

Scope





These operating instructions apply to all precision single hole fixing limit switches EGT with reed contacts. These operating instructions, the document *Safety information* and any available data sheet form the complete user information for your device.

Important!

Make sure to use the operating instructions valid for your product version. Please contact the EUCHNER service team if you have any questions.

Supplementary documents

The overall documentation for this device consists of the following documents:

Document title (document number)	Contents	
Safety information (2525460)	Basic safety information	
Operating instructions (MAN20001597)	(this document)	
Declaration of conformity	Declaration of conformity	
Any additions to the operating instructions	Take any associated additions to the operating instructions or data sheets into account.	

Important!

Always read all documents to gain a complete overview of safe installation, setup and use of the device. The documents can be downloaded from www.euchner.com. For this purpose, enter the doc. no. or the order number for the device in the search box.

Correct use

Thanks to their round design and simple, single-hole mounting, precision single hole fixing limit switches are suitable for installation directly at the locations to be monitored. Exact adjustment is permitted by means of the precision metric thread.

Correct use includes compliance with the relevant requirements for installation and operation, in particular

- EN IEC 60204-1
- EN ISO 12100

Important!

▸ If a data sheet is included with the product, the information on the data sheet applies in case of discrepancies with the operating instructions.

Incorrect use

- Precision Single Hole Fixing Limit Switches with reed contacts must not be used in safety circuits.
- Never switch incandescent lamps, not even for test purposes.
- Single hole fixing limit switches must not be used as an end stop.

Function

Precision Single Hole Fixing Limit Switches are used for positioning and control applications in mechanical and systems engineering.

The switching contacts are actuated when the actuating element is moved from the free position to the end position.

Switching states

The detailed switching states for your switch can be found in the wiring diagrams. All available switching elements are described there.

Please refer to the data sheets for additional special versions of switching elements.

Mounting

NOTICE

Device damage due to improper mounting and unsuitable ambient conditions.

- Mounting must be performed only by authorized personnel.
- Precision Single Hole Fixing Limit Switches and actuators must not be used as an end stop.
- Protect the Precision Single Hole Fixing Limit Switches against damage.
- The specified IP degree of protection is applicable only if the housing screws, cable entries and plug connectors are properly tightened. Observe the tightening torques.

Protection against environmental effects

- Mask plunger, plunger guide and type label during painting work!

Electrical connection

Important!

- Strip the insulation from the ends of the individual wires over a length of 6^{±1} mm to ensure a safe contact.

The following information applies to devices with plug connector:

- Check that the plug connector is sealed.

Function test

Mechanical function test

- The actuating element must move easily.
- Actuate plunger and check the switching functions.

Electrical function test

- Check correct function sequence.

Inspection and service

Inspection of the following is necessary to ensure trouble-free long-term operation:

- Correct switching function
- Secure mounting of all components
- Precise adjustment of trip dogs in relation to single hole fixing limit switches
- Damage, heavy contamination, dirt and wear
- Loose plug connectors and cable connections

Info: The year of manufacture can be seen in the bottom right corner of the type label.

Exclusion of liability and warranty

In case of failure to comply with the conditions for correct use stated above, or if the safety regulations are not followed, or if any servicing is not performed as required, liability will be excluded and the warranty void.

Notes on UL requirements

The following information applies to devices with plug connector:

This device is intended to be used and applied with a Class 2 power supply in accordance with UL1310. Connecting cables for safety switches installed at the place of use must be separated from all moving and permanently installed cables and un-insulated active elements of other parts of the system that operate at a voltage of over 150 V. A constant clearance of 50.8 mm must be maintained. This does not apply if the moving cables are equipped with suitable insulation materials that possess an identical or higher dielectric strength compared to the other relevant parts of the system.

Declaration of conformity

The product complies with the requirements according to Machinery Directive 2006/42/EC.

The EU declaration of conformity can be found at www.euchner.com. Enter the order number of your device in the search box. The document is available under *Downloads*.

Service

If servicing is required, please contact:

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 Kohlhammerstraße 16
 70771 Leinfelden-Echterdingen
 Germany

Service telephone:

