



## Safety sensor 120

The M18 safety sensor is used in food and packaging machines and has a high switching distance of up to 35 mm.

### Technical specifications

- Available connection types: cable outlet and M12 pigtail
- Large switching distances enable concealed installation
- Application-dependent combination of sensor and actuator (e.g. sensor concealed behind stainless steel, actuator in stainless-steel housing in process zone)

### Technical drawing

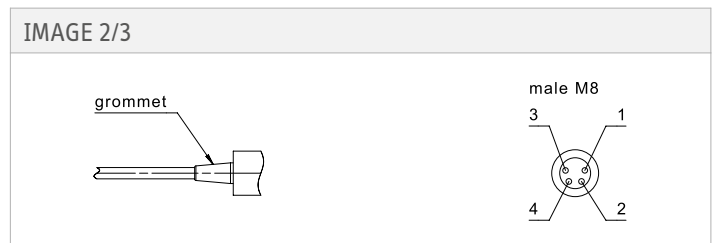
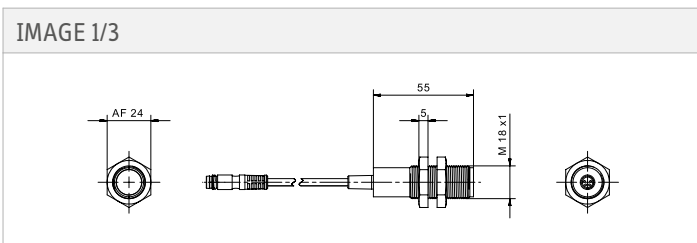
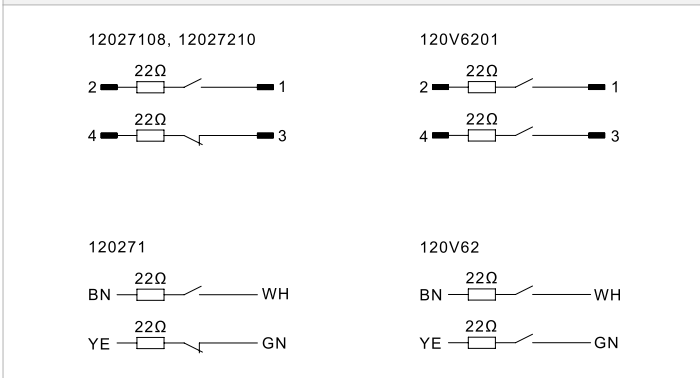


IMAGE 3/3



**Product options**

IMAGE 1/3



Suitable for front actuation. Offset depending on magnet system: max. 2.5 mm to 8 mm. Assured switching distance (Sao) of up to 13 mm with standard actuators, up to 7 mm with extended-range actuators. Assured switch-off distance (Sar) of up to 35 mm with standard actuators, up to 23 mm with extended-range actuators

IMAGE 2/3

**ORDERING KEY**

	120V62	120V6201	120272
Plastic housing M18	x	x	x
M8x1 pigtail and connector, 4-pin	-	x	-
Connection cable 1m*	x	-	x
N.O./N.C. contacts	x	x	-
N.O./N.C. contacts	-	-	x
Coded	x	x	x
Uncoded	-	-	-

	12027210	120271	12027108
Plastic housing M18	x	x	x
M8x1 pigtail and connector, 4-pin	x	-	x
Connection cable 1m*	-	x	-
N.O./N.C. contacts	-	-	-
N.O./N.C. contacts	x	x	x
Coded	x	-	-
Uncoded	-	x	x

\* Other cable lengths, cable materials and connector types on request

IMAGE 3/3

MATCHING ACTUATORS

Actuators	Actuation direction	120V62			120V6201			120272		
		S <sub>0</sub>	S <sub>1</sub>	S <sub>2</sub>	S <sub>0</sub>	S <sub>1</sub>	S <sub>2</sub>	S <sub>0</sub>	S <sub>1</sub>	S <sub>2</sub>
304 200 00	Front	0.5	4	18	0.5	4	18	0.5	4	22
304 200 00 V		0.5	4	18	0.5	4	18	0.5	4	22
304 200 00 H		0.5	4	18	0.5	4	18	0.5	4	22
304 200 00 S		3	7	20	3	7	20	3	7	23
304 200 00 VS		3	7	20	3	7	20	3	7	23
304 200 00 SH		3	7	20	3	7	20	3	7	23
300 785		-	-	-	-	-	-	-	-	-

