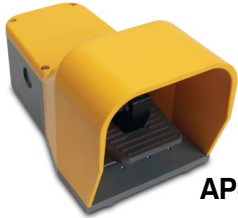


# Foot Switches



APS1211-V0



APS1151-V0



APD1231-V0

## Applications

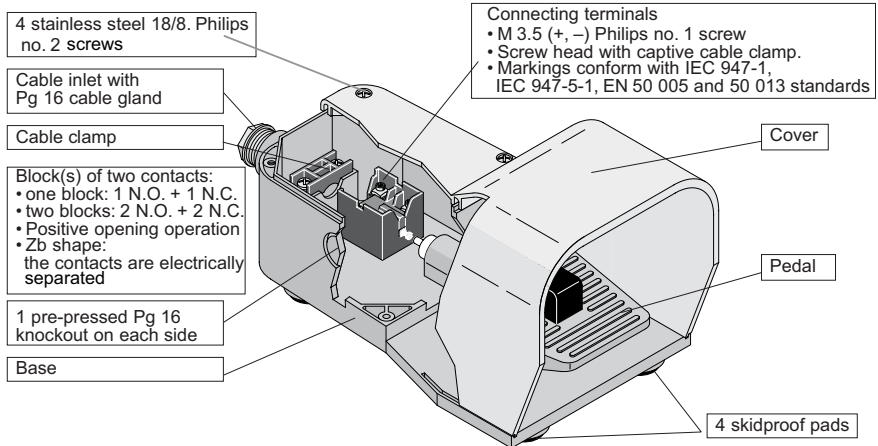
Choose these switches for foot switch-operated machines such as shearing machines, spinning machines, spinning lathes, machine tools, wrapping machines, riveting machines, and riveting presses.

AutomationDirect stocks foot switches in these operational formats:

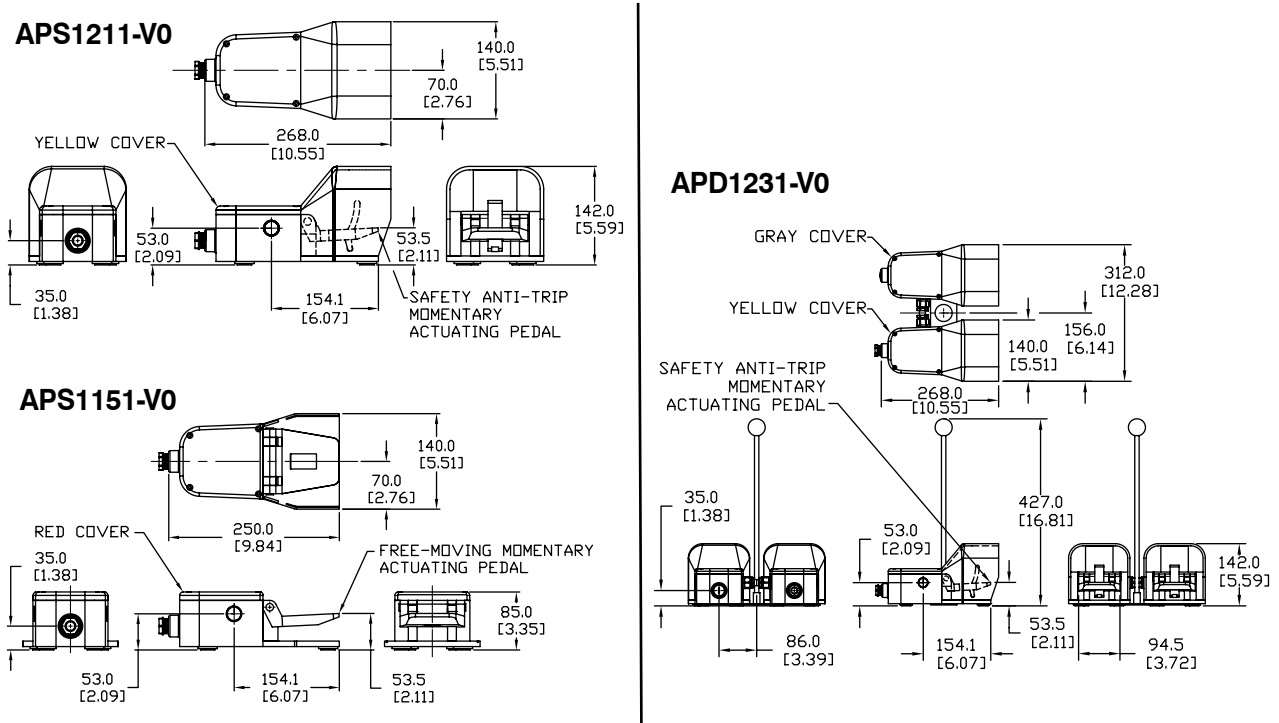
- Free movement (momentary):**  
 Contact position follows pedal movement; actuated when the pedal is pushed down, released when pedal is in state of rest.
- Foot switch locked in neutral position (safety anti-trip momentary):**  
 Same operation as above, after unlocking the pedal with the foot.
- Foot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

