

FM SERIES



The FM series foot switches are ideal for light or medium duty applications and especially medical applications. The compact, sturdy but small, ABS housing is designed to meet all the different contact and switch insert configurations.

This series has many features, such as maintained and two stage momentary contacts, two different colors, and two protection levels. It also offers a variety of flexibility and alternatives already in the standard versions. The wide range of options include:

- Protection levels IP 68 (Medical versions IEC 601-1 certified)
- Especially designed gold plated contacts for low current
- High current switch inserts
- Different cable entries/strain reliefs
- Other cable versions, with shield
- Custom colors for the guard, custom connectors.

The standard and optional features together provide various application possibilities:

Foot switches are typically used when hands-free operation is required or when the hands are needed to perform a separate task while the machine or device must be started or stopped, or the machine requires manipulation in other ways. Application examples would be:

- Conveyor belt in supermarket
- Sewing machine in textile factory
- Control of dentistry tools
- Operation of logical or digital signals

Warning

Please see page 25 in reference to the warning that applies to every application.



FM1

- Compact, one pedal foot switch

Standard Features

- Housing: Gray or black ABS body and pedal cover
- Protection Level: IP 43 and IP 65
- Switch Insert: Snap action microswitch, UL/CSA approved
 - Electrical Rating: 5A/125-250V AC (If used with appropriate cable, see cable chart on page 29)
 - Contact Types: Momentary, maintained, or two stage momentary
 - Circuit: SPDT-SB, DPDT-SB, 2x SPDT-SB
- Strain Relief: Vinyl sleeve
- Cable:
 - Multi conductor, PVC, SJT, 2 m (6 ft. - 6 in.)
 - Without Cable
- Temperature Range: -20°C up to +80°C (-4°F up to +176°F)



Ordering Information

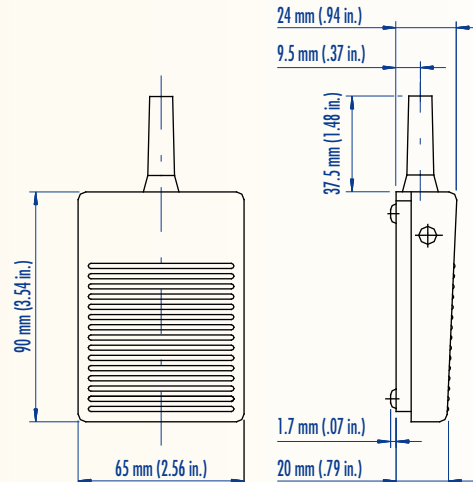
Type	Catalog No.	Circuit Function	Electrical Ratings	Switch/Contact Type	Cable	Protection Level
FM1 ... L1						
FM1 SU1 L1	51.601	<input type="checkbox"/>	SPDT-SB	5A/250V AC	Snap Action, Momentary	None (Solderable) IP 43
FM1 SU2 L1	51.607	<input type="checkbox"/>	DPDT-SB	5A/250V AC	Snap Action, Momentary	None (Solderable) IP 43
FM1 SU1R L1	51.604	<input type="checkbox"/>	SPDT-SB	5A/250V AC	Snap Action, Maintained	None (Solderable) IP 43
FM1 SU2R L1	51.610	<input type="checkbox"/>	DPDT-SB	5A/250V AC	Snap Action, Maintained	None (Solderable) IP 43
FM1 SU1DSU1 L1	51.613	<input type="checkbox"/>	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	None (Solderable) IP 43
FM1 ... F1						
FM1 SU1 F1	51.602	<input type="checkbox"/>	SPDT-SB	5A/250V AC	Snap Action, Momentary	20 AWG/3 Cond. IP 43
FM1 SU2 F1	51.608	<input type="checkbox"/>	DPDT-SB	5A/250V AC	Snap Action, Momentary	20 AWG/6 Cond. IP 43
FM1 SU1R F1	51.605	<input type="checkbox"/>	SPDT-SB	5A/250V AC	Snap Action, Maintained	20 AWG/3 Cond. IP 43
FM1 SU2R F1	51.611	<input type="checkbox"/>	DPDT-SB	5A/250V AC	Snap Action, Maintained	20 AWG/6 Cond. IP 43
FM1 SU1DSU1 F1	51.614	<input type="checkbox"/>	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	20 AWG/6 Cond. IP 43
FM1 ... F2						
FM1 SU1 F2	51.603	<input type="checkbox"/>	SPDT-SB	5A/250V AC	Snap Action, Momentary	20 AWG/3 Cond. IP 65
FM1 SU2 F2	51.609	<input type="checkbox"/>	DPDT-SB	5A/250V AC	Snap Action, Momentary	20 AWG/6 Cond. IP 65
FM1 SU1R F2	51.606	<input type="checkbox"/>	SPDT-SB	5A/250V AC	Snap Action, Maintained	20 AWG/3 Cond. IP 65
FM1 SU2R F2	51.612	<input type="checkbox"/>	DPDT-SB	5A/250V AC	Snap Action, Maintained	20 AWG/6 Cond. IP 65
FM1 SU1DSU1 F2	51.615	<input type="checkbox"/>	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	20 AWG/6 Cond. IP 65

