



Precision Limit Switches

Mini Stopper Precision Limit Switches

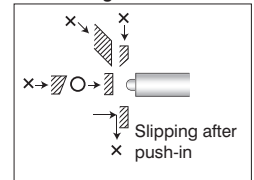
Overview

Precision stopper limit switches incorporate a mechanical stop and a limit switch function in a single switch, eliminating the need for a separate stop.

Features

- Mini Stopper switch
- Provides higher contact force ideal for indexing/positioning
- 10 micron (μm) repeat accuracy
- No movement differential
- No temperature drift

Straight Touch

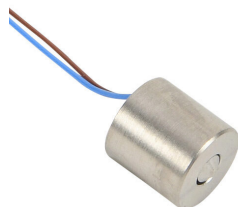


O indicates correct target approach and orientation. X indicates approach and orientation that should be avoided.

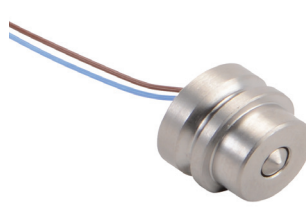
Mini Stopper Precision Limit Switches Selection Chart

Part Number	Price	Drawing Link	Actuator/Head Type*	Barrel Type	Barrel Diameter/Thread	Stroke	Switching Output	Contact Force	Connection Type
STM11A		PDF	Ø 3mm plunger, 8mm flat	Smooth	Ø8	0.5mm	(1) N.O.	0.8N	Core wire, 0.5m [1.6ft]
STM13A		PDF	Ø 3mm plunger, 8mm flat	Smooth	Ø10	0.5mm		0.8N	
STM31A		PDF	Ø 3mm plunger, 8mm flat	Threaded	M10×0.75	0.5mm		0.8N	
STM32A		PDF	Ø 3mm plunger, 8mm flat	Threaded	M10×0.75	0.5mm		0.8N	Cable, 2m [6.5ft]
STM33A		PDF	Ø 3mm plunger, 13mm flat	Threaded	M10×1.5	0.5mm		0.8N	Core wire, 0.5m [1.6ft]
STM34A		PDF	Ø 3mm plunger, 8mm flat	Threaded	M10×1.5	0.5mm		0.8N	Cable, 2m [6.5ft]
STM63A		PDF	Ø 3mm plunger with boot, Ø 2.5mm	Smooth	Ø11	0.3mm		1N	Core wire, 0.5m [1.6ft]
STM81A		PDF	Ø 3mm plunger with boot, Ø 2.5mm	Threaded	M10×0.75	0.3mm		1N	
STM83A		PDF	Ø 3mm plunger with boot, Ø 2.5mm	Threaded	M10×1.5	0.3mm		1N	
STM14A-L		PDF	Ø 3mm plunger, 8mm flat	Smooth	Ø10	0.5mm		0.8N	Cable, 2m [6.5ft]
STM36A-L		PDF	Ø 3mm plunger, 4.5mm flat	Threaded	M10×0.75	0.5mm		0.8N	
STM64A-L		PDF	Ø 3mm plunger with boot, Ø 2.5mm	Smooth	Ø11	0.3mm		1N	
STM32A-L		PDF	Ø 3mm plunger, 8mm flat	Threaded	M10×0.75	0.5mm		0.8N	
STM82A-L		PDF	Ø 3mm plunger with boot, Ø 2.5mm	Threaded	M10×0.75	0.3mm		1N	
STM34A-L		PDF	Ø 3mm plunger, 13mm flat	Threaded	M10×1.5	0.5mm		0.8N	
STM84A-L		PDF	Ø 3mm plunger with boot, Ø 2.5mm	Threaded	M10×1.5	0.3mm		1N	

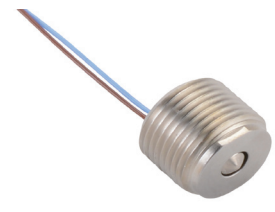
* Ø = diameter



STM11A



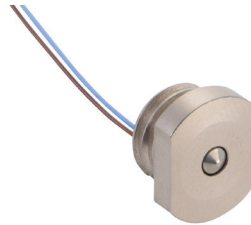
STM13A



STM31A



STM32A



STM33A



STM34A

METROL Precision Limit Switches

Mini Stopper: STM Series



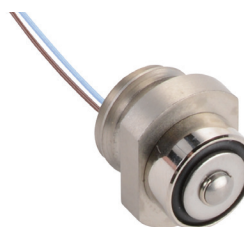
STM36A-L



STM63A



STM81A



STM83A



STM14A-L



STM64A-L



STM32A-L



STM82A-L



STM34A-L



STM84A-L



Precision Limit Switches

Mini Stopper Precision Limit Switches Specifications

Series	STM
Environmental	
Degree of Protection	IP44 (STM11A, STM13A, STM31A, STM32A, STM33A, STM34A, STM14A-L, STM32A-L, STM34A-L) IP67 (STM63A, STM81A, STM83A, STM64A-L, STM82A-L, STM84A-L)
Temperature Range	Operating: 0 to 80°C [32 to 176°F] (Ice-free)
Mechanical Ratings	
Enclosure Material	Stainless Steel
Torque (for nuts on threaded barrels, set screws on smooth barrels)	10Nm
Vibration	10–55Hz total amplitude 1.5 for X, Y, Z each direction
Shock	300 m/s ² for X, Y, Z each direction
Withstand Load	3000N
Repeat Accuracy	Both On→Off, Off→On/ 0.01 (range) (At operating speed 50-200mm/min) *
Recommended Minimum Operating Speed	50mm [1.96in]/minute
Electrical Ratings	
Contact Life	10 million (No bounce caused by vibration and use under contact rating)
Impact Resistance	0.2J
Contact Voltage	5–24VDC
Steady Current Rating	10mA or less
Max In-rush Current Rating	20mA without LED indicator, 10mA with LED indicator
Connection Type	Standard length 2m or 0.5 m Oil resistant 2.8 / 2 cores, Tensile strength 30N, minimum bending R7
Indicating	-L models: LED indicator (mounted in cable 120mm from the switch)

* At operating speed 50-200 mm/minute. Operating speed slower than 10 mm/min is not recommended.

Circuit Diagrams

Without LED	With LED (-L models)
<p>Normally open (N.O.)</p>	<p>Normally open (N.O.)</p> <p>LED Normally Off</p>