

## Precision single limit switches

► Plunger material stainless steel

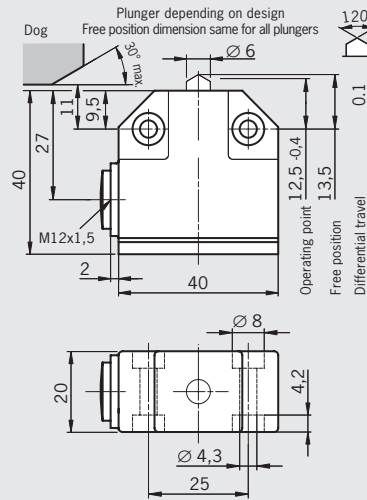


For temperatures up to 180 °C

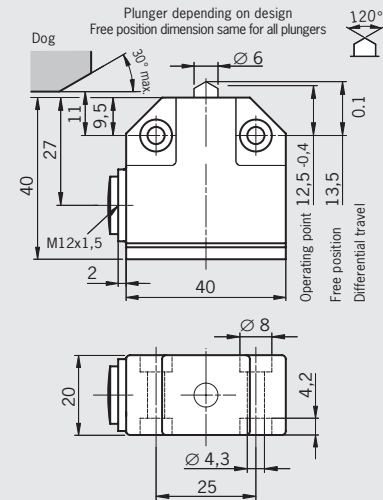


**Design N01**  
Cable entry M12 x 1.5

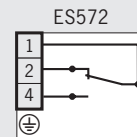
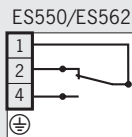
### Dimension drawings



**Design N01**  
Cable entry M12 x 1.5



### Wiring diagrams



### Technical data

Housing material	Die-cast aluminum, anodized			Die-cast aluminum, anodized		
Degree of protection according to IEC 60529	IP 67			IP 67		
Ambient temperature [°C]	-5...+80			-5...+180		
Plunger type	Chisel	Roller	Ball	Chisel	Roller	Ball
Operating point accuracy <sup>1)</sup> [mm]	± 0.02	± 0.05	± 0.03	± 0.02	± 0.05	± 0.03
Approach speed max. <sup>2)</sup> [m/min]	20	50	8	20	50	8
Approach speed, min. [m/min]	0.01			0.01		
Actuating force, max. [N]	15			15		
Switching element	<b>ES550</b>		<b>ES562</b>	<b>ES572</b>		
Switching contact	1 changeover contact			1 changeover contact		
Switching principle	Snap-action switching contact			Snap-action switching contact		
Mechanical life	1 x 10 <sup>7</sup> operating cycles			5 x 10 <sup>5</sup> operating cycles at -5 ... +125 °C 200 h at +180 °C		
Rated impulse withstand voltage U <sub>imp</sub> [kV]	2.5			2.5		
Rated insulation voltage U <sub>i</sub> [V]	250			250		
Utilization category acc. to IEC 60947-5-1	AC-15 U <sub>e</sub> 230V I <sub>e</sub> 2A DC-13 U <sub>e</sub> 24V I <sub>e</sub> 2A		DC-13 U <sub>e</sub> 30V I <sub>e</sub> 100mA	AC-15 U <sub>e</sub> 230V I <sub>e</sub> 4A DC-13 U <sub>e</sub> 24V I <sub>e</sub> 1A		
Contact material	Silver, gold-plated		Gold alloy	Fine silver		
Switching current, min. at [mA]	10		5	10		
Switching current [V DC]	24		5	24		
Short circuit protection (control circuit fuse) [A gG]	6		0.125	5		
Connection type	Soldered connection, 1.0 mm <sup>2</sup> max.			Soldered connection, 1.0 mm <sup>2</sup> max.		

1) The reproducible operating point accuracy relates to axial actuation, after run-in of approx. 2000 operating cycles.

2) The approach speed applies for a trip dog approach angle of 30°, 100 mm long, hardened and ground.

3) For mating connector see page 46 and 47.

### Ordering table

Plunger type	ES550	ES562	ES572
Chisel plunger	<b>084 902</b> N01D550-M	<b>087 151</b> N01D562-M	<b>087 162</b> N01D572-M
Roller plunger  R = 2.5 mm	<b>084 903</b> N01R550-M	<b>085 243</b> N01R562-M	<b>087 163</b> N01R572-M
Ball plunger	<b>084 904</b> N01K550-M	<b>087 152</b> N01K562-M	<b>087 164</b> N01K572-M