Actuators	Actuation direction	12027210			120271			12027108		
		S <sub>0</sub>	S <sub>1</sub>	S <sub>2</sub>	S <sub>0</sub>	S <sub>1</sub>	S <sub>2</sub>	S <sub>0</sub>	S <sub>1</sub>	S <sub>2</sub>
304 200 00	Front	0.5	4	22	-	-	-	-	-	-
304 200 00 V		0.5	4	22	-	-	-	-	-	-
304 200 00 H		0.5	4	22	-	-	-	-	-	-
304 200 00 S		3	7	23	-	-	-	-	-	-
304 200 00 VS		3	7	23	-	-	-	-	-	-
304 200 00 SH		3	7	23	-	-	-	-	-	-
300 785		-	-	-	0.5	13	35	0.5	13	35

S<sub>0</sub> = minimum switching distance (mm), S<sub>1</sub> = operating distance (mm), S<sub>2</sub> = assured switch-off distance (mm)

## Electrical data

Attribute	120V6201	12027108	12027210	120V62	120271	120272
Min. switching voltage	19.2 V DC					
Max. switching voltage	28.8 V DC					
Max. switching current	0.1 A					
Max. switching power	3 W					
Switching frequency	5 Hz					
Assured switching distance (Sao)	4 mm	13 mm	4 mm		13 mm	4 mm
Assured switch-off distance (Sar)	18 mm	35 mm	22 mm	18 mm	35 mm	22 mm
Minimum switching distance (SO min)	0.5 mm					
LED display	No					
Actuation	front					
Switching principle	magnetic					
Series resistor	22 Ohm					
Technology	Reed					
Contact form	NO/NO	NO/NC		NO/NO	NO/NC	
Pollution degree	3					
Protection class	III					

## Safety-related characteristics

Attribute	120V6201	12027108	12027210	120V62	120271	120272
Coding acc. to EN ISO 14119	Low					
B10d acc. to EN ISO 13849-1	20000000					
Type acc. to EN ISO 14119	4	3	4		3	4
Mission time in years	20 a					
Structure acc. to EN ISO 13849-1	Two-channel					

## Mechanical data

Attribute	120V6201	12027108	12027210	120V62	120271	120272
Housing design	cylindrical					
Dimensions	M18 x 55 mm					
cannot be mounted flush	yes					
Detent present	no					

## Material information

Attribute	120V6201	12027108	12027210	120V62	120271	120272
Housing material	PBT					
Cable material	PVC					
Nut material	PBT					
Housing colour	schwarz					

## Environmental conditions

Attribute	120V6201	12027108	12027210	120V62	120271	120272
<b>Protection class</b>	IP67 DIN EN 60529					
<b>Protection class, connector</b>	IP67 DIN EN 60529 (geschraubt) - IP65 DIN EN 60529 (gesteckt)			-		
<b>Operating temperature min.</b>	-25 °C					
<b>Max. operating temperature</b>	75 °C					
<b>Min. cable temperature range, moving</b>	-25 °C			-5 °C		
<b>Max. cable temperature range, moving</b>	90 °C			70 °C		
<b>Min. cable temperature range, fixed installation</b>	-25 °C					
<b>Max. cable temperature range, fixed installation</b>	90 °C			70 °C		
<b>Shock resistance (Norm)</b>	30g / 11ms					
<b>Vibration resistance (Norm)</b>	10 - 55Hz					
<b>Min. storage temperature</b>	-25 °C					
<b>Max. storage temperature</b>	75 °C					

## Installation

Attribute	120V6201	12027108	12027210	120V62	120271	120272
<b>Mounting type</b>	Fastening nut					
<b>Thread</b>	M18					
<b>Weight</b>	-				48 g	-

## Connection

Attribute	120V6201	12027108	12027210	120V62	120271	120272
Connector type	M8x1 - 4 polig			-		
Cable length	0.1 m			1 m		
Number of strands	4					
Wire cross section	0.25 mm <sup>2</sup>					
Cable colour	-				beige	-
Cable type	-				Oelflex 4x0,25	-

## Approvals

Attribute	120V6201	12027108	12027210	120V62	120271	120272
CE label	yes					no
Certified in accordance with	-			ETL	-	ETL

## Operating data

Attribute	120V6201	12027108	12027210	120V62	120271	120272
Possible actuators	30420000	300785	30420000		300785	30420000