- G Gray housing/cable
- B Black housing/cable

Options

- Protection Level: - IP 67
- Switch Insert:
 - Gold plated contacts for low current applications
 - Electrical Rating: 0.1A/125V AC
 - Silver-Nickel plated contacts
 - Electrical Rating: 10.1A, (1/4HP)/125-250V AC
- Strain Relief:
 - Standard straight-through (IP 68)
 - Bend protection (IP 68)
 - Trumpet Pull/Bend protection (IP 68)
- Cable:
 - Shielded cable
 - Per customer specifications
- Connectors: - Per customer specifications
- IEC 60601-1 certified and UL 2601-1 recognized

Dimensions

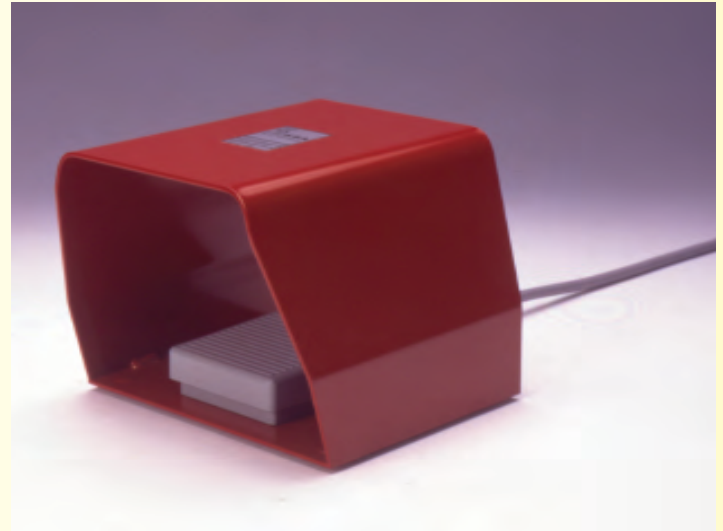


FM1 ... U

- Compact, one pedal foot switch with foot guard

Standard Features

- Housing: Gray or black ABS body and pedal cover
- Guard: Modern design with high quality steel construction and rubber mat, color: bright red
- Protection Level: IP 43 and IP 65
- Switch Insert: Snap action microswitch, UL/CSA approved
 - Electrical Rating: 5A/125-250V AC (If used with appropriate cable, see cable chart on page 29)
 - Contact Types: Momentary, maintained, or two stage momentary
 - Circuit: SPDT-SB, DPDT-SB, 2x SPDT-SB
- Strain Relief: Vinyl sleeve
- Cable:
 - Multi conductor, PVC, SJT, 2 m (6 ft. - 6 in.)
 - Without Cable
- Temperature Range: -20°C up to +80°C (-4°F up to +176°F)



