Foot Switches



Applications

Choose these switches for foot switchoperated machines such as shearing machines, spinning machines, spinning lathes, machine tools, wrapping machines, riveting machines, and riveting presses.

AutomationDirect stocks foot switches in these operational formats:

- Free movement (momentary): Contact position follows pedal movement; actuated when the pedal is pushed down, released when pedal is in state of rest.
- Foot switch locked in neutral position (safety anti-trip momentary): Same operation as above, after unlocking the pedal with the foot.
- Foot switch latched in low position (maintained):
 Same operation as free movement, except that a state of rest is obtained only after pedal is unlatched.





APS1151-V0

Description

- Plastic Unit Material
- Base, cover and pedal of shock-resistant ABS plastic material
- Aluminum Unit Materials Base and pedal of shock-resistant ABS plastic material; cover of die-cast aluminum
- Double switches include a 16" carrying rod



Foot Switches

ABS Plastic Foot Switch Selection					
Part Number	Cover Color	Price	Drawing Link	Description	
<u>APS1211-V0</u>	Yellow	\$0d5#:	PDF	Single, ABS plastic, safety actuating lever, 1 N.O. and 1 N.C. snap action contacts	1
<u>APS1213-V0</u>	Yellow	\$;0d5!:	PDF	Single, ABS plastic, safety actuating lever, 2 N.O. and 2 N.C. snap action contacts	
<u>APS1151-V0</u>	Half Red	\$0d5_:	PDF	Single, ABS plastic, free-moving mounting, 1 N.O. and 1 N.C. snap action contacts	
<u>APD1231-V0</u>	One Yellow One Gray	\$;00d5[:	PDF	Double, ABS plastic, safety actuating lever, 1 N.O. and 1 N.C. snap action contacts for each switch	APS1211-





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APS1151-V0

Pilot Devices

tPIL-67

Foot Switches Technical Specifications

Foot Switch General Technical Data				
Standards	IEC 947-5-1			
Certifications - Approvals	UL/CUL file E191072, CE, RoHS			
Temperature	Operating (ambient) air temperature: – 10 to + 70°C [14 to 158°F] Storage (non-operating) air temperature: – 30 to + 80°C [-22 - 176°F]			
Environmental	According to IEC 68-2-3 and salty mist according to IEC 68-2-11			
Shock (according to IEC 68-2-27 and EN 60 068-2-27)	50g (1/2 sinusoidal shock for 11 ms) no change in contact position			
Degree of Protection (according to IEC 529 and EN 60 529)	IP 65			
Operating Torque	0.25 N·m (2.2 lb·in)			
Torque - Terminal Screw	Recommended: 0.8 N·m (7.0 lb.in); Maximum 0.9 N·m (8.0 lb·in)			
Torque - Cover Screw	Recommended: 5.0 N·m (4.3 lb.in); Maximum 0.8 N·m (7.0 lb·in)			
Operating Angle	15 Degree			
Cable Inlet	Pg 16 x 1.41 knockout			
Foot Switc	h Electrical Data			
Rated Insulation voltage U _i	690V (according to IEC 947-1 and EN 60-947-1) Degree of pollution 3			
Rated Impulse Withstand Voltage U _{imp}	6kV (according to IEC 947-1 and EN 60 947-1)			
Conventional Free Air Thermal Current I _{th} Θ < 40 °C	10A (according to IEC 947-1)			
Short-circuit Protection Ue < 500V AC, - gG (g)) type fuses	10A			
Rated Operational Current	A 600 (according to UL 508 and CSA C22-2 n° 14) Q 600 (according to UL 508 and CSA C22-2 n° 14			
AC-15 (according to IEC 947-5-1) 24V 120V 230V 240V DC-13 (according to IEC 947-5-1) 24V 125V 250V	10A 6A 3.1 A 3A 1.8 A 2.8 A 0.55 A 0.27 A			
Resistance Between Contacts	25mΩ			
Connecting Terminals	M3.5 (±) Philips head #1 with cable clamp			
Positive Opening Operation (according to IEC 947-5-1)	Yes marked by Θ			
Connecting Capacity	(1 or 2 x mm ²) 0.75 to 2.5			
Terminal Marking	According to EN 50 013			
Life Expectancy	Mechanical: 30 million operations Electrical Operations: Utilization categories AC-15 and DC-13 (Load factor of 0.5 according to curves)			

Wiring

Snap-action contact: A contact element in which the contact motion is independent of the speed of the actuator. This feature ensures reliable electrical performance even in applications involving very slow moving actuators. Slow-make/slow-break contact: A contact element in which the contact motion is dependent on the actuator speed.

Snap Action or Slow Action 1 N.O. and 1 N.C.



Note: See contact block accessories for <u>AGZ11-SWITCH</u> and <u>AGX11-SWITCH</u> replacement contact block (contact blocks have adjustable screw actuator).







DC-13	Snap Action	Slow Action			
Power breaking for a durability of 5 million operating cycles					
Voltage 24V	9.5 W	12W			
Voltage 48V	6.8 W	9W			
Voltage 110V	3.6 W	6W			

IEC Limit Switches Accessories

Replacement Contact Blocks

Easily-installed replacement contact blocks fit both heavy-duty IEC and double-insulated limit switches, including mini-DIN models. Note: Limit switches come standard with snap-action contacts (<u>AGZ11-SWITCH</u>.) To replace contact block, remove limit switch cover. Carefully remove old contact block and install replacement. Contact blocks are supplied with an adapter to fit into larger ABM and ABP switches. Remove this adapter when installing contacts in mini-DIN AAP models.



Replacement Contact Blocks						
Part Number	Price	Contact Type	Action			
AGZ11-SWITCH	\$88c:	Snap action (1) N.O. and (1) N.C.	3ms change-over time			
AGZ02-SWITCH \$88b		Snap action (2) N.C.	3ms change-over time			
AGX11-SWITCH	\$889:	Slow action (1) N.O. and (1) N.C.	Break before make			
AGY11-SWITCH	\$88a:	Slow action overlay (1) N.O. and (1) N.C.	Make before break			
AGW02-SWITCH	\$887:	Slow action delay (2) N.C.	Simultaneous			
AGW20-SWITCH \$888		Slow action overlay (2) N.O.	Simultaneous			

Additional Lever Arms, Spare Parts and Accessories for ABM Series

Additional Lever Arms/Spare Parts and Accessories						
Part Number	Price	Drawing Link	Actuator Type			
AGE42-LEVER	\$883:	PDF	Lever with stainless steel roller for E42 models (replacement lever)			
AGE44-LEVER	\$884:	N/A	Lever with 50mm diameter rubber roller (fits E42 models)			
AGE52-LEVER	\$885:	PDF	Lever with stainless steel roller for E52 models (replacement lever)			
AGE54-LEVER	\$886:	PDF	Lever with 50mm diameter rubber roller (fits E52 models)			

Note: See the Bar Charts page of this section for more information.



Replacement actuator levers for heavy-duty IEC models Easily-replaceable actuators for E42 and E52 model limit switches.

Note: These models have an E42 or E52 in the part number, for example, <u>ABM1E42Z11</u>.



AGE52-LEVER

(Replacement lever shown installed on <u>ABM5E52Z11</u> limit switch)





AGE54-LEVER

