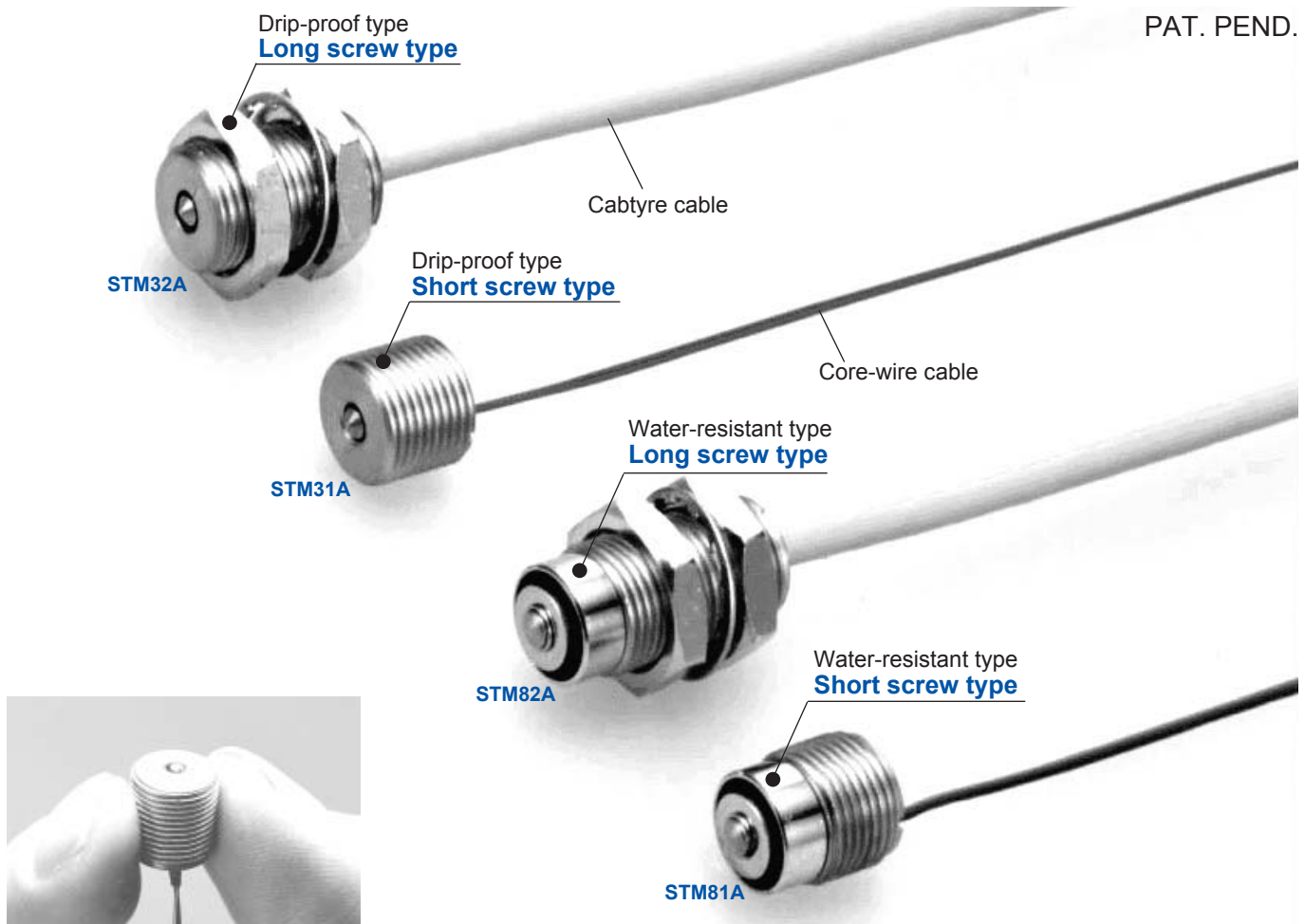


Stopper Mini with Sensors (Contact type)

PAT. PEND.



