

# Simple RF-ID! 8-bit system

- Reading program is unnecessary
- The best way of jig or dies management

- Reduce maintenance
- Automate the jig exchange
- Error proofing etc.

## 8-bit ID tags available in 120 °C

The ID tag data would not be damaged in 120°C during non-communication. (It is not available to read data in 120 °C.)

### Flexible tag

The glass fiber housing is so flexible that it is not broken even if it is bent.



### Ceramic tag

Ceramic tags have excellent chemical resistance and oil resistance.

### ID tag (ISO15693)

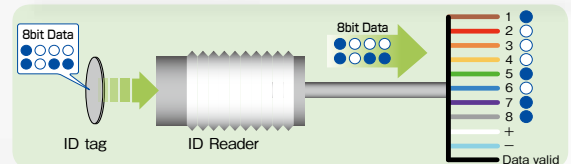
- Z1-EC02-128 (Ø26 × 3.4mm Ceramic tag)
- Z1-EA02-128 (Ø9.5 × 2.7mm Ceramic tag)
- Z1-FA01-128 (Ø16 × 0.9mm Flexible tag)



### ID Reader

- Z5-AA01N-02 (NPN)
- Z5-AA01P-02 (PNP)

## ID reader outputs data in parallel



## Improvement case by 8-bit system

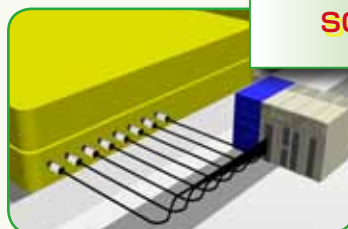
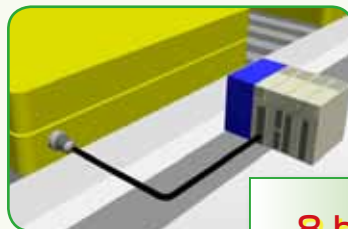
### Problems :

#### Connector ...

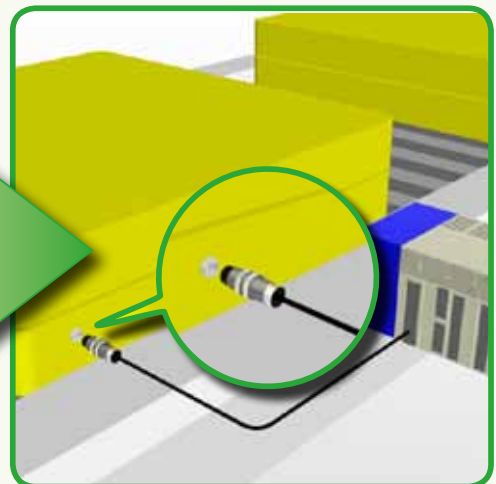
- × Poor contact
- × Dirt

#### Sensors ...




- × Space
- × Costs



**8-bit system solves all!**



## ID tag

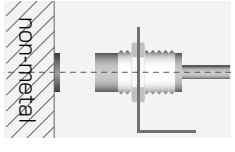
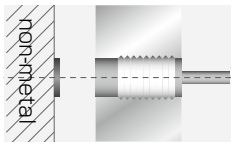
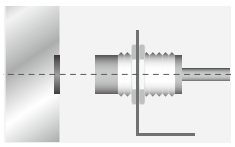
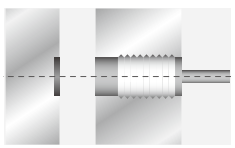
Type code	Z1-EA02-128	Z1-EC02-128	Z1-FA01-128
			
Size	φ 9.5 x 2.7 mm	φ 26 x 3.4 mm (穴φ 6)	φ 16 x 0.9 mm
Flush mount in metal	Yes	Yes	No
Housing material	Zirconia ceramic	Almina ceramic	Glass resin cloth
IC chip	i-code SLI		
Available memory capacity	112byte (EEPROM)		
Operating temperature	-20...+80°C		
Storage temperature	-25...+120°C <sup>1)</sup>		
Protection class	IP60 <sup>2)</sup>	IP67	IP67
Installation	with double-stick tape on the back	M5 screw <sup>3)</sup> , double-stick tape	with double-stick tape on the back
Life	Read cycles : Unlimited, Programming cycles : 100,000, Data retention time : 10 year		
Standard	ISO15693 (13.56 MHz)		

1) Please contact us if the storage temperature would be over 120°C .

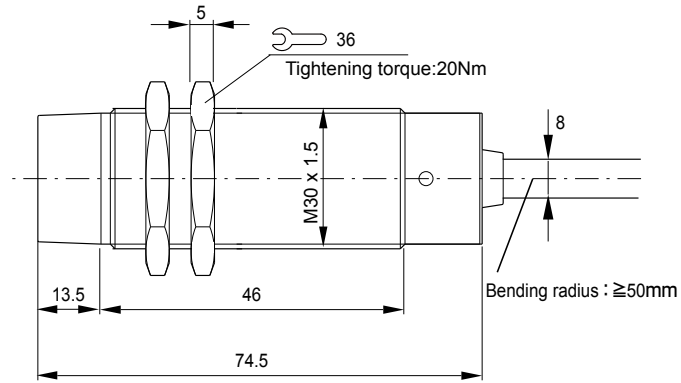
2) Please contact us if you intend to use in a location that requires Z1-EA02-128 water proof.

