

SUNS[®] International, LLC

■ Innovation ■ Quality ■ Service



Medical Foot Switches

<http://www.suns-usa.com>

2021

- Innovation
- Quality
- Service



SUNS International is a leading manufacturer of high quality medical grade foot switches. Our world class manufacturing facility is ISO9001 and ISO13485 certified. All of our medical foot switches are IPx8 rated and IEC60601-1 certified.

Why Choose SUNS Medical Foot Switches:

- Serving medical equipment communities for over 20 years.
- Trusted by top medical companies
- High quality and competitive price
- Ergonomic design and wide range of choices
- Offer customization and turn-key design

SUNS products are widely used in following applications:

Medical Lasers
Electrosurgical Generator
Biopsy Sampling System
Surgical Microscope Control
Ophthalmic Imaging
Dental Equipment
Hospital Bed/Chair Control
X-ray / MRI /CT Machines

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FS1 Series Stainless Steel Medical Foot Switches (IPX8)

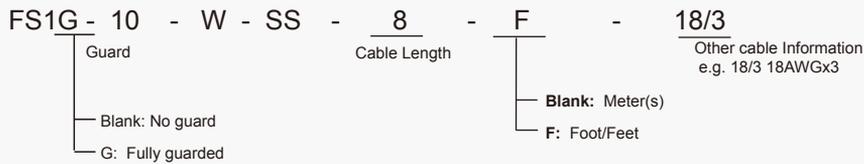
Features

- Robust all stainless steel design for corrosion resistance
- With nonskid base pad and foot treadle pad
- UL/CSA/CE/CCC approved
- Custom wiring available

Specifications

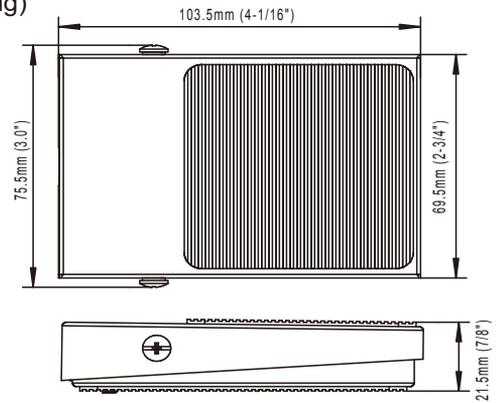
Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	10A/250VAC
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IPX8 (NEMA 4, 4x, 6, 6P)

Selection Guide:

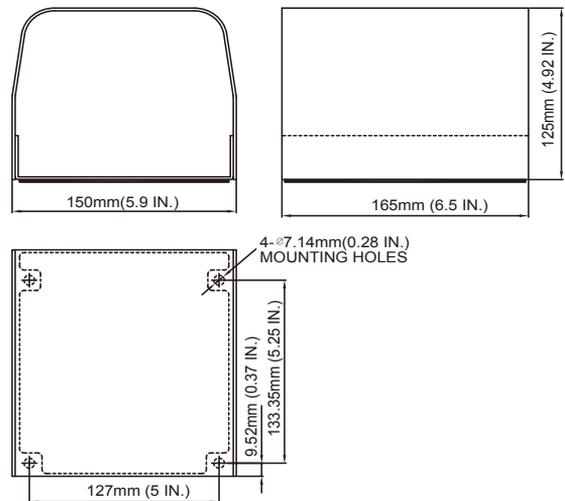


Dimensions:

- FS1-10-W-SS (Not wired)
- FS1-10-W-SS-2-18/3 (Prewired, 2 meters, 18AWGx3, 1NO)
- FS1-10-W-SS-8F-18/3 (Prewired, 8ft, 18AWGx3, 1NO)
- FS1-10-W-SS-P-8F-18/3 (Prewired, 8ft, 18AWGx3, with series plug)



- FS-1G (Orange)
- FS-1G-W (Medical white)
- FS-1G-SS (Stainless steel)
- FSP-1G(Plastic)



FS-81 Series Medical Foot Switches(IPX8)

Features

- Robust glass fiber reinforced plastic or zinc die cast body
- Galvanically separated contacts
- Positive opening of NC contacts
- UL/CSA/CE/CCC approved
- IEC60601 certification issued by TÜV for medical applications
- Custom color/wiring available

Specifications

Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	Ith: 10A Ui: 300V AC UL Rating: A300/AC15 CCC Rating: . . 10A/250V IEC60601 (TUV): 5A/25VAC
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IPX8 (NEMA 4, 4x, 6, 6P)

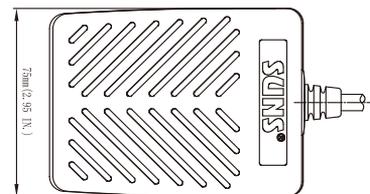
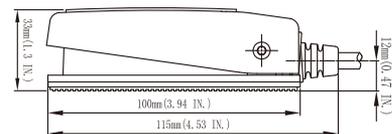
Selection Guide:

FS-81	G	-	SP	-	-	-	T	-	M	-	Twin	-	8	-	F	-	20/4S
	Guard		Switch Type		Contact Type		Contact Type		Enclosure Type		Options	Cable Length					Additional Wiring Information e.g. 20AWGx4 Shielded
	Blank: No guard		SP: Snap action		Blank: Momentary		Blank: SPDT		Blank: Fiber reinforced plastic		Blank: single						Blank: Meter(s)
	G: With guard		SL: Slow action		D: Push-on/Push-off		T: DPDT (2NO/2NC)		M: Die cast zinc		Twin: 2-pedal						F: Foot/feet
							S: DPDT (2-stage)				n-pedal (n = 3...6)						

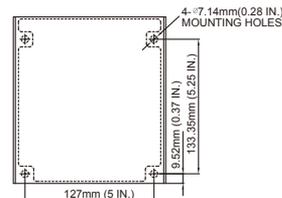
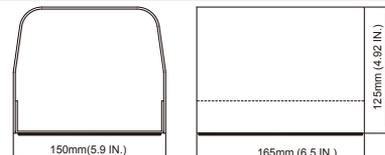
* Standard pedal color:Black -Y for Yellow -U for Blue

Dimensions:

- FS-81-SP-2-20/4S** (20AWGx4, shielded, 2 meters, 1NO/1NC, cable diameter 7.0mm)
- FS-81-SP-2-22/5S** (22AWGx5, shielded, 2 meters, 1NO/1NC, cable diameter 5.6mm)
- FS-81-SP-T-2-20/4S** (20AWGx4, shielded, 2 meters, 2NO, cable diameter 7.0mm)
- FS-81-SP-T-2-22/5S** (22AWGx5, shielded, 2 meters, 2NO, cable diameter 5.6mm)
- FS-81-SP-S-2-20/4S** (20AWGx4, shielded, 2 meters, 2x1NO, 2-stage, cable diameter 7.0mm)
- FS-81-SP-S-2-22/5S** (22AWGx5, shielded, 2 meters, 2x1NO, 2-stage, cable diameter 5.6mm)

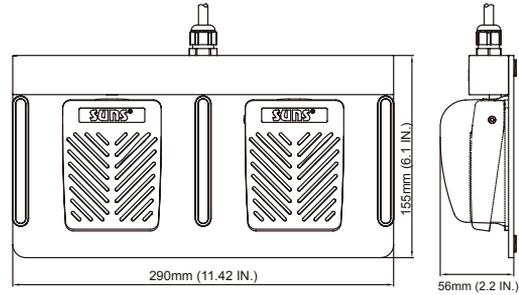


- FS-1G** (Orange)
- FS-1G-W** (Medical white)
- FS-1G-SS** (Stainless steel)
- FSP-1G**(Plastic)

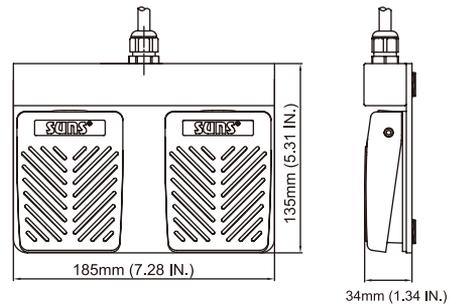


FS-81 Series Medical Foot Switches(IPx8)

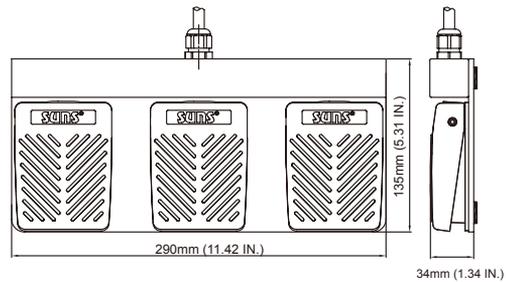
FS-81-SP-W(Twin)-2-20/4S (20AWGx4, shielded, 2 meters, 1NO per pedal, cable diameter 7.0mm)
FS-81-SP-W(Twin)-2-22/5S (22AWGx5, shielded, 2 meters, 1NO per pedal, cable diameter 5.6mm)



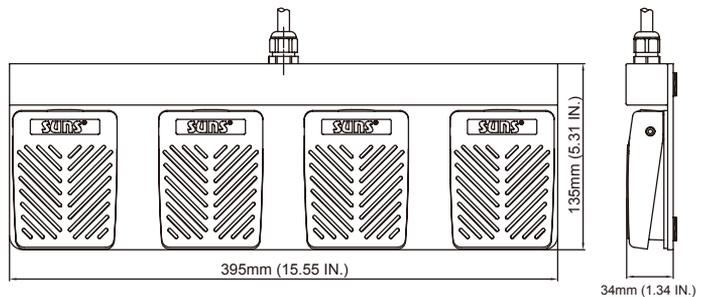
FS-81-SP-(Twin)-2-20/4S (20AWGx4, shielded, 2 meters, 1NO per pedal, cable diameter 7.0mm)
FS-81-SP-(Twin)-2-22/5S (22AWGx5, shielded, 2 meters, 1NO per pedal, cable diameter 5.6mm)



FS-81-SP-(3-Pedal)-2-20/4S (20AWGx4, shielded, 2 meters, 1NO per pedal, cable diameter 7.0mm)
FS-81-SP-(3-Pedal)-2-22/5S (22AWGx5, shielded, 2 meters, 1NO per pedal, cable diameter 5.6mm)



FS-81-SP-(4-Pedal)-2-22/5S (22AWGx5, shielded, 2 meters, 1NO per pedal, cable diameter 5.6mm)



FS-81-CS Series Medical Foot Switches (IPX8)

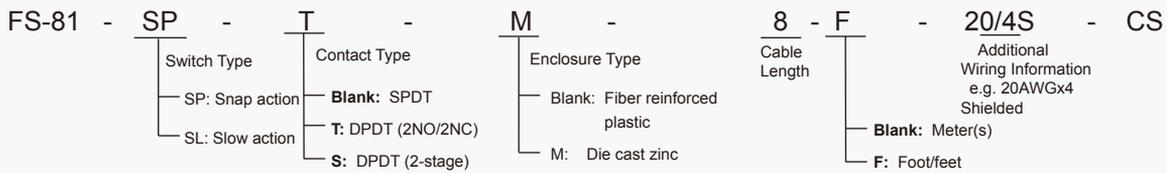
Features

- Maximum protection provided for accidental activation, with minimum dimensions
- High mechanical stability
- Push to open; Push again to close
- Foot pedal material: glass fiber reinforced plastic or zinc die cast
- Zinc die cast base with fiber reinforced plastic protective cover

Specifications

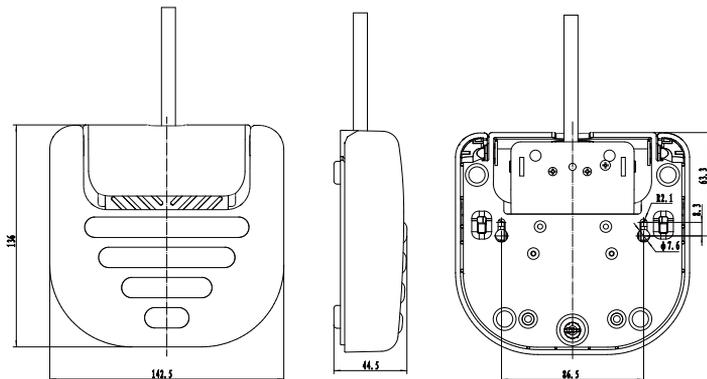
Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	Ith: 10A Ui: 300V AC UL Rating: A300/AC15 CCC Rating: . . 10A/250V IEC60601 (TUV): 5A/25VAC
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IPX8 (NEMA 4, 4x, 6, 6P)

Selection Guide:



Dimensions:

- FS-81-SP-2-20/4S-CS** (20AWGx4, shielded, 2 meters, 1NO/1NC, cable diameter 7.0mm)
- FS-81-SP-2-22/5S-CS** (22AWGx5, shielded, 2 meters, 1NO/1NC, cable diameter 5.6mm)
- FS-81-SP-T-2-20/4S-CS** (20AWGx4, shielded, 2 meters, 2NO, cable diameter 7.0mm)
- FS-81-SP-T-2-22/5S-CS** (22AWGx5, shielded, 2 meters, 2NO, cable diameter 5.6mm)
- FS-81-SP-S-2-20/4S-CS** (20AWGx4, shielded, 2 meters, 2x1NO, 2-stage, cable diameter 7.0mm)
- FS-81-SP-S-2-22/5S-CS** (22AWGx5, shielded, 2 meters, 2x1NO, 2-stage, cable diameter 5.6mm)



FS-82 Series Medical Foot Switches (IPX8)

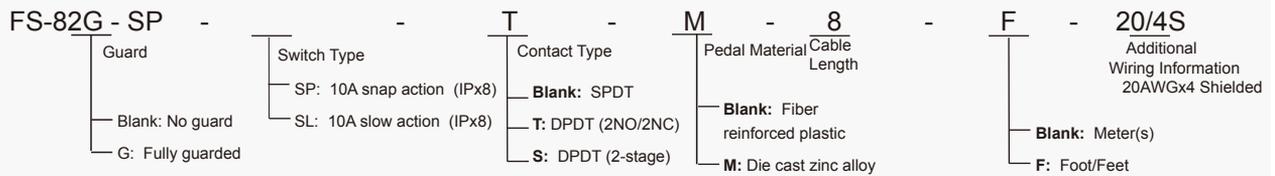
Features

- Robust glass fiber reinforced plastic
- Galvanically separated contacts (for -SP, -SL)
- Positive opening of NC contacts (for -SP, -SL)
- UL/CSA/CE/CCC certified
- IEC60601 certification issued by TÜV for medical applications
- Custom color/wiring available

Specifications

Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	Ith: 10A Ui: 300V AC UL Rating: A300/AC15 CCC Rating:.. 10A/250V IEC60601 (TUV): 5A/25VAC
Inrush Current	Complies with IEC947-5-1: AC15/DC13
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IPX8(NEMA 4, 4X, 6, 6P)

Selection Guide:



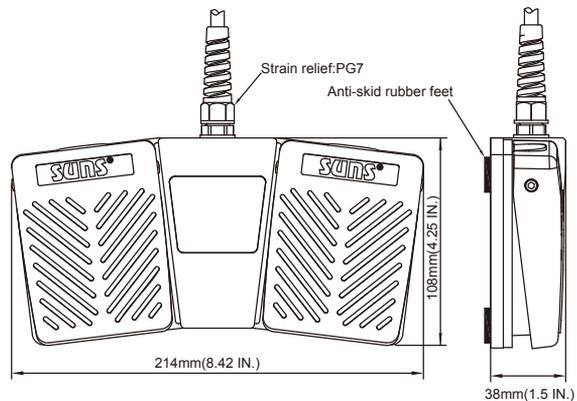
* Standard pedal color: Black

Dimensions:

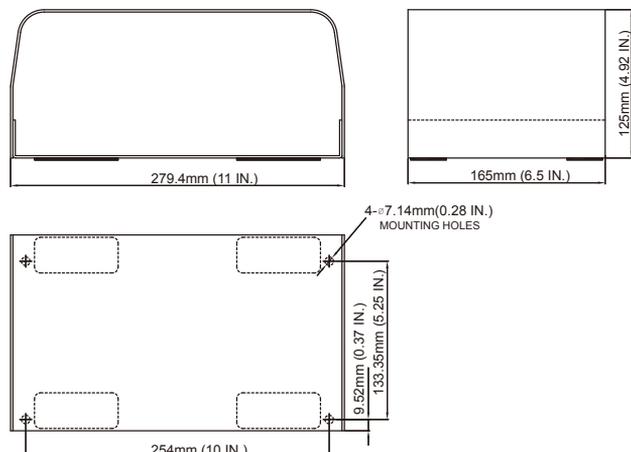
FS-82-SP-2-20/4S (20AWGx4, shielded, 2 meters, 2x 1NO, cable diameter 7.0mm)
FS-82-SP-2-22/5S (22AWGx5, shielded, 2 meters, 2x 1NO, cable diameter 5.6mm)



* Color code: (E.g. suffix: -Y,U/B for more clarity)



FS-TG (Orange)
FS-TG-W (Medical white)
FS-TG-SS (Stainless steel)



FS-82 Series Medical Foot Switches (IPX8)

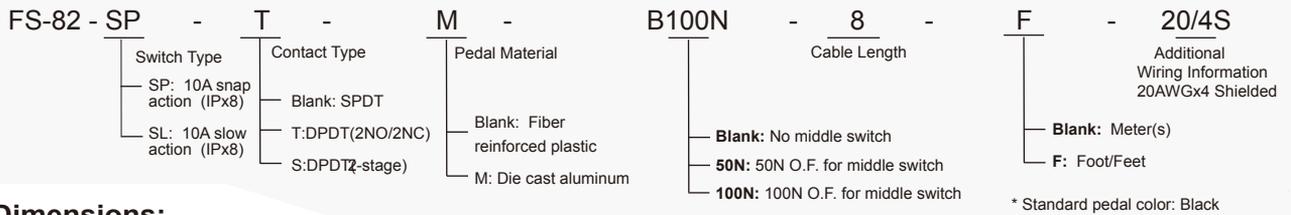
Features

- Aluminum alloy die cast base
- Galvanically separated contacts (for -SP, -SL)
- Positive opening of NC contacts (for -SP, -SL)
- UL/CSA/CE/CCC certified
- IEC60601 certification issued by TÜV for medical applications
- Custom color/wiring available

