to 800 mm/sec.	
Current consumption		2.5 A max. (during solenoid release), 100 mA typ.	
Mounting location		Indoors — away from wind, rain, sunlight, and dust	
Ambient temperature		0° to 45°C (32° to 113°F)	
Ambient humidity	Operation	30% to 85% RH without condensation and frost formation	
Vibration		10-150 Hz, single vibration width of 0.15 mm or on acceleration of 2 G (19.6 m/s^2), whichever is smaller	
Shock		20 G (196 m/s^2) in X, Y, and Z directions, respectively	
Dimensions		126L x 76W x 30H mm (4.96L x 2.99W x 1.18H in)	126L x 76W x 25H mm (4.96L x 2.99W x 0.98H in)
Weight		Approx. 100 g (3.5 oz)	

Engineering Data

■ I/O INFORMATION



Output signal levels

V_{OL} = 0.4 V at 5 mA

V_{OH} = 2.8 at 0.1 mA

■ I/O INFORMATION

3S4YR-SGR

7626-5002SC (3M:26 pin), MIL-C-83503A conformed.

Pin #	Signal	Input/Output	Description
1	$\overline{\text{RDT1}}$	Output	Read data, track 1
2	$\overline{\text{RCL1}}$	Output	Read clock, track 1
3	$\overline{\text{RDT2}}$	Output	Read data, track 2
4	$\overline{\text{RCL2}}$	Output	Read clock, track 2
5	$\overline{\text{RDT3}}$	Output	Read data, track 3
6	$\overline{\text{RCL3}}$	Output	Read clock, track 3
7	$\overline{\text{P1}}$	Output	Card detection
8	$\overline{\text{P2}}$	Output	Card insertion completed
9	$\overline{\text{SLN}}$	Input	Solenoid ON
10	$\overline{\text{LED 1}}$	Input	LED1 (Red) ON
11	$\overline{\text{LED 2}}$	Input	LED 2 (Green) ON
12	$\overline{\text{CLS}}$	Output	Magnetic card loading
13	IGND	◆	IC contact C5

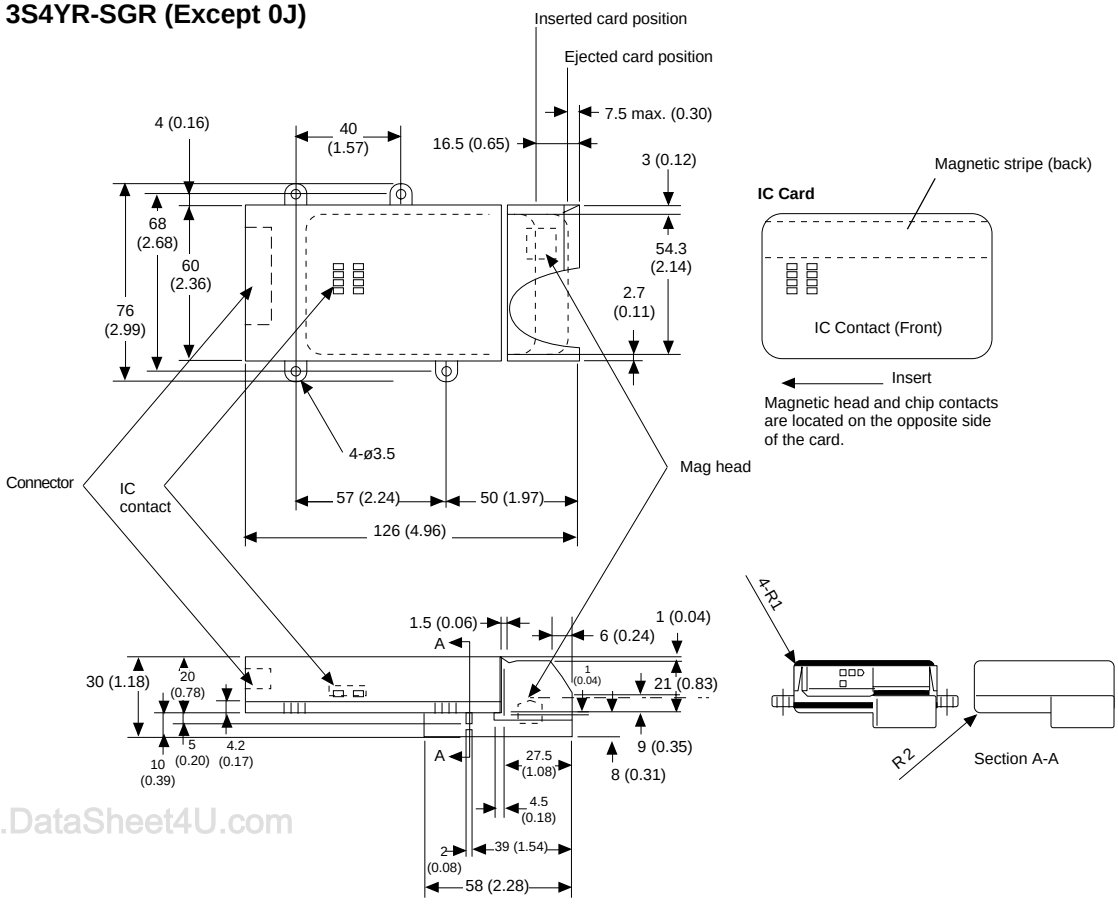
Pin #	Signal	Input/Output	Description
14	IVCC	◆	IC contact C1
15	IVPP	◆	IC contact C6
16	IRST	◆	IC contact C2
17	IDATA	◆	IC contact C7
18	ICLK	◆	IC contact C3
19	IRFV2	◆	IC contact C8
20	IRFV1	◆	IC contact C4
21	5VS	—	Power for solenoid
22	5VS	—	Power for solenoid
23	5V	—	Power for logic
24	0V	—	Ground
25	0V	—	Ground
26	0V	—	Ground

