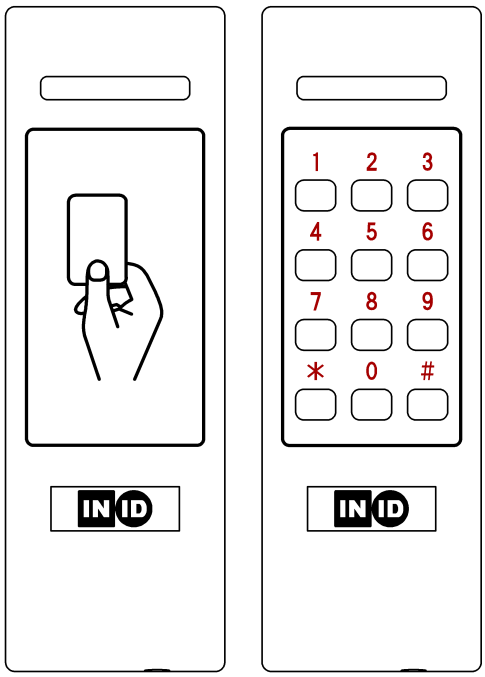
INID ISO14443 readers



Specifications

Typical read range

Model	Mifare ISO card	
INID ISO14443 AC	60 mm	2.4 inch
INID ISO14443	30 mm	1.2 inch

Power Supply

7 - 24 Volt DC (12 VDC recommended)

Power consumption

model	average	peak
INID ISO14443 AC	1300 mW	1750 mW
INID ISO14443 AC PIN	1300 mW	2050 mW
INID ISO14443	500 mW	950 mW
INID ISO14443 PIN	500 mW	1250 mW

Current consumption @12 VDC[1)]

model	average	peak
INID ISO14443 AC	110 mA	146 mA
INID ISO14443 AC PIN	110 mA	171 mA
INID ISO14443	42 mA	79 mA
INID ISO14443 PIN	42 mA	105 mA

[1)] Use Ohm's law to calculate current at different voltages.

Interface

Inputs type and protection specifics
Outputs type and protection specifics

Dimensions

143 x 50 x 25 mm / 5.63 x 2 x 1 inch

Material

UL94-V0 rated LEXAN® 925U

Operating temperature

-25° to 65° C / -15° to 150° F

Protection class

IP54 Complete protection against contact, protection against dust deposit. Protection from splashed water.

Cable specifications (non-shielded)

interface	maximum cable length		min.conductor size with 12 V supply[2)]	
	meters	feet	mm^2	AWG
Wiegand	61	200	0.25	24
	91	300		
	152	500	0.34	22
Clock/Data	25	80	0.25	24
TTL serial	1.5	5		
RS232	2.4	8		
RS485/RS422 (cable power)	61	200		
	152	500	0.34	22
RS485/RS422 (local power)	1220	4000	0.25	24
CAN bus	system / speed dependent			

[2)] With a 24V supply, minimum conductor size is AWG 24 for all interfaces and lengths.

Features

INID readers have a slim mullion mountable design and are designed for both in- and outdoor use. The INID reader can be mounted on any surface without significant performance degradation. For mounting to a metal surface however, a non-metallic spacer is advised.
The switch mode power supply of the reader accepts a wide range input from 7 - 24 VDC. Higher input voltages result in lower current consumption and allow for cost effective wiring with a smaller conductor diameter.
Reader output formats are determined by the personalization of the card and/or configuration of the reader.
Separate models are available for card-only and card+PIN; for Access Control with a larger read range and low power with a smaller read range.
Electrical interface options for WG/C&D/TTL serial, RS485/RS422, RS232 and CAN bus are available with separate models.

PIN code

INID PIN readers provide extensive options for PIN data formats and output protocols. The card and PIN code data is sent separately and independently allowing host system determined operation for card-only, PIN-only and card and PIN usage.

Indications

User feedback is provided by a single LED bar and a multi-tone sounder. User feedback is controllable by the host system. PIN models are equipped with back lighting of the PIN code digits for usage in dark environments.

Operation

When a proximity card is read successfully the card associated code is send to the Host system, the LED bar lights briefly and the sounder sounds a short tone.
When a PIN is entered the data is transmitted; at each key press a click sound is produced and the LED bar lights briefly. The back light of the PIN code lights up after a successful card read or at the first key press.
The LED bar or individual LED bar segments and the buzzer are also controllable by the Host system.

