



Foot Operator Terminal FBT

Modern design
Modular construction
Ergonomic operation

Foot Operator Terminal FBT

One solution proven to be particularly useful for the human-machine interface is the Bernstein FBT Foot Operator Terminal - Ergonomics in a modern design! The modular construction of the FBT offers a wide variety of combinations to satisfy the requirements of differing control engineering applications. Conformance with strict hygiene regulations, avoidance of dirt traps, resistance to aggressive cleaners as well as the high degree of protection (IP X8) are achieved by the use of clear form, smooth surfaces with high quality treatments. One-piece covers with external sealing lips protect the control modules and pedals etc.

The FBT was developed in consultation with manufacturers of medical equipment and fulfils their industry's specific functional and visual requirements as well as those found in the pharmaceutical and food industries.



Article number: 6067243004
Description: FBT2-DS1/DS1 SH



Article number: 6067240001
Description: FBT2-DS1/DS1



Article number: 6067241002
Description: FBT2-DS1/DS1 S



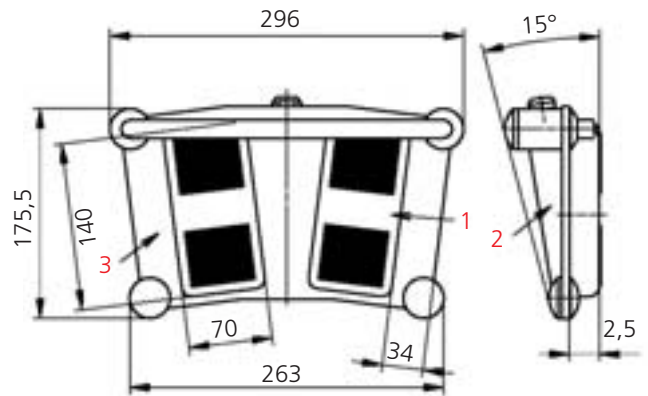
Article number: 6067242003
Description: FBT2-DS1/DS1 H

Made-to-measure solutions

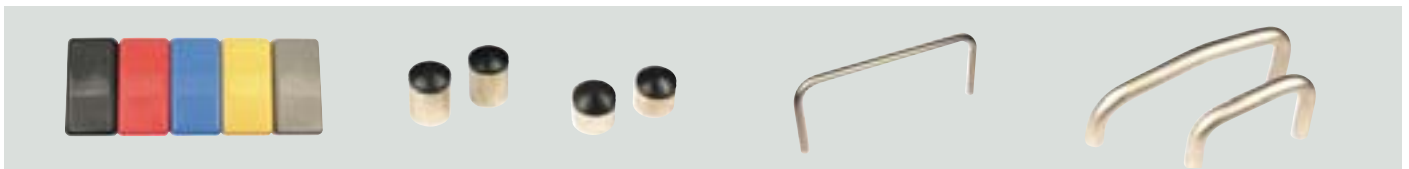
The user is able to combine the system components, 'control module' (1 in dia. opposite), cover (2), base plate (3), pillar feet, webs and handle to meet their individual requirements.

The ergonomic properties of the handle benefit the user by doubling up as a foot-rest, the web acts as a distinct separator between the control modules and the variable height pillar feet create an ideal working position.

With a choice of standard colours (red, blue, black, yellow and grey) the one-piece covers can be further customised with laser inscribed text for a totally individual appearance.



Dimensioned drawing of FBT2-DS1/DS1 H (all specifications in mm)



One-piece cover

Pillar feet

Handles

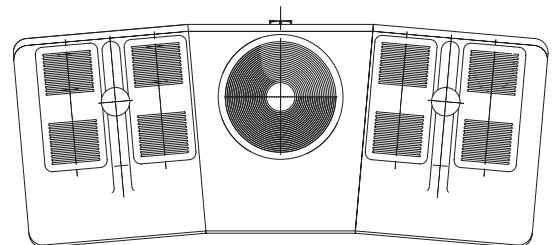
Webs

Foot Control Module FBM

The modules can be individually combined to meet the requirements of any given application (see diagram). The FBM can also be used alone i.e. mounted on a piece of equipment, machine or plant.



