



# Footswitches

SWITCHING AND SENSING SOLUTIONS



**ISSUE 01** 

1999

Herga Electric Limited is an independent UK manufacturer of switching systems. In addition to Footswitches, we offer other innovative switching solutions:-

hergair	Airswitching systems
herga	Pressure & Vacuum switches
hergalite	Fibre Optics / Infra red safety products
herga	Hand Controls

Our expertise spans the automotive, medical, packaging, domestic appliance and spa industries.

Herga is driven to respond rapidly to delight our customers. Herga seeks to develop its relations with customers to achieve their business goals.

### **Global Presence**

Our distributor network covering the world's major markets enables technical help and assistance to be just a phone call away.

### **Continuous Improvement**

Herga's approval to ISO 9002 ensures that we are fully in control of our quality. However, this is just the starting point for an aspiring World Class company. We encourage training and development and continuous improvements at individual, team and company level.

### How can we help you?

This brochure provides a brief overview of our product range. If you require further information, please contact us at our e-mail address: herga.electric@dial.pipex.com

### Herga's customers worldwide include

BMW/Rover Electrolux Jacuzzi RS Components Siemens General Electric



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#### 6251 Heavy Duty Footswitch

This stylish, yet tough, industrial diecast footswitch can be supplied in a variety of colours, with or without a guard. It incorporates various switch options and is sealed to IP67 or IP68 upon request. Can be supplied with cordsets attached.

#### 6252 Heavy Duty Footswitch

BG approved meets requirements of EN 60204 and EN 60947-5-1 with forced break contacts. This is a stylish, yet tough, industrial footswitch. The footswitch also incorporates various switch options and sealed to IP67 or IP68 upon request. Can be supplied with cordsets attached.

#### 6253 Heavy Duty Foot Potentiometer

Combining a wide choice of colour combinations with standard 5K and 10K potentiometer switching. This footswitch can be sealed to IP67 or IP68 upon request. Herga can also offer advice or help with interfacing modules.

#### 6255 'Mistral' Industrial Foot Air Valve

Utilising the stylish benefits of the industrial diecast footswitch offering a combination of pneumatic valves, 3/2 and 5/2 ports using the most advanced flow valves available. It is available in a variety of colours, with or without a guard.

#### 6254 General Industrial Footswitch

Rigorous and tough diecast aluminium footswitch offering a wide variety of switching combinations with unlimited cordset options that can be sealed up to IP68 upon request. Foot guard options and colour options are available upon request.

#### 6210 Light Industrial Footswitch

Tough all plastic lightweight construction footswitch offering a wide variety of switching combinations, it can be sealed up to IP68 upon request. Foot guard and colour options are available upon request.

#### 6289 General Purpose Footswitch

Small and compact footswitch offering a vast variety of switching combinations with unlimited cordset options. It can be sealed up to IP68 upon request. A choice of foot guards and colour options are available upon request.

#### 6220 and 6221 Leptron Palm/Footswitches

Innovative front hinged, low profile footswitch designed for improved user comfort. The Leptron all plastic switch is ideal for foot or palm use. Offering a vast variety of switching combinations with unlimited cordset options it can be supplied with a choice of foot guards for operator safety.

#### **Multi-Pedal Footswitches**

Excellent for OEM applications where multi-switching combinations are required, these footswitches offer a wide variety of foot pedals in a variety of colour combinations and unlimited designs. These footswitches can be sealed up to IP68 upon request.

#### 6240 Footswitch Bellows

A neat and compact hand or foot operated switch made from tough flexible PVC double insulated with a wide choice of colours. Available with aluminium base plate for permanent fixing and offers contact and switching options. With foot guard option available.

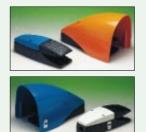
#### Your Guide to Certification Markings Covers most worldwide authorities/certification marks.

Covers most worldwide authorities/certification marks

### Your Guide to IP Ratings

Sealing of electrical enclosures.

Your Guide to Standards and Comparisons of Wire Size and Ratings with Fax back form and sketch pad.















