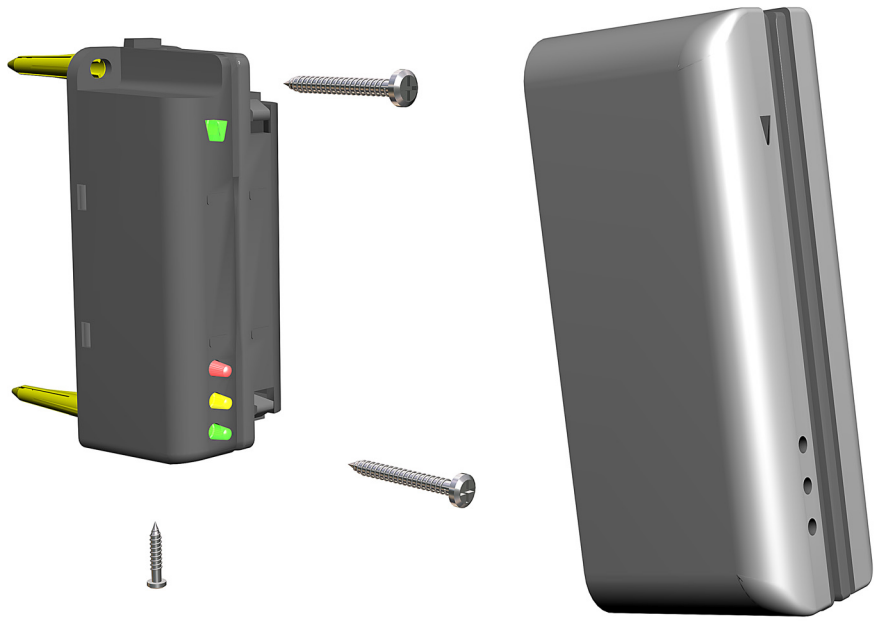
10/12/2009

Ins-30024 - OEM Magstripe reader, clock and data output

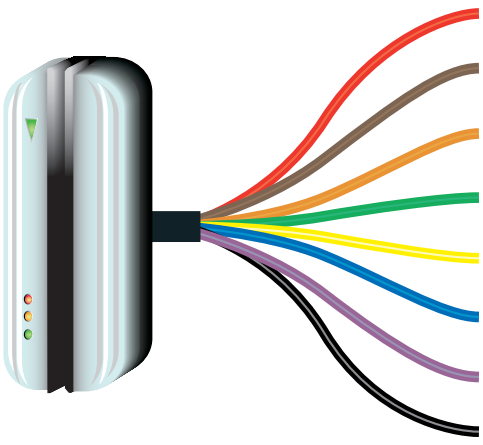
Suitability

Wet environments	✓	Security-sensitive doors	✓
Mounted on metal surface	✓	Readers mounted together	✓