Foot Operator Terminal with 2 joypads



Foot Operator Terminal with 1 joypad and 4 dual switch modules

Example module variations Other versions on request

Description	Mono switch module	Dual switch module	Joypad
Microswitch*	1 (S1) / 2 (S2)	1 (DS1) / 2 (DS2)	1 (JP1) / 2 (JP2)
Foot Operator Module FBM	• / •	• / •	• / •
Foot Operator Terminal FBT1 (one module)	• / •	• / •	• / •
Foot Operator Terminal FBT2 (two modules)	• / •	• / •	• / •
Foot Operator Terminal FBT3 (three modules)	• / •	• / •	• / •

*A maximum of two microswitches can be used per ●

Technical data

Operational data	
U _i	250 VDC
Resistive load	2 A

Please copy, fill in and fax

Yes, I would like to know more about the Bernstein Foot Operator Terminal FBT

- Please send us more data sheet information.
- Please send us the product catalogue.
- Please call us to arrange for consultation.
Tel. no.: _____
- Please send us a quotation for _____
Foot Operator Terminals FBT.

Comments:

Surname

First name

Street address

Town / postal code

Company

Position

Telephone

Fax

E-mail

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Footswitches with single pedal

F1

Protection class IP 65

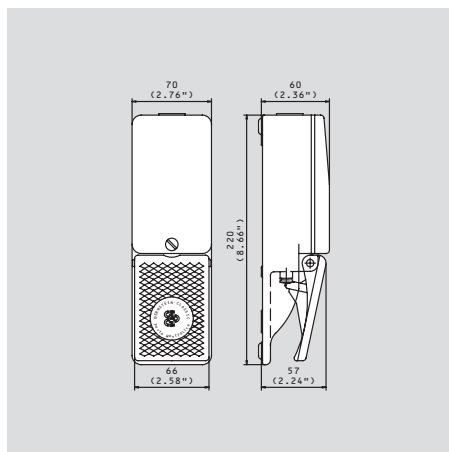


Designation	F1-U1Z	F1-U1Y	F1-SU1Z	F1-SU1 Mi RG
Part number	606.1100.005	606.1100.001	606.1300.011	616.1300.327
Circuit diagram				
	¹⁾ pressure point			
Slow make & break/snap action	●/–	●/–	–/●	–/●
Pressure point	–	–	–	–
Latching switch	–	●	–	–
Potentiometer	–	–	–	● 10 kΩ 2 W ²⁾
Pedal interlocking	–	–	–	–
Emergency stop function	–	–	–	–
Power contactor	–	–	–	–
Voltage	500 V AC	500 V AC	500 V AC	250 V AC DC
Permanent current	10 A	10 A	10 A	5 A
In-rush current complies with standards IEC 947-5-1 AC 15/DC 13	●	●	●	●
Switching frequency	50/min.	50/min.	50/min.	20/min.
Mechanical life – number of switching actions	10 x 10 ⁶	10 x 10 ⁶	10 x 10 ⁶	10 x 10 ⁶
Mechanical life – number of revolutions	–	–	–	50 x 10 ³ ³⁾
Operating temperature	–30 °C/+80 °C –22 °F/+176 °F	–30 °C/+80 °C –22 °F/+176 °F	–30 °C/+80 °C –22 °F/+176 °F	–30 °C/+80 °C –22 °F/+176 °F
Approvals	BG, CSA, UL	BG, CSA, UL	BG, CSA, UL	–
Cable entry	1 x M 20	1 x M 20	1 x M 20	1 x M 20
Weight	0.60 kg/1.3 lb	0.60 kg/1.3 lb	0.60 kg/1.3 lb	0.75 kg/1.65 lb
Delivery: ex-stock/built to order	●/–	●/–	●/–	●/–

All dimensions in mm (inch)

²⁾ other resistance figures on request

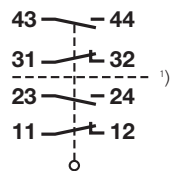
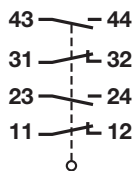
³⁾ number of revolutions available up to 5 x 10⁶





F1-U2Z
606.1200.003

F1-U2Z D
606.1200.007



●/-	●/-
-	●
-	-
-	-
-	-
-	-

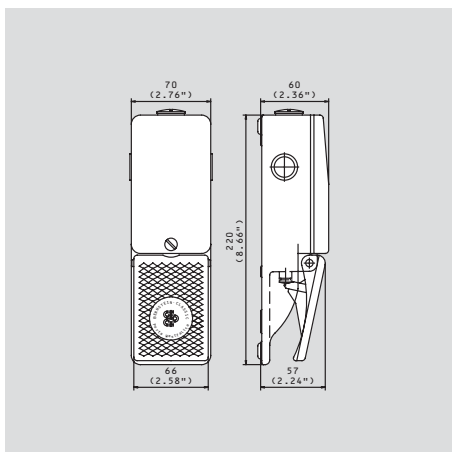
500 V AC	500 V AC
10 A	10 A
●	●

50/min.	50/min.
10 x 10 ⁶	10 x 10 ⁶
-	-
-30 °C/+80 °C	-30 °C/+80 °C
-22 °F/+176 °F	-22 °F/+176 °F