Ordering Information

Type	Catalog No.	Circuit Function	Electrical Ratings	Switch/Contact Type	Cable	Protection Level
FM1 ... L1 U - with Foot Guard						
FM1 SU1 L1 U	51.651	SPDT-SB	5A/250V AC	Snap Action, Momentary	None (Solderable)	IP 43
FM1 SU2 L1 U	51.657	DPDT-SB	5A/250V AC	Snap Action, Momentary	None (Solderable)	IP 43
FM1 SU1R L1 U	51.654	SPDT-SB	5A/250V AC	Snap Action, Maintained	None (Solderable)	IP 43
FM1 SU2R L1 U	51.660	DPDT-SB	5A/250V AC	Snap Action, Maintained	None (Solderable)	IP 43
FM1 SU1DSU1 L1 U	51.663	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	None (Solderable)	IP 43
FM1 ... F1 U - with Foot Guard						
FM1 SU1 F1 U	51.652	SPDT-SB	5A/250V AC	Snap Action, Momentary	20 AWG/3 Cond.	IP 43
FM1 SU2 F1 U	51.658	DPDT-SB	5A/250V AC	Snap Action, Momentary	20 AWG/6 Cond.	IP 43
FM1 SU1R F1 U	51.655	SPDT-SB	5A/250V AC	Snap Action, Maintained	20 AWG/3 Cond.	IP 43
FM1 SU2R F1 U	51.661	DPDT-SB	5A/250V AC	Snap Action, Maintained	20 AWG/6 Cond.	IP 43
FM1 SU1DSU1 F1 U	51.664	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	20 AWG/6 Cond.	IP 43
FM1 ... F2 U - with Foot Guard						
FM1 SU1 F2 U	51.653	SPDT-SB	5A/250V AC	Snap Action, Momentary	20 AWG/3 Cond.	IP 65
FM1 SU2 F2 U	51.659	DPDT-SB	5A/250V AC	Snap Action, Momentary	20 AWG/6 Cond.	IP 65
FM1 SU1R F2 U	51.656	SPDT-SB	5A/250V AC	Snap Action, Maintained	20 AWG/3 Cond.	IP 65
FM1 SU2R F2 U	51.662	DPDT-SB	5A/250V AC	Snap Action, Maintained	20 AWG/6 Cond.	IP 65
FM1 SU1DSU1 F2 U	51.665	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	20 AWG/6 Cond.	IP 65

N Gray foot switch, Red guard

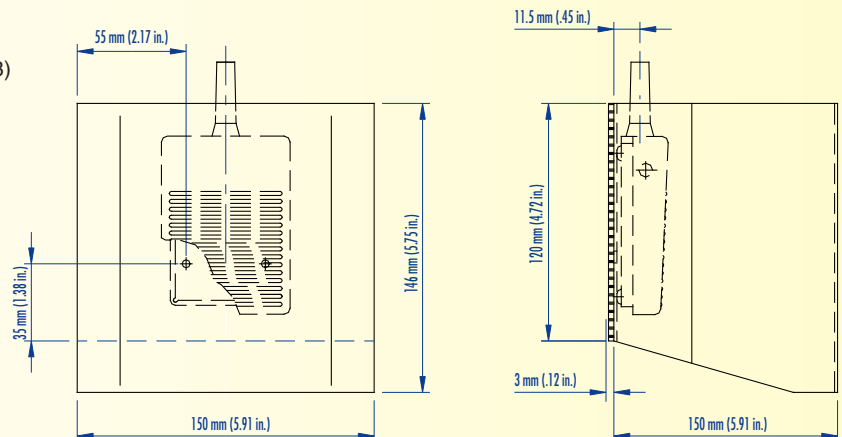
R Black foot switch, Red guard

Options

- Protection Level:
 - IP 67
- Switch Insert:
 - Gold plated contacts for low current applications
 - Electrical Rating: 0.1A/125V AC
 - Silver-Nickel plated contacts
 - Electrical Rating: 10.1A (1/4HP)/125-250V AC
- Strain Relief:
 - Standard straight-through (IP 68)
 - Bend protection (IP 68)
 - Trumpet Pull/Bend protection (IP 68)
- Cable:
 - Shielded cable
 - Per customer specifications
- Connectors:
 - Per customer specifications
- IEC 60601-1 certified and UL 2601-1 recognized
- Custom colors upon request

Dimensions

Note: For foot pedal dimensions, see page 5.