Specifications

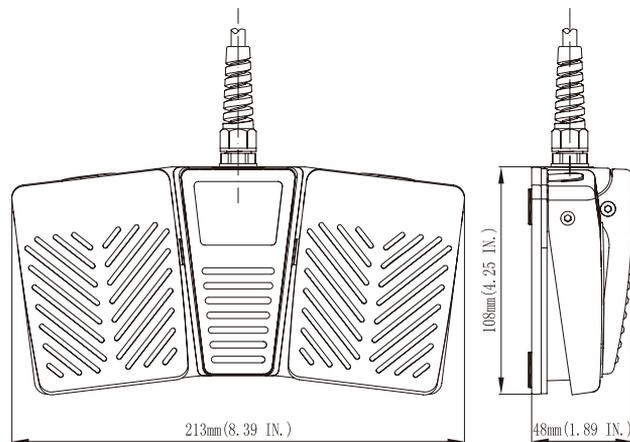
Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	Ith: 10A Ui: 300V AC UL Rating: A300/AC15 CCC Rating: 10A/250V IEC60601 (TUV): 5A/25VAC
Inrush Current	Complies with IEC947-5-1: AC15/DC13
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x 10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IPX8(NEMA 4, 4X, 6, 6P)

Selection Guide:



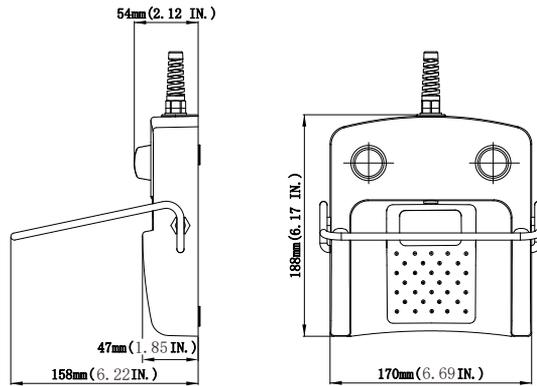
Dimensions:

FS-82-SP-M-B100N

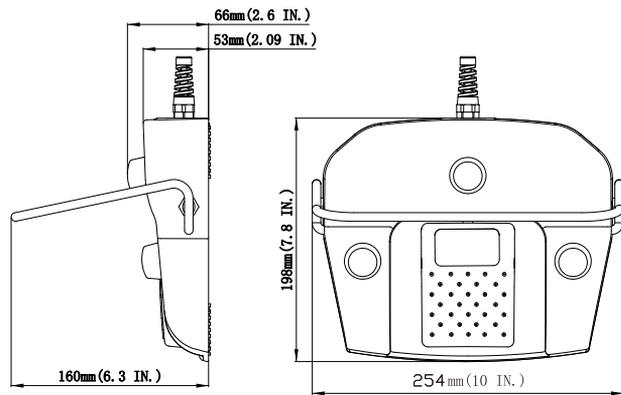


FS-81 FS-21 FX-81 Series Single Pedal Medical Foot Switches (IPX8)

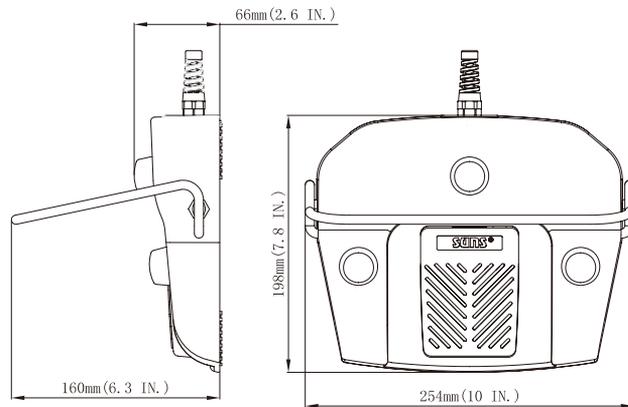
FX-81-5-W-N-B2-H-2



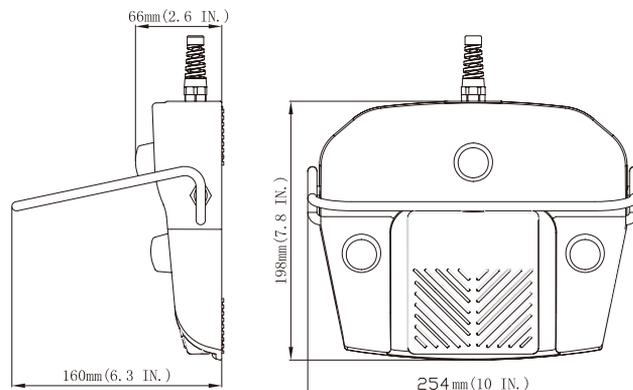
FX-81-5-W1-N-B3-H-2



FS-81-SP-W1-T-B3-H-2



FS-81R-10W-W1-B3-H-2



FS-81 FS-21 FX-81 Series Single Pedal Medical Foot Switches (IPX8)

Features

- Aluminum alloy die cast base
- Galvanically separated contacts (for -SP)
- Positive opening of NC contacts (for -SP)
- UL/CSA/CE certified
- IEC60601-1 certification issued by TÜV for medical applications
- Custom color/wiring available

Specifications

Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ @500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	Ith: 10A Ui: 300V AC UL Rating: A300/AC15 CCC Rating: 10A/250V IEC60601-1 (TUV): 5A/25VAC
Inrush Current	Complies with IEC947-5-1: AC15/DC13
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IPX8(NEMA 4, 4X, 6, 6P)

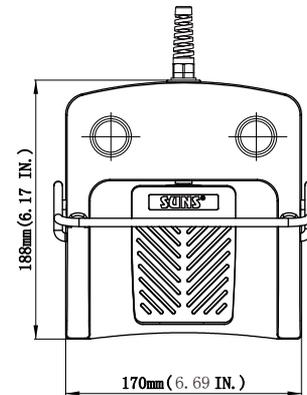
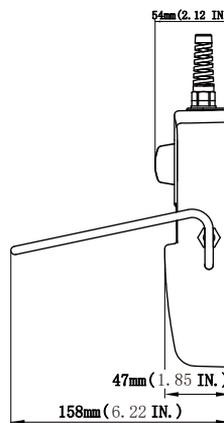
Selection Guide:

FS-81R-SP	-	T	-	W	-	M	-	N	-	B1	-	H	-	8	-	F	-	20/4S	-	L	
Model Type		Contact Type		Pedal Material		Pressure Point		With Cable Handle Length		Additional Wiring Information 20AWGx4 Shielded		Blank: Standard									
— FS-81-SP : Standard		— Blank : SPDT		— Blank : Fiber reinforced plastic		— Blank		— Blank : No Button		— Blank : Meter(s)		— Blank : Standard									
— FS-81R-10W : Rocker Style		— T : DPDT (2NO/2NC)		— M : Die cast zinc alloy		— N : With pressure point (FX81 only)		— B1 : Button in middle		— F : Foot/Feet		— L : Large									
— FS-21-10W : Wider Pedal		— S : DPDT (2-stage)						— B2 : 2 Buttons on left and right				— S : Small									
— FX-81-5 : Ergonomic with Pressure Point								— B3 : 3 Buttons													
								— B5 : 5 Buttons													

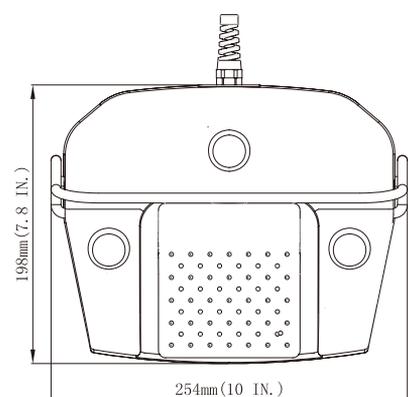
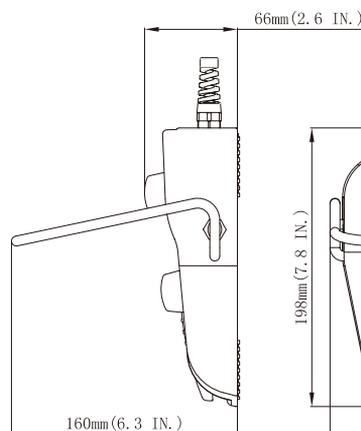
* Standard pedal color: Black

Dimensions:

FS-81-SP-W-M-B2-H-2



FS-21-10W-T-W1-B3-H-2



FS-82-W Series Medical Foot Switches (IPX8)

Features

- Aluminum alloy die cast base
- Galvanically separated contacts (for -SP, -SL)
- Positive opening of NC contacts (for -SP, -SL)
- UL/CSA/CE/CCC certified
- IEC60601 certification issued by TÜV for medical applications
- Custom color/wiring available

Specifications

Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	Ith: 10A Ui: 300V AC or 10A/15A 250VAC
Inrush Current	Complies with IEC947-5-1: AC15/DC13
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x 10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IPX8(NEMA 4, 4X, 6, 6P)

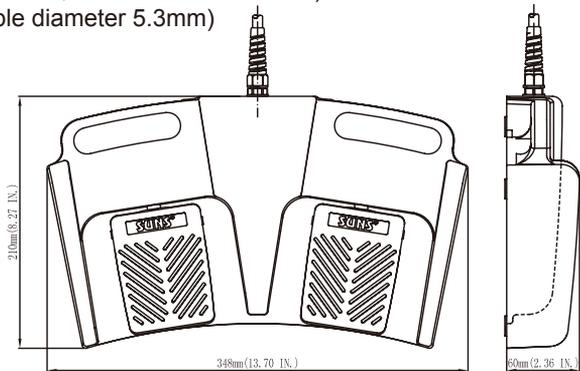
Selection Guide:

FS-82 - SP	-	W	-	T	-	M	-	B1	-	8	-	F	-	20/4S	(S)
Switch Type				Contact Type		Pedal Material		Options		Cable Length		Additional Wiring Information		20AWGx4 Shielded	
SP: 10A snap action (IPx8)				Blank: SPDT		Blank: Fiber reinforced plastic		B: NO Button				Blank: Meter(s)			
SL: 10A slow action (IPx8)				T: DPDT (2NO/2NC)		M: Die cast aluminum		B1: Button in middle				F: Foot/Feet			Blank: Large base
				S: DPDT (2-stage)				B2: 2 Buttons on left and right							(S): Small base
								B3: 3 Buttons							

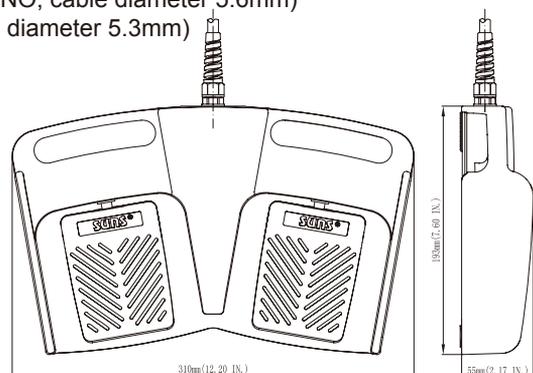
* Standard pedal color: Black

Dimensions:

- FS-82-SP-W-2-20/4S** (20AWGx4, shielded, 2 meters, 2x 1NO, cable diameter 7.0mm)
- FS-82-SP-W-2-22/5S** (22AWGx5, shielded, 2 meters, 2x 1NO, cable diameter 5.6mm)
- FS-82-SP-W-B1-2-20/4S** (20AWGx4, shielded, 2 meters, 3x 1NO, cable diameter 7.0mm)
- FS-82-SP-W-B2-2-22/5S** (22AWGx5, shielded, 2 meters, 4x 1NO, cable diameter 5.6mm)
- FS-82-SP-W-B3-26/7** (26AWGx7, PUR, coiled, 5x 1NO, cable diameter 5.3mm)



- FS-82-SP-W-2-20/4S (S)** (20AWGx4, shielded, 2 meters, 2x 1NO, cable diameter 7.0mm)
- FS-82-SP-W-2-22/5S (S)** (22AWGx5, shielded, 2 meters, 2x 1NO, cable diameter 5.6mm)
- FS-82-SP-W-B1-2-20/4S (S)** (20AWGx4, shielded, 2 meters, 3x 1NO, cable diameter 7.0mm)
- FS-82-SP-W-B2-2-22/5S (S)** (22AWGx5, shielded, 2 meters, 4x 1NO, cable diameter 5.6mm)
- FS-82-SP-W-B3-26/7 (S)** (26AWGx7, PUR, coiled, 5x 1NO, cable diameter 5.3mm)



FS-83-W Series Medical Foot Switches (IPX8)

Features

- Aluminum alloy die cast base
- Galvanically separated contacts (for -SP, -SL)
- Positive opening of NC contacts (for -SP, -SL)
- UL/CSA/CE/CCC certified
- IEC60601 certification issued by TÜV for medical applications
- Custom color/wiring available

Specifications

Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	Ith: 10A Ui: 300V AC or 10A/15A 250VAC
Inrush Current	Complies with IEC947-5-1: AC15/DC13
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IPX8(NEMA 4, 4X, 6, 6P)

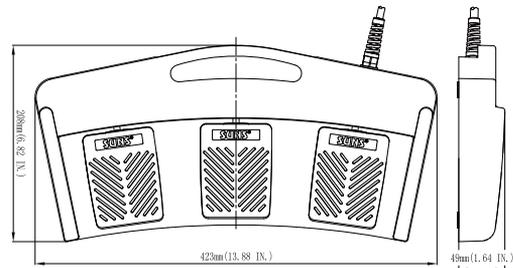
Selection Guide:

FS-83	-	SP	-	W	-	T	-	M	-	B1	-	8	-	F	-	20/4S	-	P
		Switch Type				Contact Type		Pedal Material		Options		Cable Length		Additional Wiring Information		20AWGx4 Shielded		
		SP: 10A snap action (IPx8)				Blank: SPDT		Blank: Fiber reinforced plastic		B: No Button				Blank: Meter(s)				Blank: No Partition
		SL: 10A slow action (IPx8)				T: DPDT (2NO/2NC)		M: Die cast aluminum		B1: Button in middle				F: Foot/Feet				P: With partition between pedals
						S: DPDT (2-stage)				B2: 2 Buttons on left and right								
										B3: 3 Buttons								

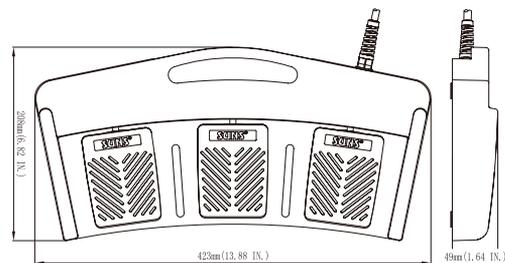
* Standard pedal color: Black

Dimensions:

- FS-83-SP-W-2-20/4S** (20AWGx4, shielded, 2 meters, 3x 1NO, cable diameter 7.0mm)
- FS-83-SP-W-2-22/5S** (22AWGx5, shielded, 2 meters, 3x 1NO, cable diameter 5.6mm)
- FS-83-SP-W-B1-2-22/5S** (22AWGx5, shielded, 2 meters, 4x 1NO, cable diameter 5.6mm)
- FS-83-SP-W-B2-26/7** (26AWGx7, PUR, coiled, 5x 1NO, cable diameter 5.3mm)



- FS-83-SP-W-2-20/4S(P)** (20AWGx4, shielded, 2 meters, 3x 1NO, cable diameter 7.0mm)
- FS-83-SP-W-2-22/5S(P)** (22AWGx5, shielded, 2 meters, 3x 1NO, cable diameter 5.6mm)
- FS-83-SP-W-B1-2-22/5S(P)** (22AWGx5, shielded, 2 meters, 4x 1NO, cable diameter 5.6mm)
- FS-83-SP-W-B2-26/7(P)** (26AWGx7, PUR, coiled, 5x 1NO, cable diameter 5.3mm)



FS-84-W Series Medical Foot Switches (IPX8)

Features

- Robust glass fiber reinforced plastic base
- Galvanically separated contacts (for -SP, -SL)
- Positive opening of NC contacts (for -SP, -SL)
- UL/CSA/CE/CCC certified
- IEC60601 certification issued by TUV for medical applications
- Custom color/wiring available

Specifications

Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	Ith: 10A Ui: 300V AC or 10A/15A 250VAC
Inrush Current	Complies with IEC947-5-1: AC15/DC13
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IPX8(NEMA 4, 4X, 6, 6P)

Selection Guide:

FS-84 - SP - W - T - M - B1 - 8 - F - 20/4S																														
<table border="0"> <tr> <td>Switch Type</td> <td>Contact Type</td> <td>Pedal Material</td> <td>Options</td> <td>Cable Length</td> <td>Additional Wiring Information</td> </tr> <tr> <td>- SP: 10A snap action (IPx8)</td> <td>- Blank: SPDT</td> <td>- Blank: Fiber reinforced plastic</td> <td>- Blank: No Button</td> <td>- Blank: Meter(s)</td> <td>- Blank: Meter(s)</td> </tr> <tr> <td>- SL: 10A slow action (IPx8)</td> <td>- T: DPDT (2NO/2NC)</td> <td>- M: Die cast zinc</td> <td>- B1: Button in middle</td> <td>- B1: Button in middle</td> <td>- F: Foot/Feet</td> </tr> <tr> <td></td> <td>- S: DPDT (2-stage)</td> <td></td> <td>- B2: 2 Buttons on left and right</td> <td>- B2: 2 Buttons on left and right</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>- B3: 3 Buttons</td> <td>- B3: 3 Buttons</td> <td></td> </tr> </table>	Switch Type	Contact Type	Pedal Material	Options	Cable Length	Additional Wiring Information	- SP : 10A snap action (IPx8)	- Blank : SPDT	- Blank : Fiber reinforced plastic	- Blank : No Button	- Blank : Meter(s)	- Blank : Meter(s)	- SL : 10A slow action (IPx8)	- T : DPDT (2NO/2NC)	- M : Die cast zinc	- B1 : Button in middle	- B1 : Button in middle	- F : Foot/Feet		- S : DPDT (2-stage)		- B2 : 2 Buttons on left and right	- B2 : 2 Buttons on left and right					- B3 : 3 Buttons	- B3 : 3 Buttons	
Switch Type	Contact Type	Pedal Material	Options	Cable Length	Additional Wiring Information																									
- SP : 10A snap action (IPx8)	- Blank : SPDT	- Blank : Fiber reinforced plastic	- Blank : No Button	- Blank : Meter(s)	- Blank : Meter(s)																									
- SL : 10A slow action (IPx8)	- T : DPDT (2NO/2NC)	- M : Die cast zinc	- B1 : Button in middle	- B1 : Button in middle	- F : Foot/Feet																									
	- S : DPDT (2-stage)		- B2 : 2 Buttons on left and right	- B2 : 2 Buttons on left and right																										
			- B3 : 3 Buttons	- B3 : 3 Buttons																										

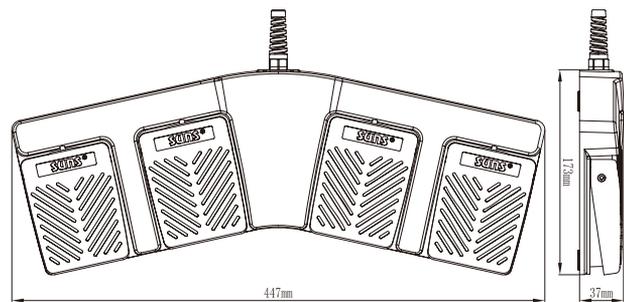
* Standard pedal color: Black

Dimensions:

