

# SCHMERSAL Heavy Duty Limit Switches

## Cast Iron Limit Switches 250 Series

### Overview

The Schmersal heavy duty cast iron limit switches offer a variety of actuator options, including side rotary levers with metal or plastic rollers, metal belt alignment rollers, or high-temperature models with metal rollers. They are IP65, IP66, and IP67 rated and have up to 2 conduit entries.

Belt alignment switches are actuated when the conveyor belt becomes misaligned. Depending on the plant arrangements, this signal can be used to switch the equipment off or to provide automatic correction of the belt alignment. The actuator arm contains a heavy duty roller and can be actuated to either side. Material handling applications often need special purpose switches for belt alignment. Many feature the heavy duty limit switch housings with uniquely designed actuators for these purposes.

### Features

- Cast iron enclosure
- (2) M25 x 1.5 cable entry connection
- Available in snap action and slow action contacts
- IP65 IP66 IP67 protection rating
- High temperature models available -40 to 200°C [-40 to 392°F]



**MD250-11Z**



**TD250-02/02Z-RMS**



**M.250-22Z-1224**



**TD250-10/10Z-T**

### Cast Iron Limit Switches 250 Series

Part Number	Price	Actuator Type	Snap Action Contacts	Slow Action Contacts	Travel Diagram	Total Travel	Actuating Force (min)	Weight (lbs)	Drawing Link
<a href="#"><u>MD250-11Z</u></a>	\$513.00	Side rotary lever with plastic roller	(1) N.O./(1) N.C.	—	1	90°	40N	8.5	<a href="#"><u>PDF</u></a>
<a href="#"><u>MD250-22Z</u></a>	\$608.00		(2) N.O./(2) N.C.	—	2			8.75	<a href="#"><u>PDF</u></a>
<a href="#"><u>TD250-02/02Z</u></a>	\$579.00		—	(2) N.C. left and (2) N.C. right	3			9.66	<a href="#"><u>PDF</u></a>
<a href="#"><u>TD250-11/11Z</u></a>	\$579.00		—	(1) N.O./(1) N.C. left and (1) N.O./(1) N.C. right	4			9.17	<a href="#"><u>PDF</u></a>
<a href="#"><u>TD250-02Z</u></a>	\$490.00		—	(2) N.C.	5			9.66	<a href="#"><u>PDF</u></a>
<a href="#"><u>TD250-02/02Z-RMS</u></a>	\$579.00	Side rotary lever with metal roller	—	(2) N.C. left and (2) N.C. right	3			10.19	<a href="#"><u>PDF</u></a>
<b>Belt Alignment Models</b>									
<a href="#"><u>M.250-11Z-1224</u></a>	\$747.00	Side rotary lever with metal belt roller	(1) N.O./(1) N.C.	—	1	90°	40N	9.74	<a href="#"><u>PDF</u></a>
<a href="#"><u>M.250-22Z-1224</u></a>	\$841.00		(2) N.O./(2) N.C.	—	2			9.71	<a href="#"><u>PDF</u></a>
<a href="#"><u>T.250-02Z-H-966</u></a>	\$708.00		—	(2) N.C.	5			8.37	<a href="#"><u>PDF</u></a>
<b>High Temperature Models</b>									
<a href="#"><u>TD250-10/10Z-T</u></a>	\$581.00	Side rotary lever with metal roller	—	(1) N.O. left and (1) N.O. right	6	90°	40N	9.62	<a href="#"><u>PDF</u></a>
<a href="#"><u>MD250-11Z-T</u></a>	\$580.00		(1) N.O./(1) N.C..	—	1			8.64	<a href="#"><u>PDF</u></a>

# SCHMERSAL Heavy Duty Limit Switches

## Cast Iron Limit Switches 250 Series Specifications

Series	Snap Action		Slow Action
Impact Energy (maximum)	7 J		
Actuating Speed (maximum)	3 m/s		
Enclosure Material	Cast iron (galvanized and painted)		
Contact Material	Gold-plated silver		
Thermal Current	16A		
Short Circuit Current	1,000A		
Bounce Duration (maximum)	5ms		
Switching Frequency (maximum)	3,000/h		
Switchover Time (maximum)	35ms		
Rated Impulse Withstand Voltage	4kV	6kV	
Electrical Data - Contacts	Voltage AC-15	400 VAC ( M.250-11Z-1224 and MD250-11Z 230 VAC)	
	Current AC-15	4A ( M.250-11Z-1224 and MD250-11Z 2.5 A)	
Contact Type	Snap action: change-over contact, up to 250 V, with 2 galvanic separated contact bridges		Slow action: change-over contact, up to 250 V, with 2 galvanic separated contact bridges, positive break NC contacts A
Conduit Entrance	(2) M25 x 1.5 cable entry		
Connection	Screw terminals M 3.5 2.5 mm <sup>2</sup> (including conductor ferrules)		
Torque Requirements	1N•m		
Mechanical Life	5 million operations	10 million operations	
Degree of Protection	IP65 IP66 IP67		
Temperature Range	-30 to 90°C [-22 to 194°F] TD250-10/10Z-T, and MD250-11Z-T -40 to 200°C [-40 to 392°F]		
Agency Approvals*	cULus E57648, CE		

\*To obtain the most current agency approval information, see the Agency Compliance & Certifications Checklist section on the specific part number's web page.

## Travel Diagrams

Diagram 1  
Snap Action  
1 N.O. / 1 N.C.

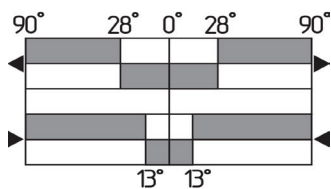


Diagram 2  
Snap Action  
2 N.O. / 2 N.C.

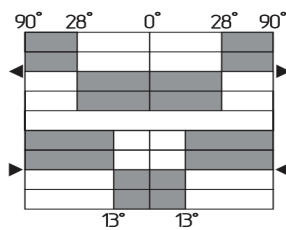


Diagram 3  
Slow Action  
2 N.C. Left, 2 N.C. Right

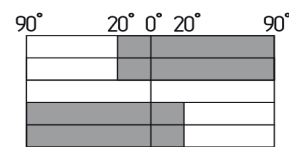


Diagram 4  
Slow Action  
1 N.O. / 1 N.C. Left  
1 N.O. / 1 N.C. Right

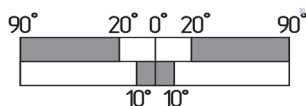


Diagram 5  
Slow Action  
2 N.C.

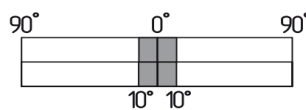


Diagram 6  
Slow Action  
1 N.O. Left / 1 N.O. Right