Connector Assignments

Wiegand / Clock and Data / TTL serial

500-5000 INID ISO14443 AC reader WG/C&D/TTL
500-5040 INID ISO14443 AC PIN reader WG/C&D/TTL
500-5100 INID ISO14443 reader WG/C&D/TTL
500-5140 INID ISO14443 PIN reader WG/C&D/TTL

1	LED 1 - Green		5 BUZZER	RXD
2	LED 2 - Amber		6 TAMPER	
3	D1 DATA	TXD	7 GND	
4	D0 CLOCK	TXE	8 POWER	

RS485 / RS422

500-5010 INID ISO14443 AC reader RS485/RS422
500-5050 INID ISO14443 AC PIN reader RS485/RS422
500-5110 INID ISO14443 reader RS485/RS422
500-5150 INID ISO14443 PIN reader RS485/RS422

1	LED 1 - Green		5 RS485 n.c.	RS422 RX-
2	LED 2 - Amber		6 RS485 n.c.	RS422 RX+
3	RS485 TRX+	RS422 TX+	7 GND	
4	RS485 TRX-	RS422 TX-	8 POWER	

Caution: *floating communication lines may cause spurious emissions. Ensure all communication lines are properly biased and terminated.*

RS232

500-5020 INID ISO14443 AC reader RS232
500-5060 INID ISO14443 AC PIN reader RS232
500-5120 INID ISO14443 reader RS232
500-5160 INID ISO14443 PIN reader RS232

1	LED 1 - Green	5	RTS
2	LED 2 - Amber	6	RXD
3	CTS	7	GND
4	TXD	8	POWER

CAN bus

500-5030 INID ISO14443 AC reader CAN bus
500-5070 INID ISO14443 AC PIN reader CAN bus
500-5130 INID ISO14443 reader CAN bus
500-5170 INID ISO14443 PIN reader CAN bus

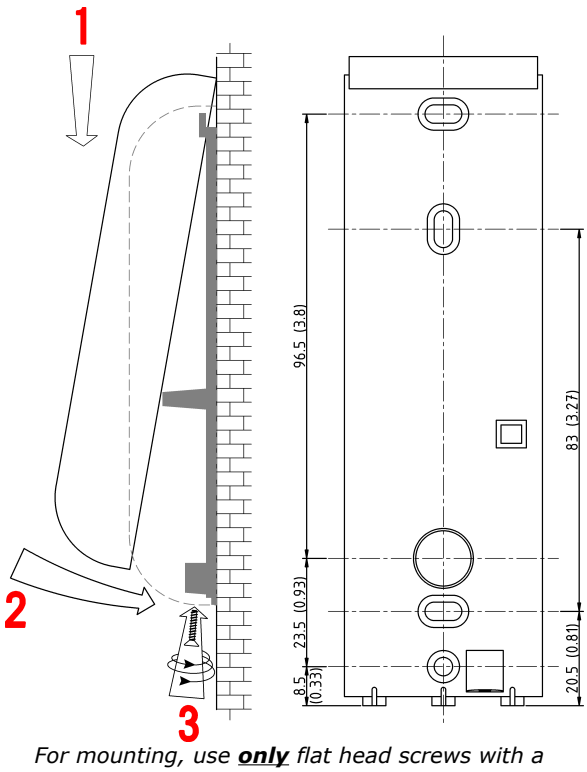
1	LED 1 - Green	5	n.c.
2	LED 2 - Amber	6	n.c.
3	CANL	7	GND
4	CANH	8	POWER

Parts list

1	Reader front	qty: 1
2	Terminal connector	qty: 1
3	Mounting backplate	qty: 1
4	Enclosure screw	qty: 1
5	Installation sheet	qty: 1

Installation instructions

1 Determine an appropriate position for the reader and drill two holes for mounting the backplate and one hole for the cable, see diagram for measurements. Do not mount readers less than 20 cm (8 inches) apart.
2 Pull the cable trough the hole in the backplate and mount the backplate. Protect the cable against sharp edges and any damage from chafing.
3 Remove the terminal connector from the front of the reader. Prepare the end of the cable and wires, eliminate any loose or frayed strands. Keep the wire ends as short as practical.
4 Connect the wires to the connector according to the reader type. Wire ends, termination resistor leads and optional permanent links shall be kept as short as possible.
5 Place the connector on the reader pins.
6 Place the reader front over the hinge of the backplate and close the reader (see diagram), keeping the wiring in the lower part of the reader housing. DO NOT use excessive force, retract the cable if necessary.



*For mounting, use **only** flat head screws with a maximum shank size of 4 mm (5/32", #7)*

7 Test the reader: apply power and present a valid card. The LED bar should flash and the sounder should produce a short tone indicating a successful read. If the Host system is connected to LED bar and sounder inputs these should follow the functionality of the Host system.
8 The reader front should now be secured to the backplate using the supplied enclosure screw.

Certifications

CE, FCC

FCC ID: **YAB-ISOACRDR** (model 50XX)
YAB-ISORDR (model 51XX)

Compliance statement
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
1) this device may not cause harmful interference, and
2) this device must accept any interference received, including interference that may cause undesired operation.

Warning (part 15.21)
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This in particular is applicable for the antenna which has been delivered with the reader.

Consult your National Authority if any authorization is needed for this product.

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