

# Position Switches with M12 Plug Connectors



More than safety.



**EUCHNER**

# More than safety.



Emil Euchner, the company's founder and inventor of the multiple limit switch, circa 1928.



## Around the world – the Swabian specialists in motion sequence control for mechanical and systems engineering.

EUCHNER's history began in 1940 with the establishment of an engineering office by Emil Euchner. Since that time, EUCHNER has been involved in the design and development of switchgear for controlling a wide variety of motion sequences in mechanical and systems engineering. In 1953, Emil Euchner founded EUCHNER + Co., a milestone in the company's history. In 1952, he developed the first multiple limit switch – to this day a symbol of the enterprising spirit of this family-owned company.

## Automation – Safety – ManMachine

Today, our products range from electromechanical and electronic components to complex system solutions. With this wide range of products we can provide the necessary technologies to offer the right solution for special requirements – regardless of whether these relate to reliable and precise positioning or to components and systems for safety engineering in the automation sector.

EUCHNER products are sold through a world-wide sales network of competent partners. With our closeness to the customer and the guarantee of reliable solutions throughout the globe, we enjoy the confidence of customers all over the world.

## Quality, reliability, precision

Quality, reliability and precision are the hallmarks of our corporate philosophy. They represent concepts and values to which we feel totally committed.

At EUCHNER, quality means that all our employees take personal responsibility for the company as a whole and, in particular, for their own field of work. This individual commitment to perfection results in products which are ideally tailored to the customers' needs and the requirements of the market. After all: our customers and their needs are the focus of all our efforts. Through efficient and effective use of resources, the promotion of personal initiative and courage in finding unusual solutions to the benefit of our customers, we ensure a high level of customer satisfaction. We familiarize ourselves with their needs, requirements and products and we learn from the experiences of our customers' own customers.

**EUCHNER – More than safety.**



Quality – made by EUCHNER

## Position Switches with M12 Plug Connectors



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## General Information

### Precision Single Hole Fixing Limit Switch with Reed Contact or Snap-Action Contact Element

EUCHNER precision single hole fixing limit switches are technically sophisticated control switches which have been proving their reliability, day in and day out, for decades in rough industrial applications.

These mechanically actuated precision single hole fixing limit switches are IP 67 rated and are entirely maintenance free.

EUCHNER precision single hole fixing limit switches feature a thread at the upper part and can thus be inserted or screwed through the mounting hole either from the cable end or from the actuator end. Setting the position of the switching point opposite to the machine section to be sensed is easy with this thread.

The compact overall size and the round type of construction allow installation directly at the sensing points. This thus dispenses with complicated deflection levers or linkages which are associated with a high level of design complexity and expense.



### Precision Single Plunger Limit Switch with Snap-Action Contact Element

EUCHNER precision single plunger limit switches are technically precise control switches which have been developed on the basis of practical requirements in close collaboration with machine tool manufacturers.

Use of high-quality materials, interplay of a sophisticated technology and practically oriented design guarantee operation under even the toughest conditions.

EUCHNER precision single plunger limit switches are used for positioning and controlling machines and in industrial installations. The types of construction which differ as regards type and size, the choice of five different types of plunger and easy conversion from longitudinal to transverse actuation offer the user a broad range of individual possible applications.



### Position Switches According to EN 50041

EUCHNER limit switches were designed in accordance with European standard EN 50041.

Robust construction and the use of high quality corrosion resistant materials, precision finishing and degree of protection IP 67 according to IEC 60529 guarantee trouble-free reliable operation under the toughest conditions.

The EUCHNER position switches, available in various versions, including a safety switch, feature switching elements whose normally closed contacts are opened mechanically and positively via a rigid plunger even if the element should fail as the result of spring failure or contact welding. Limit switches with positively driven NC contacts are used anywhere a circuit break is absolutely essential, e.g. for end of travel limit switching or an EMERGENCY STOP.



