

Installation Instructions P49885

Effective November 2025
Supersedes April 2025



Powering Business Worldwide

Instruction Leaflet
Montageanweisung
Notice d'installation
Instrucciones de montaje
Istruzioni per il montaggio
安裝說明

Инструкция по монтажу
Montagehandleiding
Montagevejledning
Οδηγίες εγκατάστασης
Instruções de montagem
Monteringsanvisning

Asennusohje
Návod k montáži
Paigaldusjuhend
Szerelési utasítás
Montāžas instrukcija
Montavimo instrukcija

Instrukcja montażu
Navodila za montažo
Návod na montáž
Монтажни инструкции
Instrucțiuni de montaj
Upute za montažu

 (en) Electric current! Danger to life! Only skilled or instructed persons may carry out the following operations.	(el) Προσοχή, κίνδυνος ηλεκτροπληξίας! Οι εργασίες που αναφέρονται στη συνέχεια θα πρέπει να εκτελούνται μόνο από ηλεκτρολόγους και ηλεκροτεχνίτες.	(lt) Pavojus gyvybei dėl elektros srovės! Tik elektrikai ir elektrotechnikos specialistai gali atlikti žemiau aprašytus darbus.
(de) Lebensgefahr durch elektrischen Strom! Nur Elektrofachkräfte und elektrotechnisch unterwiesene Personen dürfen die im Folgenden beschriebenen Arbeiten ausführen.	(pt) Perigo de vida devido a corrente eléctrica! Apenas electricistas e pessoas com formação electotécnica podem executar os trabalhos que a seguir se descrevem.	(pl) Porażenie prądem elektrycznym stanowi zagrożenie dla życia! Opisane poniżej prace mogą przeprowadzać tylko wykwalifikowani elektrycy oraz osoby odpowiednio poinstruowane w zakresie elektrotechniki.
(fr) Tension électrique dangereuse ! Seules les personnes qualifiées et averties doivent exécuter les travaux ci-après.	(sv) Livsfara genom elektrisk ström! Endast utbildade elektriker och personer som undervisats i elektroteknik får utföra de arbeten som beskrivs nedan.	(sl) Življenjska nevarnost zaradi električnega toka! Spodaj opisana dela smejo izvajati samo elektrostrokovnjaki in elektrotehnično poučene osebe.
(es) ¡Corriente eléctrica! ¡Peligro de muerte! El trabajo a continuación descrito debe ser realizado por personas cualificadas y advertidas.	(fi) Hengenvaarallinen jännite! Vain pätevät sähköasentajat ja opastusta saaneet henkilöt saavat suorittaa seuraavat työt.	(sk) Nebezpečenstvo ohrozenia života elektrickým prúdom! Práce, ktoré sú nižšie opísané, smú vykonávať iba elektroodborníci a osoby s elektrotechnickým vzdelaním.
(it) Tensione elettrica: Pericolo di morte! Solo persone abilitate e qualificate possono eseguire le operazioni di seguito riportate.	(cs) Nebezpečí úrazu elektrickým proudem! Niže uvedené práce smějí provádět pouze osoby s elektrotechnickým vzděláním.	(bg) Опасност за живота от електрически ток! Операциите, описани в следващите раздели, могат да се извършват само от специалисти-електротехници и инструктиран електротехнически персонал.
(zh) 触电危险! 只允许专业人员和受过专业培训的人员进行下列工作。	(et) Eluohhtlik! Elektrilöögioht! Järgnevalt kirjeldatud töid tohib teostada ainult elektriala spetsialist või elektrotehnilise instrueerimise läbinud personal.	(ro) Atenție! Pericol electric! Toate lucrările descrise trebuie efectuate numai de personal de specialitate calificat și de persoane cu cunoștințe profunde în electrotehnică.
(nl) Levensgevaar door elektrische stroom! Uitsluitend deskundigen in elektriciteit en elektrotechnisch geïnstrueerde personen is het toegestaan, de navolgend beschreven werkzaamheden uit te voeren.	(hu) Életveszély az elektromos áram révén! Csak elektromos szakemberek és elektrotechnikában képzett személyek végezhetik el a következőkben leírt munkákat.	(hr) Opasnost po život uslijed električne struje! Radove opisane u nastavku smiju obavljati samo stručni električari i osobe koje su prošle elektrotehničku obuku.
(da) Livsfare på grund af elektrisk strøm! Kun uddannede el-installatører og personer der er instruerede i elektrotekniske arbejdsopgaver, må udføre de nedenfor anførte arbejder.	(lv) Elektriskā strāva apdraud dzīvību! Tālāk aprakstītos darbus drīkst veikt tikai elektrospeciālisti un darbam ar elektrotehnikām iekārtām instruētās personas!	

