

# TD4PX series

## electronic roll-over switch

# DURAKOOL



- Roll-over detection and fuel cut-off
- Wide trigger angle with 2° Hysteresis
- 3 sec delay on trigger and reset angle standard
- Non resettable - one shot optional
- Optional reset by external module or auto reset after 90s
- Up to 1A output to drive up to 2 x mini-ISO relays
- Optional LED for trip status indication



RoHS Compliant

### Specifications

Output		PNP (see Fig. 3 for details)
Output load	DC	0.5A (max.)
Short circuit protection		Yes
Supply voltage	DC	8 - 30V
Current consumption		≤ 25mA
Polarity protection		Yes
Boot up time		<10ms

Housing		Plastic injection moulded (PBTP)
Dimensions (approx.)	L x W x H	40 x 40 x 25mm
Mounting		M3 screws
Connection		M12 5 pin male connector (others to special order)
Weight		approx. 50g
Ambient temperature		-25°C to +85°C (storage and operating)
Humidity		0 - 95% non-condensing
Sealing	IEC60529	IP67
Shock resistance	max.	10g

Measuring range	detection angle	± 40° standard, other angles can be specified - see ordering code
Centering function		pre-centered at 0°, range ±5°
Frequency response	(-3dB)	0 - 0.1Hz
Accuracy		±5°
Offset Error		0° (after factory zeroing)
Resolution		0.09°
Temperature coefficient		±0.04°/K

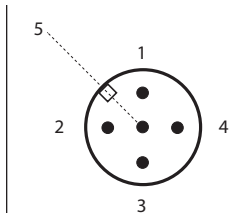
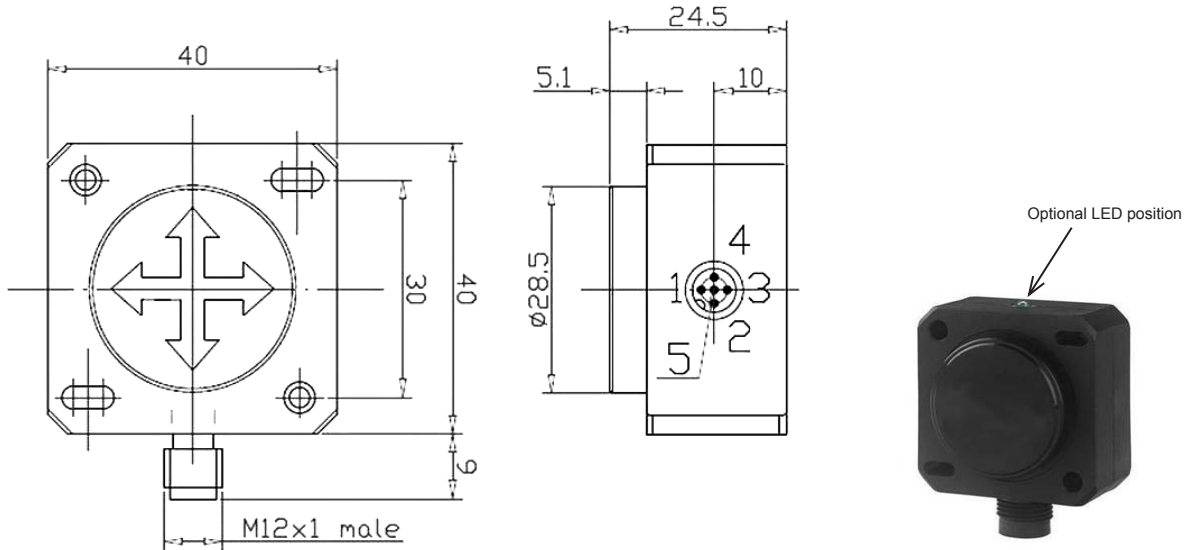
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Dimensions and mounting holes