FS-84-SP-W-2-22/5S (22AWGx5, shielded, 2 meters, 4x 1NO, cable diameter 5.6mm)

FS-84-SP-W-B1-26/7 (26AWGx7, PUR, coiled, 5x 1NO, cable diameter 5.3mm)

FS-84-SP-W-B2-26/7 (26AWGx7, PUR, coiled, 6x 1NO, cable diameter 5.3mm)



FS-8 Series Linear Hall Effect Foot Switches (IP68)

Features

- Robust glass fiber reinforced plastic housing
- Aluminum alloy die cast base
- Linear output or switch output
- Output can be directly connected to most electronics circuitry such as microprocessors integrated logic, discrete transistors and SCRs with compatible voltage specifications

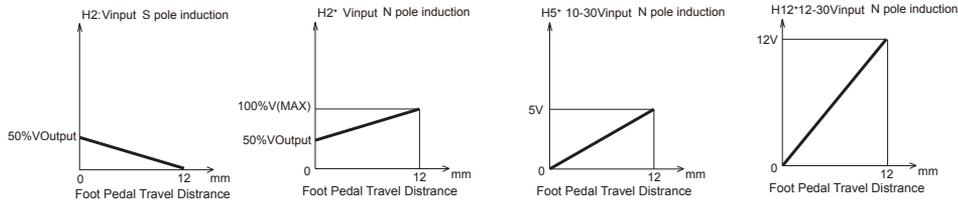
Specifications

Supply Voltage (Vs)	Switch output H1: 3.8-30VDC Analog output H2: 4.5-10.5 VDC H3: 30VAC H5/H10: 10-30 VDC
Supply Current	H1: 45mA H2: 7mA H3: 20mA H5/H10: 16mA
Output Type	Linear output or switch output
Output Voltage	See the graph below
Output Current	H2/H3: 5mA H5/H10: 20mA H5/H10: 45mA
Service Life	1 x10 ⁷ (operations)
Operating Temperature	-40~+100°C (-40~212°F)
Degree of Protection	IP68

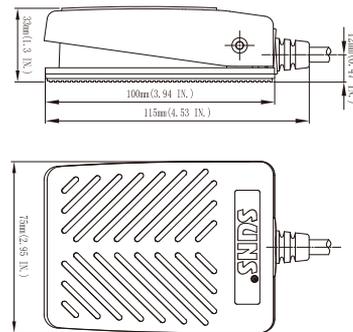
Selection Guide:

FS-81	-	G	-	W	-	H1	-	N	-	M	-	B1	-	8	-	F	-	24/3
Number of Pedals		Guard				H1: 10-30VDC switch input H2: 4.5-10.5VDC analog input H3: 30VAC analog input H5: 10-30VDC output analog output 0-5V H12: 12-30VDC input analog output 0-10V		N: N pole induction S: S pole induction		Pedal Material Blank: Fiber reinforced plastic M: Die cast zinc alloy		Optional Cable Pushbutton Length Blank: No button B1: One button B2: Two buttons						Additional Wiring Information e.g. 24AWGx3 Blank: Meter(s) F: Foot/feet
81: 1 pedal 82: 2 pedals 83: 3 pedals 84: 4 pedals		Blank: No guard G: Fully guarded		Blank: No base W: With Base														

Dimensions:



FS-81-H2-N-2-24/3



FS-81-H1-B2



FS-82-W-H2-N-2-24/6



* Dimensions refer to page 7 and 8

FS-8_R Series Medical Foot Switches (IPX8, Rocker Style)

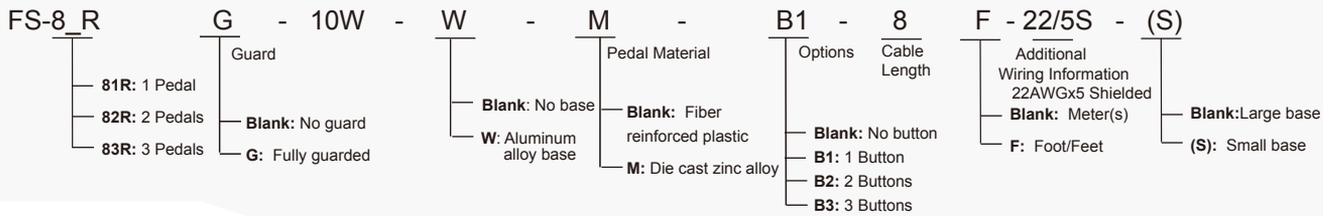
Features

- Robust glass fiber reinforced plastic or die cast zinc alloy pedal
- Sturdy aluminum alloy base available
- Compact design
- Pedal rocks left and right for multifunction applications
- Various base options available

Specifications

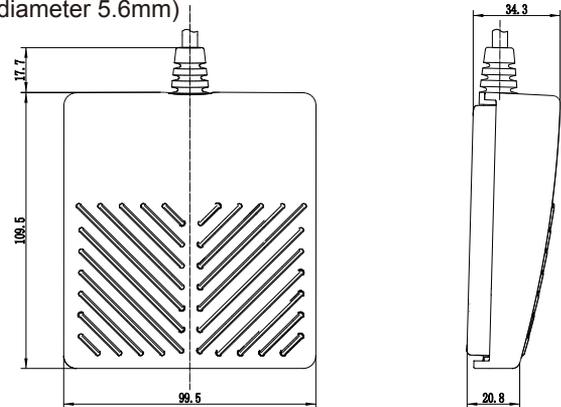
Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	10A/15A 1/2HP 250VAC
Inrush Current	Complies with IEC947-5-1: AC15/DC13
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x 10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IPX8

Selection Guide:

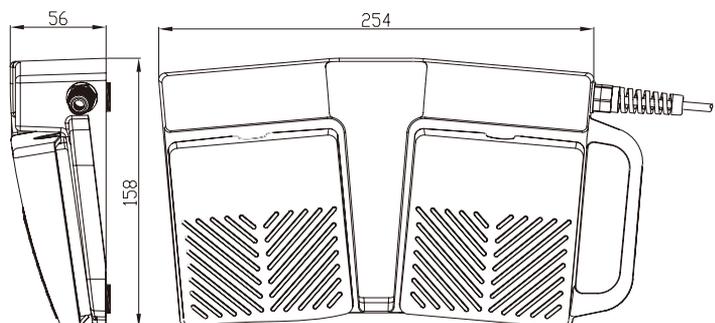


Dimensions:

FS-81R-10W-2-20/4S (20AWGx4, shielded, 1NO/1NC, cable diameter 7.0mm)
FS-81R-10W-2-22/5S (22AWGx5, shielded, 1NO/1NC, cable diameter 5.6mm)

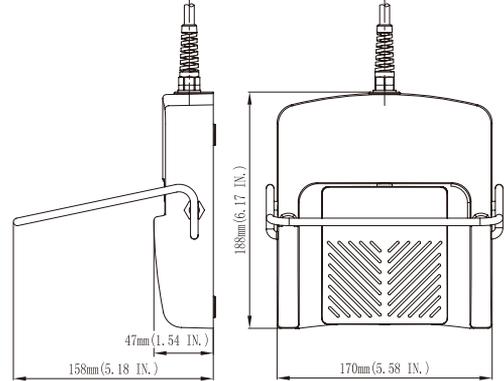


FS-82R-10W-2-22/5S (22AWGx5, shielded, 2 meters, 2x 1NO, cable diameter 5.6mm)
FS-82R-10W-B1-26/7 (26AWGx7, PUR, coiled, 3x 1NO, cable diameter 5.3mm)
FS-82R-10W-B2-26/7 (26AWGx7, PUR, coiled, 4x 1NO, cable diameter 5.3mm)

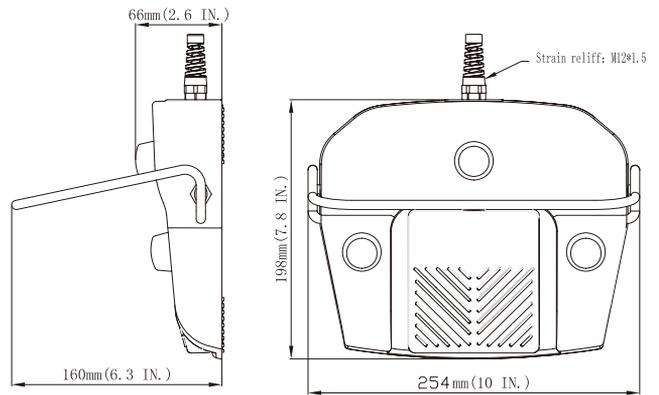


FS-8_R Series Medical Foot Switches (IPx8)

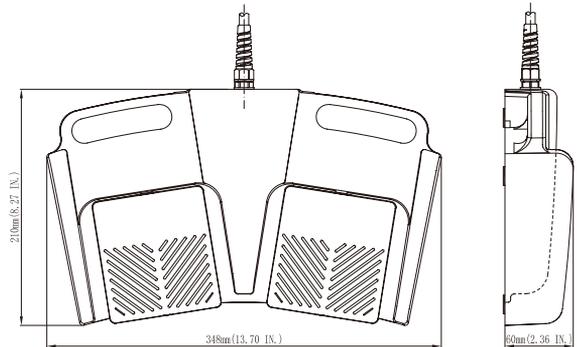
- FS-81R-10W-W-2-20/4S** (20AWGx4, shielded, 2 meters, 2x 1NO, cable diameter 7.0mm)
- FS-81R-10W-W-B1-20/4S** (20AWGx4, shielded, 2 meters, 3x 1NO, cable diameter 7.0mm)
- FS-82R-10W-W-B1-22/5S** (22AWGx5, shielded, 2 meters, 3x 1NO, cable diameter 5.6mm)
- FS-82R-10W-W-B2-22/5S** (22AWGx5, shielded, 2 meters, 4x 1NO, cable diameter 5.6mm)



- FS-81R-SP-W-B3-2-26/7** (26AWGx7, PUR, coiled, 5x 1NO, cable diameter 5.3mm)

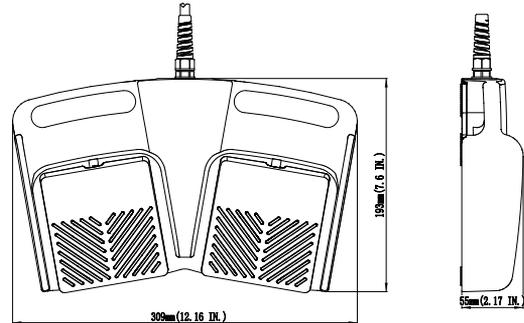


- FS-82R-10W-W-2-22/5S** (22AWGx5, shielded, 2 meters, 4x 1NO, cable diameter 5.6mm)
- FS-82R-10W-W-B1-2-26/7** (26AWGx7, PUR, coiled, 5x 1NO, cable diameter 5.3mm)

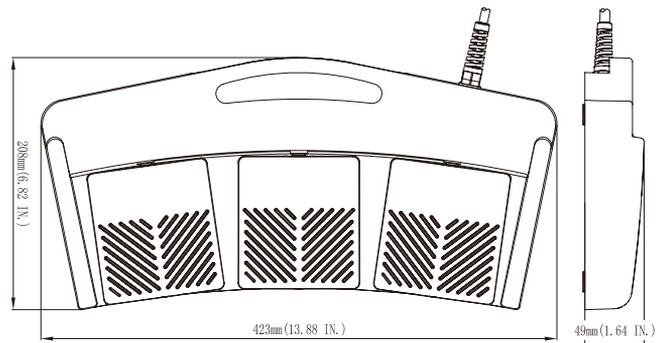


FS-8_R Series Medical Foot Switches (IPx8)

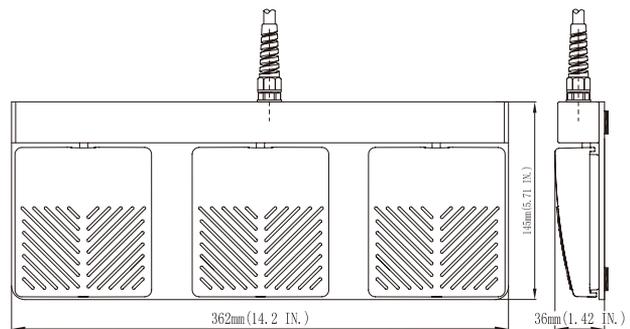
FS-82R-10W-W-2-22/5S(S) (22AWGx5, shielded, 2 meters, 4x 1NO, cable diameter 5.6mm)
FS-82R-10W-W-B1-2-26/7(S) (26AWGx7, PUR, coiled, 5x 1NO, cable diameter 5.3mm)



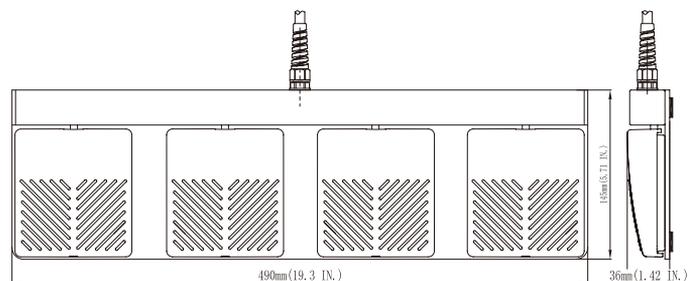
FS-83R-10W-W-26/7 (26AWGx7, PUR, coiled, 6x 1NO, cable diameter 5.3mm)



FS-81R-10W(3-PEDAL) Black (26AWGx7, PUR, coiled, 6x 1NO, cable diameter 5.3mm)



FS-81R-10W(4-PEDAL) (26AWGx9, PUR, coiled, 8x 1NO, cable diameter 5.3mm)



FS-21 Series Medical Foot Switches (IPX8)

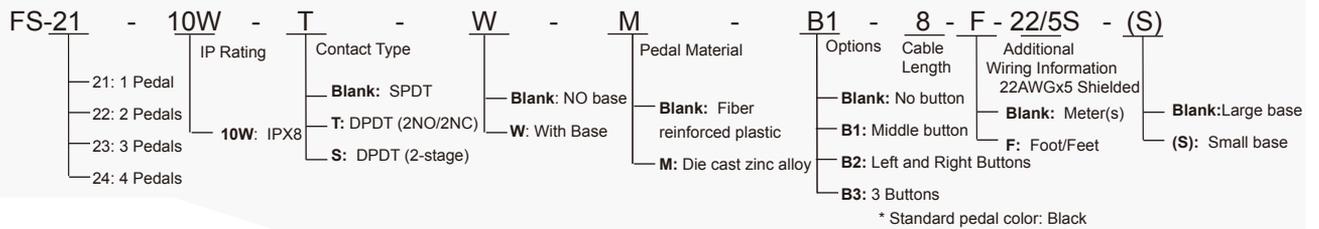
Features

- Robust glass fiber reinforced plastics
- Compact design
- Galvanically separated contacts with double-break
- Various base options available

Specifications

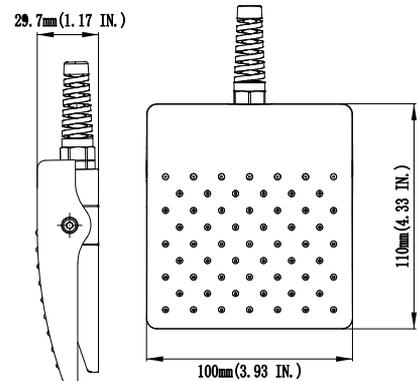
Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	10A/15A 1/2HP 250VAC
Inrush Current	Complies with IEC947-5-1: AC15/DC13
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x 10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IPX8

Selection Guide:

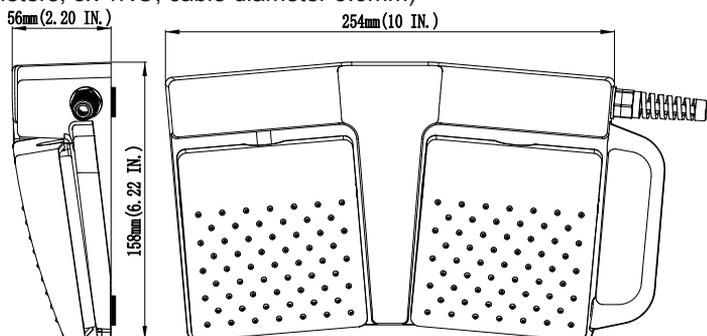


Dimensions:

FS-21-10W-2-20/4S (20AWGx4, shielded, 2 meters, 1NO/1NC, cable diameter 7.0mm)
FS-21-10W-2-22/5S (22AWGx5, shielded, 2 meters, 1NO/1NC, cable diameter 5.6mm)



FS-22-10W-2-20/4S (20AWGx4, shielded, 2 meters, 2x 1NO, cable diameter 7.0mm)
FS-22-10W-2-22/5S (22AWGx5, shielded, 2 meters, 2x 1NO, cable diameter 5.6mm)
FS-22-10W-B1-2-20/4S (20AWGx4, shielded, 2 meters, 3x 1NO, cable diameter 7.0mm)
FS-22-10W-B1-2-22/5S (22AWGx5, shielded, 2 meters, 3x 1NO, cable diameter 5.6mm)

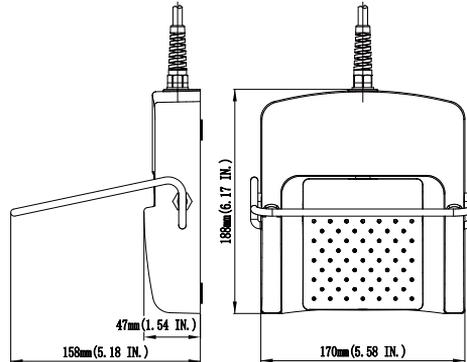


FS-21 Series Medical Foot Switches (IPX8)

FS-21-10W-W-B2-2-20/4S (20AWGx4, shielded, 2 meters, 3x 1NO, cable diameter 7.0mm)
FS-21-10W-W-B2-2-22/5S (22AWGx5, shielded, 2 meters, 3x 1NO, cable diameter 5.6mm)



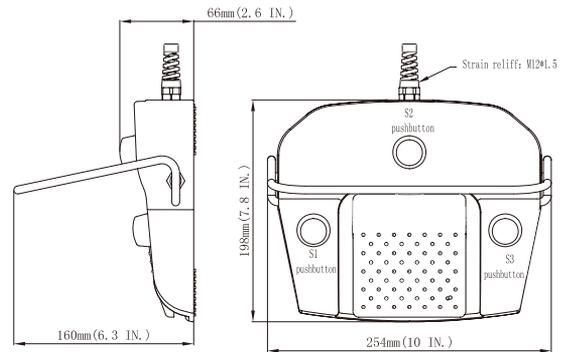
Unitary aluminium alloy base



FS-21-10W-T-W-B3-H-2-26/7 (26AWGx7, PUR, coiled, 2 meters, 5x 1NO, cable diameter 5.3mm)