## 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



## Dimensions mm [inches]



# Foot Switches

All footswitches have heavy duty ABS plastic bases.




ABS Plastic Foot Switch Selection			
Part Number	Cover Color	Price	Description
<b>APS1211-VO</b>	Yellow	\$39.50	Single, ABS plastic, safety actuating lever, <b>1 N.O. and 1 N.C.</b> snap action contacts
<b>APS1213-VO</b>	Yellow	\$44.50	Single, ABS plastic, safety actuating lever, <b>2 N.O. and 2 N.C.</b> snap action contacts
<b>APS1151-VO</b>	Half Red	\$39.50	Single, ABS plastic, free-moving mounting, <b>1 N.O. and 1 N.C.</b> snap action contacts
<b>APD1231-VO</b>	One Yellow One Gray	\$86.00	Double, ABS plastic, safety actuating lever, <b>1 N.O. and 1 N.C.</b> snap action contacts for each switch

Die-cast Aluminum Foot Switch Selection			
Part Number	Cover Color	Price	Description
<b>APS1113-VO-M</b>	Yellow	\$59.00	Single, die-cast aluminum, free moving momentary actuating pedal, <b>2 N.O. and 2 N.C.</b> snap action contacts
<b>APS1114-VO-M</b>	Yellow	\$59.00	Single, die-cast aluminum, free moving momentary actuating pedal, <b>2 N.O. and 2 N.C.</b> slow action contacts
<b>APS1123-VO-M</b>	Gray	\$59.00	Single, die-cast aluminum, free moving momentary actuating pedal, <b>2 N.O. and 2 N.C.</b> snap action contacts
<b>APS1124-VO-M</b>	Gray	\$59.00	Single, die-cast aluminum, free moving momentary actuating pedal, <b>2 N.O. and 2 N.C.</b> slow action contacts
<b>APS1143-VO-M</b>	Red	\$59.00	Single, die-cast aluminum, free moving momentary actuating pedal, <b>2 N.O. and 2 N.C.</b> snap action contacts
<b>APS1144-VO-M</b>	Red	\$59.00	Single, die-cast aluminum, free moving momentary actuating pedal, <b>2 N.O. and 2 N.C.</b> slow action contacts
<b>APS1213-VO-M</b>	Yellow	\$65.00	Single, die-cast aluminum, safety anti-trip momentary actuating pedal, <b>2 N.O. and 2 N.C.</b> snap action contacts
<b>APS1214-VO-M</b>	Yellow	\$65.00	Single, die-cast aluminum, safety anti-trip momentary actuating pedal, <b>2 N.O. and 2 N.C.</b> slow action contacts
<b>APS1223-VO-M</b>	Gray	\$65.00	Single, die-cast aluminum, safety anti-trip momentary actuating pedal, <b>2 N.O. and 2 N.C.</b> snap action contacts
<b>APS1224-VO-M</b>	Gray	\$65.00	Single, die-cast aluminum, safety anti-trip momentary actuating pedal, <b>2 N.O. and 2 N.C.</b> slow action contacts
<b>APS1243-VO-M</b>	Red	\$65.00	Single, die-cast aluminum, safety anti-trip momentary actuating pedal, <b>2 N.O. and 2 N.C.</b> snap action contacts
<b>APS1244-VO-M</b>	Red	\$65.00	Single, die-cast aluminum, safety anti-trip momentary actuating pedal, <b>2 N.O. and 2 N.C.</b> slow action contacts
<b>APS1313-VO-M</b>	Yellow	\$65.00	Single, die-cast aluminum, free moving maintained actuating pedal, <b>2 N.O. and 2 N.C.</b> snap action contacts