BG, CSA, UL BG, CSA, UL

3 x M 20 3 x M 20

0.60 kg/1.3 lb	0.70 kg/1.5 lb
●/-	●/-



Footswitches with single pedal (guarded)

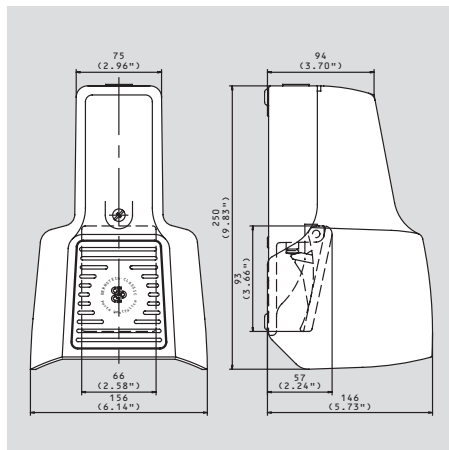
F1 UN

Protection class IP 65



Designation	F1-U1Z UN	F1-U1Y UN	F1-SU1Z UN
Part number	606.1600.006	606.1600.002	606.1800.012
Circuit diagram			
	1) pressure point		
	2) Emergency stop button – self latching		
Slow make & break/snap action	●/–	●/–	–/●
Pressure point	–	–	–
Latching switch	–	●	–
Potentiometer	–	–	–
Pedal interlocking	–	–	–
Emergency stop function	–	–	–
Power contactor	–	–	–
Voltage	max. 500 V AC	max. 500 V AC	max. 500 V AC
Permanent current	max. 10 A	max. 10 A	max. 10 A
In-rush current complies with standards IEC 947-5-1 AC 15/DC 13	●	●	●
Switching frequency	max. 50/min.	max. 50/min.	max. 50/min.
Mechanical life – number of switching actions	10 x 10 ⁶	10 x 10 ⁶	10 x 10 ⁶
Mechanical life – number of revolutions	–	–	–
Operating temperature	min./max. –30 °C/+80 °C –22 °F/+176 °F	min./max. –30 °C/+80 °C –22 °F/+176 °F	min./max. –30 °C/+80 °C –22 °F/+176 °F
Approvals	BG, CSA, UL	BG, CSA, UL	BG, CSA, UL
Cable entry	1 x M 20	1 x M 20	1 x M 20
Weight	1.50 kg/3.3 lb	1.50 kg/3.3 lb	1.50 kg/3.3 lb
Delivery: ex-stock/built to order	●/–	●/–	●/–

All dimensions in mm (inch)



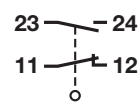
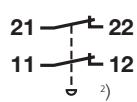
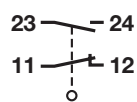
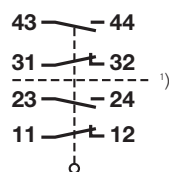
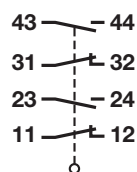