**EUCHNER** position switches with M12 plug connectors offer important advantages and have the following special features

- ▶ Simple installation
- ▶ Great reliability in a harsh industrial environment
- ▶ Time savings and thus costs savings during mounting
- ▶ Simplified removal during servicing
- ▶ Standard plug connectors
- ▶ Direct connection to bus systems



## Precision Single Hole Fixing Limit Switch with Reed Contact

### Related Plug Connectors M12

### M12 x 1 with PE Terminal

### M14 x 1

### M14 x 1

**Wiring diagram**

4-pin	5-pin
1 BN	1 BN
2 WH	2 WH
4 BK	4 BK
3 BU	3 BU
	5 GNYE

**Pin assignment NO contact**

**or NC contact**

**Pin assignment NO contact**

**or NC contact**

**Pin assignment NO contact**

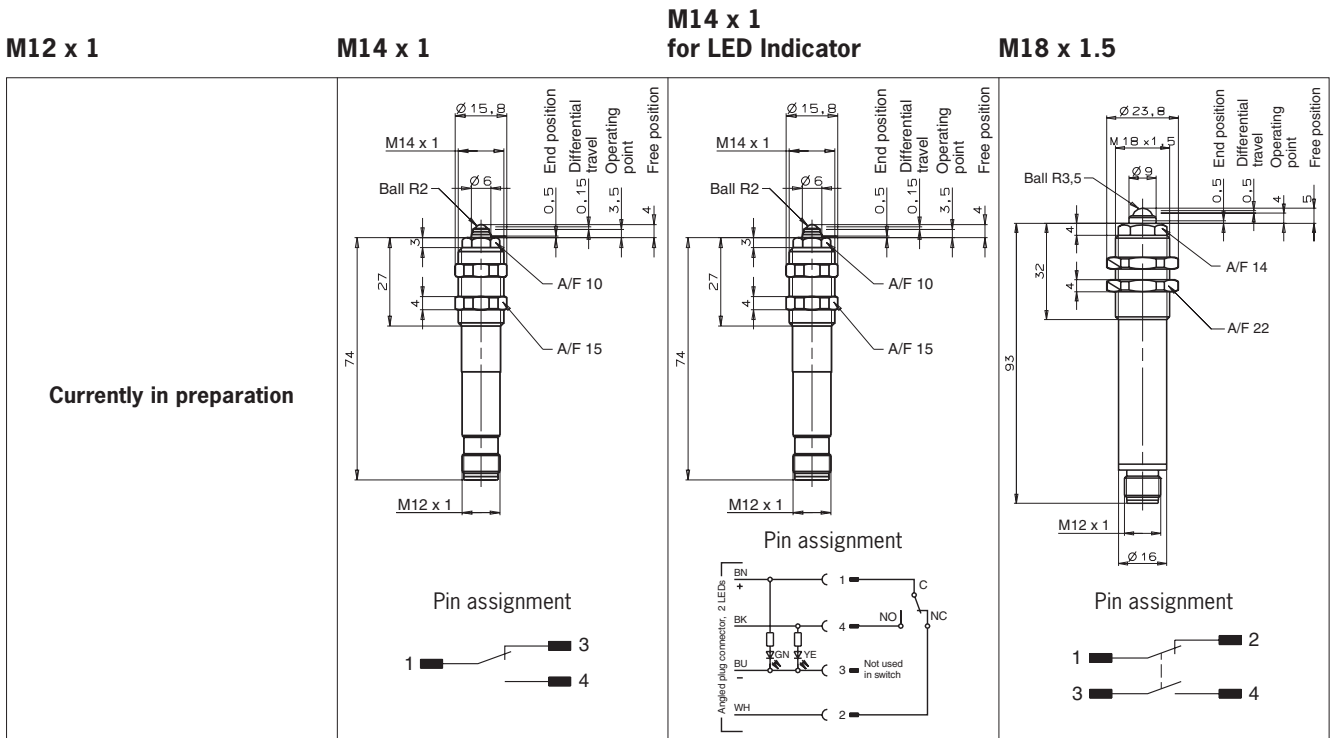
### Technical data

Parameter	Value			
Housing material	Stainless steel / brass, nickel-plated			
Degree of protection according to IEC 529	IP 67 when connected			
Ambient temperature [°C]	-5 ... +65			
Plunger form	Dome (stainless steel)	Ball (stainless steel)		
Approach speed [m/min]	max. 8			
Mech. switching operations	30 x 10 <sup>6</sup>			
Switching point accuracy [mm]	±0.01			
Actuating force [N]	10			
Switching frequency [per min]	200			
Switching element	Reed contact			
Contact element	1 NO or 1 NC		1 NO	
Contact material	Rhodium			
Rated insulation voltage U <sub>i</sub> [V]	50			