◆ = Direct IC Contact

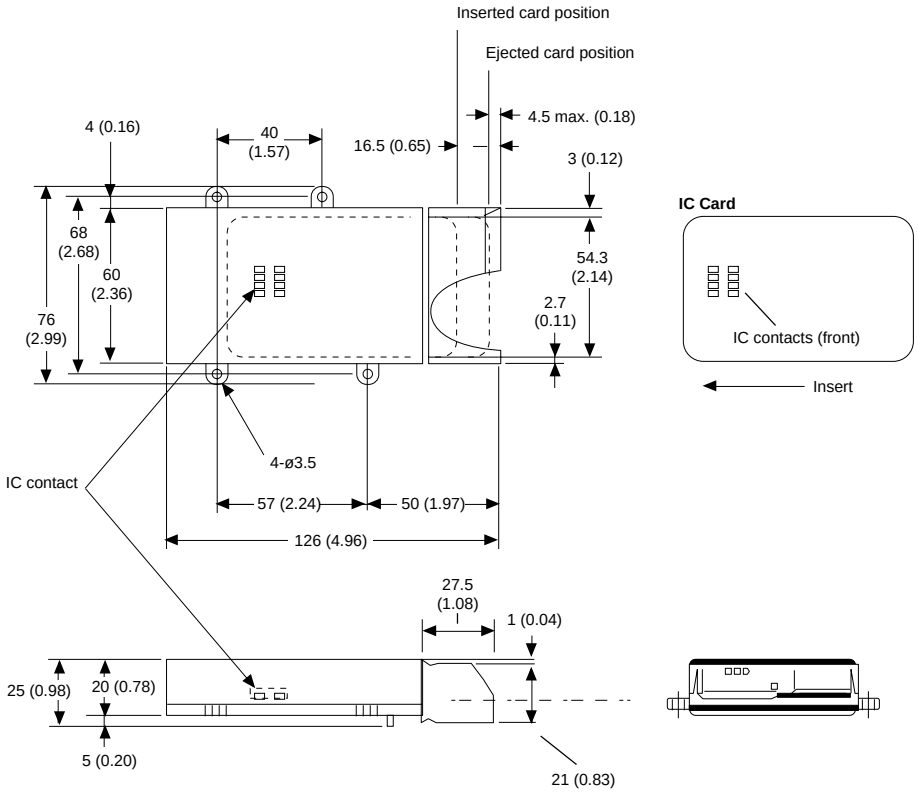
Dimensions

Unit: mm (inch)

■ 3S4YR-SGR (Except 0J)



■ 3S4YR-SGR0J



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

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