MAYSER®

Innovative by tradition.

Pressure-sensitive surface sensor

EN | Product information

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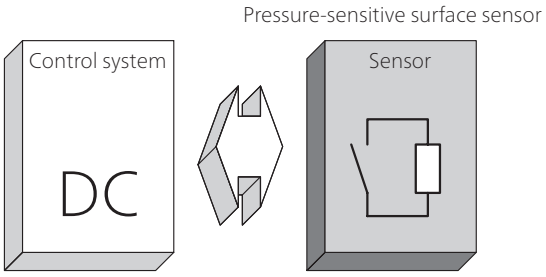
Area of application

Thanks to its flexible geometry and customizable shape, the pressure-sensitive surface sensor can be optimally integrated into medical devices in a visually unobtrusive way – by acting as an "invisible" safety cover.
The tried-and-tested technology of the pressure-sensitive surface sensor makes it absolutely ideal for protective devices up to Category 3 PL d. It responds whenever the slightest pressure is applied to its surface. The advantage of triggering it in this way is that the pressure-sensitive surface sensor always functions reliably regardless of the material from which the triggering object is made.
A custom finish can be applied to the pressure-sensitive surface sensor, which is good to know when you consider how important this is for the health care sector. This does not affect the functionality in any way.

The principle

Inside the pressure-sensitive surface sensor, there is a NO contact with a defined terminal resistance. When slight pressure is applied, it actuates the pressure-sensitive surface sensor, causing a significant change in the resistance at the sensor output. The higher-level control system (DC) evaluates the change in the output signal and either initiates a STOP or reverses the colliding movement.

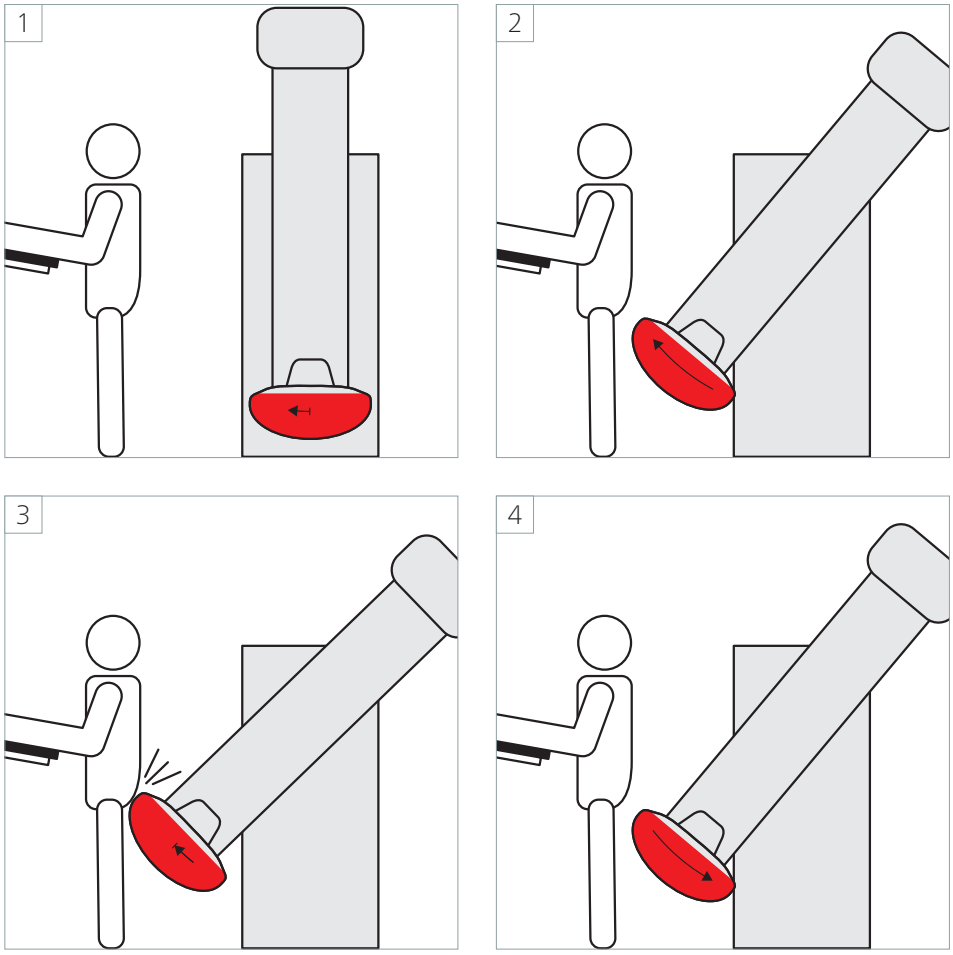


Examples

The pressure-sensitive surface sensor is used on medical diagnostic equipment such as radiology scanners in operating environments.
In this context, it is typically used to prevent patients from being crushed or to avoid damaging collisions with other objects.

Function

The product can be optimally integrated in a visually unobtrusive way (invisibly) to serve as a locally deformable pressure-sensitive surface sensor. The exertion of the slightest pressure on the sensor is sufficient to cause a significant change in the signal at the sensor output. The output signal is evaluated in the higher-level control system (DC). There, a STOP is initiated or the colliding movement is reversed.



Maintenance and cleaning

The surface sensor is virtually maintenance-free.
We recommend carrying out a functional check and inspecting the product for damage on a daily basis.

The surface sensor is cleaned in the same way as the device into which it is integrated.

Technical data

Pressure-sensitive surface sensor	
Function	
In accordance with	ISO 13856-3
Triggering with test piece (cylinder) Ø 80 mm	20 to 150 N
Overtravel distance at 50 mm/min up to 250 N (B1)	(Depending on geometry) Approx. 2 mm
Safety classification	
ISO 13849-1:2015	Category 1 (Sensor only)
ISO 13856-3: switching operations	>10,000
Service life	10 a
Design	
Moulded	Customizable/freely selectable
Electrical operating conditions	
Connecting voltage	DC 24 V
Switching voltage	DC 24 V
Switching current (min./max.)	1 mA / 10 mA
Connector plug	Freely selectable
Mechanical operating conditions	
Fixing, mounting aid	Acc. to customer requirements (e.g. snap connections)
IEC 60529: degree of protection	IP67
Operating temperature	+20 to +70 °C
Storage temperature	–20 to +70 °C
Weight	Depends on component geometry
Special features	
	• Custom finish (e.g. antibacterial coating) • Freely selectable lettering
Conformity	
RoHS	Yes
REACH	Yes
Others	UL 94; EMC

At a glance

- Responds to slight pressure
- Highly integrated: "invisible" safety cover
- Custom finish
- Tried-and-tested, reliable technology
- Evaluation performed by customer's own control system