



**IDEM SAFETY**  
Making Industry Safer

**SENSORmATIC**  
SPECIALIST&SOLUTIONS

Achieve the Highest Safety Level

**PLe, Category4, SIL3, Type4**



# MLZ, MPZ & MMZ Advanced RFID Safety Interlock Devices

Product Overview Brochure

# MLZ HYGIENIC RFID SAFETY LOCKING SWITCH

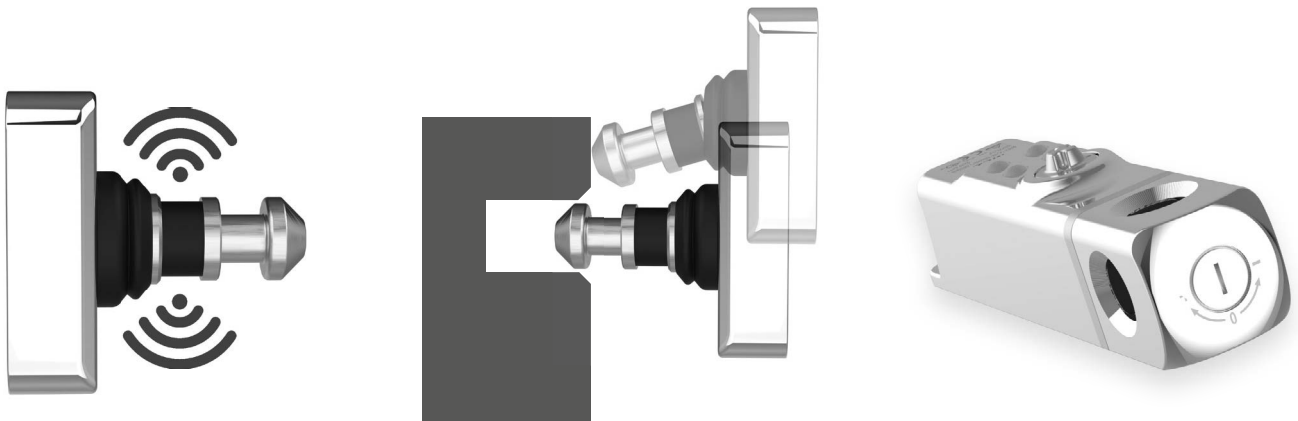


## Small but mighty.

The MLZ is a compact 30mm-wide hygienic safety locking switch housed in mirror polished 316 stainless steel. It features versatile mounting with 3 RFID coded entry points. The device's super-compact size means it is compatible with the narrowest of machine guard rails and requires no mounting plate, making it simple to install and maintain.

The MLZ's diminutive size belies its strength and durability, with an impressive **4000N holding force** when locked.

Tested to **IP67 and IP69K** and suitable for SIP and CIP cleaning, this robust interlock is ideal for outdoor use as well as for strict washdown environments, particularly food contact, beverage, and pharmaceutical manufacturing.



The unique actuator design features a built in RFID tag that can be activated from 3 switch positions. It is compatible with both sliding and hinged guards for full flexibility when mounting.

The RFID actuation meets the requirements of High Level Coding to ISO 14119.

The MLZ Actuator has been designed with a high degree of tolerance to misaligned guards. The tongue is spring loaded and features a smooth surface for easy actuation.

The switch has three beveled entry points for reduced entry friction.

The MLZ features an adjustable latch mechanism which ensures smooth unlocking, even with heavy guard doors.

Reduces the likelihood of nuisance tripping.

# MLZ HYGIENIC RFID SAFETY LOCKING SWITCH



## Connectivity made simple.

The MLZ can be wired in series up to 30 devices maintaining **CAT4, SIL3, PLe**. The **OSSD outputs** simplifies wiring of multiple MLZ's, reducing the number of safety outputs down to a single pair back to the safety controller.

The simple to understand LED indication displays the input and output status, for quick identification of faults.



The MLZ features a robust, 316 stainless steel actuator that can withstand up to **4000N holding force** on 3 faces.

The RFID coded sensor is enclosed within the plunger, reducing the likelihood of nuisance tripping.

## Seamless Integration.

The MLZ's compact design and 3-way head actuation means it can be integrated onto any machine guard door. The flexible actuator and adjustable latch mechanism supports misaligned guards.



# MLZ HYGIENIC RFID SAFETY LOCKING SWITCH

## Additional Features and Accessories.

The MLZ is available with a range of features and accessories to help with installations. Rear escape functionality combined with handle accessories are a great way to improve operator safety whilst simplifying the installation and maintenance.



