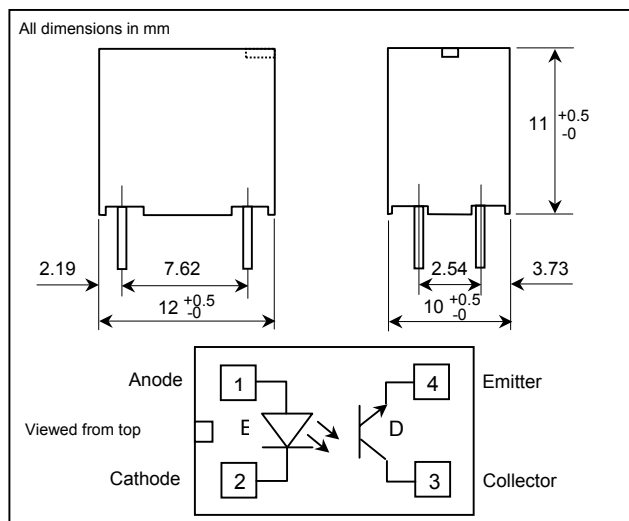
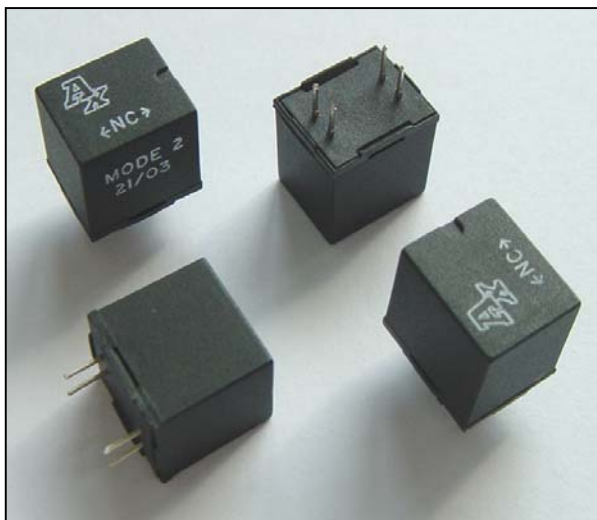


# Non-Mercury Tilt Sensor - Mode 2 - (C12-1075)

(Horizontally Mounted, Normally Closed, Bi-directional, 65°)

TuControls Limited

The TuControls non-mercury, mode 2, normally closed 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  $65^{\circ} \pm 5$  from the vertical, bi-directionally. 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						
<b>Emitter</b>						
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	$P_M$	----	----	170	mW	-----
<b>Detector</b>						
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	$I_C(\text{ON})$	2	----	10	mA	$V_{CE} = 25\text{V}$
Coll. Emitt. Sat. V	$V_{CE(\text{SAT})}$	----	----	0.4	V	$I_C = 2.0\text{mA}, I_B = 100\mu\text{A}$
Power Dissipation	$P_M$	----	----	100	mW	-----
<b>Operating Specification</b>						
Operating Angle	Op	60	65	70	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.

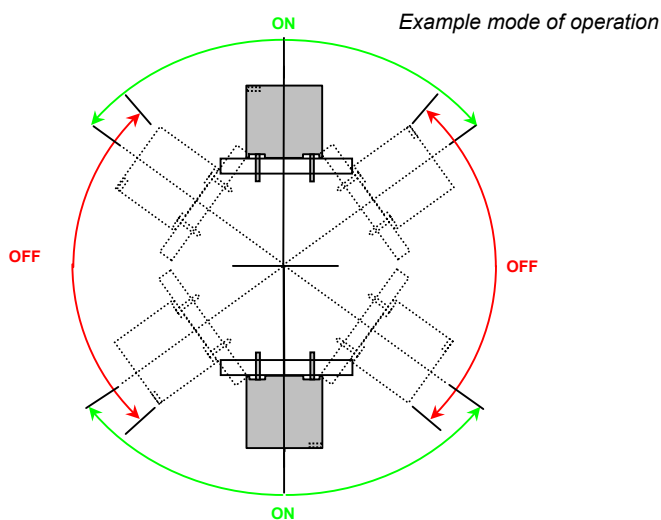
**Features:**

- 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.



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

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