F1-U2Z UN
606.1700.004

F1-U2ZD UN
606.1700.008

F1-U1Z NA2 UN
606.1600.435

F1-U1Z AT UN
616.1600.400



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500 V AC
10 A

500 V AC
10 A

500 V AC
10 A

600 V AC
10 A

500 V AC
10 A

-
- 50/min.
- 10 x 10⁶
-
- 30 °C/+80 °C
- 22 °F/+176 °F

-
- 50/min.
- 10 x 10⁶
-
- 30 °C/+80 °C
- 22 °F/+176 °F

-
- 50/min.
- 10 x 10⁶
-
- 30 °C/+80 °C
- 22 °F/+176 °F

-
- 50/min.
- 10 x 10⁶
-
- 30 °C/+80 °C
- 22 °F/+176 °F

BG, CSA, UL

BG, CSA, UL

BG, CSA, UL

BG, CSA, UL

3 x M 20

3 x M 20

3 x M 20

1 x M 20

1.50 kg/3.3 lb

1.60 kg/3.5 lb

1.60 kg/3.5 lb

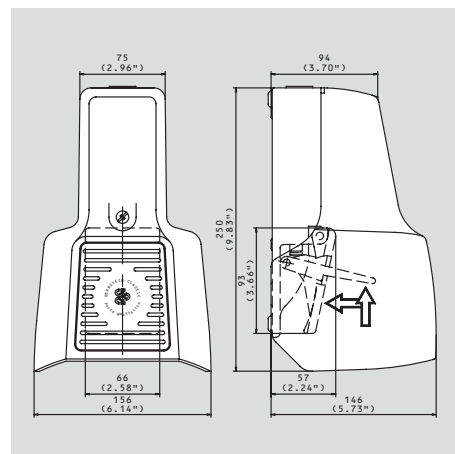
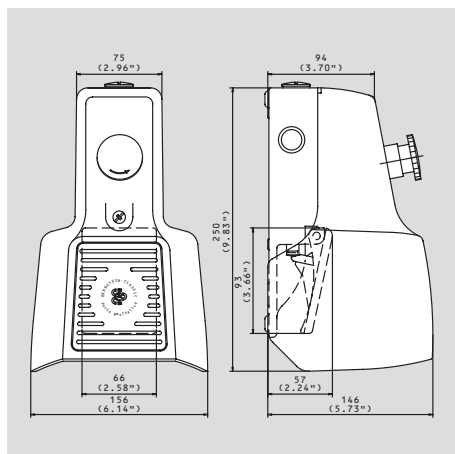
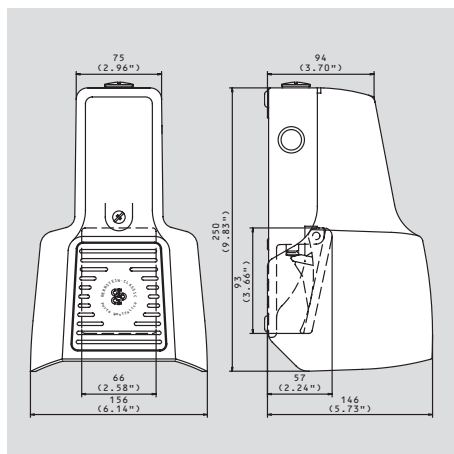
1.50 kg/3.3 lb

- /-

- /-

- /-

- /●



Safety footswitch

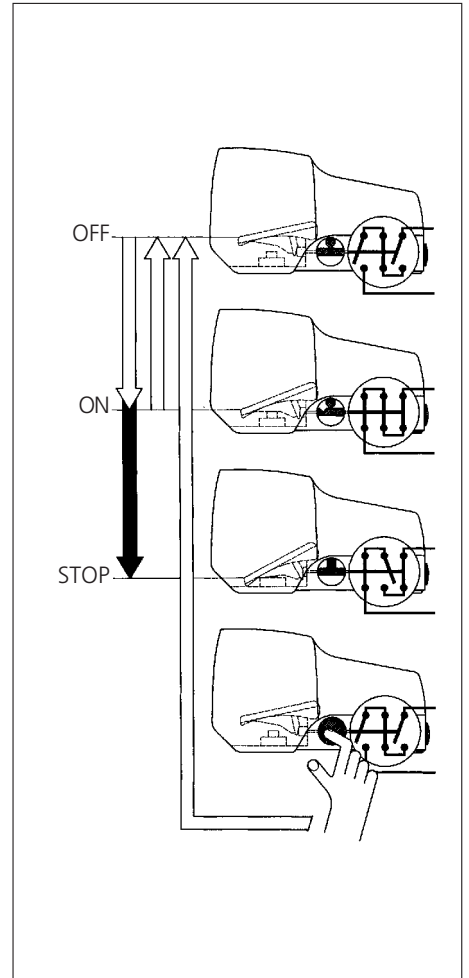
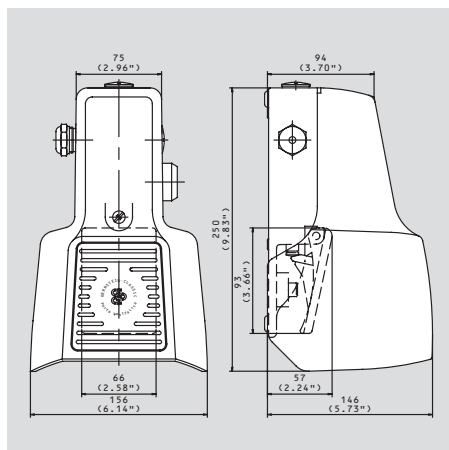
Safety latch with manual reset