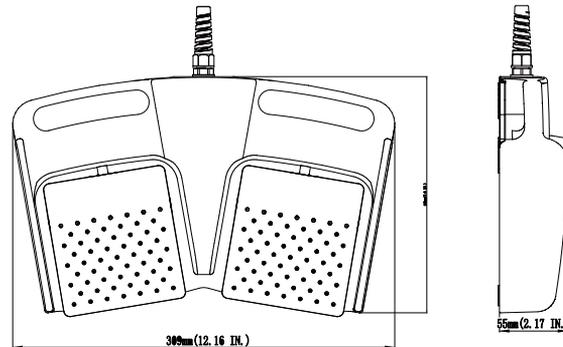
Unitary aluminium alloy base



FS-22-10W-W-2-20/4S(S) (20AWGx4, shielded, 2 meters, 2x 1NO, cable diameter 7.0mm)
FS-22-10W-W-2-22/5S(S) (22AWGx5, shielded, 2 meters, 2x 1NO, cable diameter 5.6mm)



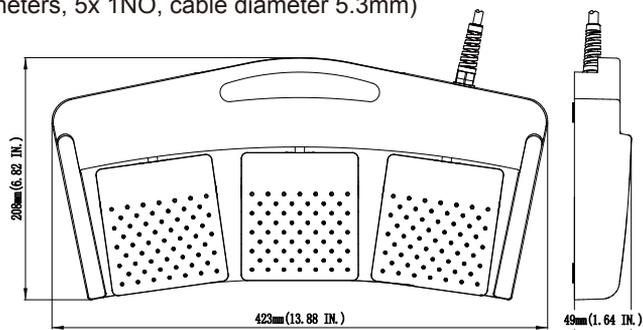
Unitary aluminium alloy base



FS-23-10W-W-2-20/4S (20AWGx4, shielded, 2 meters, 3x 1NO, cable diameter 7.0mm)
FS-23-10W-W-B2-2-26/7 (26AWGx7, PUR, coiled, 2 meters, 5x 1NO, cable diameter 5.3mm)



Unitary aluminium alloy base



MED-170 Low Profile/Omni-Directional Medical Foot Switches (IPX8)

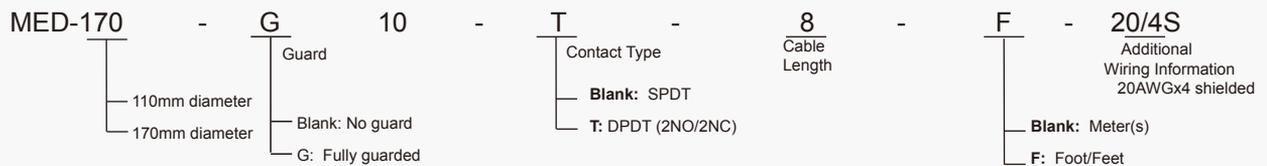
Features

- 360° actuation
- High mechanical stability
- Aluminum alloy die cast body
- Custom color available

Specifications

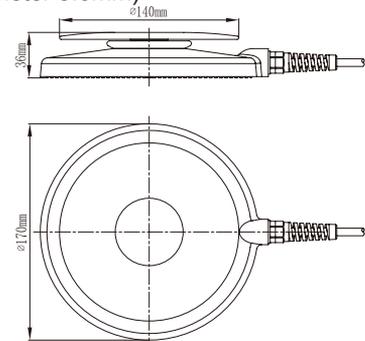
Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	5A or 10A 0-250V
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	2 x 10 ⁶ (operations)
Operating Temperature	-20~+80°C (-4~176°F)
Degree of Protection	IP68 (NEMA 4, 4x, 6, 6P)

Selection Guide:

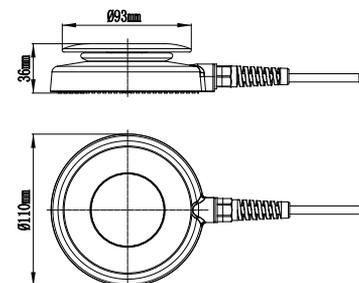


Dimensions:

- MED-170-10-2-18/3** (18AWGx3, 2 meters, 1x 1NO)
- MED-170-10-T-2-20/4S** (20AWGx4, shielded, 2 meters, 2NO/2NC, cable diameter 7.0mm)
- MED-170-10-T-2-22/5S** (22AWGx5, shielded, 2 meters, 2NO/2NC, cable diameter 5.6mm)



- MED-110-10-2-18/3** (18AWGx3, 2 meters, 1x 1NO)
- MED-110-10-T-2-22/5S** (22AWGx5, shielded, 2 meters, 2NO/2NC, cable diameter 5.6mm)



FCP Series Surgical Microscope Foot Switch

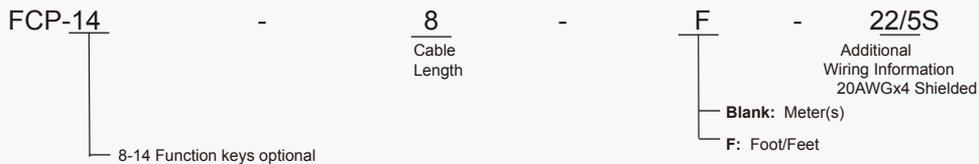
Features

- High strength alloy plastic
- Use the central pedal to control zoom and focus
- The lever is used for microscopical positioning
- 6 additional buttons that can be specified
- Protection level IP X8
- Easy to clean
- Custom label
- RAL color is available

Specifications

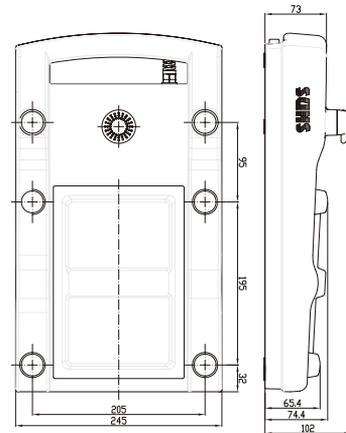
Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	Ith: 10A Ui: 300V AC or 10A/15A 250VAC
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x 10 ⁶ (operations)
Operating Temperature	-20~+80°C (-4~176°F)
Degree of Protection	IPX8

Selection Guide:

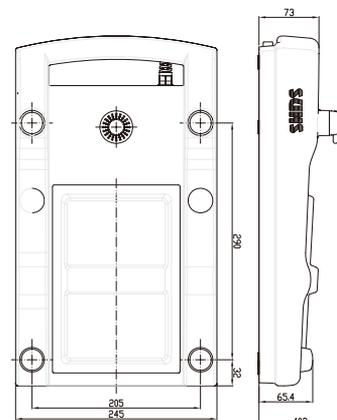


Dimensions:

FCP-14



FCP-12



FSR Series Medical Foot Switches (IPX8, Rocker Style)

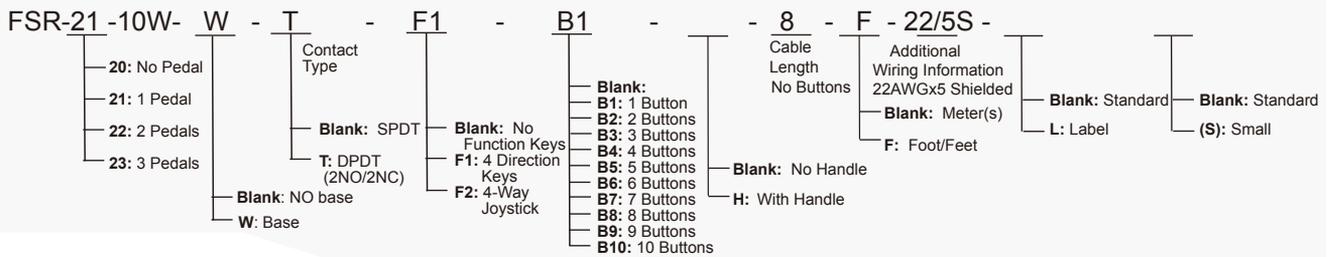
Features

- Aluminium alloy foot pedal
- Compact design
- Pedal rocks left and right for multifunction applications
- Various configurations available

Specifications

Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	10A/15A 1/2HP 250VAC
Inrush Current	Complies with IEC947-5-1: AC15/DC13
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x 10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IPX8

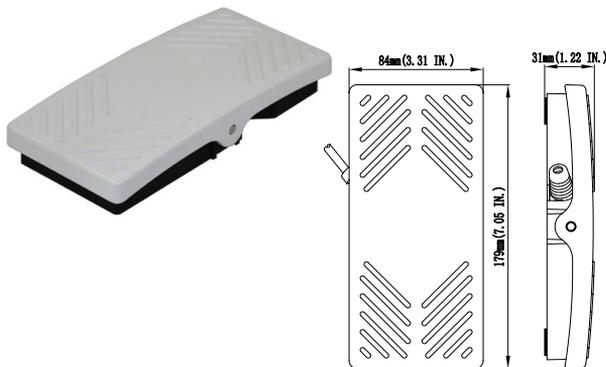
Selection Guide:



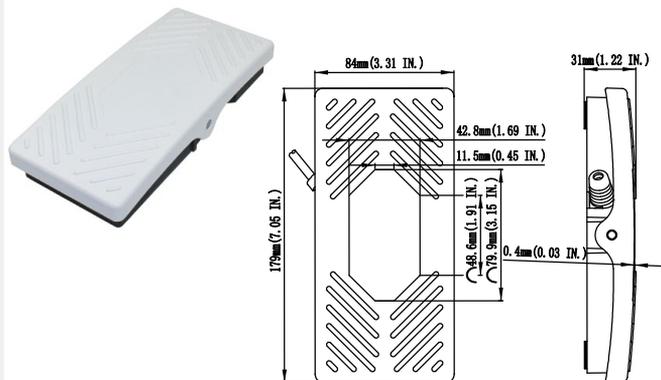
Dimensions:

*(S) is for dual pedals or three pedals, it is not suitable for F1 and B1 options

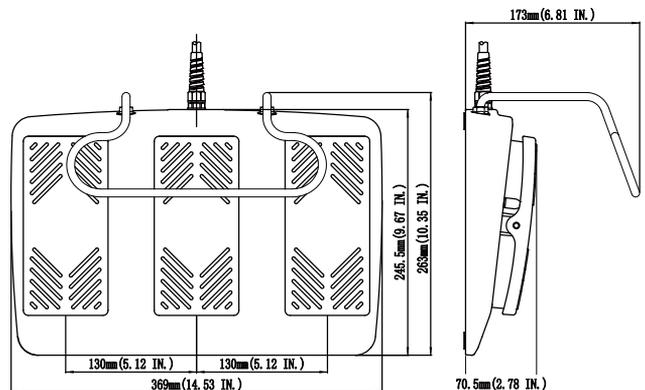
FSR-21-10W-2-20/4S
FSR-21-10W-T-2-22/5S



FSR-21-10W-2-20/4S-L

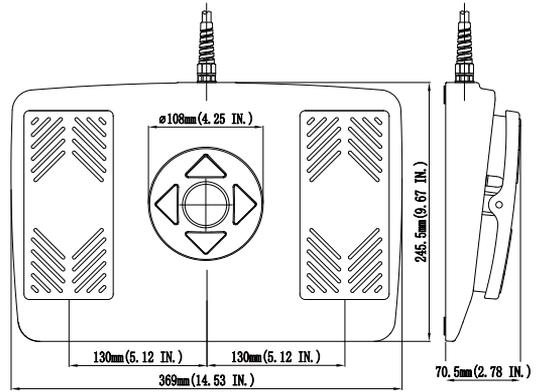


FSR-23-10W-W-H-2-22/5S

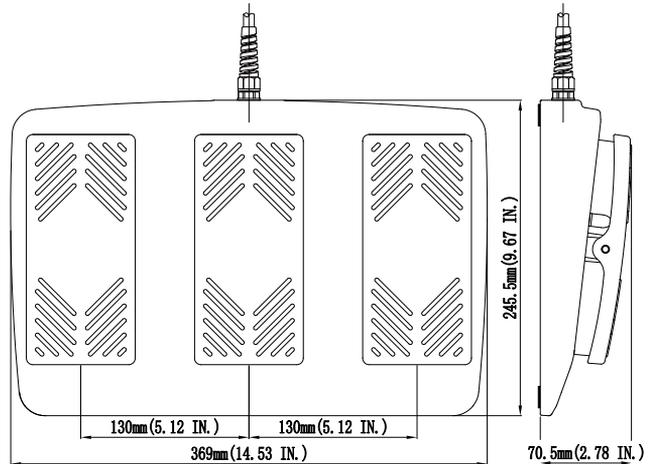


FSR Series Medical Foot Switches (IPX8, Rocker Style)

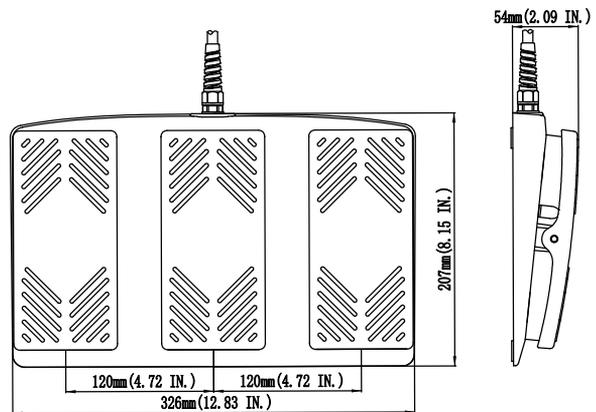
FSR-22-10W-W-F1



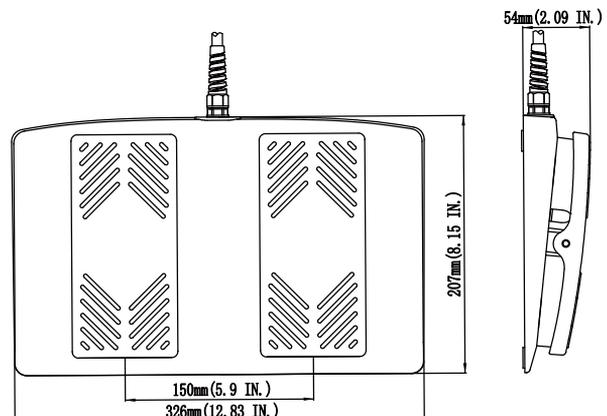
FSR-23-10W-W-2-22/9



FSR-23-10W-W-2-22/5S(S)

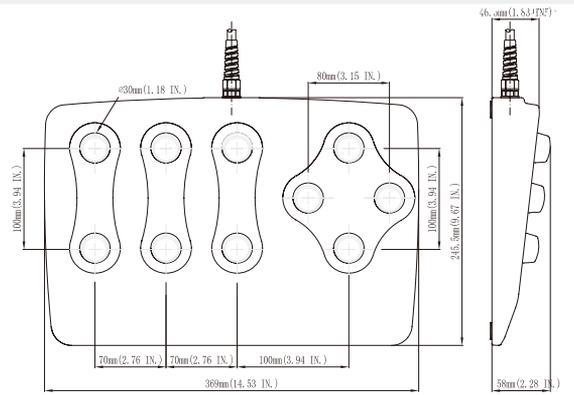


FSR-22-10W-W-2-22/5S(S)

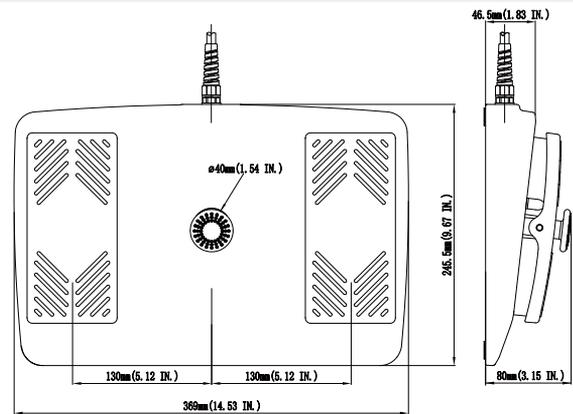


FSR Series Medical Foot Switches (IPX8, Rocker Style)

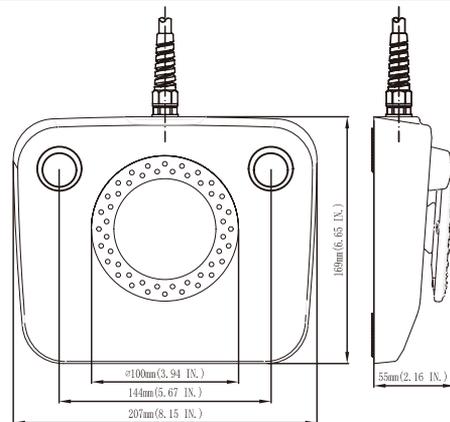
FSR-20-10W-W-B10



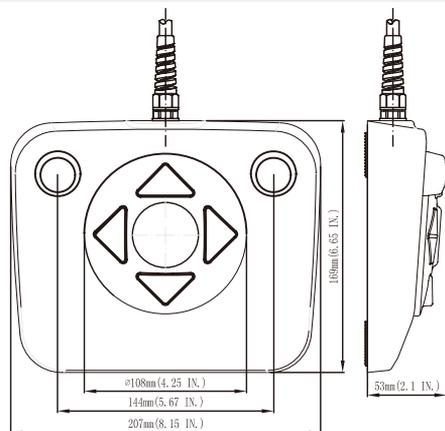
FSR-22-10W-W-F2



FSR-20-10W-F2-B2



FSR-20-10W-W-F1-B1(B2)



FS-9 Series Medical Foot Switches (IPx8)

Features

- Robust glass fiber reinforced plastics or zinc die cast body
- UL/CSA/CE/CCC approved
- Custom color/wiring available

Specifications

Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	10A/250VAC
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IPX8(NEMA 4, 4X, 6, 6P)