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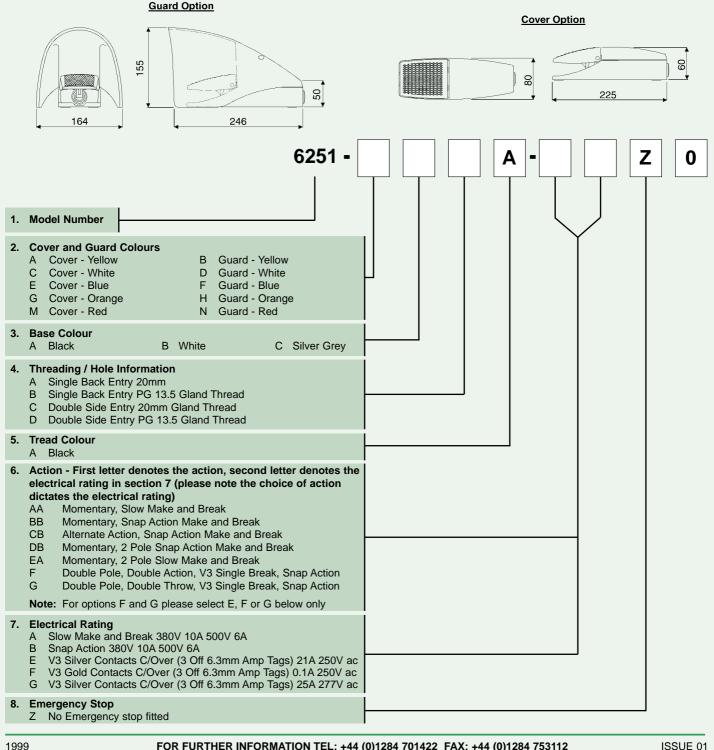
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#### **Benefits**

- Average life expectancy 1x10<sup>6</sup> operations
- Rugged high performing heavy duty footswitch ٠.
- Waterproof to IP67, IP68 upon request ٠.
- Choice of colours
- Distinctive styling
- Screw terminals and self-lifting clamp for connection of flexible leads 2 x 1.5mm<sup>2</sup> or wire up to 2 x 2.5mm<sup>2</sup>
- Available in your own livery for a small cost
- Competitively priced for OEM users



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Design	To EN 60204-1				
IP Rating	The electrical housing l	nas an environmental ra	ating of IP67 (IP68 upon i	request)	
Approvals	Switches to EN 61058				
Rated Operational Voltage	500V ac, over 380V ac	same potential only			
Rated Operational Current	10A380VAC110A110VAC16A500VAC16A250VAC116A110VAC11Note: When the footswitch is supplied with a pre-wired cordset the cordset rating will takeprecedence over the footswitch rating. The rating will be marked somewhere on the cordset.				
Contact Configuration	Normally open / norma	lly closed			
Contact Gap	>3mm suitable for mains isolation				
Temperature Operating Range	-25°C to +60°C				
Mechanical Endurance	1x10 <sup>6</sup> operations				
Electrical Life Expectancy At Category AC-15	$0.5 \times 10^6$ switching cycles when interrupting AC-11 6A at 250V				
Terminals	Screw terminals with s Minimum 2 x 1.5mm <sup>2</sup> s Maximum 2 x 2.5mm <sup>2</sup>	Standard Conductor	nnection of flexible leads		
Action Type from Order Code	А	В	С	D	
Connection Diagram	1 Pole Slow Make Slow Break	1 Pole Snap Action	2 Pole Snap Action	2 Pole Slow Make Slow Break	
Limit Switches (Other switching sequences are available upon request)	$ \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \end{array} $	3 $4 $ $0 $ $1 $ $2$	$\begin{array}{c} a \\ 3 \\ 0 \\ 1 \\ 3 \\ 0 \\ 0 \\ 1 \\ 1 \\ 2 \\ 2$	$\begin{array}{c} \begin{array}{c} \begin{array}{c} \\ 1 \\ \end{array} \\ \hline $ \\ \hline \end{array} \\ \\ \end{array} \\ \hline \end{array} \\ \\ \hline \end{array} \\ \\ \hline \end{array} \\ \\ \end{array} \\ \\ \end{array}  \\ \hline \end{array} \\ \\ \\ \end{array} \\  \\ \hline  \\ \hline  \\ \hline  \\ \\ \end{array} \\ \\ \end{array} \\ \\ \end{array} \\ \\ \end{array} \\ \\ \\ \end{array} \\  \\	