Fitting



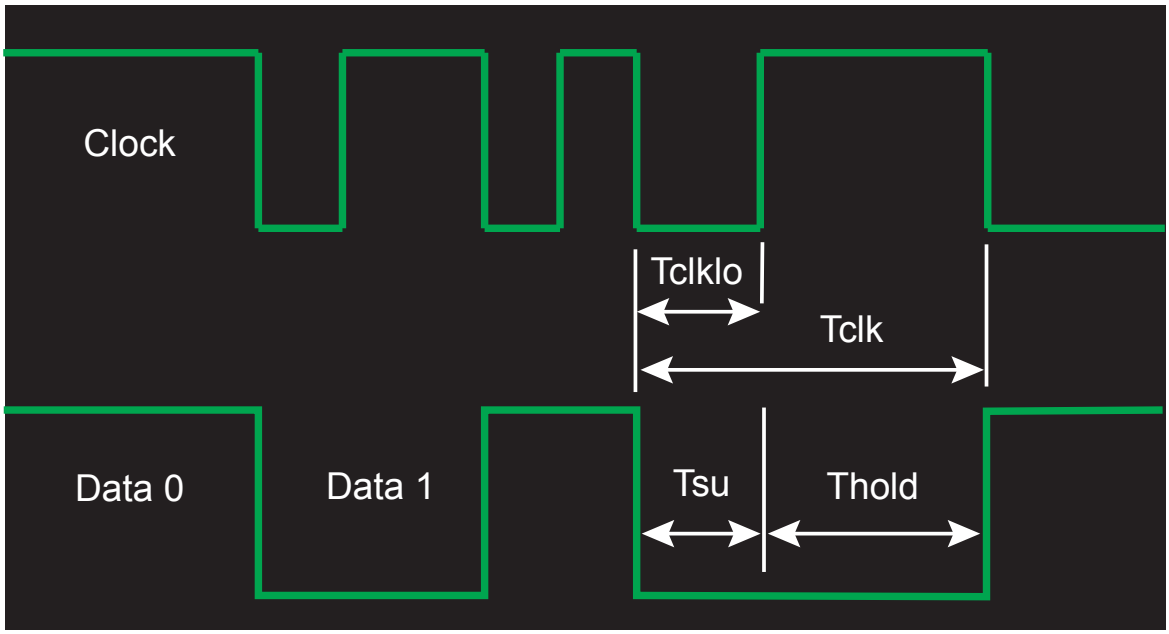
Wiring



+12V DC	
Red LED	Pull directly to 0V to light LED
Amber LED	Pull directly to 0V to light LED
Green LED	Pull directly to 0V to light LED
Data	Open collector
Clock	Open collector
Not Required	
0V	

Output format

The following diagram applies to all readers with serial number greater than or equal to 090008



The Clock period (Tclk) is variable and will depend on the speed that the user card is swiped through the reader.

Data period (Tclk) = > 60 µs but < 3000 µs
Data Hold Time (Thold) = Tclk - Tclklo
Data Set-up Time (Tsu) = Tsu = Tclklo

Data Clock Low (Tclklo). This is 'data dependent' but will approximate to the following:
If Data = 0 (High) then Tclklo = Tclk / 2
If Data = 1 (Low) then Tclklo = Tclk / 3

Cable extensions

Readers can be extended using Belden CR9540 10-core overall screened cable to a maximum of 100 metres.

Specifications			
	Min	**Max**	
Environment			
Operating temperature	-20 °C	+55 °C	
Cable length			5 metres
IP Rating	IPX7		Outdoor Use
Reader head life	1,000,000		Swipes
Electrical			
Voltage	8V DC	14V DC	
Current	90 mA	110 mA	
Clock and data bit period	60 µs	3000 µs	
Media speed	125 mm/s	1250 mm/s	
Media acceleration		500 mm/s^2	
Magnetic stripe coercivity	300 Oe	4000 Oe	
Dimensions			
	Width	**Height**	**Depth**
Reader	34 mm	89 mm	34 mm

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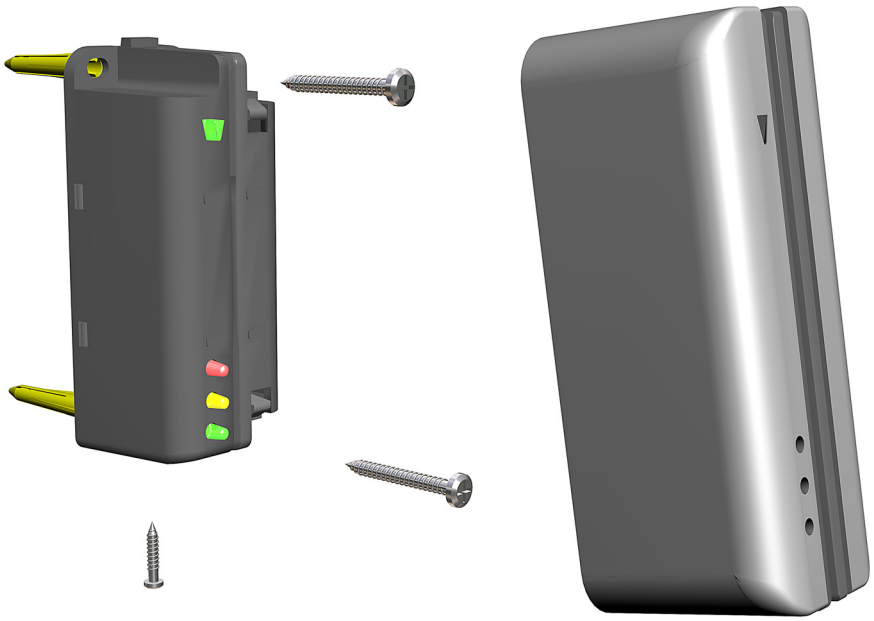

