

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 (such as EMV)
- Supports both ISO and CP8 chip contact locations
- Red and green LEDs for operation indicator
- Solenoid-controlled IC card locking mechanism
- Configurations available to read on card push or pull
- RS-232C-interface with embedded EMV support, available early 1997



Ordering Information

Magnetic Tracks Supported (R, R/W)					IC Contact	Mag Read Direction	Solenoid	Interface	Color	Part Number
1	2	3	Center	JIS II						
—	—	—	—	—	J-type (ISO)	—	Yes	TTL	Black	3S4YR-SGR0J
—	—	—	—	—	X-type (ISO+CP8)	—	Yes	TTL	Black	3S4YR-SGR0X
R	R	R	—	—	J-type (ISO)	Push	Yes	TTL	Black	3S4YR-SGR1J
R	R	R	—	—	X-type (ISO+CP8)	Push	Yes	TTL	Black	3S4YR-SGR1X
R	R	R	—	—	—	Push/pull	No	TTL	Black	3S4YR-SGR1N
R	—	—	—	—	J type (ISO)	Push	Yes	TTL	Black	3S4YR-SGR3J
R	—	—	—	—	X type (ISO+CP8)	Push	Yes	TTL	Black	3S4YR-SGR3X
R	—	—	—	—	—	Push/pull	No	TTL	Black	3S4YR-SGR3N
—	R	—	—	—	J type (ISO)	Push	Yes	TTL	Black	3S4YR-SGR4J
—	R	—	—	—	X type (ISO+CP8)	Push	Yes	TTL	Black	3S4YR-SGR4X
—	R	—	—	—	—	Push/pull	No	TTL	Black	3S4YR-SGR4N
—	—	R	—	—	J type (ISO)	Push	Yes	TTL	Black	3S4YR-SGR5J
—	—	R	—	—	X type (ISO+CP8)	Push	Yes	TTL	Black	3S4YR-SGR5X
—	—	R	—	—	—	Push/pull	No	TTL	Black	3S4YR-SGR5N
R	R	—	—	—	J type (ISO)	Push	Yes	TTL	Black	3S4YR-SGR6J
R	R	—	—	—	X type (ISO+CP8)	Push	Yes	TTL	Black	3S4YR-SGR6X
R	R	—	—	—	—	Push/pull	No	TTL	Black	3S4YR-SGR6N
—	R	R	—	—	J type (ISO)	Push	Yes	TTL	Black	3S4YR-SGR7J
—	R	R	—	—	X type (ISO+CP8)	Push	Yes	TTL	Black	3S4YR-SGR7X
—	R	R	—	—	—	Push/pull	No	TTL	Black	3S4YR-SGR7N

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

■ TYPICAL APPLICATIONS

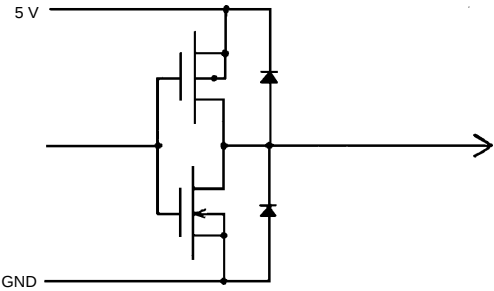
- Remote Terminals for Computers
- Credit Card Readers
- ID Card Checkers
- Electronic Locks
- Automatic Gate Machines
- POS Terminals
- ATMs
- Gas Pump Control
- Vending Machines
- Pre-paid Systems
- Kiosks

Specifications

Part number		3S4YR-SGR□N	3S4YR-SGR□J, X
Recommended card type		ISO 7810 - 7813, 7816/1-2	
Service life	Mag head	300,000 passes (preliminary)	
	IC contact	500,000 passes (preliminary)	
Operating power supply		5 VDC ± 5%	
Current consumption		2.5 A max.	
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/s²), whichever is smaller	
Shock		20 G (196 m/s²) in X, Y, and Z directions, respectively	
Dimensions		126L x 76W x 25H (4.96L x 2.99W x 0.98H in)	126L x 76W x 30H mm (4.96L x 2.99W x 1.18H in)
Weight		Approx. 100 g (3.5 oz)	

Engineering Data

■ I/O INFORMATION



Output signal levels

$V_{OL} = 0.4 \text{ V at } 5 \text{ mA}$
 $V_{OH} = 2.8 \text{ at } 0.1 \text{ mA}$