Protection class IP 65



Designation		F1-SU1Z/UV1 DUN
Part number		616.1000.203
Circuit diagram		<p>1) pressure point</p> <p>2) latch</p>
Slow make & break/snap action		●●
Pressure point		●
Latching switch		●
Potentiometer		-
Pedal interlocking		-
Emergency stop function		-
Power contactor		●
Voltage		max. 500 V AC
Permanent current		max. 10 A
In-rush current complies with standards		●
IEC 947-5-1 AC 15/DC 13		
Switching frequency		max. 50/min.
Mechanical life – number of switching actions		10 x 10 ⁶
Mechanical life – number of revolutions		
Operating temperature		min./max. -30 °C/+80 °C -22 °F/+176 °F
Approvals		BG, UL, CSA
Cable entry		1 x M 20
Weight		1.50 kg/3.3 lb
Delivery: ex-stock/built to order		●/-

All dimensions in mm (inch)



1. Depressing the pedal to the pressure point closes the contact and the operating process starts.
2. In an emergency situation the pressure point is overcome – the contact is opened and locked – the operating process is then interrupted. The latching mechanism holds the contact in the off position ensuring that an uncontrolled restart or new start of the machine cannot happen.
3. Interlocking: Only by releasing the locking device manually (reset button on the side of the housing), after the dangerous situation has been cleared, can the contacts be set to normal again. The operating process can then be repeated by operating the pedal to the pressure point.

Footswitches with two pedals

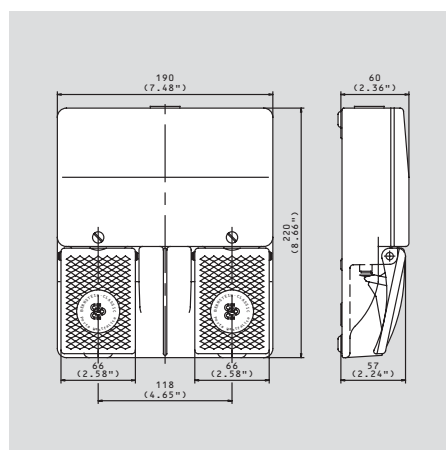
F2

Protection class IP 65



Designation	F2-U1Z/U1Z	F2-U2Z/U2Z
Part number	606.2110.013	606.2220.015
Circuit diagram		
Slow make & break/snap action	●/-	●/-
Pressure point	-	-
Latching switch	-	-
Potentiometer	-	-
Pedal interlocking	-	-
Emergency stop function	-	-
Power contactor	-	-
Voltage	max. 500 V AC	500 V AC
Permanent current	max. 10 A	10 A
In-rush current complies with standards IEC 947-5-1 AC 15/DC 13	●	●
Switching frequency	max. 50/min.	50/min.
Mechanical life – number of switching actions	10 x 10 ⁶	10 x 10 ⁶
Mechanical life – number of revolutions	-	-
Operating temperature	min./max. -30 °C/+80 °C -22 °F/+176 °F	-30 °C/+80 °C -22 °F/+176 °F
Approvals	BG, CSA, UL	BG, CSA, UL
Cable entry	1 x M 20	1 x M 20
Weight	1.70 kg/3.7 lb	1.70 kg/3.7 lb
Delivery: ex-stock/built to order	●/-	●/-

All dimensions in mm (inch)



