MULTÍ DÍMENSÍON Sensing the Future

TMR6201D

Single Channel Currency Head

General Description

The TMR6201D magnetic pattern recognition sensor consists of Tunneling Magnetoresistance (TMR) sensing elements, a high-quality magnet, a robust plastic base with outstanding mechanical strength, and a durable non-magnetic stainless steel cover. The physical structure is shown in Fig. 1.

Features and Benefits

The TMR6201D series of TMR magnetic pattern recognition sensoris a magnetic signal reader head for use in detecting and recognizing the magnetic properties of paper bills, bank notes, and securities documents. Designed with outstanding weak field detection capability of MDT's TMR technology, along with a custom shaped bias magnet, the TMR6201D features high sensitivity, high signal to noise ratio, and wide air-gap tolerance, and it is not susceptible to tilt or misalignment in installationor shock and vibration along the vertical direction (Z-axis) during operation.

The TMR6201D has high mechanical strength plastic, and solid, hard-wearing non-magnetic stainless steel materials, and it achieves a compact, miniaturized, light-weight and robust structural design. It can significantly simplify the design of structural components of financial machinery and measurement equipment, and it can release installation and maintenance procedures from complicated requirements.

The TMR6201D has a digital output signal that can be directly connected to the processing logic without the need for amplification or analog front end circuit.

Applications

- Bill and banknote Counter and validator
- Bill and banknote sorter
- ATM
- Bill reader and validator in automated vending machines
- Reader head of magnetic card reader



TMR6201D

Pin Out and Dimensions (mm)



Absolute Maximum Ratings

Parameter	Symbol	Limit	Unit	
Supply Voltage	V _{cc}	5.5	V	
Operating Temperature	T _A	-30 ~85	°C	
Storage Temperature	T _{stg}	-40 ~125	°C	
ESD Level	V _{ESD}	2000	V	

Electrical Property (TA=25°C)

Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Supply Voltage	V_{DD}		2.5	5		V
Output High Voltage	V _{OH}	V _{DD} =5V		V _{DD} -0.3	V_{DD}	V
Output Low Voltage	V _{OL}	V _{DD} =5V	-	0.2		V
Magnetic Field	Bs	At sensing surface (S pole)	-	800	1000	G
Detecting Width (mm)	W	-	-	5	-	mm
Resolution (mm)	Т	-	-	0.475	-	mm



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