$\phi 8 \times 8$ size for space-saving installation

Mini Sensor with Stopper Featuring excellent durability

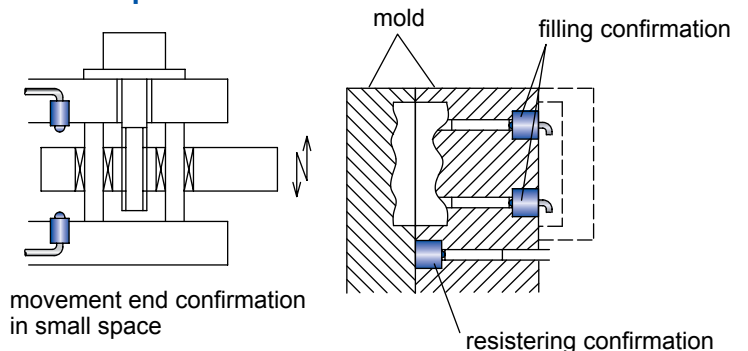
Compatible with a wide range of applications such as control signals and discrimination of physical quantities (weight, force, pressure) that can be converted to length by installing in automated equipment.

Rugged design and high durability

The movable parts of the contacts are not affected by friction due to the use of a leaf spring.

The result is contact life able to withstand more than 10 million operations. HRC45 hardened steel is used for the stopper surface, delivering a static load capacity of 300 kg.

■ Example



Specifications

Mechanical Standard Specification

unit : mm

Type	Drip-proof type		Water-resistant type	
	Short	Long	Short	Long
Mode	A : NO(normally open)			
Repeatability	0.01			
Protective structure	IP44(IP67 when used downward)		IP67	
Stroke	0.5		0.3	
Pretravel	0.25		0.15	
Stopper surface	Outside		Inside of rubber boot	
Contact force	0.8 N		1 N	
Static load resistance	3000N on the whole stopper surface		3000N	
	1500N when the detecting surface is $\phi 6$ or less			
Shock resistance	0.2J			
Contact material	SUS HRc 50 or more			
Stopper material	SUS HRc 45			
Cable	Short type : 0.5m core-wire $\phi 0.6 \times 2$			
	Long type : 2m Cabtyre cable(oil-resistant) 2-core $\phi 3$			

Common Mechanical Specification

Working temperature range : 0 ~ 80°C
Contact life : 10 million times



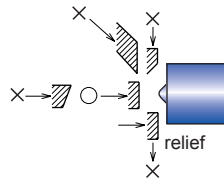
Orders for heat-resistant (ambient temperature: 200°C) and sensors provided with vacuum, non-magnetic and other special specifications are also accepted. Please consult your dealer.

Electrical specifications and Circuit diagram P5

Precaution for use

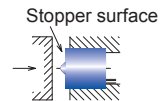
How to apply detecting objects

- Apply detecting objects, at right angles, to switches other than STM35 and STM36. They may break if levers, etc., are applied as they are inclined or slid.



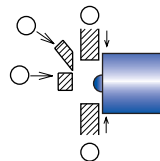
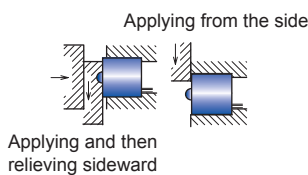
How to install

- Use the stopper surface as a stopper (when using within the static load resistance).

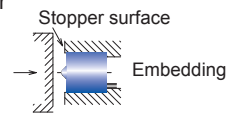


- Ball contact type (STM35A and STM36A)

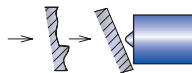
Can also be used for sideward sliding.



- When the specified static load resistance is exceeded, embed in a larger, rugged stopper surface (to be prepared by the customer) for use.



- Be aware that if the detecting surface is inclined or dented, the contact may not be depressed, resulting in no output of seating signals, or breakage may occur.



- Do not force the tip of the contact of the drip-proof type deeper than the stopper surface.
- Be aware that the short type core-wire cable is weak in tensile strength (less than 15N).
- Unusable in harsh environments subject to the presence of cuttings.

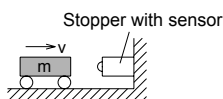
Expression to calculate shock resistance energy

Pure inertia collision

$$E = 1/2mv^2$$

m : Mass(kg)

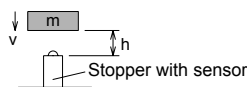
v : Speed(m/s)



Vertical free fall

$$E = mgh$$

g: Gravitational acceleration(9.8m/s²)
h : Dropping height(m)



example of calculation

m	v	1/2mv ² [J]
4	0.3	0.18
5	0.4	0.4

example of calculation

m	h	v = $\sqrt{2gh}$	mgh[J]
0.4	0.05	1	0.2
0.4	0.1	1.4	0.4