

## INTRODUCTION

TEKMEC make series TLS Limit Switches are being manufactured as per rigid quality standards conforming to IS/IEC 60947 (Pt. 5 / Sec. 1). These Limit Switches performs in most contaminated atmosphere.

## KEY FEATURES

- High Accuracy
- Long Electrical / Mechanical Life.
- Protection against oil, dust and other industrial conditions.

## ENCLOSURES

Limit Switches enclosure has been designed for service under most aggressive conditions. A rubber diaphragm with a sealing ring under the push rod guide provides protection against any leakage from this direction. A ridge on the housing along with oil resistant rubber gasket under the cover prevents oil and water seepage. External mounting holes further ensure oil tightness. The enclosure complies with IP65 protection requirement.

## OPERATION

An ingenious design of the limit switch head permits rotation in steps of 90° thus enabling use of the actuating rod from any of the four directions Limit Switch are available with straight as well as angular roller levers. Straight lever is used with horizontal actuator while angular lever for vertical actuator.

## CONNECTIONS

Terminals are suitable for straight end connections for two wires of equal or different sizes.

## HIGH ACCURACY

Close tolerances for push rod guide and contact bridge lead to very high level of accuracy. Position of contacts for the Limit Switches maintained within very fine tolerances even after a large number of operations.

## APPLICATIONS

For optimum utilisation of TEKMEC Limit Switches, appropriate application is very important.

- \* Applied force should not be excessive.
- \* Roller Lever should not be in opposition to the actuating movement.
- \* Push Rod speeds upto 1M/sec are permitted in the direction of stroke.
- \* Speed of moving contacts should not be less than 0.015M/sec for DC
- \* For lower operating speeds, use snap action switches.
- \* Avoid installing Limit Switches in locations subject to heavy vibrations.
- \* Actuator angle can be upto 45° with roller lever with actuation in the direction of roller level.



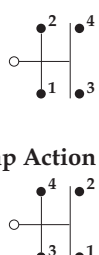
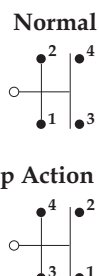
**CONTACT BLOCKS**

Contact Block has 1NO&1NC contact. Contact Blocks can be used as a limit switch by itself in control cabinets and other similar applications. If desired, a transparent cover can be provided over the contact to protect against the dust settling on the contacts. Three types of Contact Blocks are available:

- Normal : for relatively quick operation.
- Snap Action : for slow operation

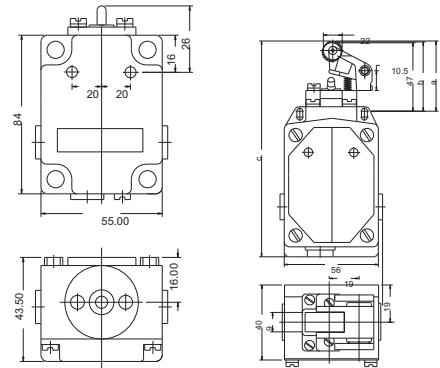
The contacts are made from special silver alloy which ensures satisfactory operation even at low voltages. Contacts are rated at 10 Amp. Contact life when used in AC Circuits is indicated in the Table.

Contact life of snap-action type limit switches is about 70% of the values indicated in the TABLE 1. Contact Blocks can be used upto 500VAC or 600V DC . The rated making capacity of contacts is 90 Amps. The rated breaking capacity of contacts is 90 Amps. The rated breaking capacity for AC circuits upto 500V (40-60 Hz PF 0.3 to 1 AC 11 class) is 30 Amps for snap action switches and 60Amps (upto 440V) for other types of switches. Rated breaking capacity for D.C. Circuits is indicated in TABLE.

CONTACT ARRANGEMENT	TYPE	FORCE REQUIRED AT END STOP WHEN ACTUATED		
		IN DIRECTION OF STROKE APPROX Kg.	IN LATERAL DIRECTION AT PERMISSIBLE ANGLE OF ACTUATION APPROX Kg.	
<b>With Push Rod</b> 	TLS - 000 -0 TLS - 1010-0 TLS - 020-0	1	0.6	
	TLS - 000 -1 TLS - 1010-1 TLS - 020-1	1.5	0.9	
	<b>Normal Roller Lever</b> 	TLS - 100 -0	0.75	9.0
		TLS -100-1	1.2	9.0


Breaking Current Amps.	1	3	6	10
Contact Life Millions of switching cycles	15	5	2.5	1

Breaking Capacity Amps.	VOLTAGE						
			24	110	220	440	600
	Non Inductive Load	Snap Action	7	1.5	0.62	0.28	0.21
		Others	10	2.2	0.9	0.4	0.3
Inductive Load DC11	Snap Action	7	0.91	0.28	0.14	0.1	
	Others	10	1.3	0.4	0.2	0.14	

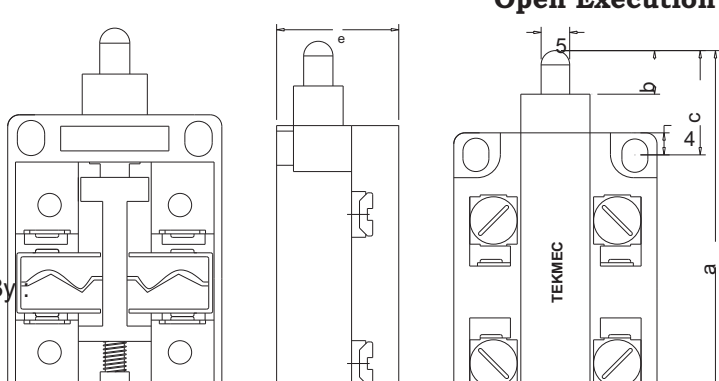


Values of travel and operating force limit switch 2 sets of contact

Mfd. By:



**Open Execution**



TYPE	a	b	c	d	e
TLS 000-1	65	12	21	18	--
TLS 1010-1	65	12	21	18	25