Footswitches with two pedals (guarded) F2 UN

With three pedals F3

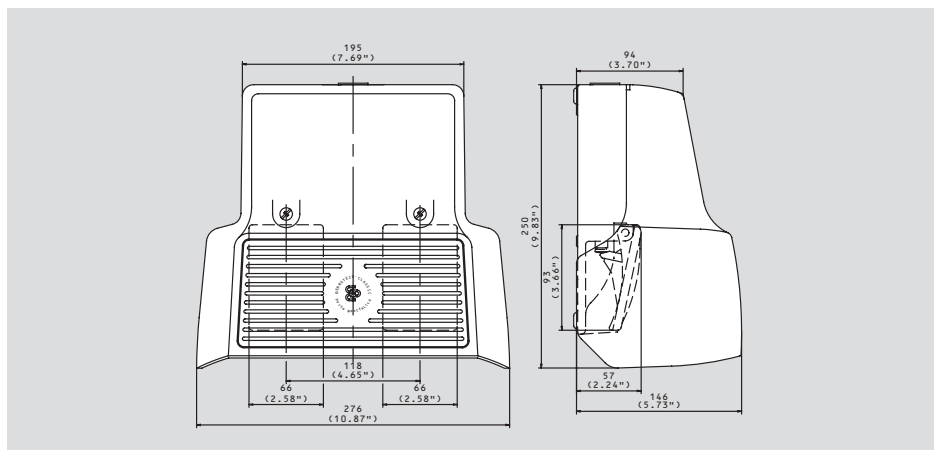
With three pedals (guarded) F3 UN

Protection class IP 65



Designation	F2-U1Z/U1Z UN	F2-SU1Z/SU1Z UN	F2-U2Z/U2Z UN	F2-U2ZD/U2ZD UN
Part number	606.2610.014	606.2830.022	606.2720.016	606.2720.020
Circuit diagram				
Slow make & break/snap action	●/-	●/-	-/●	-/●
Pressure point	-	-	-	●
Latching switch	-	-	-	-
Potentiometer	-	-	-	-
Pedal interlocking	-	-	-	-
Emergency stop function	-	-	-	-
Power contactor	-	-	-	-
Voltage	max. 500 V AC	max. 500 V AC	max. 500 V AC	max. 500 V AC
Permanent current	max. 10 A	max. 10 A	max. 10 A	max. 10 A
In-rush current complies with standards IEC 947-5-1 AC 15/DC 13	●	●	●	●
Switching frequency	max. 50/min.	max. 50/min.	max. 50/min.	max. 50/min.
Mechanical life – number of switching actions	10 x 10 ⁶	10 x 10 ⁶	10 x 10 ⁶	10 x 10 ⁶
Mechanical life – number of revolutions	-	-	-	-
Operating temperature	min./max. -30 °C/+80 °C -22 °F/+176 °F	min./max. -30 °C/+80 °C -22 °F/+176 °F	min./max. -30 °C/+80 °C -22 °F/+176 °F	min./max. -30 °C/+80 °C -22 °F/+176 °F
Approvals	BG, CSA, UL	BG, CSA, UL	BG, CSA, UL	BG, CSA, UL
Cable entry	1 x M 20	1 x M 20	1 x M 20	1 x M 20
Weight	2.60 kg/5.7 lb	2.60 kg/5.7 lb	2.60 kg/5.7 lb	2.80 kg/6.2 lb
Delivery: ex-stock/built to order	●/-	●/-	●/-	●/-

All dimensions in mm (inch)

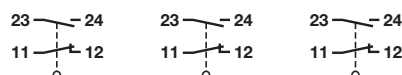
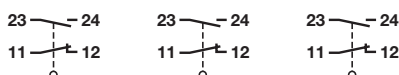




F2-SU1ZD/SU1ZD UN
606.2830.417

F3-U1Z/U1Z/U1Z
606.3111.025

F3-U1Z/U1Z/U1Z UN
606.3611.026



-/●	-/●	●/-	●/-	●/-	●/-	●/-	●/-
●	●	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

500 V AC
10 A

500 V AC
10 A

500 V AC
10 A

●	●	●	●	●	●	●	●
50/min.	50/min.	50/min.	50/min.	50/min.	50/min.	50/min.	50/min.
10 x 10 ⁶	10 x 10 ⁶	10 x 10 ⁶	10 x 10 ⁶	10 x 10 ⁶	10 x 10 ⁶	10 x 10 ⁶	10 x 10 ⁶
-	-	-	-	-	-	-	-
-30 °C/+80 °C	-30 °C/+80 °C	-30 °C/+80 °C	-30 °C/+80 °C	-30 °C/+80 °C	-30 °C/+80 °C	-30 °C/+80 °C	-30 °C/+80 °C
-22 °F/+176 °F	-22 °F/+176 °F	-22 °F/+176 °F	-22 °F/+176 °F	-22 °F/+176 °F	-22 °F/+176 °F	-22 °F/+176 °F	-22 °F/+176 °F

BG, CSA, UL

BG, CSA, UL

BG, CSA, UL

1 x M 20

2 x M 20

2 x M 20

2.80 kg/6.2 lb

3.10 kg/6.8 lb

5.40 kg/11.9 lb

●/-	●/-	●/-
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