#### **MICROSWITCHES 21A**

Average Life	0		1.0 x 10 <sup>6</sup>	
Expectancy	Electrical	2.0 x 10⁵ @	10A 1.0	x 10⁴ @ 21A
		Ма	x. Electrical L	oad
	Voltage	Resistive	Inductive	Motor (Pf0.75)
	250V	21A	8A	2HP
AC	250V	21A		2HF 1HP
	125V	21A		
	6V	21A	21A	
	12V	15A	15A	
DC	24V	8A	7A	
DC	60V	1A	0.5A	
	110V	0.5A	0.2A	
	220V	0.25A	0.1A	

In all applications except where protective extra low voltage (PELV) circuits are being switched, an earth conductor must be installed. The earth conductor should be rated in accordance with the prevailing standards.

Microswitch Standards: EN 60730 EN 61058 and UL 508 Microswitch Approvals: CE, BEAB, CSA, DEMCO, IMQ, KEMA, NEMCO, OVE, SEMCO, SETI, SEV, UL, VDE

#### GOLD CONTACT MICROSWITCHES

Average Life	Mechanical	Mechanical 1.0 x 10 <sup>6</sup>				
Expectancy	Electrical	2.0 x 10⁵ @ .01A				
		Max. Electrical Load				
	Voltage	Resistive	Inductive	Motor (Pf0.75)		
AC	250V	0.1A	0.05	N/A		
UL/CSA Only	125V	0.1A				

Notes: Dry Switching

These switches must be used for low power circuits i.e. low current (4 to 100 milliamperes) and low voltage (below 30V), consult herga for further advice.

#### **MICROSWITCHES 25A**

Average Life	Mechanical 1.0 x 10 <sup>6</sup>						
Expectancy	Electrical	1	1.0 x 10⁵ @ 1.0A				
		Ма	x. Electrical L	oad			
	Voltage	Resistive	Inductive	Motor (Pf0.75)			
AC	277V	25A		2HP			
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	250V	25A		2HP			
UL/CSA Only	125V	25A		1HP			

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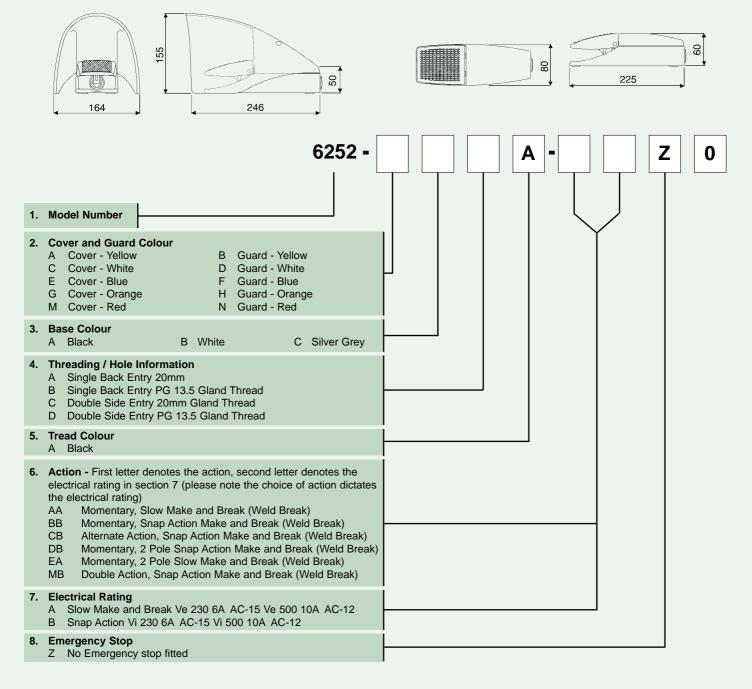


**Guard Option** 

#### **Benefits**

- Forced break positive opening contacts, BG approved to EN 60204-1 / EN 60947-5-1
- Average life expectancy 1x10<sup>6</sup> operations
- Rugged high performing heavy duty footswitch
- Waterproof to IP67, IP68 upon request
- Choice of colours \*\*
- Distinctive styling
- Screw terminals and self-lifting clamp for connection of flexible leads 2 x 1.5mm<sup>2</sup> or wire up to 2 x 2.5mm<sup>2</sup>
- Available in your own livery for a small cost
- \* Competitively priced for OEM users

