Tilt Sensor Product Selection Guide

Introduction

This guide is designed to assist you in selecting the most appropriate tilt sensor based on the part number structure. Understanding the part number will enable you to quickly identify the key features of the tilt sensor that best meet your requirements.

Part Number Structure Explanation



Accuracy

The first digit after "TS" represents the accuracy of the tilt sensor. In the example "TS 2312 R01", the digit "2" indicates an accuracy of 0.2 degrees (see table for details). Higher number implies better accuracy.

Resolution

The second digit denotes the resolution. In our example, "3" means a resolution of 0.02 degrees. Higher number means a more refined resolution, which is beneficial for applications that require very detailed tilt data, like in some medical equipment or high - precision industrial machinery.

Axis Number

The third digit indicates the number of axes the sensor can measure. In "TS 2312 R01", "1" represents a single - axis tilt sensor. If your application requires measuring tilt in multiple directions, you may need a sensor with a higher axis number. For example, a "2" would indicate a dual - axis sensor capable of measuring tilt in two perpendicular directions.

Product Group

The fourth digit is related to the product group which is used for Analog internal tracking purpose.

Rugged Indicator

The letter "R" in the part number stands for "Rugged". This indicates that the tilt sensor is designed to withstand harsh environmental conditions. If your application involves exposure to extreme temperatures, vibrations, or moisture, a sensor with the "R" designation is more suitable. "P" means PCBA only.

Output Mode

The last two digits specify the output mode. In "TS 2312 R01", "01" represents the CAN (Controller Area Network) output mode. Other output modes may include analog voltage output etc. (See table for details).

TS	XO	X1	X2	R	0	
Generic family name	Series identifier1(Accuracy)	Series identifier2(Resolution)	Product variant/ Algorithm type	Form Factor / Hardware options	Output Options	
	higher is more accurate	higher is better			01-CAN	
TS=Tilt Sensor	0000-series 0.5 deg	100-series 0.1	10 = single axis	R = Rugged	02-RS232, RS485, TTL Optional	
	1000-series 0.3 deg	200-series 0.03			03-RS232, RS485, TTL Optional, Modbus	
	2000-series 0.2 deg	300-series 0.02	20 = dual axis	P = PCBA only	04-0-5V,0-10v Optional	
	3000-series 0.1 deg	400-series 0.01			05-4-20mA,0-20mA,0-24mA Optional	
	4000-series 0.05 deg	500serires 0.005	30= three axis			
	5000-series 0.02 deg	600-series 0.001				
	6000-series 0.01 deg	700-series 0.0007				
	7000-series 0.005 deg	800-series 0.0005				
	8000-series 0.003 deg	900-series 0.0001				
	9000-series 0.001 deg					

TABLE 1.	Tilt Sensor	Part	Number	Coding
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