FM2

- Compact, two pedal foot switch

Standard Features

- Housing: Gray or black ABS body and pedal cover
- Protection Level: IP 43 and IP 65
- Switch Insert: Snap action microswitch, UL/CSA approved
 - Electrical Rating: 5A/125-250V AC (If used with appropriate cable, see cable chart on page 29)
 - Contact Types: Momentary, maintained, or two stage momentary
 - Circuit: SPDT-SB, DPDT-SB, 2x SPDT-SB
- Strain Relief: Vinyl sleeve
- Cable:
 - Multi conductor, PVC, SJT, 2 m (6 ft. - 6 in.)
 - Without Cable
- Temperature Range: -20°C up to +80°C (-4°F up to +176°F)



Ordering Information

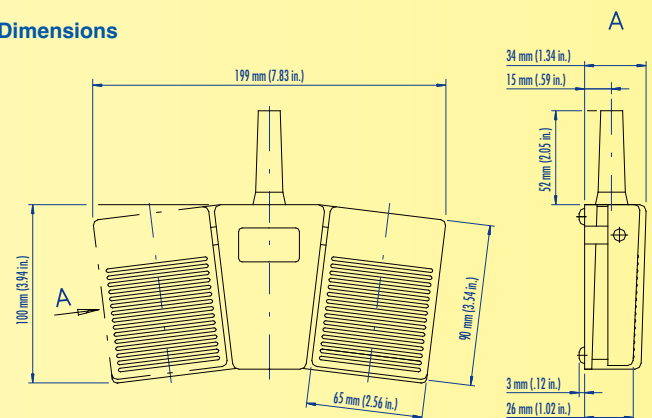
Type	Catalog No.	Circuit Function	Electrical Ratings	Switch/Contact Type	Cable	Protection Level
FM2 ... L1						
FM2 SU1(2x) L1	51.701	SPDT-SB	5A/250V AC	Snap Action, Momentary	None (Solderable)	IP 43
FM2 SU2(2x) L1	51.711	DPDT-SB	5A/250V AC	Snap Action, Momentary	None (Solderable)	IP 43
FM2 SU1R(2x) L1	51.706	SPDT-SB	5A/250V AC	Snap Action, Maintained	None (Solderable)	IP 43
FM2 SU2R(2x) L1	51.716	DPDT-SB	5A/250V AC	Snap Action, Maintained	None (Solderable)	IP 43
FM2 SU1DSU1(2x) L1	51.721	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	None (Solderable)	IP 43
FM2 ... K1						
FM2 SU1(2x) K1	51.702	SPDT-SB	5A/250V AC	Snap Action, Momentary	None (Terminals)	IP 43
FM2 SU2(2x) K1	51.712	DPDT-SB	5A/250V AC	Snap Action, Momentary	None (Terminals)	IP 43
FM2 SU1R(2x) K1	51.707	SPDT-SB	5A/250V AC	Snap Action, Maintained	None (Terminals)	IP 43
FM2 SU2R(2x) K1	51.717	DPDT-SB	5A/250V AC	Snap Action, Maintained	None (Terminals)	IP 43
FM2 SU1DSU1(2x) K1	51.722	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	None (Terminals)	IP 43
FM2 ... F1						
FM2 SU1(2x) F1	51.704	SPDT-SB	5A/250V AC	Snap Action, Momentary	20 AWG/ 6 Cond.	IP 43
FM2 SU2(2x) F1	51.714	DPDT-SB	5A/250V AC	Snap Action, Momentary	20 AWG/12 Cond.	IP 43
FM2 SU1R(2x) F1	51.709	SPDT-SB	5A/250V AC	Snap Action, Maintained	20 AWG/ 6 Cond.	IP 43
FM2 SU2R(2x) F1	51.718	DPDT-SB	5A/250V AC	Snap Action, Maintained	20 AWG/12 Cond.	IP 43
FM2 SU1DSU1(2x) F1	51.724	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	20 AWG/12 Cond.	IP 43
FM2 ... K2						
FM2 SU1(2x) K2	51.703	SPDT-SB	5A/250V AC	Snap Action, Momentary	None (Terminals)	IP 65
FM2 SU2(2x) K2	51.713	DPDT-SB	5A/250V AC	Snap Action, Momentary	None (Terminals)	IP 65
FM2 SU1R(2x) K2	51.708	SPDT-SB	5A/250V AC	Snap Action, Maintained	None (Terminals)	IP 65
FM2 SU2R(2x) K2	51.718	DPDT-SB	5A/250V AC	Snap Action, Maintained	None (Terminals)	IP 65
FM2 SU1DSU1(2x) K2	51.723	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	None (Terminals)	IP 65
FM2 ... F2						
FM2 SU1(2x) F2	51.705	SPDT-SB	5A/250V AC	Snap Action, Momentary	20 AWG/ 6 Cond.	IP 65
FM2 SU2(2x) F2	51.715	DPDT-SB	5A/250V AC	Snap Action, Momentary	20 AWG/12 Cond.	IP 65
FM2 SU1R(2x) F2	51.710	SPDT-SB	5A/250V AC	Snap Action, Maintained	20 AWG/ 6 Cond.	IP 65
FM2 SU2R(2x) F2	51.720	DPDT-SB	5A/250V AC	Snap Action, Maintained	20 AWG/12 Cond.	IP 65
FM2 SU1DSU1(2x) F2	51.725	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	20 AWG/12 Cond.	IP 65