E49 IEC Limit Switches

WARNING

IN ORDER TO AVOID ELECTRIC SHOCK OR OTHER POSSIBLE INJURY:

- **INSTALL PER THE NATIONAL ELECTRIC CODE (NEC) AND ALL LOCAL CODES AND OTHER RELEVANT INSTRUCTIONS.**
- **RISK OF ELECTRIC SHOCK EXISTS EVEN AT LOW VOLTAGES AND CAN CAUSE INJURY OR DEATH**
- **RISK OF FIRE: WHEN INSTALLATION INVOLVES SPECIAL WIRING METHODS TO RUN WIRING THROUGH A BUILDING STRUCTURE CONSULT A QUALIFIED ELECTRICIAN.**
- **DO NOT USE THIS PRODUCT IN HAZARDOUS LOCATION (E.G. EXPLOSIVE ATMOSPHERES). IT WAS NOT DESIGNED, TESTED, OR RECOMMENDED FOR THIS USE.**
- **WHEN USED IN SAFETY APPLICATIONS, IT IS THE RESPONSIBILITY OF THE MACHINE BUILDER AND/OR THE INSTALLER TO ENSURE CORRECT OVERALL FUNCTION OF THE SAFETY SYSTEM. AN IMPROPER INSTALLATION OR MANIPULATION OF THE SAFETY SWITCH WILL RENDER THE PERSONAL PROTECTION FUNCTION USELESS AND CAN CAUSE SERIOUS INJURY OR ACCIDENTAL DEATH**
- **INSTALLATION OF THE SWITCH SHALL BE SUCH THAT THE FUNCTIONAL SAFETY WILL NOT BE AFFECTED BY EXTERNAL INFLUENCES SUCH AS DIRT, CHIPS, DUST, LIQUIDS, ETC. THE SWITCH SHALL NOT BE USED AS A MECHANICAL STOP.**

Models Covered In This Manual

E49-S71AP7-A5

	a	b	c	d
a	Product family	E49	Miniature DIN limit switch	
b	Switch body	S71 S73 S74	1 N.O. - 1 N.C. contacts 2 N.C. contacts 2 N.O. contacts	
c	Operating head	AP7 XP7 CP7 DP7 EP7 UP7 HP7	Roller Lever Top Push Button Top Push Roller Rod Lever Offset Roller Lever Adjustable Roller Lever Hinge Operator	
d	Accessories	A5 N	Built-in M12 connector With V1-2-M2 conduit adapter for 1/2" NPT	

E49 Miniature DIN Limit Switches are designed to meet international standards. Switches feature multiple contact configurations, positive opening normally closed contacts, finger-proof wire ready terminals, double-insulated nylon housings, stainless steel hardware, and environmental ratings to IP67 and Type 4X.

Introduction and Safety Guidelines

The E49 Limit Switch family is suitable for operation as a component in a safety circuit system for plant or machinery. When used in such a circuit system it is the responsibility of the machine builder and/or installer to ensure the correct overall function of the safety system. Installation and operation must be carried out in accordance with DIN EN ISO 14119, EN ISO 12100, and DIN EN ISO 14120. In particular, the requirements of IN EN ISO 14119 Section 7 to prevent circumvention must be taken into account.

Mounting

E49 Miniature DIN Limit Switches should be mounted on a flat and rigid surface, and may be mounted differently depending on the application and the choice of operating head. Choose the mounting that best fits the needs of your equipment.

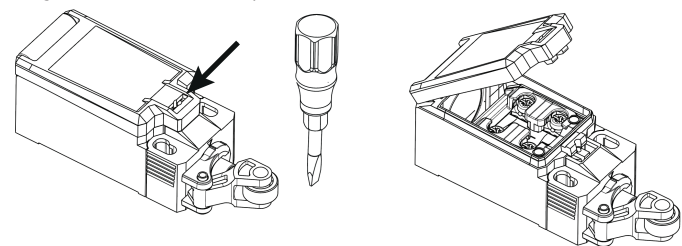
1. Adjustable mounting - two slots for M4 screws (22mm centers)
2. Fixed mounting - slots contain two holes to fit M5 screws (20mm centers) for safety applications in accordance with DIN EN ISO 4762, Installation mounting must ensure that even during a fault condition the switch will remain in a fixed location.