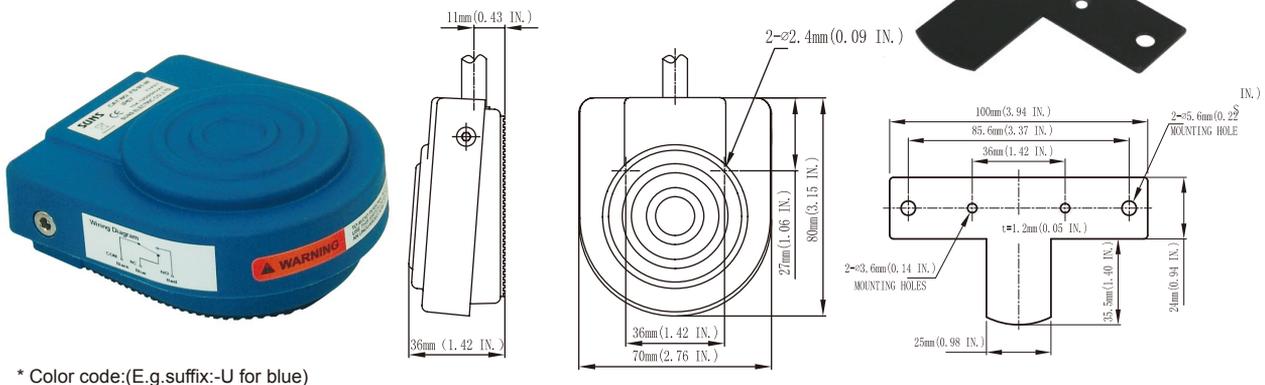
Selection Guide:

FS-91	-	G	-	10	W	-	M	-	8	-	F	-	18/3
Number of Pedals		Guard				Enclosure Type		Cable Length				Additional Wiring Information e.g. 18AWGx3	
91: 1 Pedal		Blank: No guard				Blank: Fiber reinforced plastic						Blank: Meter(s)	
92: 2 Pedals		G: Fully guarded				M: Zinc die cast						F: Foot/feet	

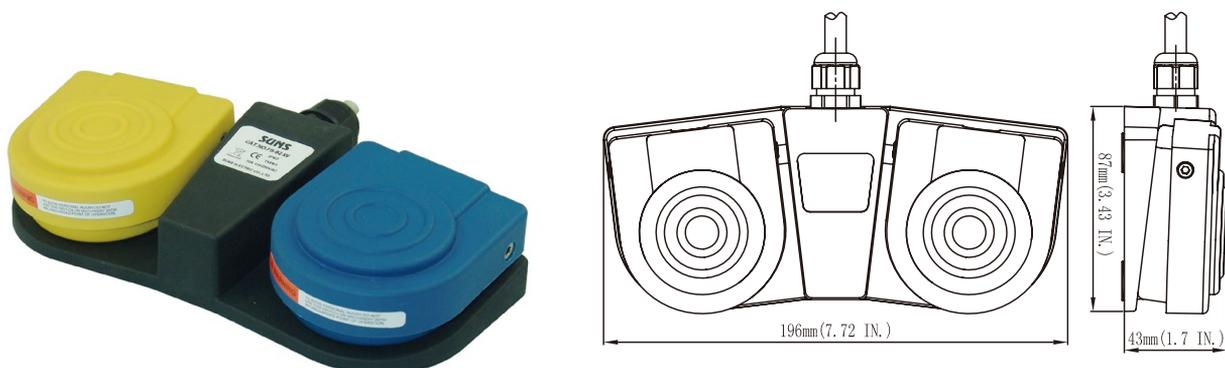
* Standard pedal color: Black

Dimensions:

FS-91-10W-8F-18/2 (18AWGx2, 8ft, 1NO, plastic, cable diameter 7.5mm)
FS-91-10W-M-8F-18/3 (18AWGx3, 8ft, 1NO, metal, cable diameter 7.5mm)



FS-92-10W-8F-18/3 (18AWGx3, 8ft, 2x 1NO, plastic, cable diameter 7.8mm)



FS6 Series Medical Foot Switches

Features

- Robust aluminum alloy die cast body
- Galvanically separated contacts with double-break
- Captive screws for easy wiring
- Positive opening of NC contacts
- UL/CSA/CE and CCC approved
- Threaded hole available in: PG13.5, M20x1.5 and 1/2NPT
- Custom color/wirings available

Specifications

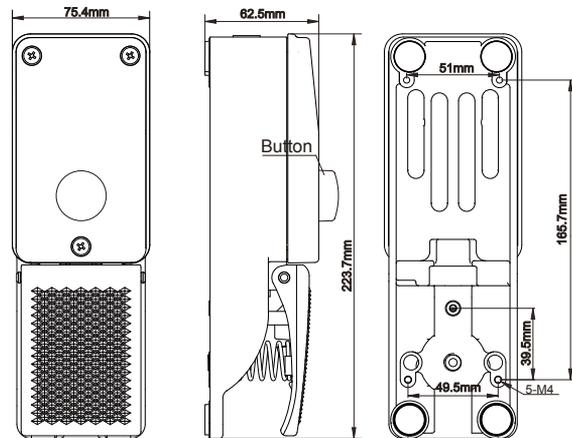
Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	10A/600V AC A600/AC15 Q300/DC13
Inrush Current	Complies with IEC947-5-1: AC15/DC13
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x 10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IP68

Selection Guide:

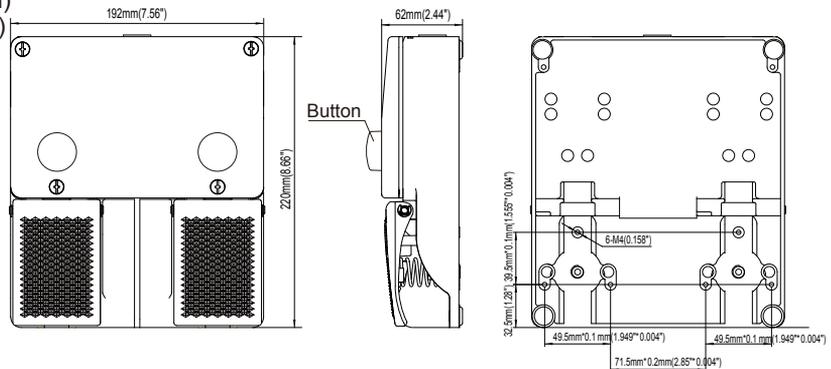
FS - 61	-	G	-	SP	-	T	-	C	-	B1	-	U/W	-	N
Number of Pedals		Guarding Options		Switch Type		Switch Configuration		Conduit Type		Optional Pushbutton		Pedal Color/ Enclosure Color		
61: 1 pedal 62: 2 pedals		Blank: No guard G: Fully guarded		SP: 10A snap action SL: 10A slow action		Blank: SPDT T: DPDT S: 2 stages		A: 1/2NPT B: PG13.5 C: M20 x1.5		B1: 1 button B2: 2 buttons		U: Blue W: White B: Black O: Orange Y: Yellow R: Red		

Dimensions:

FS-61-SP-_-B1-U/W-N(Snap action)
FS-61-SL-_-B1-U/W-N(Slow action)



FS-62-SP-_-B1-YU/W-N(Snap action)
FS-62-SL-_-B1-YU/W-N(Slow action)
FS-62-SP-_-B2-YU/W-N(Snap action)
FS-62-SL-_-B2-YU/W-N(Slow action)



FSC-6 Series Potentiometer Foot Control Pedal

Features

- Robust aluminum alloy die cast body
- 1K, 5K or 10K Ohm potentiometer
- UL, CSA, CE, CCC certified
- Threaded hole available in: PG13.5, M20x1.5 and 1/2NPT
- Custom color/wiring available

Specifications

Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<30mΩ (initial)
Rated Current/Voltage	10A/250VAC
Inrush Current	Complies with IEC947-5-1: AC15/DC13
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x 10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IP68

Selection Guide:

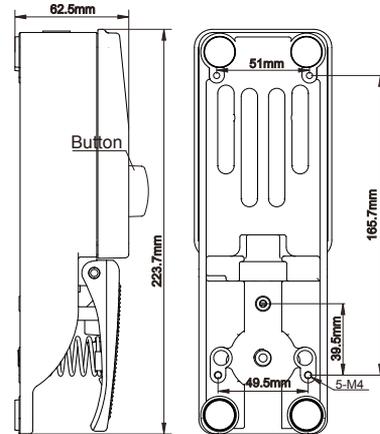
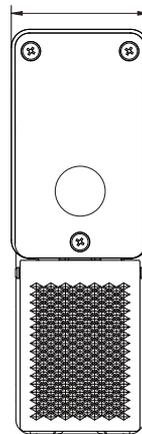
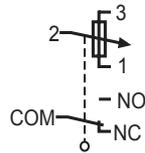
FSC - 61	-	G	-	2A	-	T	-	C	-	1K	-	B1	-	U/W	-	N
Number of Pedals		Guarding Options		Switch Type		Switch Configuration		Conduit Type		Options		Options		Pedal Color/Enclosure Color		
61: 1 pedal		Blank: No guard		2A: 2A 250VAC		Blank: SPDT		A: 1/2NPT		1K: 1K potentiometer		Blank: No button		U: Blue		
62: 2 pedals		G: Fully guarded		10A: 10A 250VAC		T: DPDT		B: PG13.5		5K: 5K potentiometer		B1: 1 button		W: White		
								C: M20 x1.5		10K: 10K potentiometer		B2: 2 buttons		O: Orange		
														Y: Yellow		
														R: Red		

Dimensions:

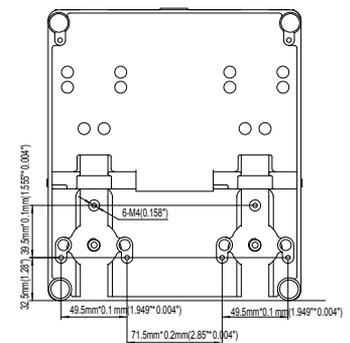
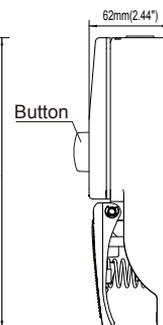
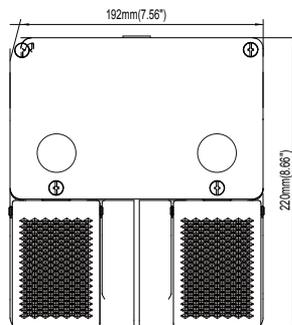
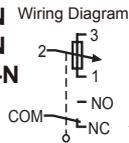
FSC-61-2A-_-1K-B1-U/W-N
FSC-61-2A-_-5K-B1-U/W-N
FSC-61-2A-_-10K-B1-U/W-N



Wiring Diagram



FSC-62-2A-_-1K-B2-YU/W-N
FSC-62-2A-_-5K-B2-YU/W-N
FSC-62-2A-_-10K-B2-YU/W-N



FWC-1/FWM-1 Series Potentiometer Foot Control Pedal

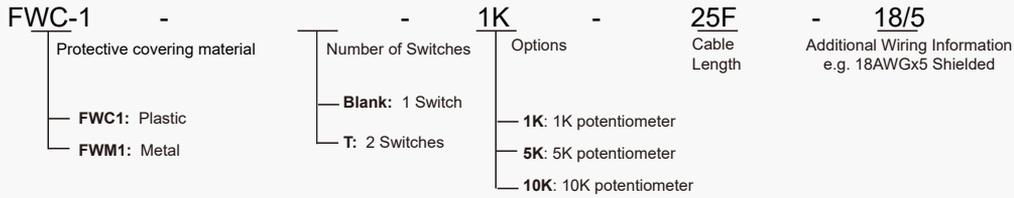
Features

- Robust fiber reinforced plastic or aluminum alloy die cast housing
- Advanced ergonomic design
- IP68 water-proof
- 1K, 5K, or 10K Ohm potentiometer
- Wireless option available

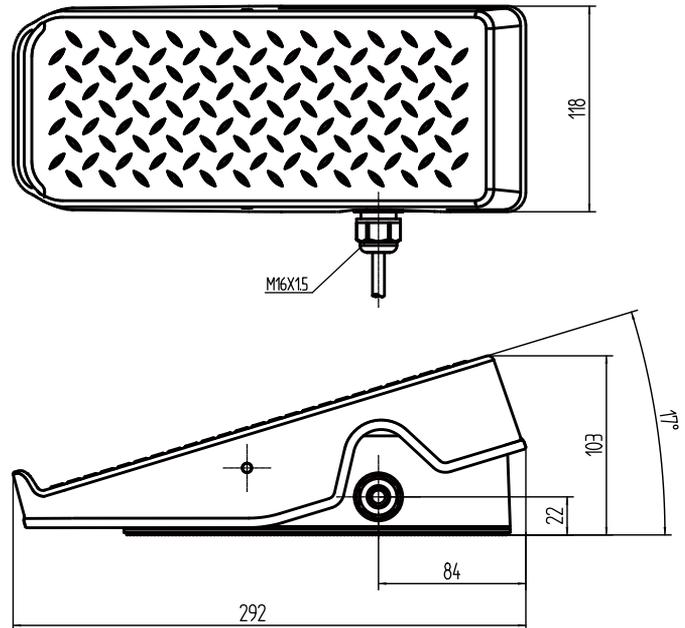
Specifications

Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<30mΩ (initial)
Rated Current/Voltage	10A/250VAC
Inrush Current	Complies with IEC947-5-1: AC15/DC13
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x 10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IP68/NEMA 6,6P

Selection Guide:



Dimensions:



FS-6 Series Linear Hall Effect Foot Switches (IP68)

Features

- Robust aluminum alloy die cast body
- Linear output or switch output
- Output can be directly connected to most electronics circuitry such as microprocessors integrated logic, discrete transistors and SCRs with compatible voltage specifications

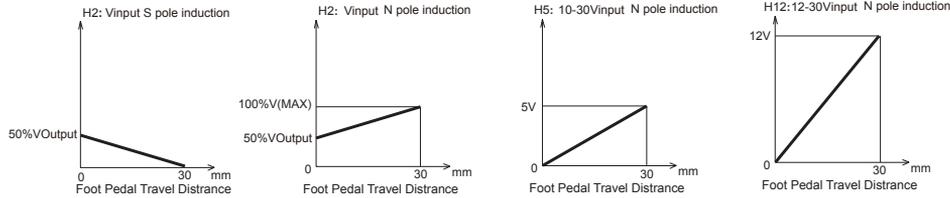
Specifications

Supply Voltage (Vs)	Switch output H1: 3.8-30VDC Analog output H2: 4.5-10.5 VDC H3: 30VAC H5/H10: 12-30 VDC
Supply Current	H1: 45mA H2: 7mA H3: 20mA H5/H10: 16mA
Output Type	Linear output or switch output
Output Voltage	See the graph below
Output Current	H2/H3: 5mA H5/H10: 20mA H5/H10: 45mA
Service Life	1 x 10 ⁷ (operations)
Operating Temperature	-40~+100°C (-40~212°F)
Degree of Protection	IP68

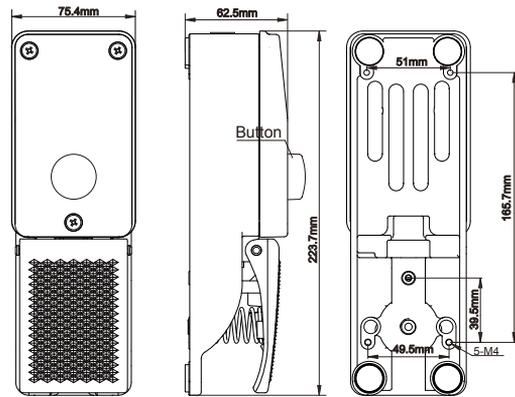
Selection Guide:

FS - 61	- G	- H1	- N	- A	- B1	- 8	- F	- 24/3	- U/W	- N
Number of Pedals 61: 1 pedal 62: 2 pedals	Guard Blank: No guard G: Fully guarded	H1: 10-30VDC switch input H2: 4.5-10.5VDC analog input H3: 30VAC analog input H5: 10-30VDC input analog output 0-5V H12: 12-30VDC input analog output 0-10V	N: N pole induction S: S pole induction	Conduit Type A: 1/2NPT C: M20 x 1 D: M16 x 1.5	Optional Pushbutton Blank: No button B1: One button B2: Two buttons	Cable Length	Additional Wiring Information e.g. 24AWGx3 Blank: Meter(s) F: Foot/feet	Pedal Color/ Enclosure Color U: Blue W: White B: Black O: Orange Y: Yellow R: Red		

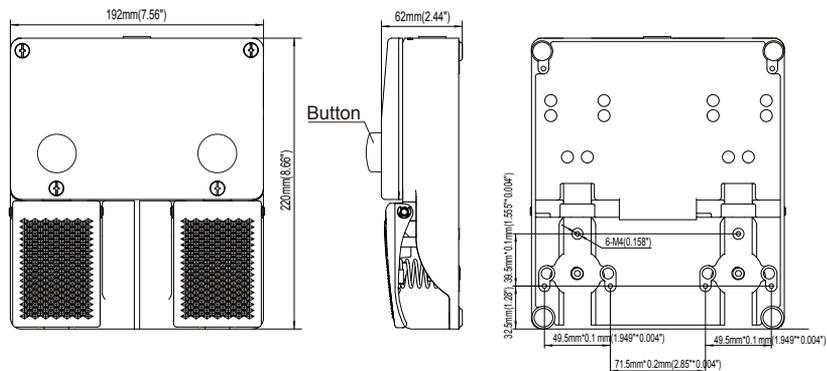
Dimensions:



FS-61-H2-N-C-2-24/3-U/W-N FS-61-H2-N-C-B1-2-24/6-U/W-N



FS-62-H2-N-C-B2-YU/W-N



FS-71 Series Medical Foot Switches

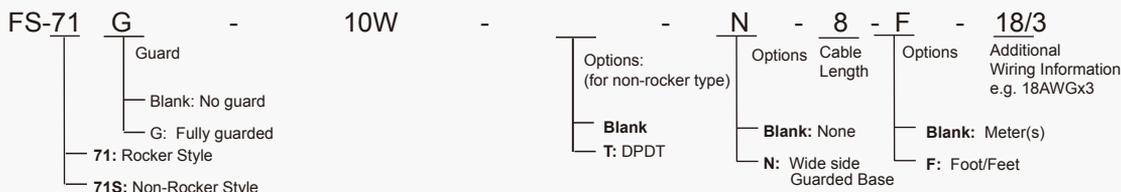
Features

- Robust glass fiber reinforced plastic housing
- Each pedal rocks left and right operating on the teeter-totter principle: Pressure on one side opens or closes line and release of returns the switch back to normal off position (Both sides are independent)
- UL, CSA, CE, CCC certified
- Custom color/wiring available

Specifications

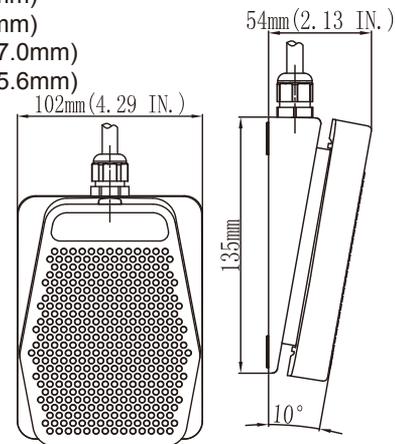
Operating Frequency	60 ops/min
Insulation Resistance	>100MW@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	10A/15A 1/2HP 250VAC (UL file E321073)
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	Mechanically 1 x 10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IPX8/NEMA 4,4X,6,6P (add -w suffix)