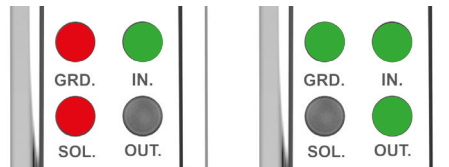
### Simple to Install.

The MLZ has a compact, 30mm profile for seamless integration onto 30x30 and 40x40 extrusion. The fixing points are central, requiring x2 M5 Torx security screws to securely mount the MLZ to the guarding.



### Intuitive Indication.

Easily recognise all device states with the bi-colour LED indicators. Simple fault diagnosis with input/output indicators.



### Hygienic Design.

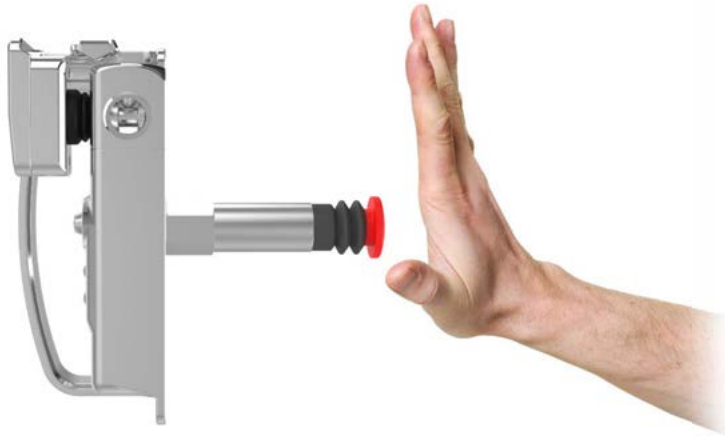


The MLZ is manufactured from 316 grade stainless steel with a mirror polished finish. The smooth surface and rounded edges make cleaning easier, reducing the likelihood of bacteria build-up.



Laser etched markings.

# MLZ HYGIENIC RFID SAFETY LOCKING SWITCH



## Reliable escape release.

Rear escape functionality allows the operator to override the MLZ from inside the hazardous area, providing a safe and reliable means of escape.

Manufactured from stainless steel, it is suitable for high impact scenarios.

The red button is highly visible, for quick identification in the event of an emergency.

## Hinged Door Handle (coming soon)

The MLZ hinged door handle has been designed with a non-latching operation. Where sliding handles require a secondary motion to open, this product requires only a single action from both outside and inside the guarded area.

The button on the handle is used to prevent the door re-latching automatically. Pressing the button lifts the catch, allowing the guard to close.

## Sliding Door Handle

The MLZ sliding door handle is manufactured from robust stainless-steel and features a heavy-duty shock bolt capable of supporting up to 10,000N lateral load. The handle has 4 padlock holes to support lock-out-tag-out procedures.

The front entry point on the switch is covered when closed to protect against external tampering.



The rear release button is sold separately and can be fitted by the end user after purchasing.





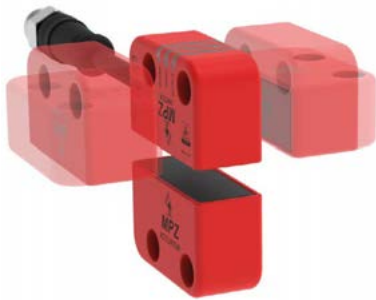
# MPZ RFID NON-CONTACT SAFETY SWITCH

The MPZ is a compact and versatile RFID safety switch suitable for monitoring doors, gates and other moveable safeguards which demand a high degree of manipulation protection.

The integrated **OSSD outputs** are suitable for series connection up to 30 sensors, maintaining **CAT4, SIL3, PLe** in accordance with the latest international safety standards.

The RFID coding is available in **any code** or **unique code**, fulfilling the requirements of **Type 4, High Level Coding** in accordance with **EN ISO 14119**.

Any Coding	Unique Coding
Any actuator will work at any time.	Factory paired, reattach procedure available up to 7 times.



## FLEXIBLE ACTUATION

- The RFID signal is projected on three sides.
- Provides safe operation on five different operating directions, ideal for most guard doors.

## SCREW CAP COVERS

- Included with every MPZ purchase.
- Provides an extra level of protection against tampering and contaminants.

## VERSATILE MOUNTING

- Symmetrical design supports both left- and right-hand cable runs.
- Compact housing with industry standard 22mm fixing holes.