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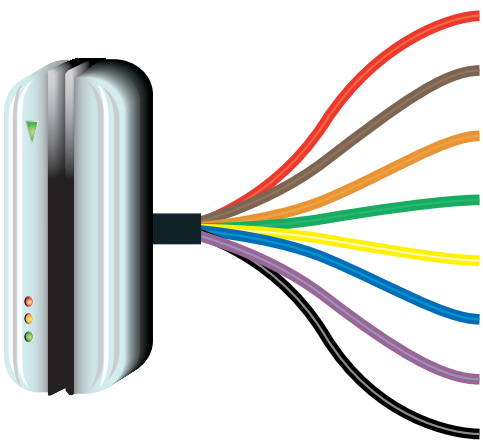

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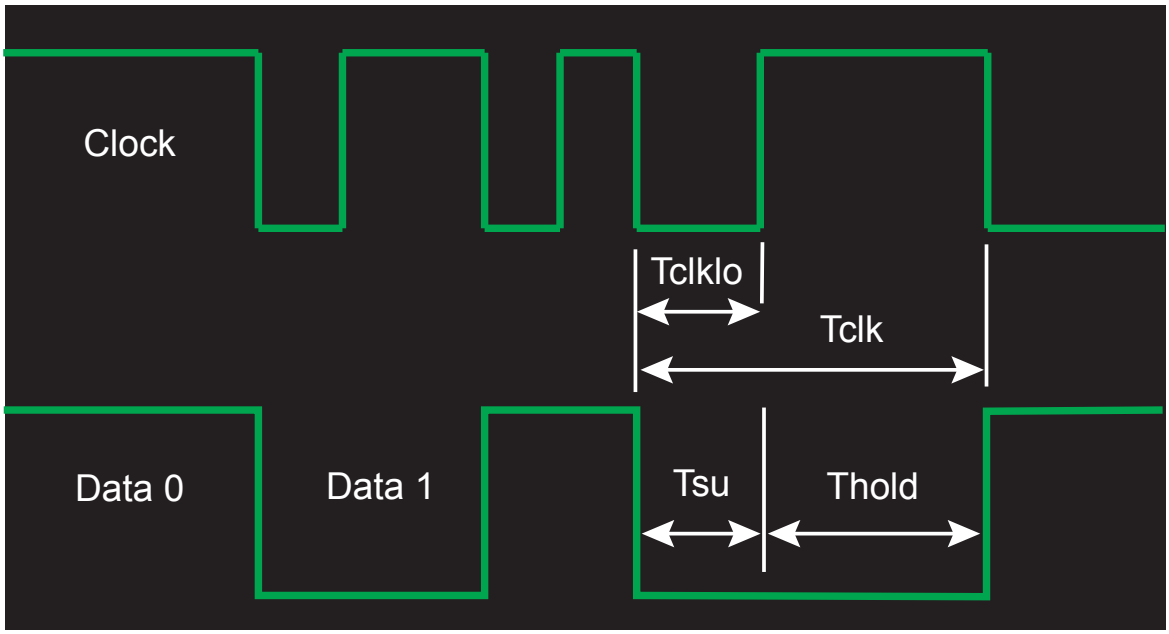

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