<b>APS1314-VO-M</b>	Yellow	\$65.00	Single, die-cast aluminum, free moving maintained actuating pedal, <b>2 N.O. and 2 N.C.</b> slow action contacts
<b>APS1323-VO-M</b>	Gray	\$65.00	Single, die-cast aluminum, free moving maintained actuating pedal, <b>2 N.O. and 2 N.C.</b> snap action contacts
<b>APS1324-VO-M</b>	Gray	\$65.00	Single, die-cast aluminum, free moving maintained actuating pedal, <b>2 N.O. and 2 N.C.</b> slow action contacts
<b>APS1343-VO-M</b>	Red	\$65.00	Single, die-cast aluminum, free moving maintained actuating pedal, <b>2 N.O. and 2 N.C.</b> snap action contacts
<b>APS1344-VO-M</b>	Red	\$65.00	Single, die-cast aluminum, free moving maintained actuating pedal, <b>2 N.O. and 2 N.C.</b> slow action contacts
<b>APD1113-VO-M</b>	Yellow	\$139.00	Double, die-cast aluminum, 2 free moving momentary actuating pedals, each with <b>2 N.O. and 2 N.C.</b> snap action contacts
<b>APD1114-VO-M</b>	Yellow	\$139.00	Double, die-cast aluminum, 2 free moving momentary actuating pedals, each with <b>2 N.O. and 2 N.C.</b> slow action contacts
<b>APD1123-VO-M</b>	Gray	\$139.00	Double, die-cast aluminum, 2 free moving momentary actuating pedals, each with <b>2 N.O. and 2 N.C.</b> snap action contacts
<b>APD1124-VO-M</b>	Gray	\$139.00	Double, die-cast aluminum, 2 free moving momentary actuating pedals, each with <b>2 N.O. and 2 N.C.</b> slow action contacts
<b>APD1133-VO-M</b>	One Yellow One Gray	\$139.00	Double, die-cast aluminum, 2 free moving momentary actuating pedals, each with <b>2 N.O. and 2 N.C.</b> snap action contacts
<b>APD1134-VO-M</b>	One Yellow One Gray	\$139.00	Double, die-cast aluminum, 2 free moving momentary actuating pedals, each with <b>2 N.O. and 2 N.C.</b> slow action contacts
<b>APD1213-VO-M</b>	Yellow	\$143.00	Double, die-cast aluminum, 2 safety anti-trip momentary actuating pedals, each with <b>2 N.O. and 2 N.C.</b> snap action contacts
<b>APD1214-VO-M</b>	Yellow	\$143.00	Double, die-cast aluminum, 2 safety anti-trip momentary actuating pedals, each with <b>2 N.O. and 2 N.C.</b> slow action contacts
<b>APD1223-VO-M</b>	Gray	\$143.00	Double, die-cast aluminum, 2 safety anti-trip momentary actuating pedals, each with <b>2 N.O. and 2 N.C.</b> snap action contacts
<b>APD1224-VO-M</b>	Gray	\$98.25	Double, die-cast aluminum, 2 safety anti-trip momentary actuating pedals, each with <b>2 N.O. and 2 N.C.</b> slow action contacts
<b>APD1233-VO-M</b>	One Yellow One Gray	\$143.00	Double, die-cast aluminum, 2 safety anti-trip momentary actuating pedals, each with <b>2 N.O. and 2 N.C.</b> snap action contacts
<b>APD1234-VO-M</b>	One Yellow One Gray	\$143.00	Double, die-cast aluminum, 2 safety anti-trip momentary actuating pedals, each with <b>2 N.O. and 2 N.C.</b> slow action contacts