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

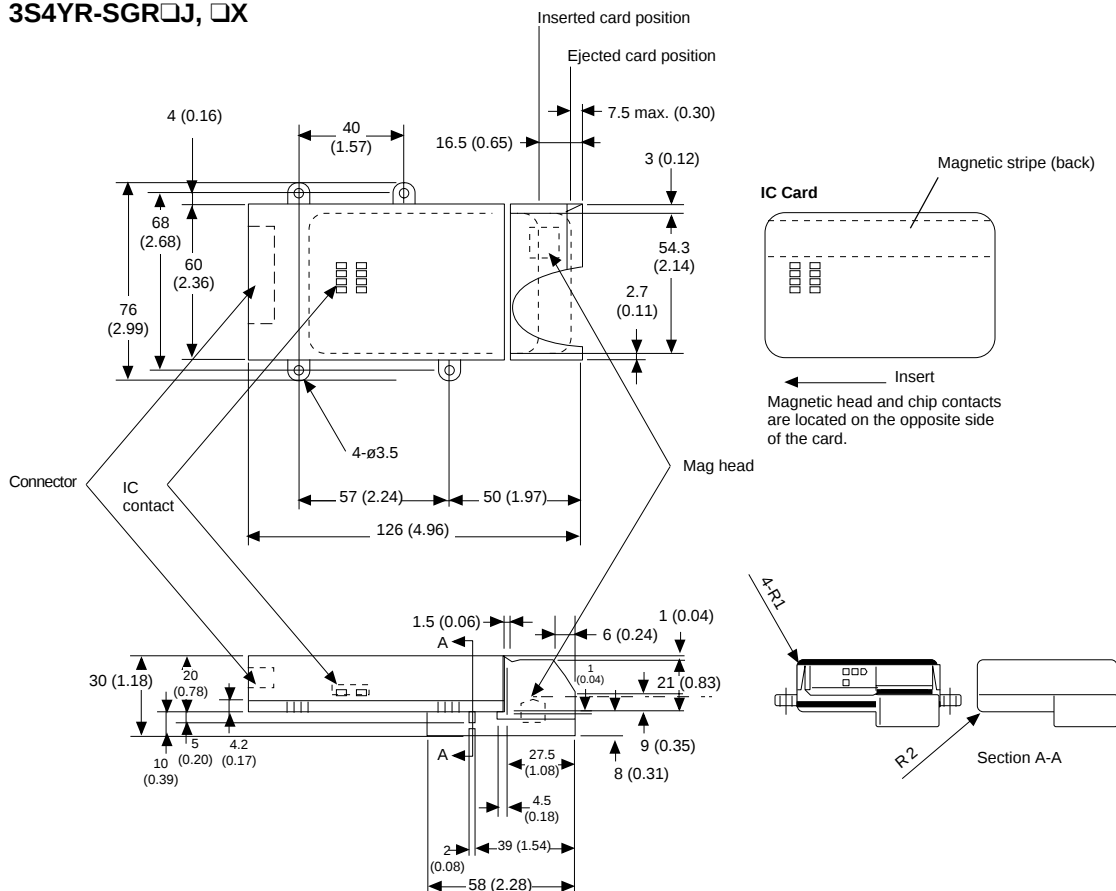
Pin #	Signal	Input/Output	Description
14	IVCC	◆	IC contact C1
15	IVPP	◆	IC contact C6
16	IRST	◆	IC contact C2
17	IDATA	◆	IC contact C7
18	ICLK	◆	IC contact C3
19	IRFV2	◆	IC contact C8
20	IRFV1	◆	IC contact C4
21	5VS	—	Power for solenoid
22	5VS	—	Power for solenoid
23	5V	—	Power for logic
24	0V	—	Ground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

◆ = Direct IC Contact

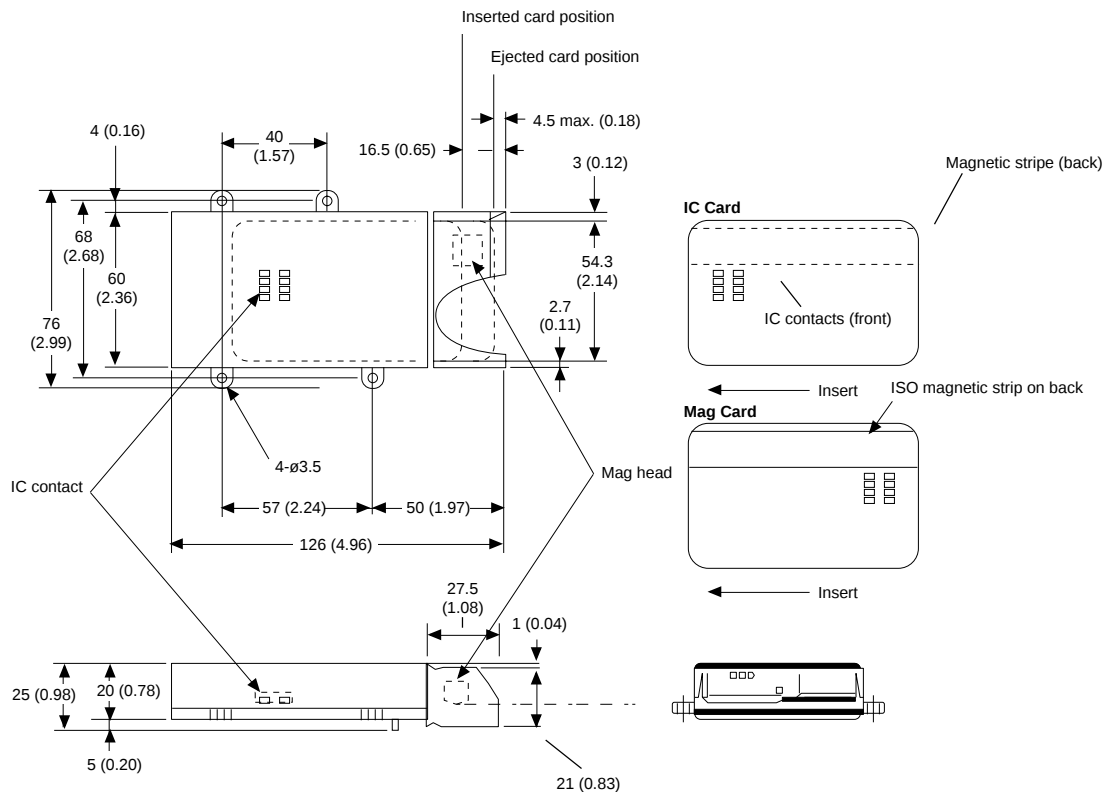
Dimensions

Unit: mm (inch)

3S4YR-SGR□J, □X



■ 3S4YR-SGR□N, 4N



Note: Magnetic stripe and chip contacts are located on the same side of card.

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