## VISIBLE INDICATORS

The LED lens is moulded directly into the switch body, providing a smooth surface finish suitable for wet and dusty environments.

The lens wraps around the body for full visibility of all device states. The indication is easily recognisable, improving both product diagnosis and maintenance.



# MMZ HYGIENIC RFID NON-CONTACT SAFETY SWITCH



The MMZ is the world's smallest RFID safety switch in mirror polished 316 stainless-steel. It is suitable for monitoring doors, gates and other moveable safeguards in rigorous washdown environments.

The integrated **OSSD outputs** are suitable for series connection of up to 30 sensors, maintaining **CAT4, SIL3, PLe** in accordance with the latest international safety standards.



Other than the switching characteristics, the MMZ shares all the same benefits as the MPZ.

- RFID Coded Actuator
- Mounting on both sides
- Highly visible LED
- OSSD Outputs



We understand the rigorous cleaning processes involved in high hygiene environments. With that in mind, the MMZ has been designed with an innovative 2-stage wrap-around poly carbonate lens. This provides a perfectly smooth exterior, free from all contamination traps.

The MMZ is tested to IP67 and IP69K and suitable for SIP and CIP cleaning processes.

It is also suitable for outdoor use as well as strict washdown environments, particularly food, beverage, and pharmaceutical manufacturing.



The MMZ ensures reliable switching due to wide sensing distance.



# MLZ PRODUCT SELECTION



Connection Type	Locking Type	Part No.	Part Description	Actuator
Standard Cable (5m, 8-Core)	Power-to-Unlock	470001	MLZ 24Vdc RFID Locking Switch OSSD IP69K 5m Cable	Yes
Standard Cable (10m, 8-Core)	Power-to-Unlock	470002	MLZ 24Vdc RFID Locking Switch OSSD IP69K 10m Cable	Yes
M12 Connector (8way, 250mm Pigtail)	Power-to-Unlock	470003	MLZ 24Vdc RFID Locking Switch OSSD IP69K QC-M12	Yes



**Require rear escape functionality?**



Part No.	Part Description
470401	Rear Escape Mechanism (90mm)



**Make your install easier with our range of handle accessories.**



Handle Type	Opening	Part No.	Part Description
Sliding	Left- and Right-Hand	470402	Sliding Handle in 316 Stainless Steel
Spring Catch for Sliding Handle	-	470403	Spring Catch to Stop Re-Latching
Hinged	Left- and Right-Hand	470410-L 470410-R	Hinged Handle in 316 Stainless Steel



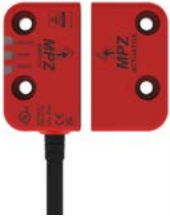
**Connectivity made simple.**



Connection Type	Part No.	Part Description
8-way M12 Connection Block, 2 x OSSD Outputs, 8 x Auxiliary Outputs, 8 x Solenoid Control Inputs	140210-Z	8 Port M12 Connection Box Z Range
Patch Cord M12 8way Male to Female	140201 140202 140203	Patch Cord M12 Male to Female 2m Patch Cord M12 Male to Female 5m Patch Cord M12 Male to Female 10m
T-Port Connector M12 8way	140206	T-Port M12 Connector
M12 8way Shorting Plug for terminating used ports	140207	M12 Short Plug
M12 8way 5m Lead M12 8way 10m Lead	140101 140102	M12 8way Female Lead 5m M12 8way Female Lead 10m



# MPZ / MMZ PRODUCT SELECTION



Connection Type	Material	Part No.	Part Description	Actuator
Standard Cable (5m, 8-Core)	Red Polyester	417002	MPZ-A RFID Safety Switch OSSD 5m Cable (Any Code)	Yes
Standard Cable (10m, 8-Core)	Red Polyester	417003	MPZ-A RFID Safety Switch OSSD 10m Cable (Any Code)	Yes
M12 Connector (8way, 250mm Pigtail)	Red Polyester	417004	MPZ-A RFID Safety Switch OSSD QC-M12 (Any Code)	Yes
Standard Cable (5m, 8-Core)	Red Polyester	417102	MPZ-U RFID Safety Switch OSSD 5m Cable (Unique Code)	Yes
Standard Cable (10m, 8-Core)	Red Polyester	417103	MPZ-U RFID Safety Switch OSSD 10m Cable (Unique Code)	Yes
M12 Connector (8way, 250mm Pigtail)	Red Polyester	417104	MPZ-U RFID Safety Switch OSSD QC-M12 (Unique Code)	Yes