Switch safety function is rated for installations below an altitude of 2000 meters (6561 feet).

Switch Wiring

Open the cover to the switch body to access the contact wiring block.

1. With the switch oriented vertically, insert a flat-blade screwdriver into the slot at the top of the switch body cover and press the handle of the screwdriver down to lift the latch. The switch body cover is hinged at the switch body base.



2. This action exposes the contact block assembly. Wire to the contacts using AWG 16-22 conductors and torque screws to 0.5-0.6 Nm (4.4-5.3 in-lbs) then close and latch the hinged switch body cover.
3. The base of the switch is built with an M20 fitting for conduit and other attachments. This can be adapted to American Pipe Thread with the adapters listed as accessories on Sheet 4 of this instruction. This can also be adapted to use an M12 connector for switch wiring as shown in the accessory list shown at the bottom of this page.
4. The performance level of the switch in accordance with DIN EN 13849-1 is reduced if switches are wired in series. Validate system wiring per DIN EN ISO 13849-2 or DIN EN 62061 as appropriate.

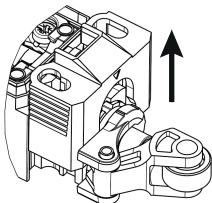
Accessories

Catalog Number	Operating Head Type	Purpose
M12A	M12 connector adapter	Threads into switch base and provides M12x1 4-pin connection
V-M20	Cord grip	Threads into switch base and provides seal for cable
V1-2-M20-NA	NPT adapter - metal	Threads into switch base to transition to 1/2" NPT threading (must be earthed)
V1-2-M20	NPT adapter - plastic	Threads into switch base to transition to 1/2" NPT threading

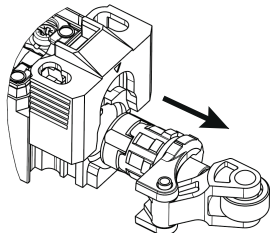
Operating Head Positioning and Replacement

E49 Miniature DIN Limit Switch operating heads can be quickly positioned in different orientations to support application requirements. Choose the mounting that is best for your equipment.

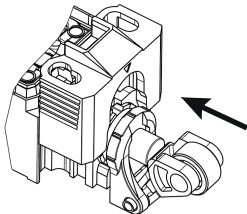
1. Open the switch body as shown in "Switch Wiring" at left.
2. Slide the captive metal collar above the switch body outward, towards the front of the switch. This captive collar will slide forward until it reaches a stop.



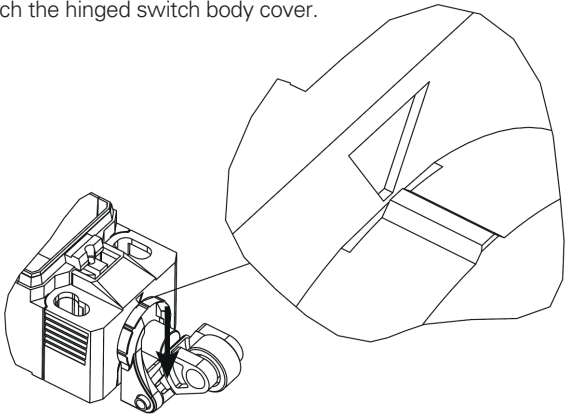
The operating head is now free to be rotated in place or removed from the switch assembly completely.



3. Position the operating head in the desired orientation. Re-insert into the switch if necessary.



4. Align the nearest notch on the operating head to the arrow cast in the collar, and then slide the collar back into its original position, and close and latch the hinged switch body cover.

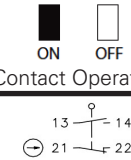
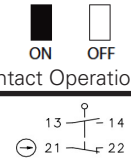
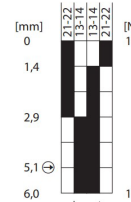
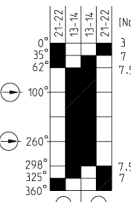
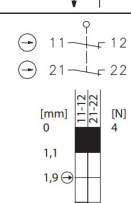
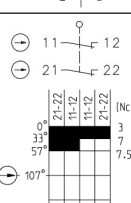
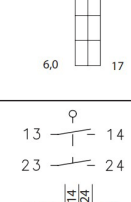
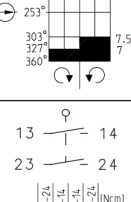
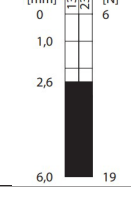
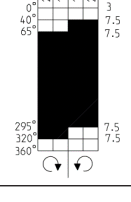


NOTE for E49...HP7 Hinge Switch versions. For these versions, the switch operating shaft must be connected to the hinge with a customer-supplied M5 hexagon socket-head cap screw conforming to DIN EN ISO 4762.