#### **Cover Option**



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Design	To EN 60204-1 with switching to meet EN 60947-5-1. VDE 0660 part 200, IEC 947-5-1			
IP Rating	The electrical housing has an environmental rating of IP67 (IP68 upon request)			
Rated Operational Voltage	500V ac, over 380V ac same potential only			
Rated Operational Current	$\begin{tabular}{ c c c c c c } \hline AC (40 to 60hz) & DC \\ \hline \hline DC & DC & DC \\ \hline \hline 1e/AC-12 & Uele & Ac-15 & Uele & DC-12 & Le/DC-13 \\ \hline 10 & 24 & 10 & 24 & 10 & 10 \\ \hline 10 & 125 & 10 & 48 & 6 & 4 \\ \hline 10 & 230 & 6 & 110 & 4 & 1 \\ \hline 10 & 400 & 4 & 220 & 1 & 0.4 \\ \hline 10 & 500 & 3 & 440 & 0.5 & 0.2 \\ \hline \end{tabular}$ Note: When the footswitch is supplied with a pre-wired cordset, the cordset rating will take precedence over the footswitch rating. The rating will be marked on the cordset.			
Contact Configuration	Normally open + normally closed positive opening operation to EN 60947-5-1			
Contact Gap	>3mm suitable for mains isolation			
Temperature Operating Range	-25°C to +60°C			
Mechanical Endurance	1x10 <sup>6</sup> operations			
Electrical Life Expectancy At Category AC-15	$0.5 \times 10^{6}$ switching cycles when interrupting AC-15 6A at 250V			
Terminals	Screw terminals with self-lifting clamps for connection of flexible leads Minimum 2 x 1.5mm <sup>2</sup> Standard Conductor Maximum 2 x 2.5mm <sup>2</sup> Standard Conductor			
Action Type from Order Code (Action Option)	A B D E F			
Connection Diagram	1 Pole1 Pole2 Pole2 PoleDouble ActionSlow MakeSnap ActionSnap ActionSlow makeSnap ActionSlow BreakSlow BreakSlow BreakSlow Break			
Limit Switches	$\begin{array}{c} \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{22} \\ \textbf{0} \\ \textbf{3} \\ \textbf{14} \\ \textbf{21} \\ \textbf{22} \\ \textbf{0} \\ \textbf{14} \\ \textbf{21} \\ \textbf{22} \\ \textbf{13} \\ \textbf{14} \\ \textbf{21} \\ \textbf{21} \\ \textbf{22} \\ \textbf{22} \\ \textbf{13} \\ \textbf{14} \\ \textbf{21} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{22} \\ \textbf{22} \\ \textbf{13} \\ \textbf{14} \\ \textbf{21} \\ \textbf{21} \\ \textbf{22} \\ \textbf{22} \\ \textbf{21} \\ \textbf{21} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{21} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{21} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ \textbf{22} \\ \textbf{21} \\ $			

In all applications, except where protective extra low voltage (PELV) circuits are being switched, an earth conductor must be installed. The earth conductor should be rated in accordance with the prevailing standards.

Cordsets

The BIA approval can also include your selected, factory fitted, cordset choice. The cordset will not be BIA approved, although the footswitch will remain BIA approved.



BIA 964025 refers to products:

6252-XXXX-AAZ0 6252-XXXX-BBZ0 6252-XXXX-DBZ0 6252-XXXX-DAZ0



BIA 964026 refers to product:

6252-XXXX-MBZ0

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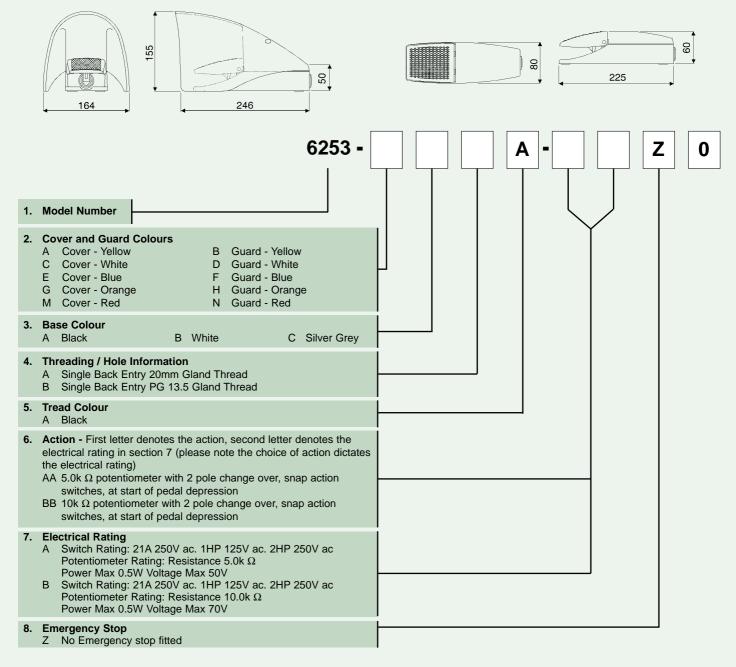


**Guard Option** 

#### **Benefits**

- Choice of 5K and 10K Potentiometers
- Average life expectancy 1x10<sup>6</sup> operations
- Rugged high performing heavy duty footswitch
- Waterproof to IP67, IP68 upon request ٠.
- ۰. Choice of colours
- Distinctive styling \*\*
- Available in your own livery for a small cost
- Competitively priced for OEM users ٠.

#### **Cover Option**



ELECTRICAL SWITCHES



POTENTIOMETER

Initial depression of the foot pedal causes both microswitch contacts to change state and further depression creates a resistance change in the potentiometer.

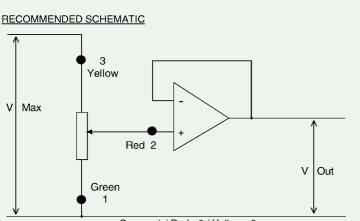
	ELECTRICAL SWITCHES		POTENTIOMETER				
Average Life	Mechanical	1.0	1.0 x 10 <sup>6</sup> Operations		Electrical Data	5.0k Ω	10.0k Ω
Expectancy	Electrical	2.0 x 10 <sup>5</sup> @	10A 1.0	x 10 <sup>5</sup> @ 21A	Resistance Tolerance	±20%	±20%
		Ma	x. Electrical L	oad	Linearity	±1.0%	±1.0%
	Voltage	Resistive	Inductive	Motor (Pf0.75)	Recommended Wiper Current	<0.1 µ A	<0.1 µ A
	250V	21A	8A		· ·	<0.1 μ/λ	<0.1 μ/λ
AC	250V	21A		2HP	Power Rating	0.5W/40°C	0.5W/40°C
	125V	21A		1HP	Max Wiper Fault Current	10mA	10mA
	6V	21A	21A		Max Potentiometer Rating	50V	70V
	12V	15A	15A		Dielectric Strength	1000V ac	1000V ac
DC	24V	8A	7A		Resistance	Conducti	ve Plastic
DC	60V	1A	0.5A		Resistance	Conducti	ve Flastic
	110V	0.5A	0.2A		Mechanical Data		
	220V	0.25A	0.1A		Average Life Expectancy Cycles	5.0 x 10 <sup>6</sup>	5.0 x 10 <sup>6</sup>

CE, BEAB, CSA, DEMCO, IMQ, KEMA, NEMCO, OVE, SEMCO, SETI, SEV, UL and VDE Microswitch Approvals:

Microswitch Standards: EN 60730 EN 61058 and UL 508

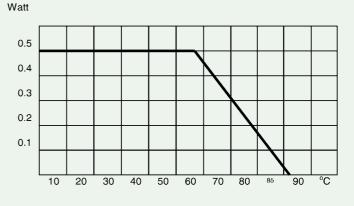
Dry Switching: If switching low power circuits i.e. low current (4 to 100 milliamperes) and low voltage (below 30V), Notes: please consult herga for advice

> IP Rating: The electrical housing has an environmental rating of IP67 (IP68 upon request)



#### Green - 1 / Red - 2 / Yellow - 3

**DE-RATING CURVE** 



In all applications except where protective extra low voltage (PELV) circuits are being switched, an earth conductor must be installed. The earth conductor should be rated in accordance with the prevailing standards.