**Do you require Stainless Steel?**



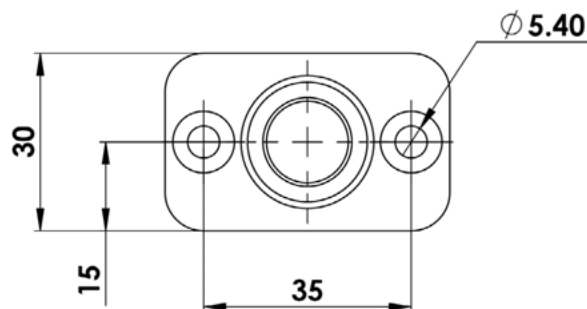
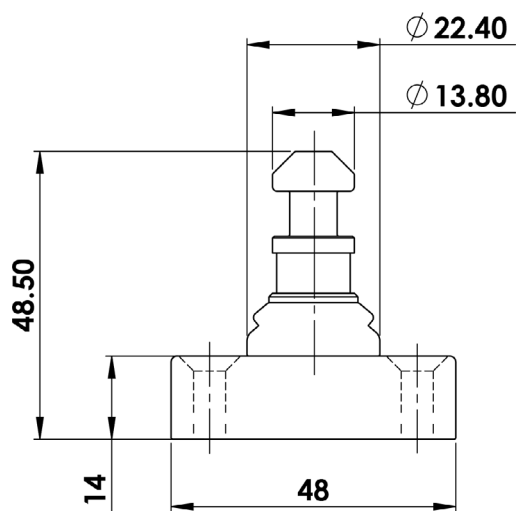
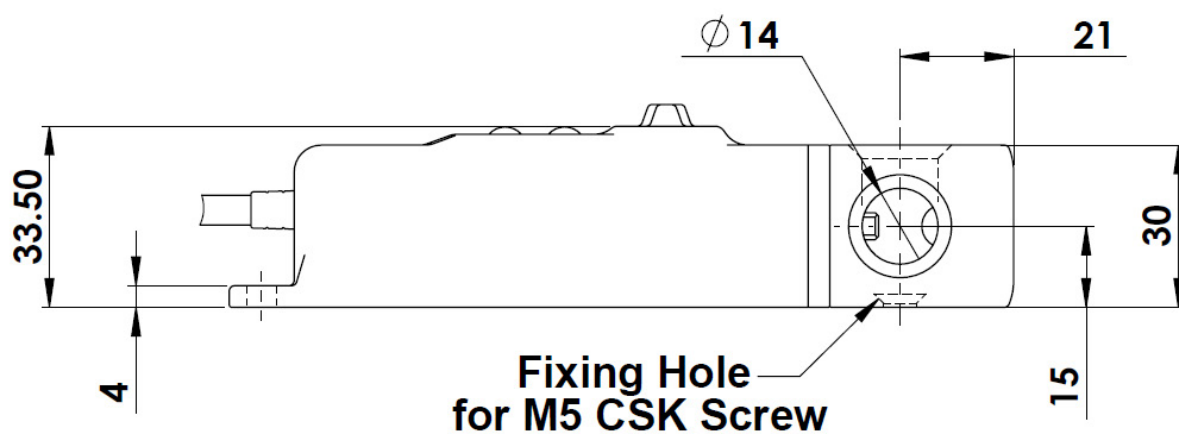
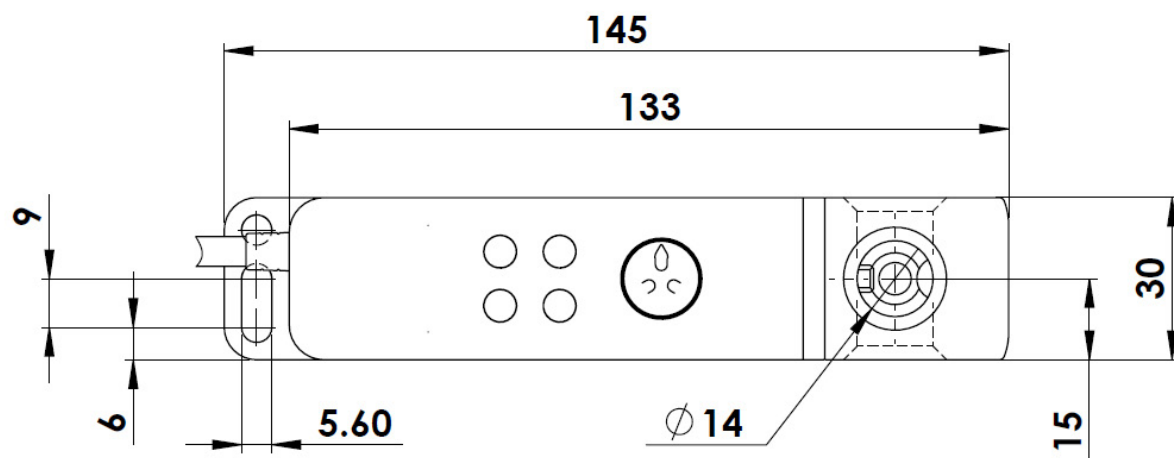
Connection Type	Material	Part No.	Part Description	Actuator
Standard Cable (5m, 8-Core)	316 Stainless Steel	418002	MMZ-A RFID Safety Switch OSSD 5m Cable (Any Code)	Yes
Standard Cable (10m, 8-Core)	316 Stainless Steel	418003	MMZ-A RFID Safety Switch OSSD 10m Cable (Any Code)	Yes
M12 Connector (8way, 250mm Pigtail)	316 Stainless Steel	418004	MMZ-A RFID Safety Switch OSSD QC-M12 (Any Code)	Yes
Standard Cable (5m, 8-Core)	316 Stainless Steel	418102	MMZ-U RFID Safety Switch OSSD 5m Cable (Unique Code)	Yes
Standard Cable (10m, 8-Core)	316 Stainless Steel	418103	MMZ-U RFID Safety Switch OSSD 10m Cable (Unique Code)	Yes
M12 Connector (8way, 250mm Pigtail)	316 Stainless Steel	418104	MMZ-U RFID Safety Switch OSSD QC-M12 (Unique Code)	Yes

