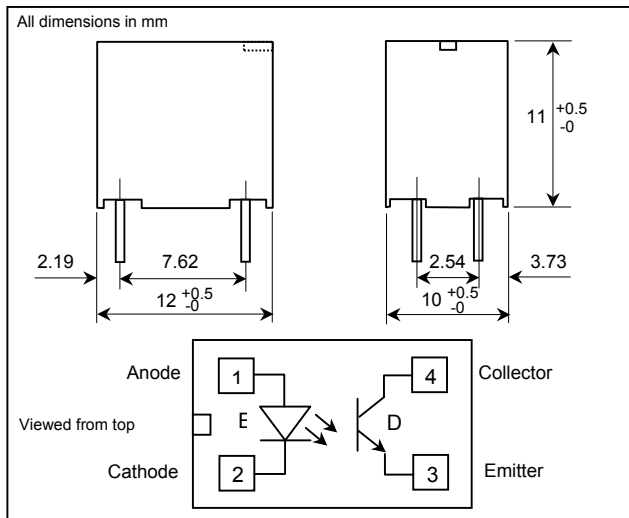
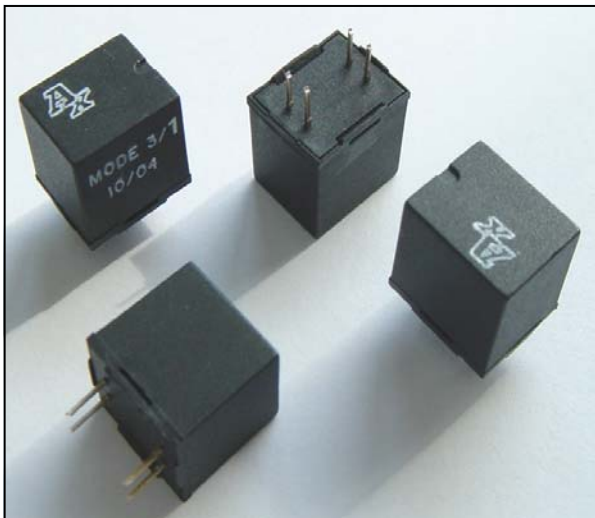


Non-Mercury Tilt Sensor - Mode 3/1

(Horizontally Mounted, Normally Open, Omni-directional, 23° + anti tip-over)

TuControls Limited

The TuControls non-mercury, mode 3/1, normally open tilt sensor is suitable for horizontal PCB mounting & is housed in a small, robust moulded package, 11mm x 12mm x 10mm in size. The operate angle is 23°±2 from the vertical, omnidirectionally, with an anti tip-over function (see operation mode). Using solid-state technology, this low powered device is suitable for CMOS logic. As a primary sensing device, the tilt sensor can be interfaced to standard TTL, or power devices & additional circuitry can be supplied for the operation of power transistors & FET's, enabling solenoids, motors & lamp loads to be switched.



Technical Characteristics						
Emitter						
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Fwd Voltage	V _F	----	1.45	1.7	V	I _F = 20mA
Cont. Fwd Current	I _F	----	20	100	MA	V _F = 5V
Rev. Voltage	V _R	----	----	5	V	I _R = 100µA
Power Dissipation	P _M	----	----	170	mW	-----
Detector						
Coll. Emitt. V	V _{CEO}	----	----	30	V	I _C = 100µA
Emitt. Coll. V	V _{ECO}	----	----	6	V	I _E = 100µA
Coll. Emitt. Leak. I	I _{CEO}	----	----	100	nA	V _{CE} = 10V
On-state Current	I _{C(ON)}	1	----	10	mA	V _{CE} = 25V
Coll. Emitt. Sat. V	V _{CE(SAT)}	----	----	0.4	V	I _C = 2.0mA, I _B = 100µA
Power Dissipation	P _M	----	----	100	mW	-----
Operating Specification						
Operating Angle	Op	21	23	25	Deg	I _F = 20mA
Release (from Op)	Rel	8	10	12	Deg	I _F = 20mA
Operating Temp.	Temp	-10	----	+70	°C	I _F = 20mA, I _C = 10mA
Soldering Temp.	TSOL	----	----	+260	°C	-----

Features:

- RoHS Compliant
- Small robust construction
- Printed circuit board mounting
- Optical coupling
- Low power consumption
- Optional interface circuitry available
- Other tilt angles available
- Other "modes" of operation available

Typical Applications:

- Emergency shutdown
- Door / barrier position sensing
- Cam / motor position indicator
- Movement alarm

Important Note: Suitable for PCB washing, but not total immersion.

Example modes of operation

RJB/10/05/2

TuControls Limited reserve the right to change this data sheet without giving notice