- G Gray housing/cable
- B Black housing/cable

Options

- Protection Level: - IP 67
- Switch Insert:
 - Gold plated contacts for low current applications
 - Electrical Rating: 0.1A/125V AC
 - Silver-Nickel plated contacts
 - Electrical Rating: 10.1A (1/4HP)/125-250V AC
- Strain Relief:
 - Standard straight-through (IP 68)
 - Bend protection (IP 68)
 - Trumpet Pull/Bend protection (IP 68)
- Cable:
 - Shielded cable
 - Per customer specifications
- Connectors:
 - Per customer specifications
- IEC 60601-1 certified and UL 2601-1 recognized
- Aluminum base plate with rubber mat
- Different switch inserts for each pedal

Dimensions

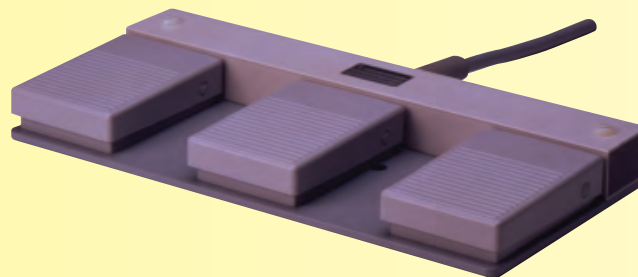


FM3

- Compact, three pedal foot switch

Standard Features

- Housing: Gray or black ABS body and pedal cover
- Base Plate: Die Cast Aluminum, PVC Conduit
- Protection Level: IP 43 and IP 65
- Switch Insert: Snap action microswitch, UL/CSA approved
 - Electrical Rating: 5A/ 125-250V AC (If used with appropriate cable, see cable chart on page 29)
 - Contact Types: Momentary, maintained, or two stage momentary
 - Circuit: SPDT-SB, DPDT-SB, 2x SPDT-SB
- Strain Relief: Vinyl sleeve
- Cable:
 - Multi conductor, PVC, SJT, 2 m (6 ft. - 6 in.)
 - Without Cable
- Temperature Range: -20°C up to +80°C (-4°F up to +176°F)