# Foot Switches Technical Specifications

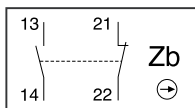
Foot Switch General Technical Data	
<b>Standards</b>	IEC 947-5-1
<b>Certifications - Approvals</b>	UL/CUL file E191072, CE, RoHS
<b>Temperature</b>	Operating (ambient) air temperature: - 10 to + 70°C (14°F to 158°F) Storage (non-operating) air temperature: - 30 to + 80°C (-22°F - 176°F)
<b>Environmental</b>	According to IEC 68-2-3 and salty mist according to IEC 68-2-11
<b>Shock</b> (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
<b>Degree of Protection</b> (according to IEC 529 and EN 60 529)	IP 65
<b>Operating Torque</b>	0.25 N-m (2.2 lb-in)
<b>Torque - Terminal Screw</b>	Recommended: 0.8 N-m (7.0 lb-in); Maximum 0.9 N-m (8.0 lb-in)
<b>Torque - Cover Screw</b>	Recommended: 5.0 N-m (4.3 lb-in); Maximum 0.8 N-m (7.0 lb-in)
<b>Operating Angle</b>	15 Degree
<b>Cable Inlet</b>	Pg 16 x 1.41 knockout
Foot Switch Electrical Data	
<b>Rated Insulation voltage <math>U_i</math></b>	690V (according to IEC 947-1 and EN 60-947-1) Degree of pollution 3
<b>Rated Impulse Withstand Voltage <math>U_{imp}</math></b>	6kV (according to IEC 947-1 and EN 60 947-1)
<b>Conventional Free Air Thermal Current <math>I_{th}</math></b> $\Theta < 40\text{ }^\circ\text{C}$	10A ( according to IEC 947-1)
<b>Short-circuit Protection</b> $U_g < 500\text{V AC}$ - gG (g) type fuses	10A
<b>Rated Operational Current</b>	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 10A 120V 6A 230V 3.1 A 240V 3A 400V 1.8 A
DC-13 (according to IEC 947-5-1)	24V 2.8 A 125V 0.55 A 250V 0.27 A
<b>Resistance Between Contacts</b>	25m $\Omega$
<b>Connecting Terminals</b>	M3.5 (±) Philips head #1 with cable clamp
<b>Positive Opening Operation</b> (according to IEC 947-5-1)	Yes. Marked by 
<b>Connecting Capacity</b>	(1 or 2 x mm <sup>2</sup> ) 0.75 to 2.5
<b>Terminal Marking</b>	According to EN 50 013
<b>Life Expectancy</b>	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.

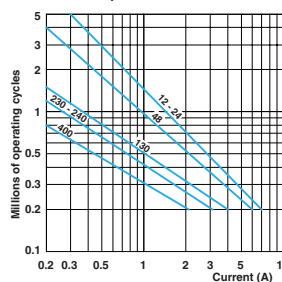
Slow-make/slow-break contact: A contact element in which the contact motion is dependent on the actuator speed.

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

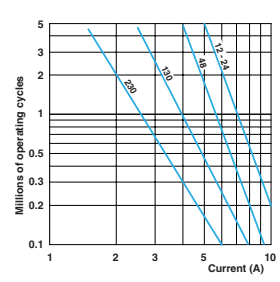


**Note:** See contact block accessories for AGZ11-SWITCH and AGX11-SWITCH replacement contact block (contact blocks have adjustable screw actuator).

**AC-15 - Snap Action**



**AC-15 - Slow Action**



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 (AGZ11-SWITCH.) 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	\$5.25	Snap-action 1 N.C. and N.O.	3ms change-over time
AGZ02-SWITCH	\$5.00	Snap-action 2 N.C.	3ms change-over time
AGX11-SWITCH	\$5.00	Slow-action 1 N.C. and 1 N.O.	Break before make
AGY11-SWITCH	\$5.00	Slow-action overlay 1 N.C. and 1 N.O.	Make before break
AGW02-SWITCH	\$5.50	Slow-action delay 2 N.C.	Simultaneous
AGW20-SWITCH	\$4.00	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	Dimensions	Actuator Type
AGE42-LEVER	\$5.00	Figure 8	Lever with stainless steel roller for E42 models (replacement lever)
AGE44-LEVER	\$5.00	Figure 13	Lever with 50mm diameter rubber roller (fits E42 models)
AGE52-LEVER	\$6.00	Figure 9	Lever with stainless steel roller for E52 models (replacement lever)
AGE54-LEVER	\$6.00	Figure 14	Lever with 50mm diameter rubber roller (fits E52 models)

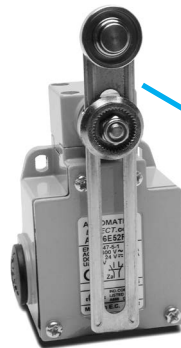
Note: See the Bar Charts page of this section for more information.



### 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, ABM1E42Z11.



### AGE52-LEVER

(Replacement lever shown installed on ABM5E52Z11 limit switch)

### AGE44-LEVER



### AGE54-LEVER