+49 711 7597-500

E-mail:

support@euchner.de

Internet:

www.euchner.com

Technical data

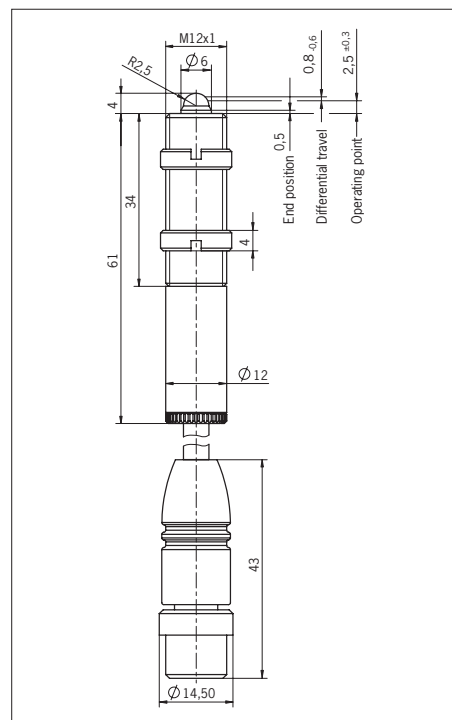
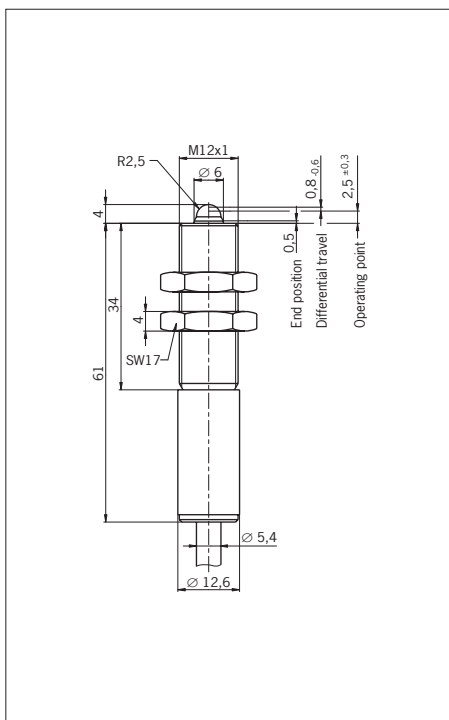
Type		EGT12...	EGT12A2N240SAM5
Housing material	Sleeve	Plastic	Brass, nickel plated
	Threaded section	Stainless steel	Stainless steel
Degree of protection		IP68	IP67 ¹⁾
Ambient temperature	[°C]	-25 ²⁾ ... +80	-25 ²⁾ ... +80
Plunger type		Rounded plunger	Rounded plunger
Approach speed, max.	[m/min]	8	8
Approach speed, min.	[m/min]	0.01	0.01
Mechanical life	Axial actuation	30 x 10 ⁶ operating cycles	30 x 10 ⁶ operating cycles
	Radial actuation		
	- Dog 15°	2 x 10 ⁶ operating cycles	2 x 10 ⁶ operating cycles
	- Dog 30°	1 x 10 ⁶ operating cycles	1 x 10 ⁶ operating cycles
Operating point accuracy ³⁾	[mm]	± 0.01	± 0.01
Actuating force (end position)	[N]	Approx. 16	Approx. 2
Switching element		Reed contact	Reed contact
Switching contact		1 NO or 1 NC	1 debit
Contact material		Rhodium	Rhodium
Rated insulation voltage U _i	[V]	50 \square	50
Utilization category acc. to EN IEC 60947-5-1		AC-12 U _e 30 V I _e 0.3 A DC-13 U _e 24 V I _e 0.3 A	AC-12 U _e 30 V I _e 0.3 A DC-13 U _e 24 V I _e 0.3 A
Switching current, min.,	at 2V	[mA]	-
	at 24V	[mA]	1
	at 30V	[mA]	-
Switching voltage, min.	[V DC]	1	1
Short circuit protection (control circuit fuse)	[A gG]	0.4	0.4
Connection		PUR cable 2 x 0.5 mm ²	Plug connector M12 with PUR cable 240 mm, 5 x 0.25 mm ²

1) Mating connector inserted and screwed tight.

2) Cable hard wired.

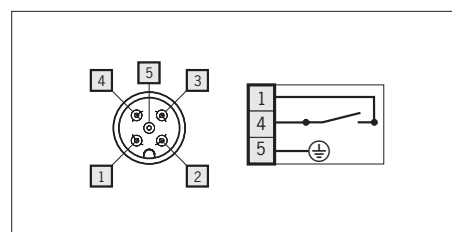
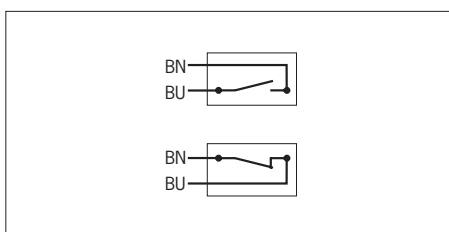
3) The reproducible operating point accuracy relates to axial actuation, after run-in of approx. 2,000 operating cycles.