**Connectivity made simple.**

Did you know you can connect all IDEM Z-range products together?

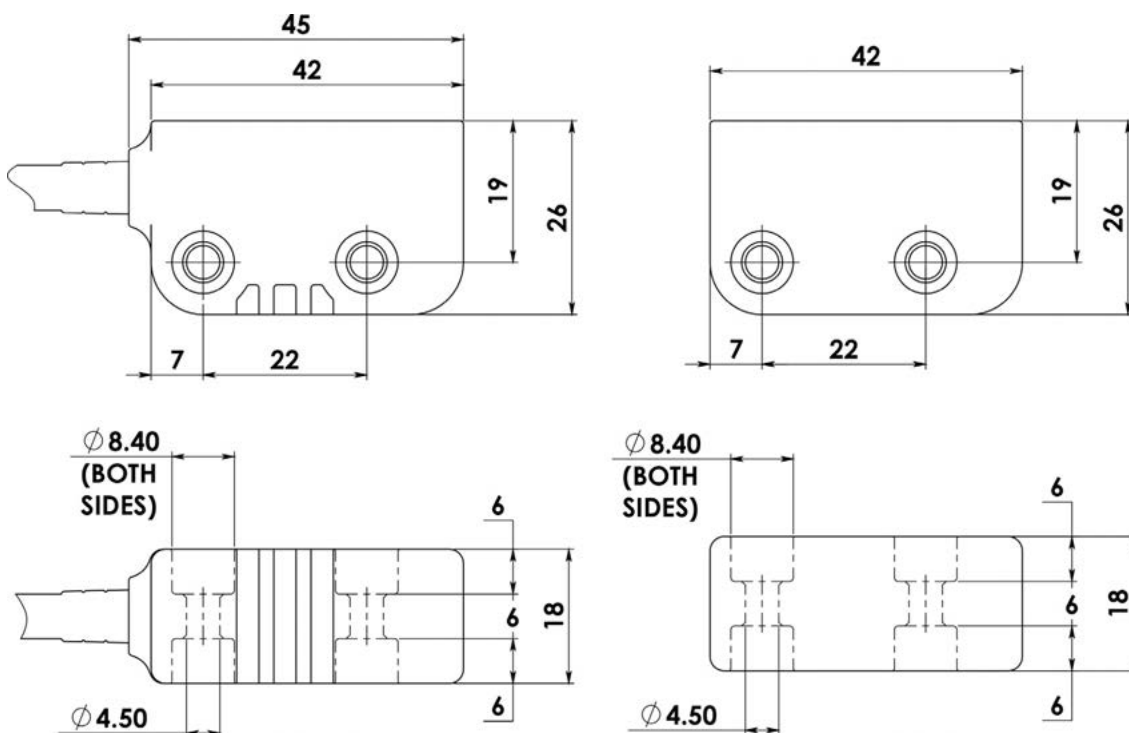


# MLZ DIMENSIONS

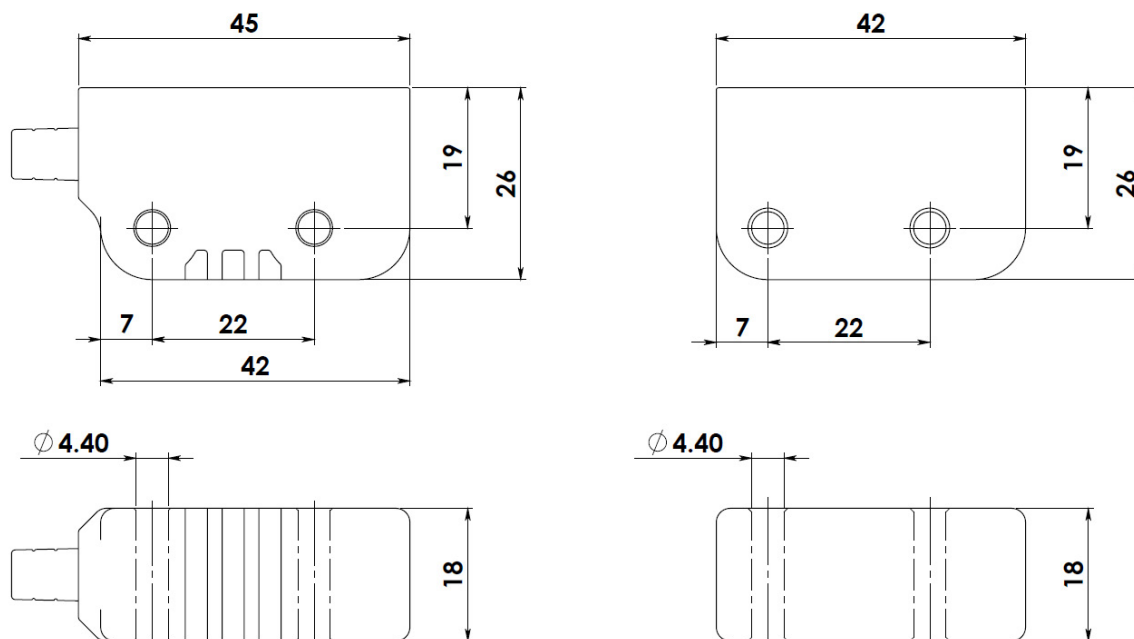


# MPZ / MMZ DIMENSIONS

## MPZ



## MMZ



# TECHNICAL SPECIFICATIONS

<b>Standards</b>	IEC 60947-5-3; ISO 13849-1; IEC 62061; IEC 61508	
<b>Power Supply Circuit</b>		
Rated operating voltage	SELV/PELV	24 V DC
Operating voltage tolerance		-15% / +10%
Power consumption	No load	25 mA / 0.6 W
Power consumption	MLZ, Solenoid Energised	Peak 6 W, Avg. 2.4 W
<b>Coding and Sensing</b>		
Working principle	RFID - 125 kHz	
Interlock Type	EN ISO 14119	Type 4
Coding Level – Any Code	EN ISO 14119	Low
Coding Level – Unique Code	EN ISO 14119	High
Sao / Sar	MPZ, MMZ	10 mm / 25 mm
Recommended setting gap	MPZ, MMZ	3mm
Tolerance to malalignment	MPZ, MMZ	+/- 5 mm any direction
<b>Input Circuits (Safe Inputs, Solenoid Input)</b>		
Rated voltage	24 V DC	
Input current	24 V DC	3 mA
<b>Output Circuits (OSSD/Safe Outputs, Auxiliary Outputs)</b>		
Output Type	PNP, Short Circuit Proof	
Max. current per output	24 V DC	100 mA
Voltage drop	24 V DC	< 1.5 V
<b>General Data</b>		
Degree of protection	IP67 / IP69K	
Temperature range	-20C + 55C	
Body Material	MPZ	Polyester
	MMZ	316 Stainless Steel
	MLZ	316 Stainless Steel

# sensorMATIC

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