Fig. 1

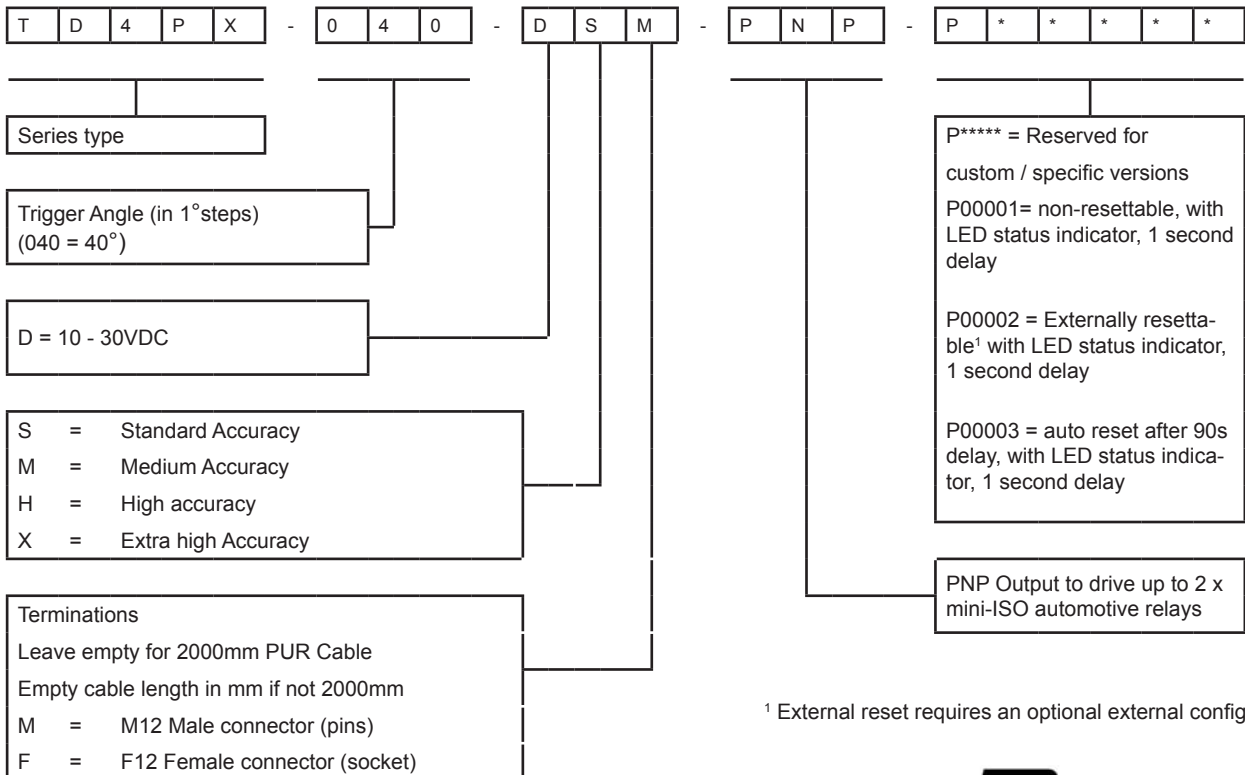


M12 5p Male connector

- Pin 1: +Supply Voltage
- Pin 2: Reset function (pin fitted but not connected for non-resettable version)
- Pin 3: Gnd (0V)
- Pin 4: Output
- Pin 5: Factory use (Centering/zero set) - leave unconnected.

All dimensions in millimeters.  
Not to scale.

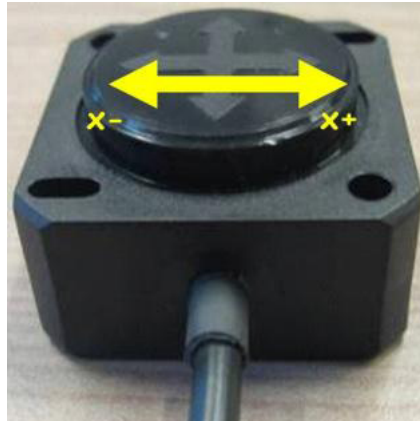
### Ordering Codes



<sup>1</sup> External reset requires an optional external configurator box

Mounting Orientation

Fig. 2

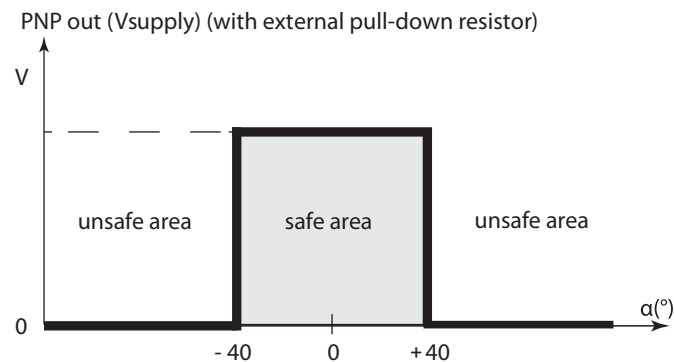


The default 0 ° position is when the switch is mounted horizontally and no acceleration (or tilt) is applied.

When mounting, please ensure sufficient space is left to allow for the cable (not supplied) and connector. Undue stress on the cable and connector should be avoided.

Output Function

Fig. 3



The PNP output is designed to drive up to 2 standard 12VDC mini-ISO automotive relays in parallel, such as the Durakool DG85 series. If driving relays a pull-down resistor is not required. When the switch is in the safe area (tilt angle is less than  $\pm 40^\circ$ ), the output is high and the relay is driven on. If the switch is tilted such that it detects an angle greater than  $40^\circ$  then the output goes low and the relay is turned off.

If the switch is unpowered, the output is off.

Once the switch has detected an over angle, there is a 3 second (optional 1 s) delay and the output goes low and stays low, even if the power to the switch is removed and re-applied. If the reset option is specified, the switch can be reset using a separate “configurator” module. The optional LED illuminates if the switch has detected an over angle and the output is low. The LED will turn off if power to the switch is removed, but will turn on again when power is re-applied (until reset for resettable versions).