Dimension drawings



Wiring diagrams

(Illustration: plunger in free position)



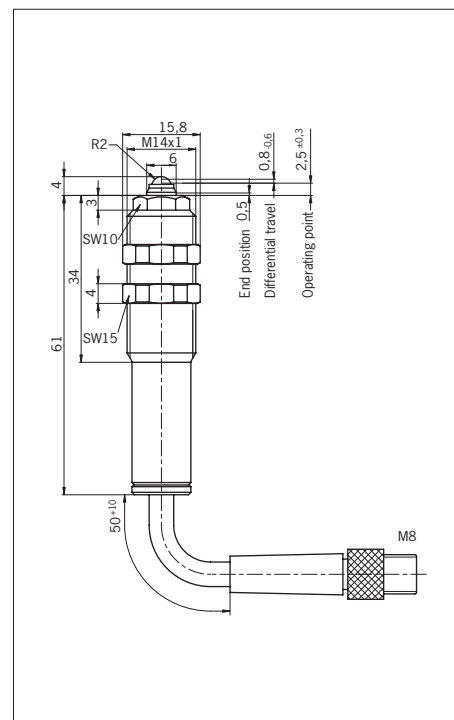
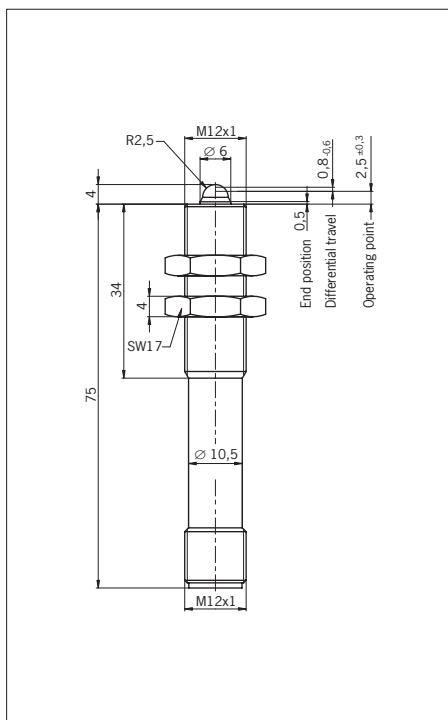
Technical data

Type		EGT12ASF5 EGT12RSFM5	EGT11R2N50SAM4
Housing material	Sleeve	Brass, nickel plated	Brass, nickel plated
	Threaded section	Stainless steel	Stainless steel
Degree of protection		IP67 ¹⁾	IP67 ¹⁾
Ambient temperature	[°C]	-25 ... +80	-5 ... +65
Plunger type		Rounded plunger	Ball plunger
Approach speed, max.	[m/min]	8	60 (axial)
Approach speed, min.	[m/min]	0.01	-
Mechanical life	Axial actuation	30 x 10 ⁶ operating cycles	30 x 10 ⁶ operating cycles
	Radial actuation		
	- Dog 15°	2 x 10 ⁶ operating cycles	-
	- Dog 30°	1 x 10 ⁶ operating cycles	-
Operating point accuracy ²⁾	[mm]	± 0.01	± 0.01
Actuating force (end position)	[N]	Approx. 16	Approx. 2
Switching element		Reed contact	Reed contact
Switching contact		1 NO or 1 NC	1 NC
Contact material		Rhodium	Rhodium
Rated insulation voltage U _i	[V]	50	50
Utilization category acc. to EN IEC 60947-5-1		AC-12 U _e 30 V I _e 0.3 A DC-13 U _e 24 V I _e 0.3 A	AC-12 U _e 30 V I _e 0.3 A DC-13 U _e 24 V I _e 0.3 A
Switching current, min.,	at 2V	[mA]	-
	at 24V	[mA]	1
	at 30V	[mA]	-
Switching voltage, min.	[V DC]	1	1
Short circuit protection (control circuit fuse)	[A gG]	0.4	0.4
Connection		Plug connector M12	Plug connector M12

1) Mating connector inserted and screwed tight.

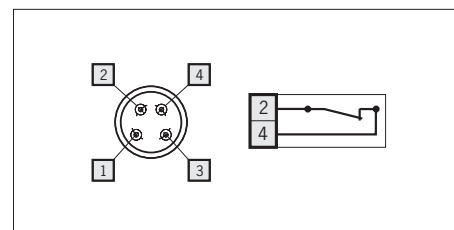
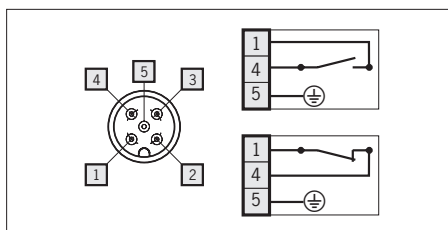
2) The reproducible operating point accuracy relates to axial actuation, after run-in of approx. 2,000 operating cycles.