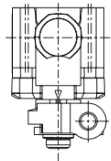
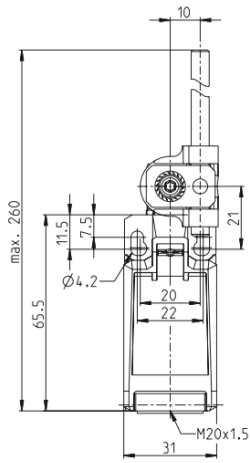
Specifications

Category	Specification
B10d (electrical and mechanical) - NC	Normally Closed contact to Open - 20 million cycles
B10d (electrical and mechanical) - NO	Normally Open contact to Close - 1 million cycles
Rated Isolation Voltage	400 V
Rated Impulse Withstand Voltage	4 kV
Rated Supply Voltage	240 VAC, 24 VDC
Operating Current	5 A continuous
Minimum Current	1 mA
Utilization Category	AC 15 U _e /I _e 240V / 3A DC 13 U _e /I _e 24V / 1.5A
Short Circuit Protection	Fusible 4 A gG
Conditional Short Circuit Current	400 A
IEC Protection Class	II Totally Insulated
Mechanical Life	30 million operations
Switching Frequency	60 operations/minute maximum
Operating Temperature	-30 to +75C (-22 to 167F)
Enclosure Material	Thermoplastic (UL 94-V0)
Wire Conductor Size accepted	AWG 16-22
Enclosure Rating	IP66, IP67 / Type 4X
Approvals	cULus (UL508, CSA 22.2 No. 14), CCC
Standards	CE, UKCA, 2006/42/EC, DIN EN ISO 13849-1, DIN EN 60947-5-1
Hinge Switch (E49...HP7) Operating Tolerance	+/- 3.5 degrees

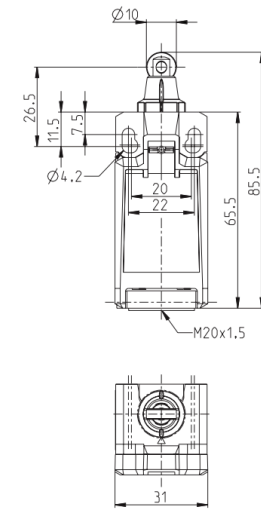
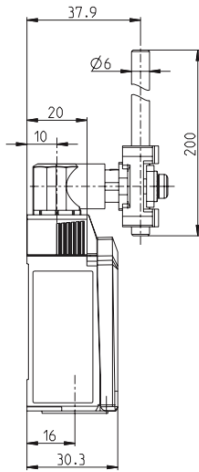
Operating Characteristics

Switch Model	Operating Head Type	Contact Type	Contacts	Operating Head	Contact Operation	**Contact Operation, HP7
E49S71AP7	Side Rotary	Snap Action	1NC/1NO	E49AP7		
E49S71XP7	Top Push Plunger	Snap Action	1NC/1NO	E49XP7		
E49S71CP7	Top Push Roller	Snap Action	1NC/1NO	E49CP7		
E49S71DP7	Rod Lever	Snap Action	1NC/1NO	E49DP7		
E49S71EP7	Offset Roller Lever	Snap Action	1NC/1NO	E49EP7		
E49S71UP7	Adjustable Side Rotary	Snap Action	1NC/1NO	E49UP7		
E49S71HP7	Hinge Operator	Snap Action**	1NC/1NO	E49HP7		
E49S73AP7	Side Rotary	Slow Action	2NC	E49AP7		
E49S73XP7	Top Push Plunger	Slow Action	2NC	E49XP7		
E49S73CP7	Top Push Roller	Slow Action	2NC	E49CP7		
E49S73DP7	Rod Lever	Slow Action	2NC	E49DP7		
E49S73EP7	Offset Roller Lever	Slow Action	2NC	E49EP7		
E49S73UP7	Adjustable Side Rotary	Slow Action	2NC	E49UP7		
E49S73HP7	Hinge Operator	Slow Action**	2NC	E49HP7		
E49S74AP7	Side Rotary	Slow Action	2NO	E49AP7		
E49S74XP7	Top Push Plunger	Slow Action	2NO	E49XP7		
E49S74CP7	Top Push Roller	Slow Action	2NO	E49CP7		
E49S74DP7	Rod Lever	Slow Action	2NO	E49DP7		
E49S74EP7	Offset Roller Lever	Slow Action	2NO	E49EP7		
E49S74UP7	Adjustable Side Rotary	Slow Action	2NO	E49UP7		
E49S74HP7	Hinge Operator	Slow Action**	2NO	E49HP7		