Selection Guide:

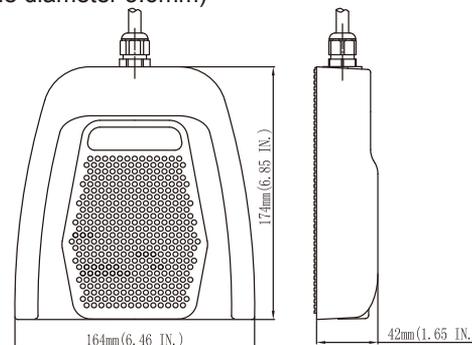


Dimensions:

- FS-71-10-W-2-20/4S** (20AWGx4, shielded, 2 meters, 2x 1NO, cable diameter 7.0mm)
- FS-71-10-W-2-22/5S** (22AWGx5, shielded, 2 meters, 2x 1NO, cable diameter 5.6mm)
- FS-71S-10-W-2-20/4S** (20AWGx4, shielded, 2 meters, 1NO/1NC, cable diameter 7.0mm)
- FS-71S-10-W-2-22/5S** (22AWGx5, shielded, 2 meters, 1NO/1NC, cable diameter 5.6mm)



- FS-71-10-W-N-2-20/4S** (20AWGx4, shielded, 2 meters, 2x 1NO, cable diameter 7.0mm)
- FS-71-10-W-N-2-22/5S** (22AWGx5, shielded, 2 meters, 2x 1NO, cable diameter 5.6mm)
- FS-71S-10-W-N-2-20/4S** (20AWGx4, shielded, 2 meters, 1NO/1NC, cable diameter 7.0mm)
- FS-71S-10-W-N-2-22/5S** (22AWGx5, shielded, 2 meters, 1NO/1NC, cable diameter 5.6mm)



FS-72 Series Medical Foot Switches

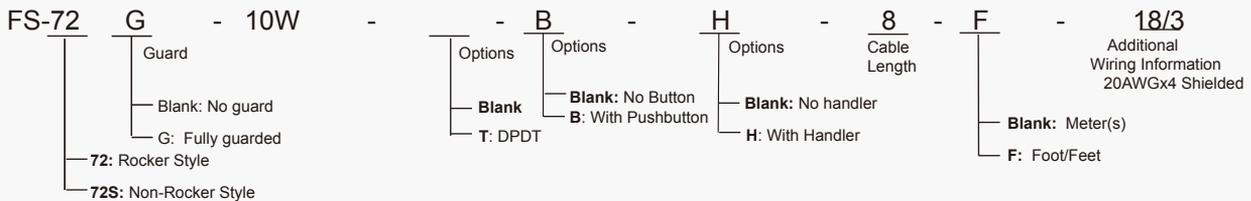
Features

- Robust glass fiber reinforced plastic housing
- Each pedal rocks left and right operating on the teeter-totter principle: Pressure on one side opens or closes line and release of returns the switch back to normal off position (Both sides are independent)
- UL, CSA, CE, CCC certified
- Custom color/wiring available

Specifications

Operating Frequency	60 ops/min
Insulation Resistance	>100MW@500V DC
Contact Resistance	<25mW (initial)
Rated Current/Voltage	10A/15A 1/2HP 250VAC
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IPX8/NEMA 4,4X,6,6P (add -w suffix)

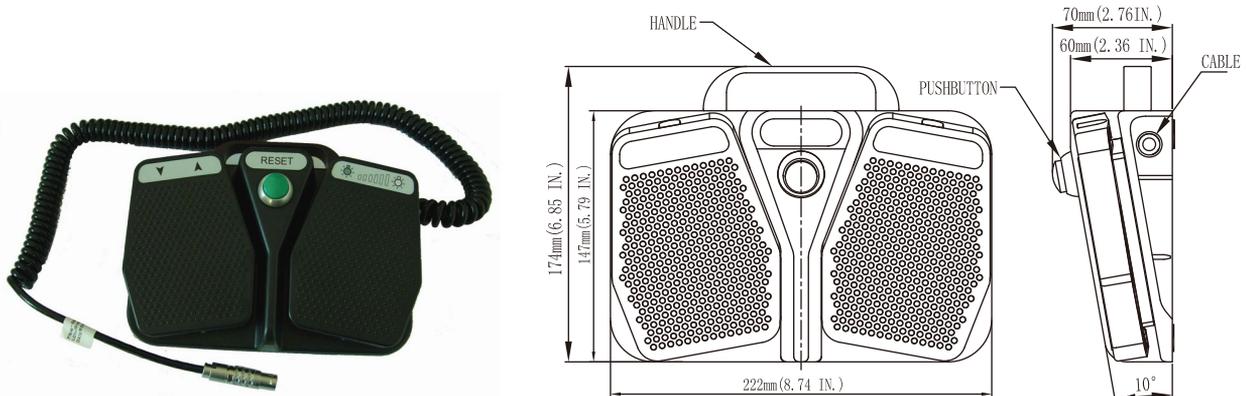
Selection Guide:



* Offer custom cable and connector according to customer requirements.

Dimensions:

- FS-72-10-W-2-22/5S** (Rocker Style, 22AWGx5, shielded, 2 meters, 4x 1NO, cable diameter 5.6mm)
- FS-72-10-W-H-2-22/5S** (Rocker Style, 22AWGx5, shielded, 2 meters, 4x 1NO, cable diameter 5.6mm, With Handler)
- FS-72-10-W-B-26/7** (Rocker Style, 26AWGx7, PUR, coiled, 5x 1NO, cable diameter 5.3mm, With Pushbutton)
- FS-72-10-W-B-H-26/7** (Rocker Style, 26AWGx7, PUR, coiled, 5x 1NO, cable diameter 5.3mm, With Pushbutton, With Handler)
- FS-72S-10-W-2-20/4S** (Non-Rocker Style, 20AWGx4, shielded, 2 meters, 2x 1NO, cable diameter 7.0mm)
- FS-72S-10-W-2-22/5S** (Non-Rocker Style, 22AWGx5, shielded, 2 meters, 2x 1NO, cable diameter 5.6mm)
- FS-72S-10-W-B-2-20/4S** (Non-Rocker Style, 20AWGx4, shielded, 2 meters, 3x 1NO, cable diameter 7.0mm, With Pushbutton)
- FS-72S-10-W-B-2-22/5S** (Non-Rocker Style, 22AWGx5, shielded, 2 meters, 3x 1NO, cable diameter 5.6mm, With Pushbutton)
- FS-72S-10-W-B-H-2-20/4S** (Non-Rocker Style, 20AWGx4, shielded, 2 meters, 3x 1NO, cable diameter 7.0mm, With Pushbutton, With Handler)
- FS-72S-10-W-B-H-2-22/5S** (Non-Rocker Style, 22AWGx5, shielded, 2 meters, 3x 1NO, cable diameter 5.6mm, With Pushbutton, With Handler)



FS-73/FS-74 Series Medical Foot Switches

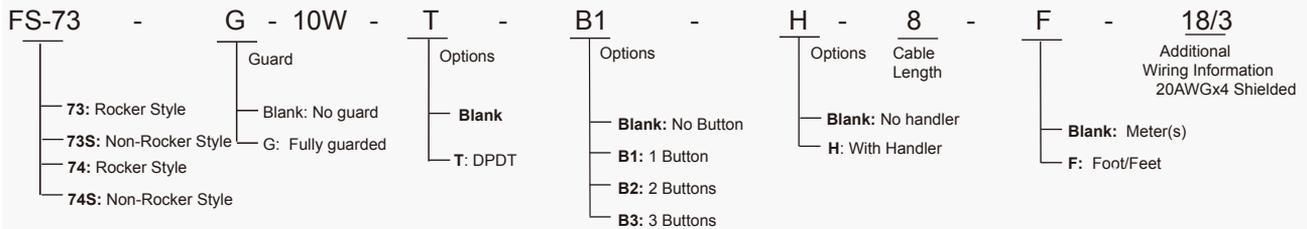
Features

- Robust glass fiber reinforced plastic housing
- Available in single momentary action or rocker (left and right) styles

Specifications

Operating Frequency	60 ops/min
Insulation Resistance	>100MW@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	10A/15A 1/2HP 250VAC
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IPX8/NEMA 4,4X,6,6P (add -w suffix)

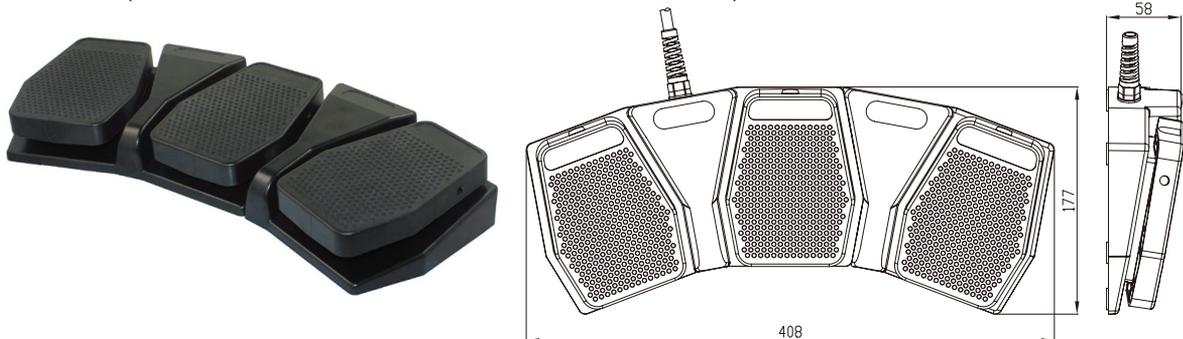
Selection Guide:



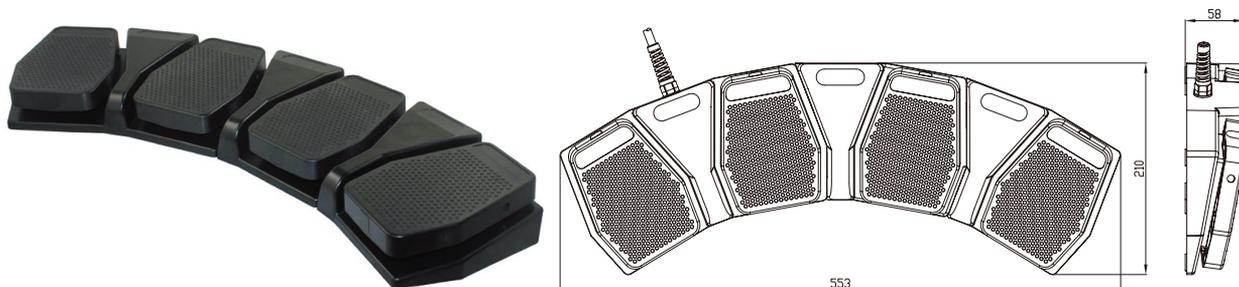
Dimensions:

* Offer custom cable and connector according to customer requirements.

- FS-73S-10-W-2-20/4S (20AWGx4, shielded, 2 meters, 3x 1NO, cable diameter 7.0mm)
- FS-73S-10-W-2-22/5S (22AWGx5, shielded, 2 meters, 3x 1NO, cable diameter 5.6mm)
- FS-73S-10-W-B1-2-22/5S (22AWGx5, shielded, 2 meters, 4x 1NO, cable diameter 5.6mm)
- FS-73-10-W-26/7 (26AWGx7, PUR, coiled, 6x 1NO, cable diameter 5.3mm)



- FS-74S-10-W-2-22/5S (22AWGx5, shielded, 2 meters, 4x 1NO, cable diameter 5.6mm)
- FS-74S-10-W-B1-26/7 (26AWGx7, PUR, coiled, 5x 1NO, cable diameter 5.3mm)
- FS-74S-10-W-B2-26/7 (26AWGx7, PUR, coiled, 6x 1NO, cable diameter 5.3mm)



FSBM-1 Series Medical Foot Switches

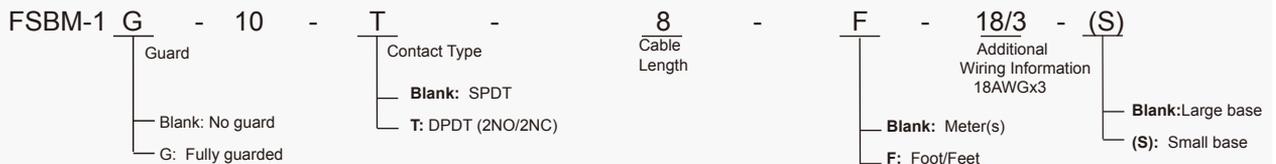
Features

- Zinc die cast base
- Compact size
- Ergonomic low profile design
- Easy to clean
- High mechanical stability
- Soft touch button with light operating force

Specifications

Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	5A or 10A 0-250V
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x 10 ⁶ (operations)
Operating Temperature	20~+80°C (-4~176°F)
Degree of Protection	IP68 (NEMA 4, 4x, 6, 6P)

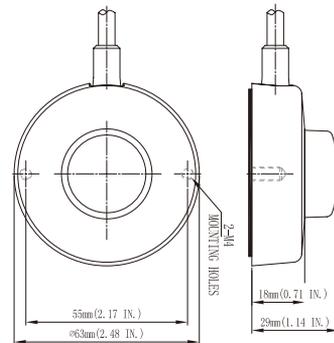
Selection Guide:



Dimensions:

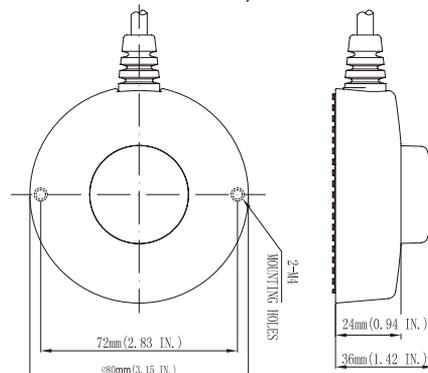
FSBM-1-10-2-18/3 (18AWGx3, 2 meters, 1x 1NO)

FSBM-1-10-T-2-20/4S (20AWGx4, shielded, 2 meters, 2NO/2NC, cable diameter 7.0mm)



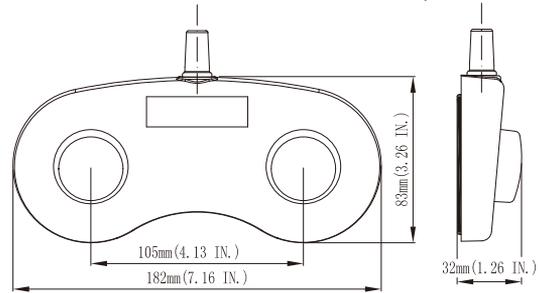
FSBM-1-10-2-18/3(80) (18AWGx3, 2 meters, 1x 1NO)

FSBM-1-10-T-2-22/5S(80) (22AWGx5, shielded, 2 meters, 2NO/2NC, cable diameter 5.6mm)

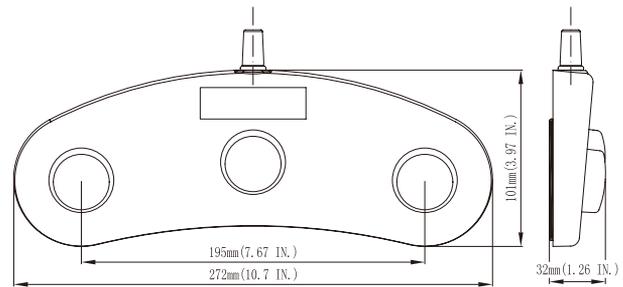


FSB-2/FSB-3 Series Medical Foot Switches

FSB-2S-10-2-20/4S(U/B) (20AWGx4, shielded, 2 meters, 2x 1NO, cable diameter 7.0mm)
FSB-2S-10-2-22/5S(U/B) (22AWGx5, shielded, 2 meters, 2x 1NO, cable diameter 5.6mm)
FSB-2S-10-T-2-22/5S(U/B) (22AWGx5, shielded, 2 meters, 4x 1NO, cable diameter 5.6mm)



FSB-3S-10-2-20/4S(U/B) (20AWGx4, shielded, 2 meters, 3x 1NO, cable diameter 7.0mm)
FSB-3S-10-2-22/5S(U/B) (22AWGx5, shielded, 2 meters, 3x 1NO, cable diameter 5.6mm)
FSB-3S-10-T-2-26/7(U/B) (26AWGx7, PUR, 2 meters, 6x 1NO, cable diameter 5.6mm)



FSB2/FSB3 Series Medical Foot Switches

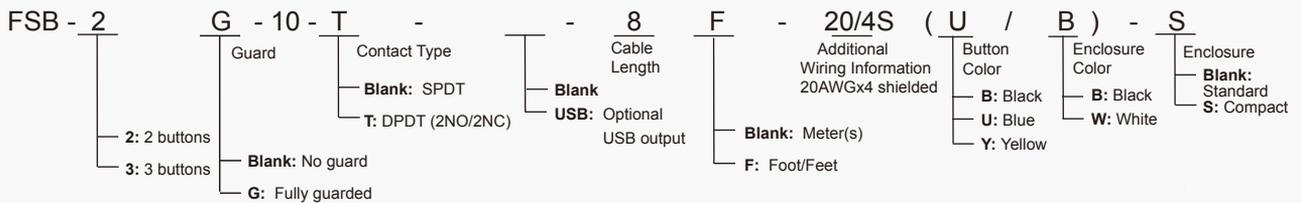
Features

- Ergonomic low profile design
- Compact Enclosure available
- Button available 2 to 3
- Easy to clean
- High mechanical stability
- Soft touch button with light operating force

Specifications

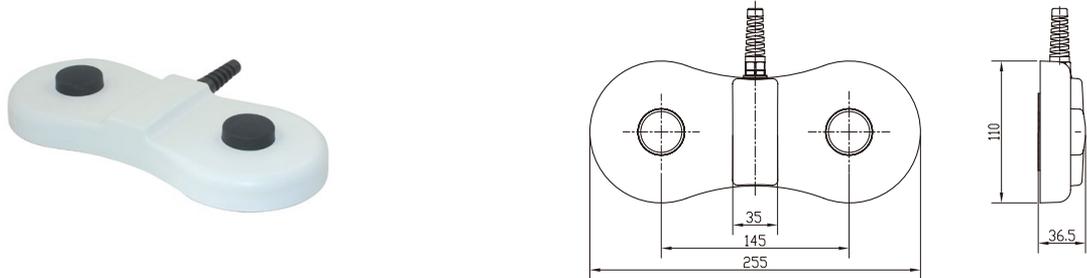
Operating Frequency	60 ops/min
Insulation Resistance	>100M Ω @500V DC
Contact Resistance	<25m Ω (initial)
Rated Current/Voltage	10A, 1/2HP, 125/250VA
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x10 ⁶ (operations)
Operating Temperature	-20~+80°C (-4~176°F)
Degree of Protection	IP68 (NEMA 4, 4x, 6, 6P)