Other potentiometer resistance values from 1K Ohm to 10K Ohm can be supplied in medium batch volumes, although these versions cannot ٠ be supplied with microswitch contacts.





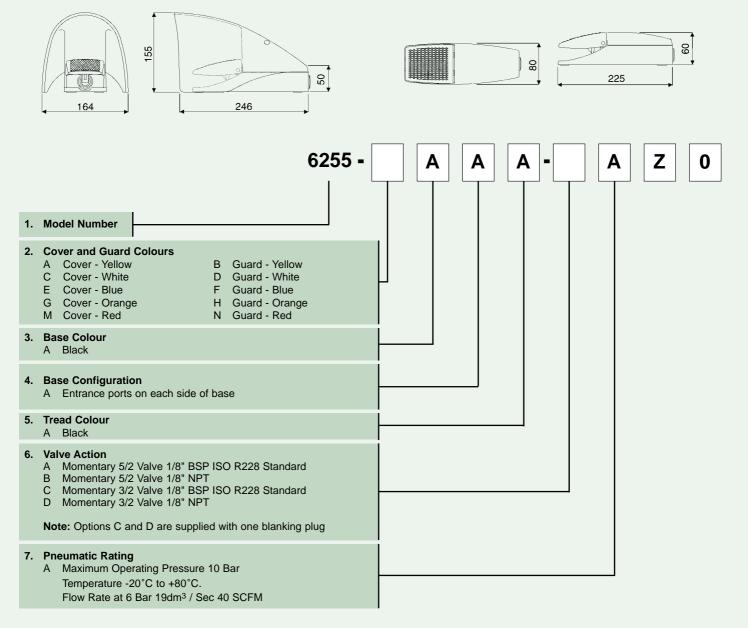
**Guard Option** 

#### Benefits

- The Mistral heavy industrial foot air valve offers high performance and style
- Available in a choice of colour combinations and valve options including valve port threads
- Special colours available for volume OEM customers
- Robust construction from die-cast aluminium
- The guard is large enough to allow the operator to wear industrial protective shoes
- Competitively priced for OEM users
- Mechanical performance 10<sup>6</sup>+ operations

#### **Cover Option**

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### 6255 ~ 'Mistral' Industrial Foot Air Valve



Technical Data				
Maximum Operating Pressure	10 bar (145 PSI / 1000kPa)			
Temperature Range	-20°C to + 80°C (-40°F to +176°F)			
Air Condition	Filtered to 40 microns lubricated or dry			
Flow Rate at 6 Bar (87 PSI / 600kPa)	19dm <sup>3</sup> / sec (40 SCFM)			
Ports	ISO R228 (1/8" BSP) standard or NPT			
Weights	Cover/Unguarded 800grms / Guarded 1.5kg			

#### **Connection Information**

#### Valve connected as a 3/2 Normally Closed valve

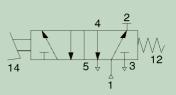
- The air supply should be connected to Port 1.
- Port 2 is redundant and should be plugged with the plug fitting supplied.
- The outlet is connected to Port 4.
- Ports 3 and 5 are exhaust ports and should be left open to atmosphere or fitted with silencers. See note below.

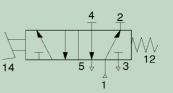
#### Valve connected as 3/2 Normally Open valve

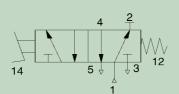
- The air supply should be connected to Port 1.
- Port 4 is redundant and should be plugged with the plug fitting supplied.
- The outlet is connected to Port 2.
- Ports 3 and 5 are exhaust ports and should be left open to atmosphere or fitted with silencers. See note below.

#### Valve connected as 5/2 valve

- The air supply should be connected to Port 1.
- Ports 2 and 4 are outlet or cylinder ports.
- Ports 3 and 5 are exhaust ports and should be left open to atmosphere or fitted with silencers. See note below.

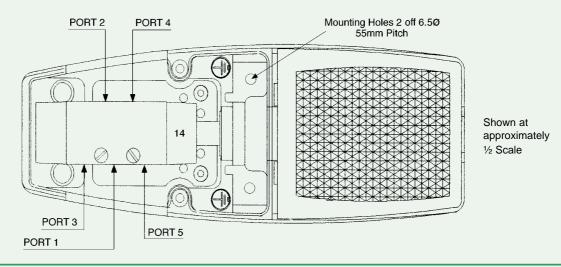






Note: We recommend that the exhaust ports of the valve are fitted with silencers. These will reduce the noise of the exhausting air and prevent dirt entering the valve.