Ordering Information

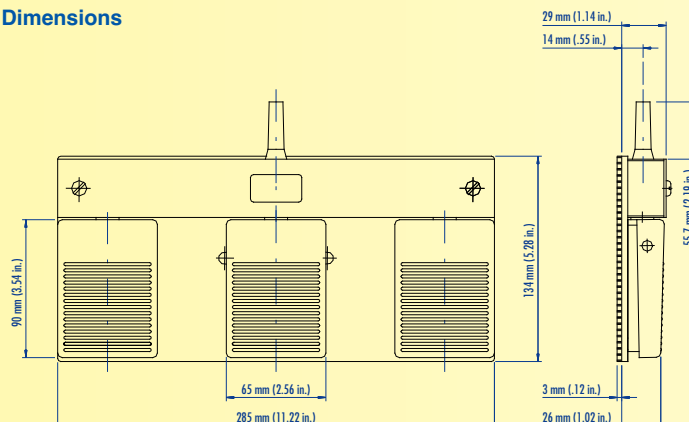
Type	Catalog No.	Circuit Function	Electrical Ratings	Switch/Contact Type	Cable	Protection Level
FM3 ... L1						
FM3 SU1 (3x) L1	51.801	SPDT-SB	5A/250V AC	Snap Action, Momentary	None (Solderable)	IP 43
FM3 SU2 (3x) L1	51.811	DPDT-SB	5A/250V AC	Snap Action, Momentary	None (Solderable)	IP 43
FM3 SU1R (3x) L1	51.806	SPDT-SB	5A/250V AC	Snap Action, Maintained	None (Solderable)	IP 43
FM3 SU2R (3x) L1	51.816	DPDT-SB	5A/250V AC	Snap Action, Maintained	None (Solderable)	IP 43
FM3 SU1DSU1 (3x) L1	51.821	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	None (Solderable)	IP 43
FM3 ... K1						
FM3 SU1 (3x) K1	51.802	SPDT-SB	5A/250V AC	Snap Action, Momentary	None (Terminals)	IP 43
FM3 SU2 (3x) K1	51.812	DPDT-SB	5A/250V AC	Snap Action, Momentary	None (Terminals)	IP 43
FM3 SU1R (3x) K1	51.807	SPDT-SB	5A/250V AC	Snap Action, Maintained	None (Terminals)	IP 43
FM3 SU2R (3x) K1	51.817	DPDT-SB	5A/250V AC	Snap Action, Maintained	None (Terminals)	IP 43
FM3 SU1DSU1 (3x) K1	51.822	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	None (Terminals)	IP 43
FM3 ... F1						
FM3 SU1 (3x) F1	51.804	SPDT-SB	5A/250V AC	Snap Action, Momentary	20 AWG/ 9 Cond.	IP 43
FM3 SU2 (3x) F1	51.814	DPDT-SB	5A/250V AC	Snap Action, Momentary	22 AWG/18 Cond.	IP 43
FM3 SU1R (3x) F1	51.809	SPDT-SB	5A/250V AC	Snap Action, Maintained	20 AWG/ 9 Cond.	IP 43
FM3 SU2R (3x) F1	51.819	DPDT-SB	5A/250V AC	Snap Action, Maintained	22 AWG/18 Cond.	IP 43
FM3 SU1DSU1 (3x) F1	51.824	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	22 AWG/18 Cond.	IP 43
FM3 ... K2						
FM3 SU1 (3x) K2	51.803	SPDT-SB	5A/250V AC	Snap Action, Momentary	None (Terminals)	IP 65
FM3 SU2 (3x) K2	51.813	DPDT-SB	5A/250V AC	Snap Action, Momentary	None (Terminals)	IP 65
FM3 SU1R (3x) K2	51.808	SPDT-SB	5A/250V AC	Snap Action, Maintained	None (Terminals)	IP 65
FM3 SU2R (3x) K2	51.818	DPDT-SB	5A/250V AC	Snap Action, Maintained	None (Terminals)	IP 65
FM3 SU1DSU1 (3x) K2	51.823	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	None (Terminals)	IP 65
FM3 ... F2						
FM3 SU1 (3x) F2	51.805	SPDT-SB	5A/250V AC	Snap Action, Momentary	20 AWG/ 9 Cond.	IP 65
FM3 SU2 (3x) F2	51.815	DPDT-SB	5A/250V AC	Snap Action, Momentary	22 AWG/18 Cond.	IP 65
FM3 SU1R (3x) F2	51.810	SPDT-SB	5A/250V AC	Snap Action, Maintained	20 AWG/ 9 Cond.	IP 65
FM3 SU2R (3x) F2	51.820	DPDT-SB	5A/250V AC	Snap Action, Maintained	22 AWG/18 Cond.	IP 65
FM3 SU1DSU1 (3x) F2	51.825	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	22 AWG/18 Cond.	IP 65