Selection Guide:

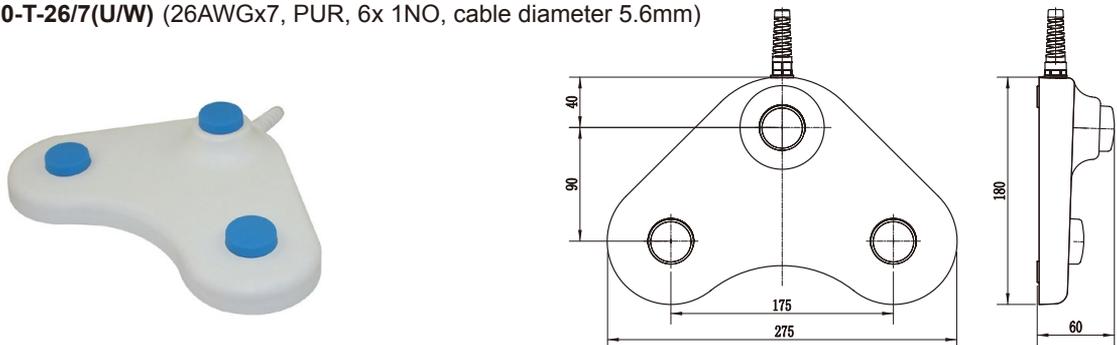


Dimensions:

- FSB-2-10-2-20/4S(B/W) (20AWGx4, shielded, 2 meters, 2x 1NO, cable diameter 7.0mm)
 FSB-2-10-2-22/5S(B/W) (22AWGx5, shielded, 2 meters, 2x 1NO, cable diameter 5.6mm)
 FSB-2-10-T-2-22/5S(B/W) (22AWGx5, shielded, 2 meters, 4x 1NO, cable diameter 5.6mm)



- FSB-3-10-2-20/4S(U/W) (20AWGx4, shielded, 2 meters, 3x 1NO, cable diameter 7.0mm)
 FSB-3-10-2-22/5S(U/W) (22AWGx5, shielded, 2 meters, 3x 1NO, cable diameter 5.6mm)
 FSB-3-10-T-26/7(U/W) (26AWGx7, PUR, 6x 1NO, cable diameter 5.6mm)



FSB-6 Medical Footswitches (IPX8)

Features

- Ergonomic low profile design
- Button available 3 to 8
- Easy to clean
- High mechanical stability
- Soft touch button with light operating force

Specifications

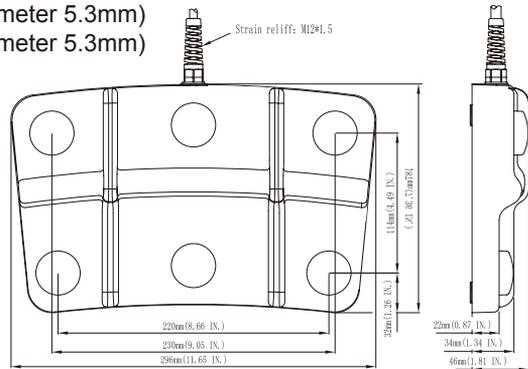
Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	15A, 1/2HP, 125/250VAC or 20A 1HP 125VAC, 2HP 250VAC
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x10 ⁶ (operations)
Operating Temperature	20~+80°C (-4~176°F)
Degree of Protection	IP68 (NEMA 4, 4x, 6, 6P)

Selection Guide:

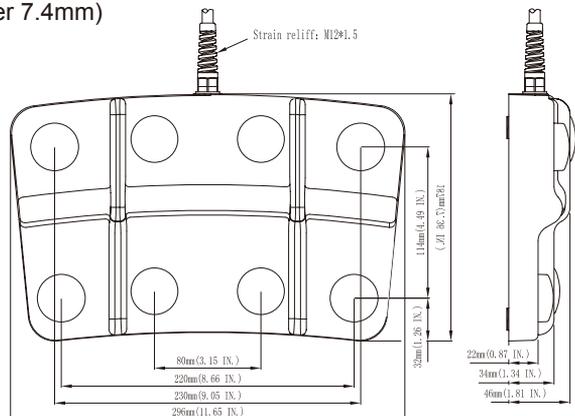


Dimensions:

- FSB-63-10-2-20/4S (20AWGx4, shielded, 2 meters, 3x 1NO, cable diameter 7.0mm)
 FSB-64-10-2-22/5S (22AWGx5, shielded, 2 meters, 4x 1NO, cable diameter 5.6mm)
 FSB-65-10-2-26/7 (26AWGx7, PUR, coiled, 5x 1NO, cable diameter 5.3mm)
 FSB-66-10-2-26/7 (26AWGx7, PUR, coiled, 6x 1NO, cable diameter 5.3mm)



- FSB-68-10-2-22/9 (22AWG, coiled, 8x 1NO, cable diameter 7.4mm)



FS-62 Series Wireless Medical Foot Switches

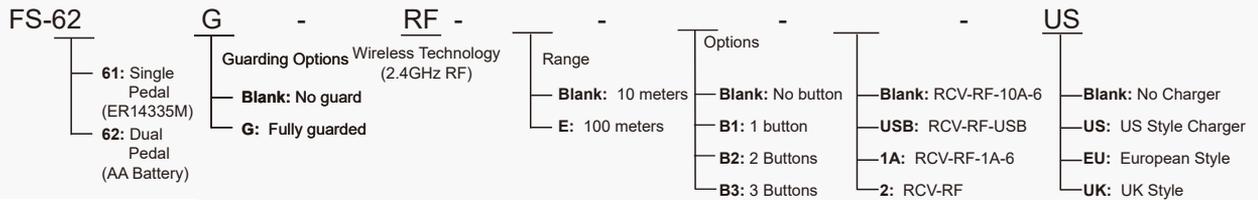
Features

- 2.4GHz RF wireless
- Clean up cable clutter
- Easy to clean and move around
- Multiple systems can be used in close vicinity
- Use Frequency-hopping spread spectrum (FHSS) RFID technology
- Transmitter with low voltage alerts
- Long battery life

Specifications

Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	Receiver output 10A/250VAC
Service Life	1 x10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Protocols	IEC802.15.1
Standards	EN 300 328,V1.7.1, EN612326-1(2006); EN 301 489-1,V.1.8.1 EN301 489-17,V2.1.1
Degree of Protection	IPX8

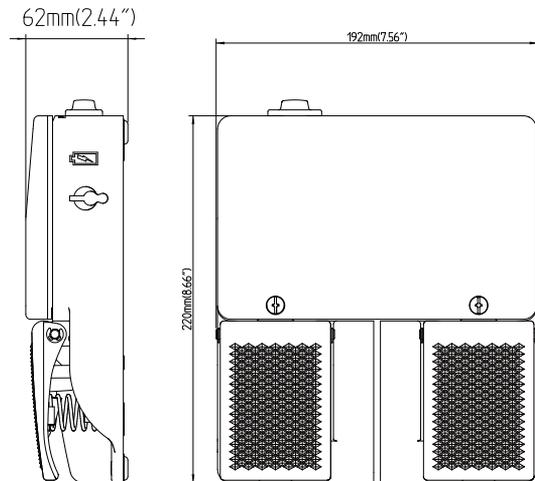
Selection Guide:



* For more receiver modules, please go to page 35

Dimensions:

FS-62-RF (2.4GHz)



Standard Receiver Module

RCV-RF-6



Power supply: 10-30VAC/DC
Output rating: 10A/250V

RCV-RF-USB



Power supply: 4.75-5.25VDC

RCV-RF-1A-6 RCV-RF-1AP-6 RCV-RF-1AN-6



Power supply: 5-30VAC/DC
Output: 1A switch volume or 1A NPN or 1A NPN optional

RCV-RF

1-6 channels are optional and can be customized according to customer requirements



Power supply: 3.3VDC
Output: 6mA IC level change
Power supply: 5VDC/10-30VDC
Output: 1A switch volume or 1A NPN or 1A NPN optional

* Contact us for custom circuit for OEM applications

FS-72 Series Wireless Medical Foot Switches (IPX8)

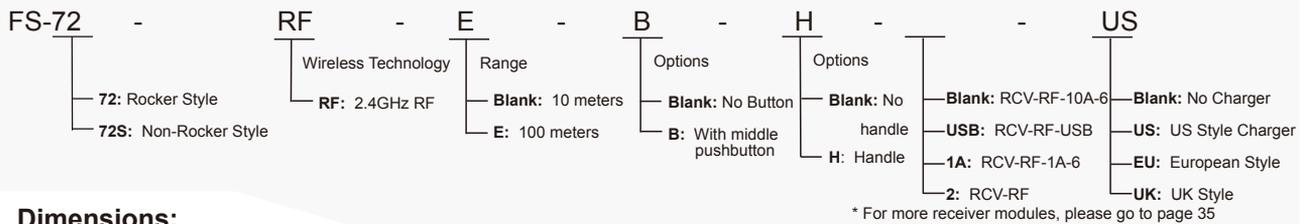
Features

- 2.4GHz RF wireless
- Clean up cable clutter
- Easy to clean and move around
- Multiple systems can be used in close vicinity
- Use Frequency-hopping spread spectrum (FHSS) RFID technology
- Transmitter powered by 2 AA batteries, with low voltage alerts
- Long battery life

Specifications

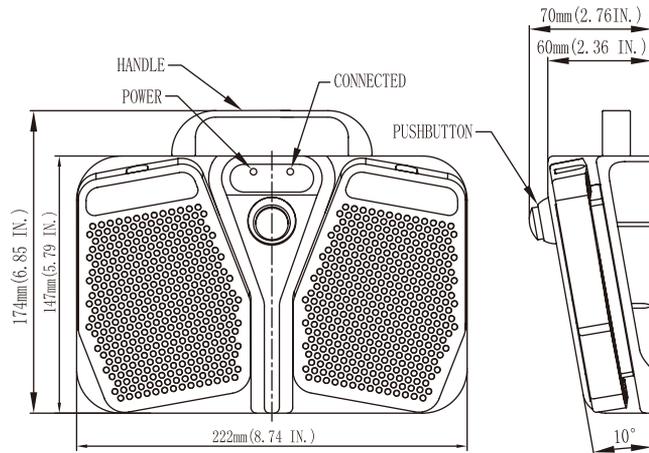
Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	Receiver output 10A/250VAC
Service Life	1 x10 ⁶ (operations)
Operating Temperature	-10~+80°C (14~176°F)
Transmission Frequency	2.40 - 2.483 GHz
Protocols	IEC802.15.1
Standards	EN 300 328,V1.7.1, EN612326-1(2006); EN 301 489-1,V.1.8.1 EN301 489-17,V2.1.1
Degree of Protection	IPX8

Selection Guide:



Dimensions:

- FS-72S-RF (2.4GHz, 2 channels)
- FS-72S-RF-B (2.4GHz, 3 channels)
- FS-72-RF (2.4GHz, 4 channels)
- FS-72-RF-B (2.4GHz, 5 channels)



Standard Receiver Module

RCV-RF-6



Power supply: 10-30VAC/DC
Output rating: 10A/250V

RCV-RF-USB



Power supply: 4.75-5.25VDC

RCV-RF-1A-6
RCV-RF-1AP-6
RCV-RF-1AN-6



Power supply: 5-30VAC/DC
Output: 1A switch volume or 1A PNP or 1A NPN optional

RCV-RF

1-6 channels are optional and can be customized according to customer requirements



Power supply: 3.3VDC
Output: 6mA IC level change
Power supply: 5VDC/10-30VDC
Output: 1A switch volume or 1A PNP or 1A NPN optional

* Contact us for custom circuit for OEM applications

FS-8 Series Wireless Medical Foot Switches (IPX8)

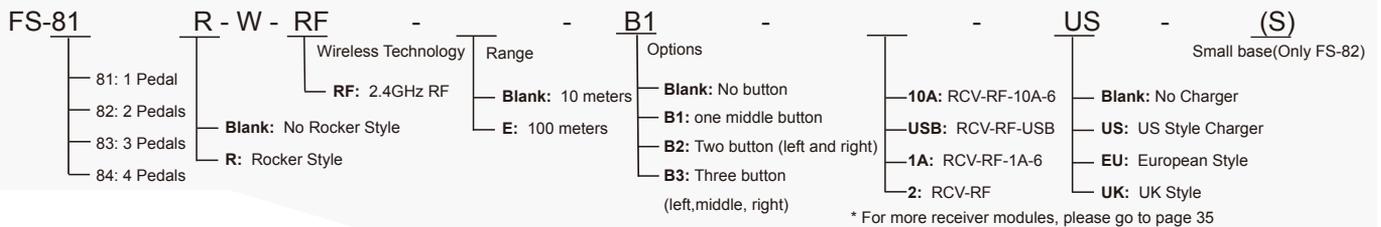
Features

- 2.4GHz RF wireless
- Clean up cable clutter
- Easy to clean and move around
- Multiple systems can be used in close vicinity
- Use Frequency-hopping spread spectrum (FHSS) RFID technology
- Transmitter powered by 2 AA batteries, with low voltage alerts
- Long battery life

Specifications

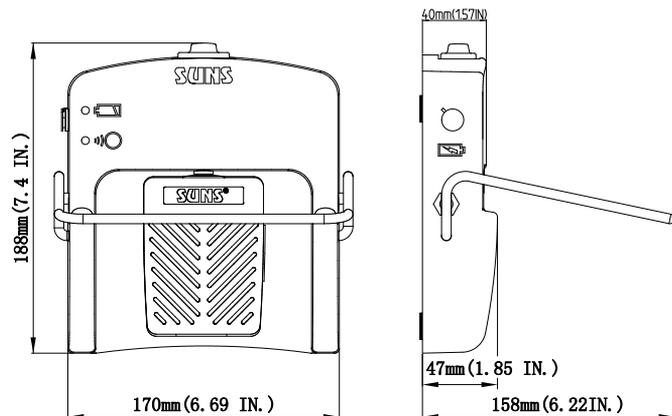
Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	Receiver output 10A/250VAC
Service Life	1 x10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Protocols	IEC802.15.1
Standards	EN 300 328,V1.7.1, EN612326-1(2006); EN 301 489-1,V.1.8.1 EN301 489-17,V2.1.1
Degree of Protection	IP68

Selection Guide:



Dimensions:

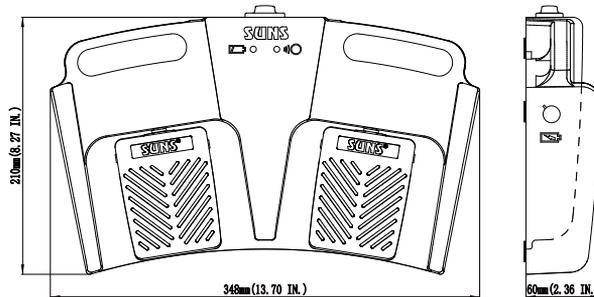
FS-81-W-RF



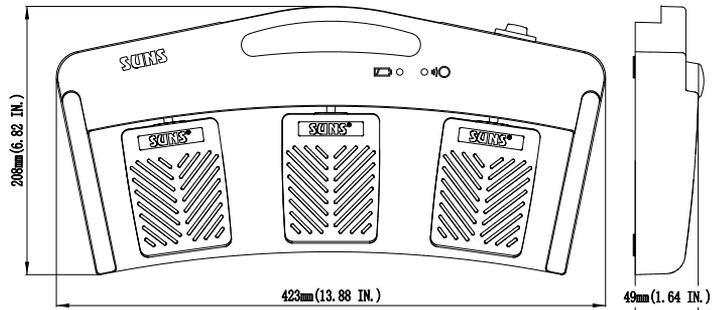
FS-8 Series Wireless Medical Foot Switches (IPX8)

Dimensions:

FS-82-W-RF



FS-83-W-RF



Standard Receiver Module

RCV-RF-6



Power supply: 10-30VAC/DC
Output rating: 10A/250V

RCV-RF-USB



Power supply: 4.75-5.25VDC

**RCV-RF-1A-6
RCV-RF-1AP-6
RCV-RF-1AN-6**



Power supply: 5-30VAC/DC
Output: 1A switch volume or 1A PNP or 1A NPN optional

RCV-RF

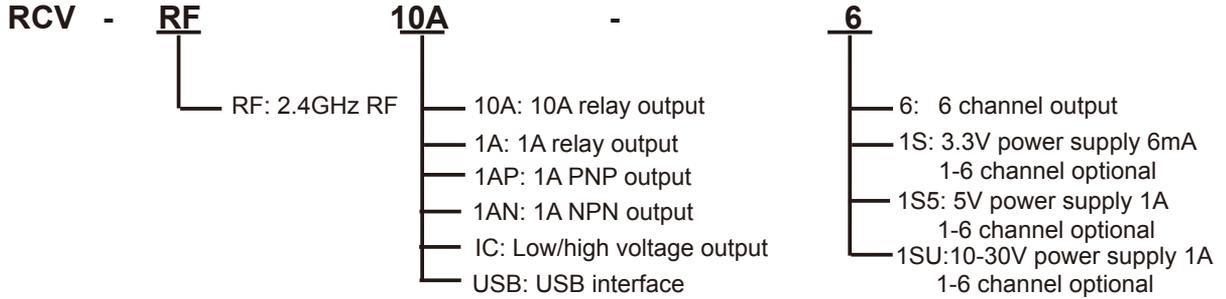
1-6 channels are optional and can be customized according to customer requirements



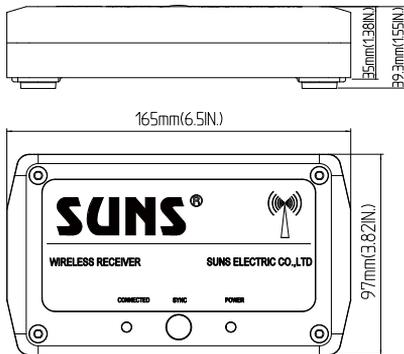
Power supply: 3.3VDC
Output: 6mA IC level change
Power supply: 5VDC/10-30VDC
Output: 1A switch volume or 1A PNP or 1A NPN optional

* Contact us for custom circuit for OEM applications

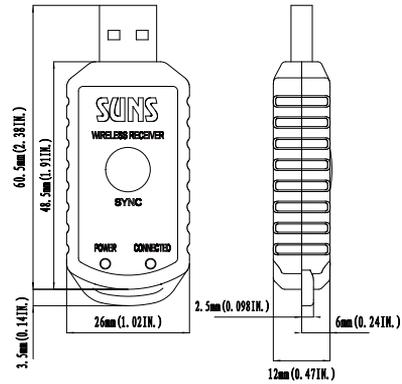
Standard Receiver Module



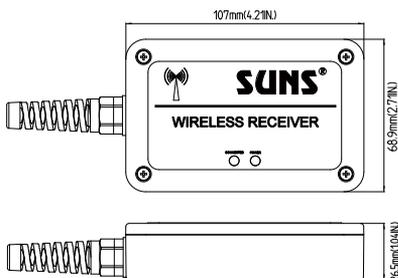
RCV-RF-10A-6
Power supply: 10-30VAC/DC
Output rating: 10A/250V



RCV-RF-USB
Power supply: 4.75-5.25VDC



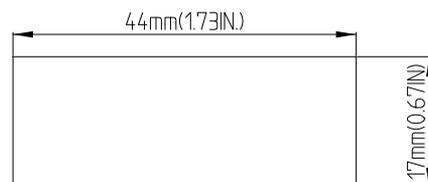
RCV-RF-1A-6
RCV-RF-1AP-6
RCV-RF-1AN-6
Power supply: 5-30VAC/DC
Output: 1A switch volume or 1A PNP
or 1A NPN optional



RCV-RF
1-6 channels are optional and can be customized according to customer requirements



Power supply: 3.3VDC
Output: 6mA IC level change
Power supply: 5VDC/10-30VDC
Output: 1A switch volume or 1A PNP
or 1A NPN optional



Medical Grade USB Foot Switches

The USB foot switch is an additional input device that provides a more comfortable and convenient way to work with computers. Users can program a unique key or multiple keys with the provided software to the foot switches.