Utilization category acc. to IEC 947-5-1	AC-15 U <sub>e</sub> 30 V I <sub>e</sub> 0.3 A DC-13 U <sub>e</sub> 36 V I <sub>e</sub> 0.3 A	AC-12 U <sub>e</sub> 50 V I <sub>e</sub> 10 mA DC-12 U <sub>e</sub> 50 V I <sub>e</sub> 10 mA		
Switching current [mA] min. at switching current [DC V]	1			
Short-circuit protection (control fuse) [A]	F 0.5			
Connection type	Round connector M12			

### Ordering table

1 NO contact	Type	EGT12ASFM5	EGT1/4ASEM4	EGT1/4ASEM4C1802
	Order No.	075 426	033 976	075 644
1 NC contact	Type	EGT12RSFM5	EGT1/4RSEM4	-
	Order No.	075 427	033 982	
1 changeover contact	Type	-	-	-
	Order No.			
1 NO contact + 1 NC contact	Type	-	-	-
	Order No.			
Plug connector, straight, 5 m PUR, order separately		SGLF5-5000P	SGLF4-5000P	SGLF4-5000P
Plug connector, angled, 5 m PUR, order separately		SWLF5-5000P	SWLF4-5000P	SWLF4-5000P

## Precision Single Hole Fixing Limit Switch with Snap-Action Contact Element



Value			
Brass, nickel-plated			
IP 67 when connected			
-5 ... +65			
Ball (stainless steel)			
max. 8			
1 x 10 <sup>6</sup>		3 x 10 <sup>6</sup>	
±0.01			
10		15	
30		60	
Snap-action contact element			
1 changeover contact		1 NO + 1 NC	
Silver alloy, gold-plated			
50			
AC-15	U <sub>e</sub> 30 V	I <sub>e</sub> 0.5 A	AC-12 U <sub>e</sub> 30 V I <sub>e</sub> 2 A
DC-13	U <sub>e</sub> 36 V	I <sub>e</sub> 0.05 A	DC-12 U <sub>e</sub> 36 V I <sub>e</sub> 2 A
10			
12			
F 2		F 6	
Round connector M12			