- G Gray housing/cable
- B Black housing/cable

Options

- Protection Level:
 - IP 67
- Switch Insert:
 - Gold plated contacts for low current applications
 - Electrical Rating: 0.1A/125V AC
 - Silver-Nickel plated contacts
 - Electrical Rating: 10.1A (1/4HP)/125-250V AC
- Strain Relief:
 - Standard straight-through (IP 68)
 - Bend protection (IP 68)
 - Trumpet Pull/Bend protection (IP 68)
- Cable:
 - Shielded cable
 - Per customer specifications
- Connectors:
 - Per customer specifications
- IEC 60601-1 certified and UL 2601-1 recognized
- Different switch inserts for each pedal
- Also available with four or more pedals

Dimensions



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FM3 - Ergonomic

- Compact, three pedal foot switch

Standard Features

- Housing: Gray or black ABS body and pedal cover
- Base Plate: Die Cast Aluminum with rubber mat
- Protection Level: IP 43 and IP 65
- Switch Insert: Snap action microswitch, UL/CSA approved
Electrical Rating: 5A/125-250V AC (If used with appropriate cable, see cable chart on page 29)
Contact Types: Momentary, maintained, or two stage momentary
Circuit: SPDT-SB, DPDT-SB, 2x SPDT-SB
- Strain Relief: Vinyl sleeve
- Cable: - Multi conductor, PVC, SJT, 2 m (6 ft. - 6 in.)
- Temperature Range: -20°C up to +80°C (-4°F up to +176°F)



Ordering Information

Type	Catalog No.	Circuit Function	Electrical Ratings	Switch/Contact Type	Cable	Protection Level
FM3 ... F1						
FM3 SU1 (3x) F1	51.864 <input type="checkbox"/>	SPDT-SB	5A/250V AC	Snap Action, Momentary	20 AWG/ 9 Cond.	IP 43
FM3 SU2 (3x) F1	51.874 <input type="checkbox"/>	DPDT-SB	5A/250V AC	Snap Action, Momentary	22 AWG/18 Cond.	IP 43
FM3 SU1R (3x) F1	51.869 <input type="checkbox"/>	SPDT-SB	5A/250V AC	Snap Action, Maintained	20 AWG/ 9 Cond.	IP 43
FM3 SU2R (3x) F1	51.879 <input type="checkbox"/>	DPDT-SB	5A/250V AC	Snap Action, Maintained	22 AWG/18 Cond.	IP 43
FM3 SU1DSU1 (3x) F1	51.884 <input type="checkbox"/>	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	22 AWG/18 Cond.	IP 43
FM3 ... F2						
FM3 SU1 (3x) F2	51.865 <input type="checkbox"/>	SPDT-SB	5A/250V AC	Snap Action, Momentary	20 AWG/ 9 Cond.	IP 65
FM3 SU2 (3x) F2	51.875 <input type="checkbox"/>	DPDT-SB	5A/250V AC	Snap Action, Momentary	22 AWG/18 Cond.	IP 65
FM3 SU1R (3x) F2	51.870 <input type="checkbox"/>	SPDT-SB	5A/250V AC	Snap Action, Maintained	20 AWG/ 9 Cond.	IP 65
FM3 SU2R (3x) F2	51.880 <input type="checkbox"/>	DPDT-SB	5A/250V AC	Snap Action, Maintained	22 AWG/18 Cond.	IP 65
FM3 SU1DSU1 (3x) F2	51.885 <input type="checkbox"/>	2x SPDT-SB	5A/250V AC	Snap Action, Two Stage Momentary	22 AWG/18 Cond.	IP 65

- G Gray housing/cable
- B Black housing/cable

Options

- Protection Level: - IP 67
- Switch Insert: - Gold plated contacts for low current applications
Electrical Rating: 0.1A/125V AC
- Silver-Nickel plated contacts
Electrical Rating: 10.1A (1/4HP)/125-250V AC
- Strain Relief: - Standard straight-through (IP 68)
- Bend protection (IP 68)
- Trumpet Pull/Bend protection (IP 68)
- Cable: - Shielded cable
- Per customer specifications
- Connectors: - Per customer specifications
- IEC 60601-1 certified and UL 2601-1 recognized
- Different switch inserts for each pedal

Dimensions