Features

- Available in Single, Twin & 3-Pedals (If more than 3 pedals needed, two foot switches can be used)
- Pre-program key functions on the foot pedal by software
- Only requires a USB interface
- Compatible with Windows OS 2000/XP/Vista/7
- Available with medical grade waterproof pedals
- Switch functions can be assigned using software provided

Specifications

Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Service Life	1 x 10 ⁶ (operations)
Operating Temperature	-30~+80°C (-22~176°F)
Degree of Protection	IP20/NEMA 1 or IPX8/NEMA 4,4X,6,6P

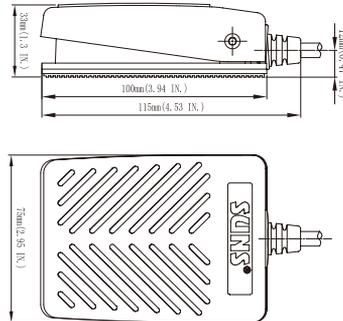
Selection Guide:

FS-81 - SP	(TWIN)	-	M	-	USB
Switch Type	Options		Pedal Material		Wiring Information (standard with 3 meters cable)
SP: Snap action (IPx8)	Blank: Single pedal		Blank: Fiber reinforced plastic		
SL: Slow action (IPx8)	(TWIN): 2-pedal		M: Die cast zinc		
10: Snap action (IP20)	(3-PEDAL): 3-pedal				

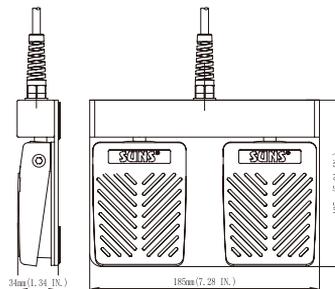
* Although only FS-81 is listed, all Suns medical foot switches are available in USB.

Dimensions:

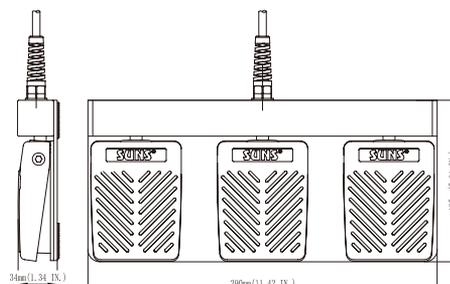
FS-81-10-USB (IP20)
FS-81-SP-USB (IPX8)



FS-81-10(TWIN)-USB (IP20)
FS-81-SP(TWIN)-USB (IPX8)



FS-81-10(3-PEDAL)-USB (IP20)
FS-81-SP(3-PEDAL)-USB (IP68)



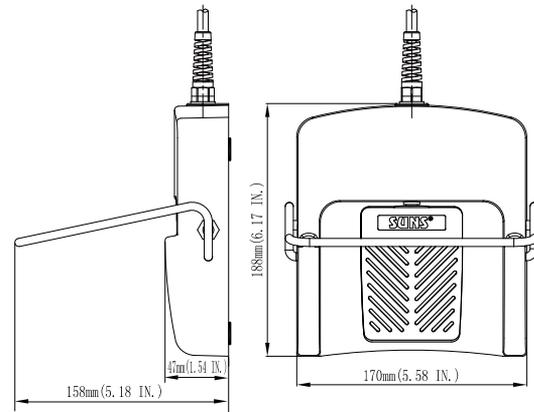
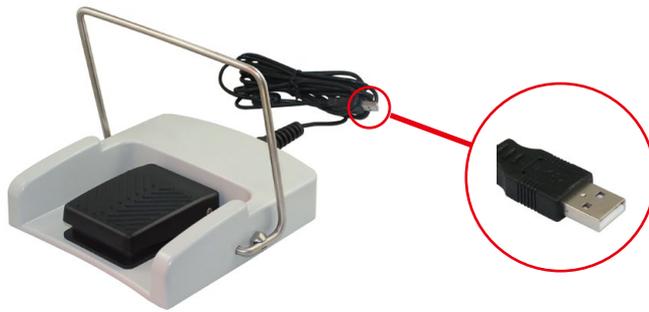
Medical Grade USB Foot Switches

Selection Guide:

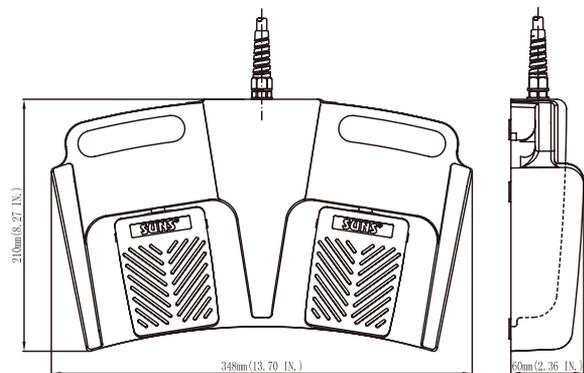
FS-81	-	SP	-	W	-	M	-	USB
Options		Switch Type				Pedal Material		Wiring Information (standard with 3 meters cable)
81: Single pedal		SP: 10A Snap action (IPX8)				Blank: Fiber reinforced plastic		
82: 2-pedal						M: Die cast zinc		
83: 3-pedal								

Dimensions:

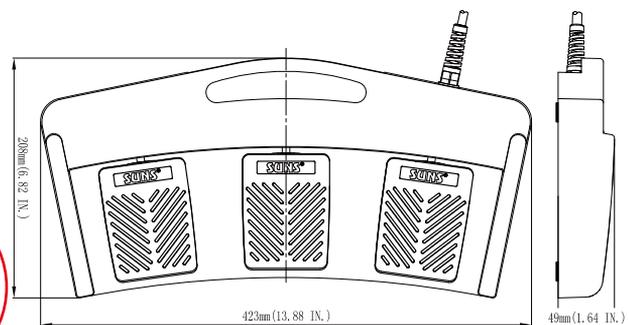
FS-81-SP-W-USB(IPX8)



FS-82-SP-W-USB(IPX8)



FS-83-SP-W-USB(IPX8)



FAS Series Air Actuated Switches

Features

- Long life air bulb actuator
- Remotely located air operated electric snap switch
- Supplied with a 10 foot 1/8" ID PVC tubing connecting the foot pedal to the remote airswitch
- Remote switch equipped with a 9/16" U.N.F. bulkhead mount
- Isolating the electrically live snap switch from the floor
- Offers environmental protection from short or shock

Specifications

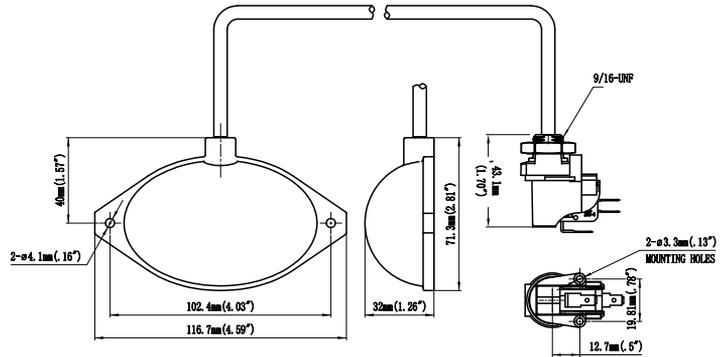
Operating Frequency	60 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial)
Rated Current/Voltage	15A, 1/2HP, 125/250VAC or 21A 1HP 125VAC, 2HP 250VAC
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	1 x 10 ⁶ (operations)
Operating Temperature	-20~+80°C (-4~176°F)
Degree of Protection	IP68 (NEMA 4, 4x, 6, 6P)

Selection Guide:

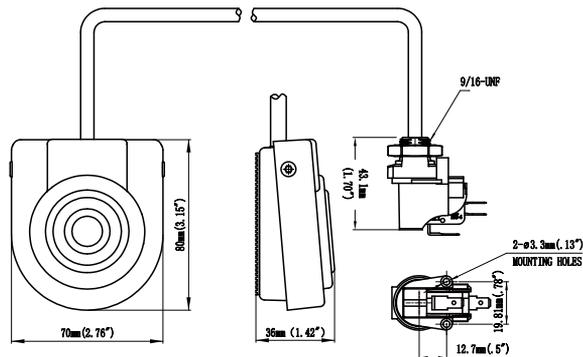
FAS-1	G	-	15	-	T	-	8	-	F
Type	Guard				Contact Type		Trachea Length		
1	Blank: No guard		15: 15A		Blank: SPDT				Blank: Meter(s)
9	G: Fully guarded		20: 21A		T: DPDT (2NO/2NC)				F: Foot/Feet
			25: 25A						

Dimensions:

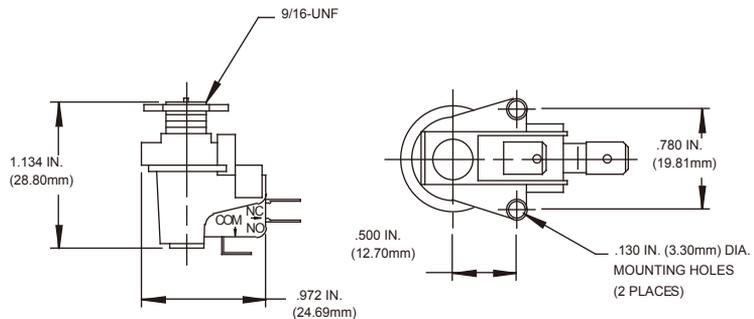
FAS-1-15-3
FAS-1-20-3



FAS-9-15-3
FAS-9-20-3



AS-15
AS-20



Pneumatic switch series (IPX8)

Features

- Long service life design
- Nonskid base pad
- The two-way model does not exhaust the back pressure
- The plunger will not damage the body
- Standard 1/8-27 N.P.T input and output ports
- Needs filtered and lubricated air supply for best operation
- Line pressure up to 150P

Material Structure

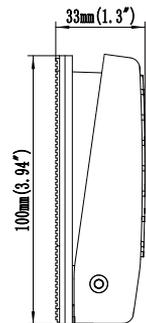
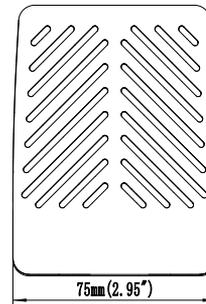
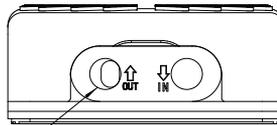
- Aluminum alloy or zinc die cast body
- Internal valve stainless steel plunger
- Press the plunger to release air flow, release the plunger for the flow to stop, and exhaust back pressure on output side
- Air flow exhausts around the plunger
- Operating temperature 0° to 131°F(-18° to +55°C)

Dimensions:

FS-81-C2



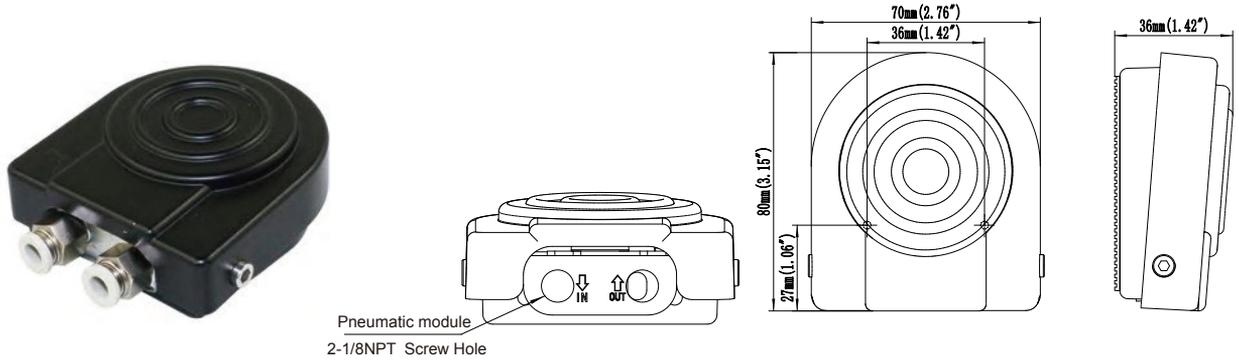
Pneumatic module
2-1/8NPT Screw hole



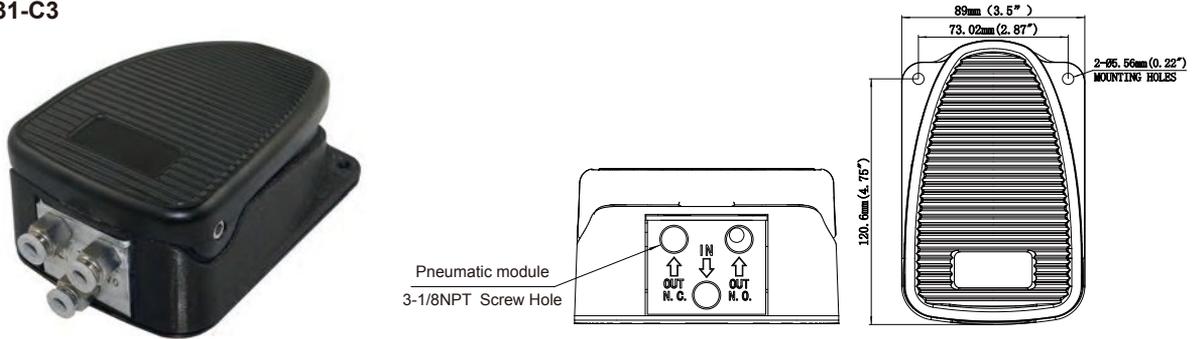
Model	Describe	Action force	100 P.S.I. Airflow	100 P.S.I. Emissions	1/8-27 N.P.T. Interface
FS-81-C2	Two way reset, aluminum alloy foot pedal	10 lbs	30 C.F.M	25 C.F.M	Interface external protection

Pneumatic switch series (IPX8)

FSM-91-C2



FSC-31-C3



Model	Describe	Action force	100 P.S.I. Airflow	100 P.S.I. Emissions	1/8-27 N.P.T. Interface
FSC-31-C2	Two - way reset, zinc - casting housing	10 lbs	30 C.F.M	25 C.F.M	Interface internal protection
FSC-31-C3	Three - way reset, zinc - casting housing	10 lbs	30 C.F.M	25 C.F.M	Interface internal protection
FSC-31-C4	Four - way reset, zinc - casting housing	19 lbs	30 C.F.M	25 C.F.M	Interface external protection
FSM-91-C2	Two - way reset, zinc - casting housing	7 lbs	30 C.F.M	25 C.F.M	Interface external protection

Customer Customization Solutions

Control switch for ophthalmic equipment:



Control switch for dental equipment:



Control switch for CT equipment:



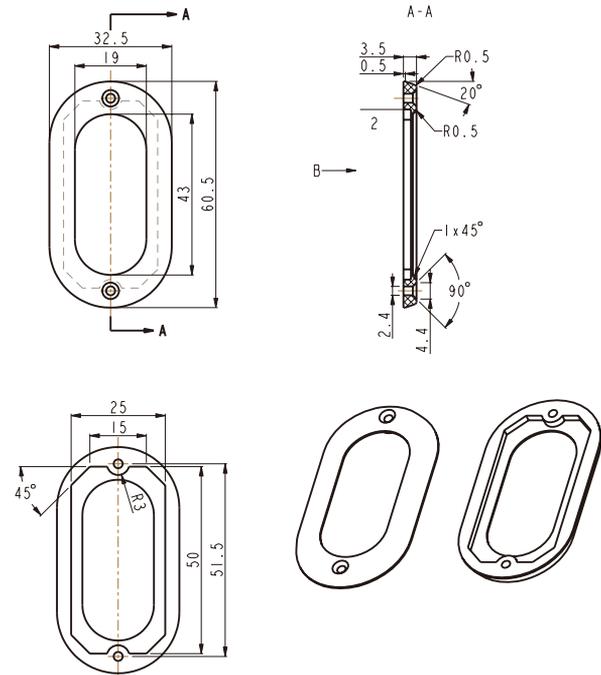
Two-Button Membrane Switches: HC-12

Features:

- Operating voltage < 50V DC
- Actuating force: 4N +/- 1N
- Minimum 3,000,000 cycles @ 300mA switching current
- Colors according to MFR 890/003:
- Plastic frame: Medical white C610
- Buttons: light blue 2717 / grey 630
- Foil colors: Medical white C610
- Arrow colors: black 433 / signal white 9003



HC-12



Connectors for Foot Switches

Order Code	Connectors	Pictures	Gauge	Standard cable length
MON3.5	3.5mm mono plug		24AWG x 2	2050mm (6.7ft)
STO3.5	3.5mm stereo plug		20AWG x 3	2050mm (6.7ft)
YPCT-6.3	6.3mm Double audio plug			
RJ45	RJ45 plug		26AWG x 4	2050mm (6.7ft)
USB	USB plug		28AWG x 4	3000mm (9.8ft)
P	3 prong series plug		18AWG x 3	2440mm (8ft)
			14AWG x 3	
DB9	9 pin D sub			
HD9PIN+DB9	Metal 9 pin plug			
ODU	ODU #S22L0C-P10MJGP-6200 (10 *)			
C13/C14	C13/C14 power cord			

* Contact us for other connectors



SUNS[®]

The Right Switch For Your Applications