A kit of 6mm fittings including elbows and silencers is available from herga, please quote part number 6050-5500-0029.

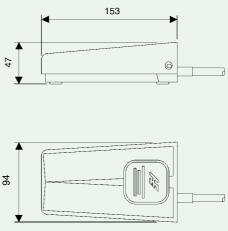


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#### Benefits

- \* Made of die cast aluminium it's toughness and modest cost make it ideal for OEM applications
- Ideal for remote switching in harsh environmental conditions where durability is required
- Low profile designed to reduce operator fatigue
- Non electrical version available, please refer to Airswitching section
- Guard in stove enamelled mild steel as standard
- Sealed to IP40 (IP68 upon request)
- Customer colours and logos available

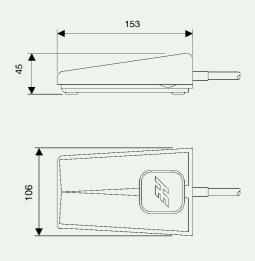
Model No	6254-CT	6254-CC	6254-D0	6254-DA	6254-W0
Weight	457g	475g	475g	525g	625g
Guard	Available	Available	Available	Available	Available
Black Body/Base	Die-cast aluminium	Die-cast aluminium	Die-cast aluminium	Die-cast aluminium	Die-cast aluminium
Guard Black as Std	Stove enamelled mild steel	Stove enamelled mild steel	Stove enamelled mild steel	Stove enamelled mild steel	Stove enamelled mild steel
No. of Poles	Single pole	Single pole	Double pole operating together	Double pole Two stage action	Single pole
Contact Configuration	Change over	Change over	Normally open	Normally open	Normally open
Cable	Terminal block	PVC 4 core	Terminal block	Terminal block	PVC 4 core
Length as Std	N/A	2 metres	N/A	N/A	2 metres
Conductor	N/A	0.75mm <sup>2</sup>	N/A	N/A	0.75mm <sup>2</sup>
Cable O/D	N/A	7.5mmØ (NOM)	N/A	N/A	6.8mmØ (NOM)
Current Rating	6 Amp 250V Ac	6 Amp 250V Ac	6 Amp 250V Ac	6 Amp 250V Ac	6 Amp 250V Ac
	3 Amp 1/2 HP	3 Amp 1/2 HP	3 Amp 1/2 HP	3 Amp 1/2 HP	(1.5A IND)
Enclosure Rating	IP40	IP40	IP40	IP40	IP67
Approvals		EN 61058-2-1, EN 6105	8, EN 60601-1 and EN 6	0950	

Cordset variations of each standard option are available (up to IP68 upon request). (6254 - DO and DA versions can be cordset built). \*

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#### Benefits

- Economic moulded plastic construction
- Versatile plastic switch designed to reduce operator fatigue
- Ideal for repetitive use for office equipment, domestic/medical appliances and general industrial applications
- Sealed to IP40 (IP68 upon request)

- Non electrical versions available, please refer to Airswitching section
- Sealed to IP40 (IP68 upon request)
- Guard available
- Customer colours and logos available
- Unlimited cordset options available

Model No	6210-ST	6210-SC	6210-W0	6210-CC	6210-DT	6210-DO
Weight Aprox	350grms	375grms	375grms	375grms	355grms	375grms
Guard	Available	Available	Available	Available	Available	Available
Material (Black Std)	Glass filled nylon	Glass filled nylon	Glass filled nylon	Glass filled nylon	Glass filled nylon	Glass filled nylon
Body (Black Std)	Glass filled nylon	Glass filled nylon	Glass filled nylon	Glass filled nylon	Glass filled nylon	Glass filled nylon
Guard (mild steel)	Stove enamelled	Stove enamelled	Stove enamelled	Stove enamelled	Stove enamelled	Stove enamelled
Number of Poles	Single pole	Single pole	Single pole	Single pole	Double pole	Double pole
Contact Configuration	Normally open	Normally open	Normally open	Change over	Normally open	Change over
Cable	Terminal block	2 core PVC	2 core PVC	4 core PVC	Terminal block	5 core PVC
Length (as Std)	N/A	2 metres	2 metres	2 Metres	N/A	2 Metres
Conductor	N/A	0.75mm <sup>2</sup>	0.75mm <sup>2</sup>	0.5mm <sup>2</sup>	N/A	0.5mm <sup>2</sup>
Cable O/D	N/A	6.8mmØ (NOM)	6.8mmØ (NOM)	6.8mmØ (NOM)	N/A	6.8mmØ (NOM)
Current Rating	6 Amp 250V Ac	6 Amp 250V Ac	6 Amp 250V Ac	3 Amp 250V Ac	6 Amp 250V Ac	3 Amp 250V Ac
Enclosure Rating	IP40	IP40	P40 IP67		IP40	IP40
Approvals		EN	61058-2-1, EN 61058	8, EN 60601-1 and E	N 60950	