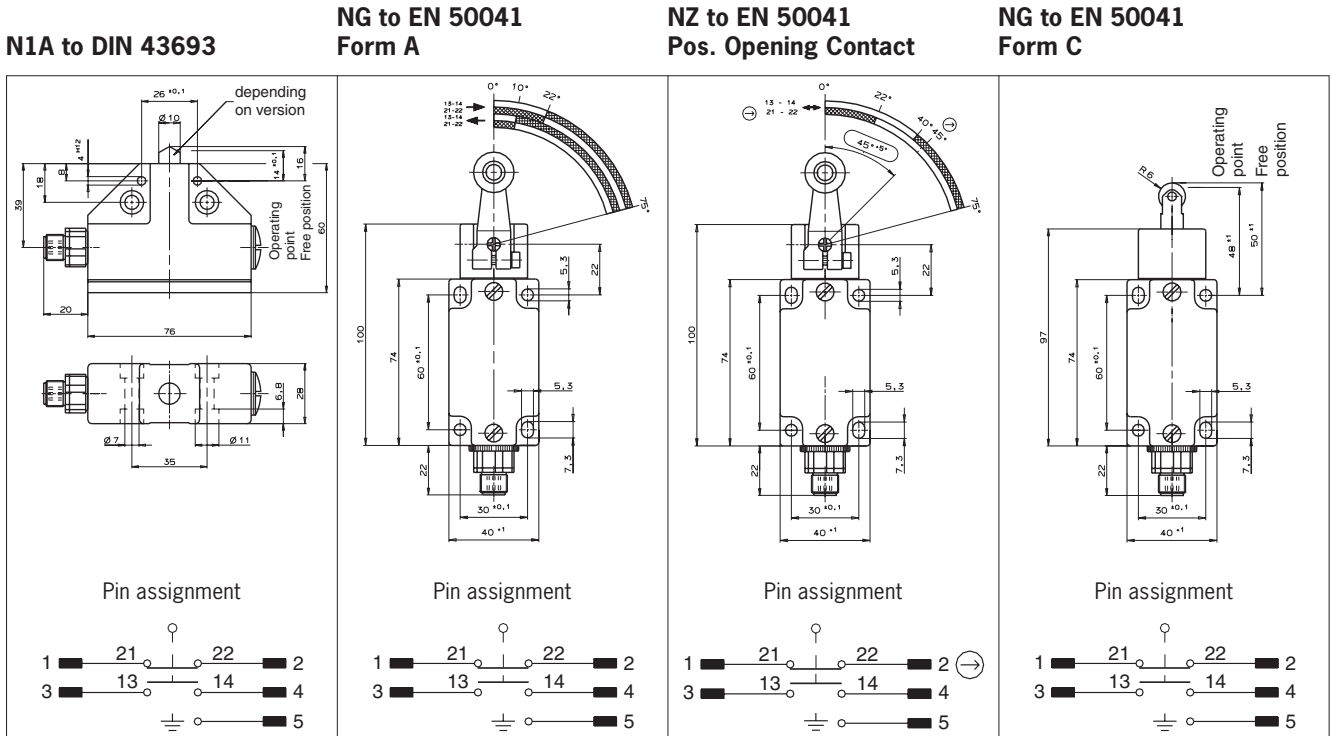
-	-	-	-
-	-	-	-
-	EGT1SEM4 019 727	EGT1SEM4C1613 054 250	-
-	-	-	EGT2SEM4 052 504
-	SGLF4-5000P	035 618 (without LED)	SGLF4-5000P
-	SWLF4-5000P	041 091 (with 2 LED)	SWLF4-5000P







## Precision Single Plunger Limit Switch, PE Terminal



Value			
Diecast aluminium, anodised			
IP 67 when connected			
-5 ... +80			
Stainless steel			
max. 50 (roller plunger actuator)	max. 300 (plastic roller)		max. 20 (roller plunger actuator)
30 x 10 <sup>6</sup>			
±0.002 (chisel plunger)			
15	10		15
200	600		300
Snap-action contact element		Slow-action contact element	Snap-action contact element
1 NO + 1 NC		1 NO + 1 positive-opening NC	1 NO + 1 NC
Silver alloy, gold-plated			
50			
AC-15 Ue 30 V Ie 4 A			
DC-13 Ue 36 V Ie 4 A			
10			
12			
F 6			
Round connector M12			
N1AD502SVM5-M 087 487	-	NZ2HS-511SVM5-M 090 867	-
N1AK502SVM5-M 087 489	-	NZ2HB-511SVM5-M 090 861	-
N1AR502SVM5-M 087 488	NG2HS-510SVM5-M 090 866	NZ2HS-528SVM5-M 090 868	NG2RS-510SVM5-M 088 632
-	NG2HB-510SVM5-M 088 631	NZ2HB-528SVM5-M 090 864	-
SGLF5-5000P			
SWLF5-5000P			

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