3) M5 metal screws are available.

## Read distance between the ID Reader Z5-AA01N/P

ID tag		Z1-EA02-128 Ø9.5x2.7	Z1-EC02-128 Ø26x3.4	Z1-FA01-128 Ø16x0.9		
Mount in non-metal	ID Reader non-flush mount 	Read distance(mm)	0...9.5	0...12	0...20	
		Center offset (± mm)	Distance 0mm	± 6	± 9	± 7
			4mm	± 6	± 9	± 9
			8mm	± 4	± 8	± 11
			12mm	—	± 3	± 10
			16mm	—	—	± 8
	20mm	—	—	± 1		
	ID Reader flush mount in steel 	Read distance (mm)	0...7.5	0...10	0...14.5	
		Center offset (± mm)	Distance 0mm	± 5.5	± 8	± 6
			4mm	± 5	± 7	± 7
8mm			—	± 4	± 7	
10mm			—	—	± 7	
12mm	—	—	± 5			
14mm	—	—	± 3			
Flush mount in steel	ID Reader non-flush mount 	Read distance (mm)	0...5.5	0...14	not available	
		Center offset (± mm)	Distance 0mm	± 4	± 8	
			4mm	± 4	± 8	
			8mm	—	± 8	
			10mm	—	± 5	
			12mm	—	± 2	
	14mm	—	—			
	ID Reader flush mount in steel 	Read distance (mm)	0...3.5	0...11	not available	
		Center offset (± mm)	Distance 0mm	± 4	± 7	
			2mm	± 2	± 7	
4mm			—	± 7		
6mm			—	± 6		
8mm	—	± 6				
10mm	—	± 4				

## ID Reader



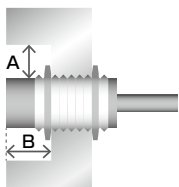
Type code	NPN	<b>Z5-AA01N-02</b>
	PNP	<b>Z5-AA01P-02</b>
Supply voltage	24V DC +10% -20% (including ripple)	
Operating frequency	13.56MHz	
Output signal	parallel (8 bits + Data valid)	
Current consumption	max.50mA	
Operating temperature	-20...+60°C	
Storage temperature	-25...+80°C	
Protection class	IP67	
Standard	ISO15693、CE	

## Installation

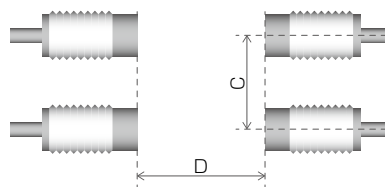
ID Reader can be flush mounted, but the read distance will become shorter.

The distance between the surrounding metal which is shown in the table below should be kept for the longer reading distance. In order to prevent mutual interference between parallel-mounted ID Readers, keep the minimum spacing as described in the table below.

### Surrounding Metal

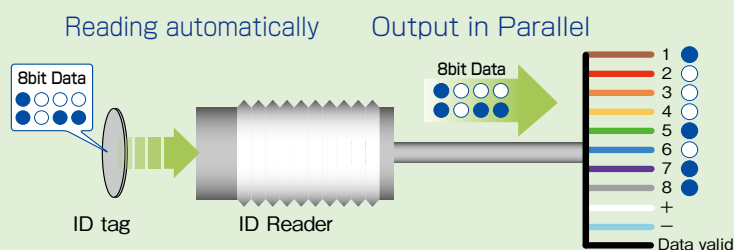


### Mutual interference



	(in mm)			
	Clear zone dimensions			
	A	B	C	D
Z5-AA01N	20	20	60	100
Z5-AA01P	20	20	60	100

## Read System



ID Reader starts reading automatically at the same time the ID tag enters in to the reading area. It outputs the 8-bit data directly in parallel.

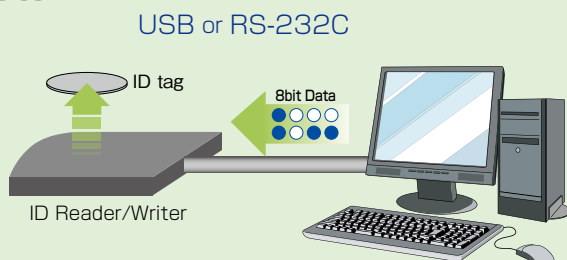
## ID Reader/Writer



ID Reader/Writer writes to the ID tag by USB or RS-232C connecting to the PC.

Type	USB	<b>Z6-01-U</b>
code	RS-232C	<b>Z6-01-R</b>
Supply voltage	5V DC (USB or BUS-power)	
Size	120mm x 72mm x 20mm , cable length 1m	
Applicable PC	Windows XP / Vista / 7	
Software for writing	using the bundled application software	
Operating temperature	0...+50°C	
Storage temperature	-10...+70°C	
Standards	ISO15693、CE (RS-232C)	

## Write System



It is easy to write data by using the bundled application software.

※ Data writing to ID tag service is available, please contact us.

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\*Specification is subject to change without notice.