Dimension drawings



Wiring diagrams

(Illustration: plunger in free position)



Technical data

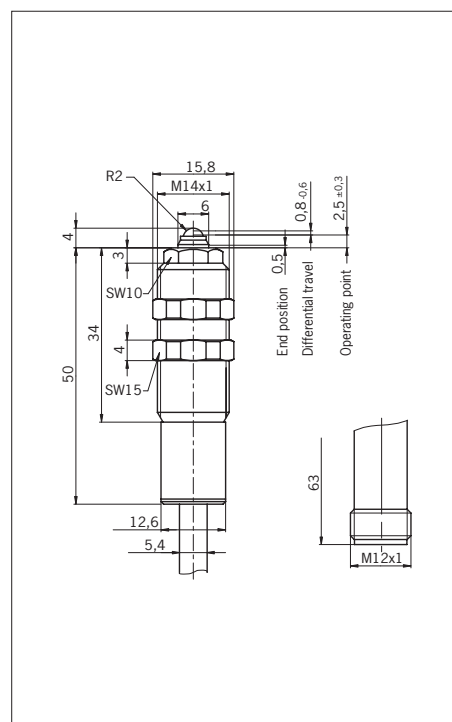
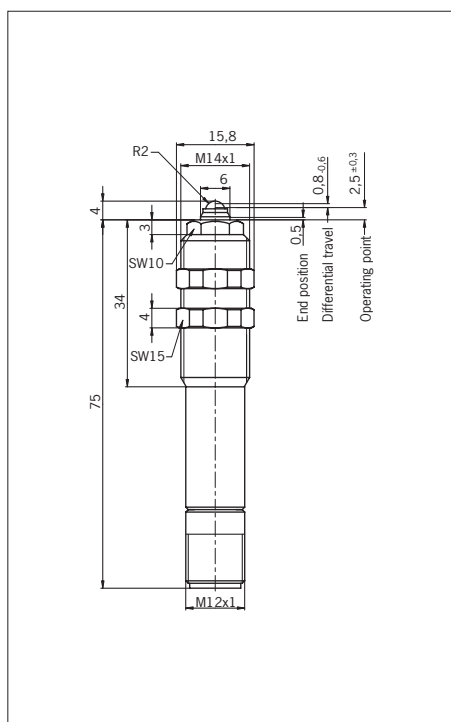
Type		EGT11A2NSFM5 EGT11R2NSFM5	EGT1/4A... EGT1/4R...	EGT1/4SEM4 EGT1/4RSEM4
Housing material	Sleeve	Brass, nickel plated	Plastic	Brass, nickel plated
	Threaded section	Stainless steel	Stainless steel	Stainless steel
Degree of protection		IP67 ¹⁾	IP68	IP67 ¹⁾
Ambient temperature	[°C]	-25 ... +80	-25 ²⁾ ... +80	-25 ... +80
Plunger type		Ball plunger	Ball plunger	Ball plunger
Approach speed, max.	[m/min]	60	8	8
Approach speed, min.	[m/min]	0.01	-	-
Mechanical life	Axial actuation	30 x 10 ⁶ operating cycles	30 x 10 ⁶ operating cycles	30 x 10 ⁶ operating cycles
	Radial actuation			
	- Dog 15°	5 x 10 ⁵ operating cycles	-	-
	- Dog 30°	-	-	-
Operating point accuracy ³⁾	[mm]	± 0.01	± 0.01	± 0.01
Actuating force (end position)	[N]	Approx. 3	Approx. 16	Approx. 16
Switching element		Reed contact	Reed contact	Reed contact
Switching contact		1 NO or 1 NC	1 NO or 1 NC	1 NO or 1 NC
Contact material		Rhodium	Rhodium	Rhodium
Rated insulation voltage U _i	[V]	50	250 ³⁾	50
Utilization category acc. to EN IEC 60947-5-1		AC-12 U _e 30 V I _e 0.3 A DC-13 U _e 24 V I _e 0.3 A	AC-12 U _e 30 V I _e 0.3 A DC-13 U _e 24 V I _e 0.3 A	AC-12 U _e 30 V I _e 0.3 A DC-13 U _e 24 V I _e 0.3 A
Switching current, min.,	at 2V	[mA]	3	-
	at 24V	[mA]	-	1
	at 30V	[mA]	300	-
Switching voltage, min.	[V DC]	1	1	1
Short circuit protection (control circuit fuse)	[A gG]	0.4	0.4	0.4
Connection		Plug connector M12	PUR cable 2 x 0.5 mm ²	Plug connector M12

1) Mating connector inserted and screwed tight.

2) Cable hard wired.

3) The reproducible operating point accuracy relates to axial actuation, after run-in of approx. 2,000 operating cycles.

Dimension drawings



Wiring diagrams

(Illustration: plunger in free position)

