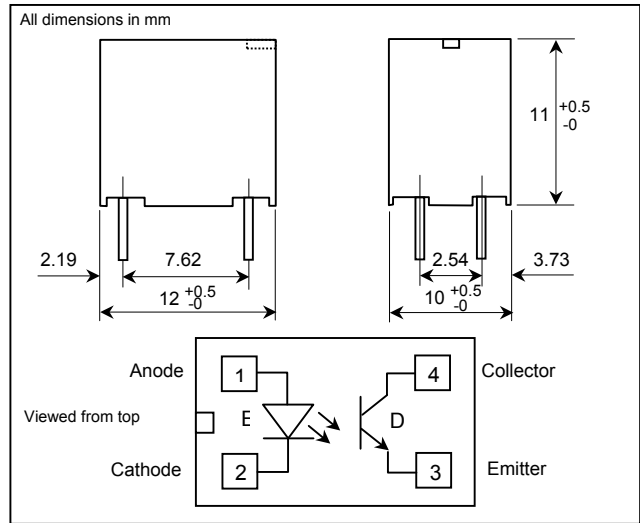
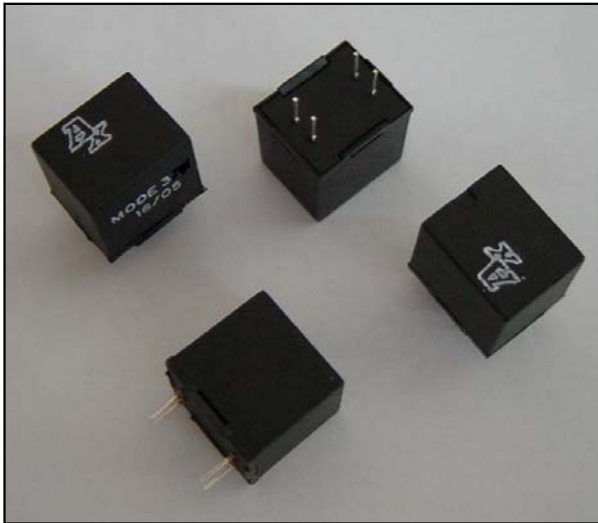


Non-Mercury Tilt Sensor - Mode 3 - (C12-1085)

(Horizontally Mounted, Normally Open, Omni-directional, 35°)

TuControls Limited

The TuControls non-mercury mode 3, 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 $35^{\circ} \pm 5$ from the vertical omni-directionally in each axis for 360° . 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	$I_F = 20\text{mA}$
Cont. Fwd Current	I_F	-----	20	100	MA	$V_F = 5\text{V}$
Rev. Voltage	V_R	-----	-----	5	V	$I_R = 100\mu\text{A}$
Power Dissipation	PM	-----	-----	170	mW	-----
Detector						
Coll. Emitt. V	V_{CEO}	-----	-----	30	V	$I_C = 100\mu\text{A}$
Emitt. Coll. V	V_{ECO}	-----	-----	6	V	$I_E = 100\mu\text{A}$
Coll. Emitt. Leak. I	I_{CEO}	-----	-----	100	nA	$V_{CE} = 10\text{V}$
On-state Current	$I_{C(ON)}$	2	-----	10	mA	$V_{CE} = 25\text{V}$
Coll. Emitt. Sat. V	$V_{CE(SAT)}$	-----	-----	0.4	V	$I_C = 2.0\text{mA}, I_B = 100\mu\text{A}$
Power Dissipation	PM	-----	-----	100	mW	-----
Operating Specification						
Operating Angle	Op	30	35	40	Deg	$I_F = 20\text{mA}$
Release (from Op)	Rel	8	10	12	Deg	$I_F = 20\text{mA}$
Operating Temp.	Temp	-10	-----	+70	$^{\circ}\text{C}$	$I_F = 20\text{mA}, I_C = 10\text{mA}$
Soldering Temp.	TSOL	-----	-----	+260	$^{\circ}\text{C}$	For 5 Seconds Max.

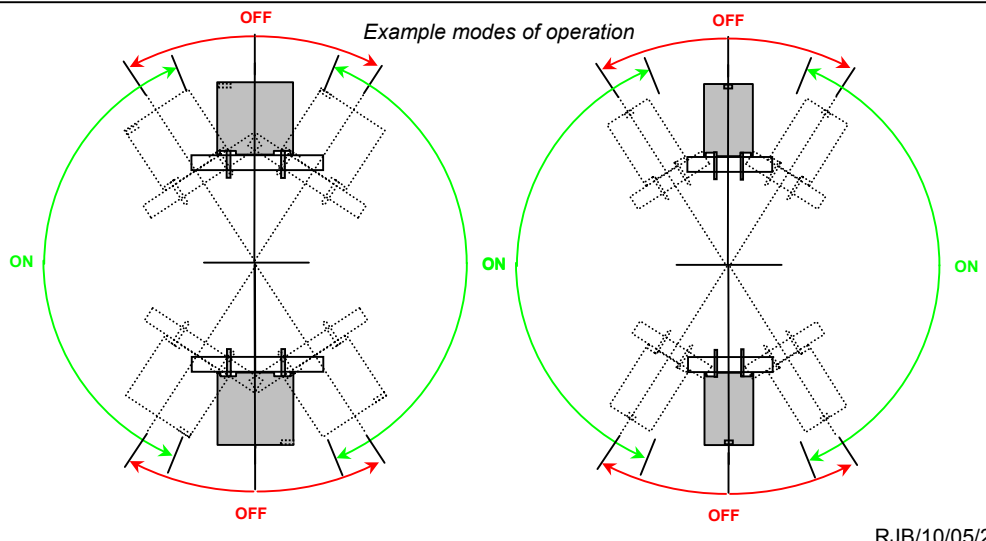
Features:

- 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.



RJB/10/05/2

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

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