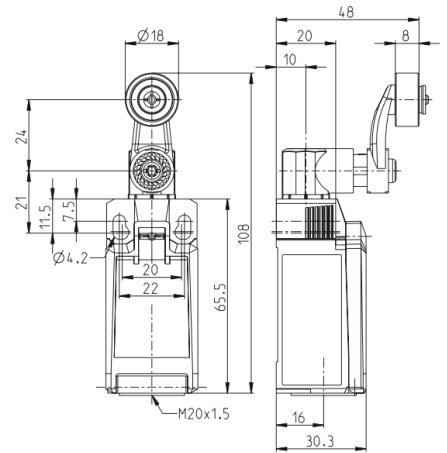
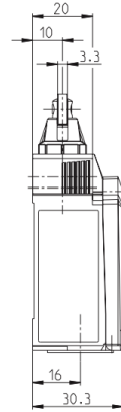
Dimensional Information



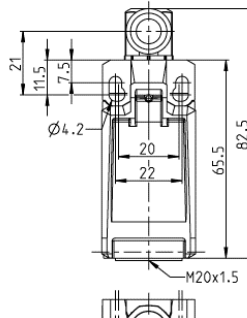
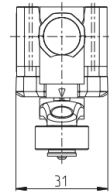
E49...DP7



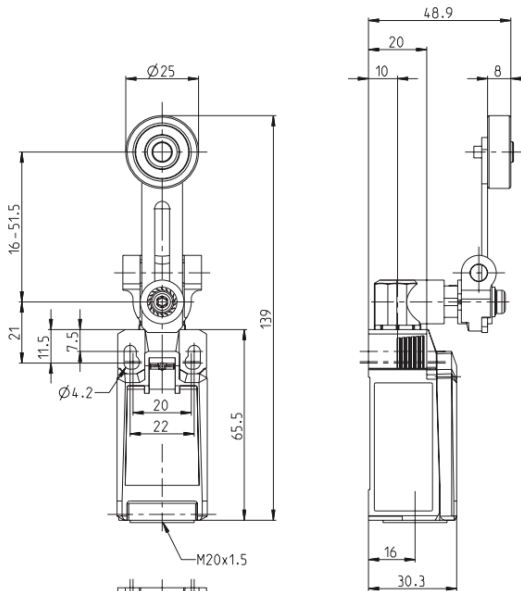
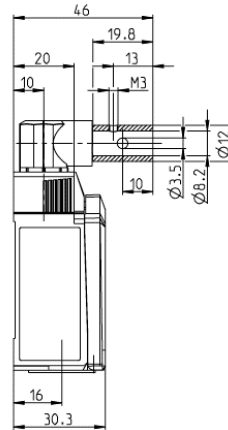
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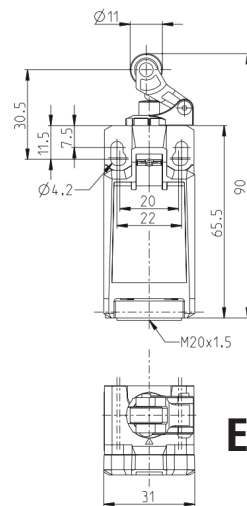
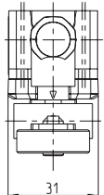
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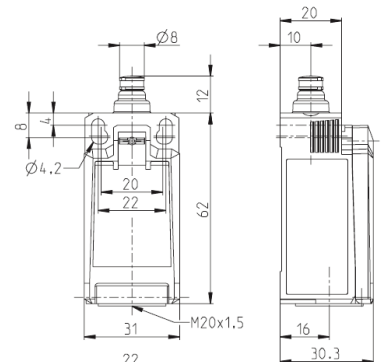
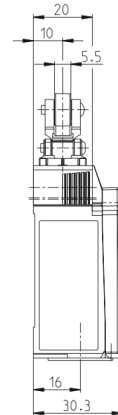
E49...HP7



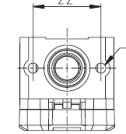
E49...UP7



E49...EP7



E49...XP7



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