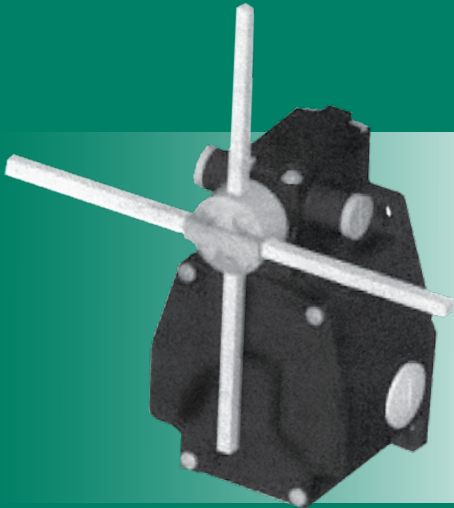


# POSITION LIMIT SWITCHES



**SPRINGER**  
controls company

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**Springer Controls** is the North American distributor for Tecno Elettrica Ravasi (T.E.R.). The Position Limit Switch can be used as control devices for overhead traveling cranes, hoists and machine tools. We offer 3 models; 4 switch (windmill), X-FSC and the X-FRZ. Each style offers outstanding quality, versatile design and rugged dependability.

## POSITION (WINDMILL) LIMIT SWITCHES

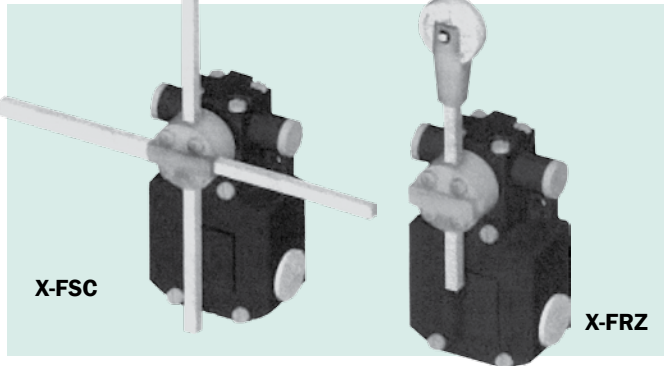
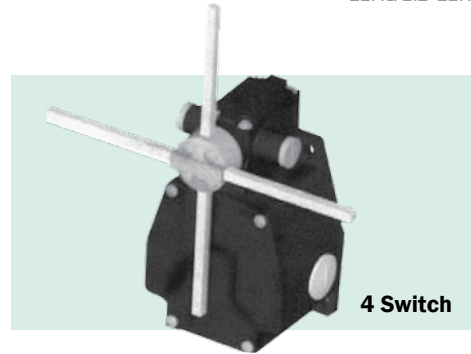
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## GENERAL DESCRIPTION

Position limit switches are control devices for overhead travelling cranes, hoists and machine tools.

They operate as auxiliary controllers of electrical motors through power interfaces, such as controllers or PLCs. Materials and components are wear resistant and protect the equipment against water and dust.

The "4 Switch" limit switch is made of die-cast aluminum and has cross rods which operate 4 switches and move to maintained positions.



Both the enclosure and the head of the X-FSC limit switch are made of plastic (nylon reinforced with fiberglass) and the "T" or "cross" rods may move to 3 or 4 maintained positions.

The X-FRZ limit switch is made of the same plastic, but it features a single rod or a rod with roller with spring return movements.

The limit switches are equipped with 1 N.O. + 1 N.C. snap action switches or, upon request, with 1 N.C. slow action switches. All switches are of the positive opening type, thus suitable for safety functions.

### Technical Specifications

Conformity to Community Directives	73/23/CEE 93/68/CEE
Conformity to Standards	EN 60204-1 EN 60947-1 EN 60947-5-1 EN 60529 EN 50013 IEC 536
Ambient Temperature	Storage; -40°C / +70°C Operational; -25°C / +70°C
Protective Degree	IP 65
Insulation Category	X-FSC and X-FRZ; Class II 4 Switches; Class I
Cable Entry	X-FXC and X-FRZ; cable clamp PG 13,5 4 Switches; cable clamp PG 16
Operating Positions	Any position
Actuating Speed	3m/s max.
Approvals	CE

### Technical Specifications of the Switches

Utilisation Category	AC 15
Rated Operational Current	3 A
Rated Operational Voltage	250V
Rated Thermal Current	10 A
Rated Insulation Voltage	300V ~
Mechanical Life	1 x 10 <sup>6</sup> operations
Terminal Referencing	According to EN 50013
Connections	Screw-type terminals with self-lifting pads
Approvals	CE UL (c)UL

### Actuating Dimensions

<b>"T" rods - Cross rods with 3 maintained positions</b>	
Pre-travel angle for contact operation	70° - 49°
Maximum rotation angle	90°
Average angle for the mechanical tripping	48°
<b>Rod - Rod and roller</b>	
Pre-travel angle for contact operation	24°
Maximum rotation angle	65°
<b>Cross rods with 4 maintained positions</b>	
Pre-travel angle for rotation contact operation	49°
Maximum rotation angle for each maintained position	90°
Average angle for the mechanical tripping	48°
Maintained positions each	90°

Series	Control Element	Positions	Actuating Travel	Catalog No.	Price						
4 Switches	Cross Rods	4 maintained		PF26755100	\$821.00						
X-FSC	"T" Rods	3 maintained		PF33710100	\$463.00						
	Cross Rods	3 maintained	3 maintained		PF33714200	\$463.00					
				4 maintained			4 maintained	4 maintained		PF33752100	\$507.00
X-FRZ	Rod	Spring Return		PF33700100	\$449.00						
			Rod & Roller			Spring Return	Spring Return		PF33702200	\$470.00	