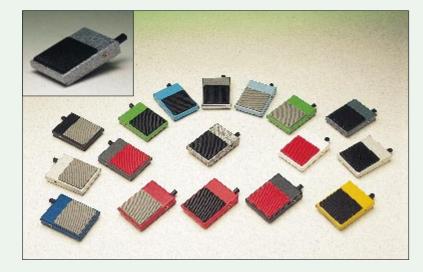
Cordset variations of each standard option are available (up to IP68 upon request).

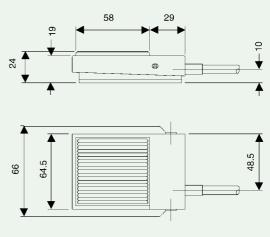
Note: Models 6210-CC and 6210-DO contain an unconnected earth wire.

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#### Benefits

- Tough, compact and versatile
- Steel construction gives long life and reliability
- \* Non electrical versions available, please refer to Airswitching section
- Guards available

- Multi pedal versions available
- Sealed to IP40 or IP67 (IP68 upon request)
- Choice of colours and switching operations
- Customer logo's available
- Variants available for medical applications

Model No	6289-PP	6289-W0	6289-D0	6289-DA	6289-SC	6289-CC	6289-CT
Depth	89mm	89mm	89mm	89mm	89mm	89mm	89mm
Width	63mm	63mm	63mm	63mm	63mm	63mm	63mm
Height	20mm	20mm	20mm	20mm	20mm	20mm	20mm
Weight	283g	283g	283g	283g	283g	283g	283g
Guard	Available	Available	Available	Available	Available	Available	Available
Material: Body			(Grey Hammerto	ne as Std) 16 SW	G mild steel shell		
Tread			(Black a	is standard) Polypi	ropylene		
Guard		2	Sizes available/St	ove enamelled mil	d steel/Hammertor	ne	
Number of Poles	Single pole	Single pole	Double pole	Two Stage Action	Single pole	Single pole	Single pole
Contact Configuration	Latching	Normally open	Normally open	Normally open	Normally open	Change over	Change over
Cable	3 core PVC	3 core PVC	5 core PVC	5 core PVC	3 core PVC	4 core PVC	INT. terminal block
Cable Length	2m (Std)	2m (Std)	2m (Std)	2m (Std)	2m (Std)	2m (Std)	N/A
Conductor	0.75mm <sup>2</sup>	0.75mm <sup>2</sup>	0.5mm <sup>2</sup>	0.5mm <sup>2</sup>	0.75mm <sup>2</sup>	0.5mm <sup>2</sup>	N/A
Cable O/D	6.8mm	6.8mm	6.8mm	6.8mm	6.8mm	6.8mm	7.0 grommet
Current Rating @ 250V ac	6 Amp resistive 3 Amp inductive 1/2 HP 250V	6 Amp resistive 1.5 Amp inductive	3 Amp resistive 3 Amp inductive 1/2 HP 250V	3 Amp resistive 3 Amp inductive ½ HP 250V	6 Amp resistive 3 Amp inductive ½ HP 250V	3 Amp inductive / resistive ½ HP 250V	6 Amp resistive 3 Amp ½ HP 250V
Enclosure Rating	IP40	IP67	IP40	IP40	IP40	IP40	IP40
Approvals		EN 6105	8-2-1, EN 61058, E	EN 60601-1 and El	N60950		

Cordset variations of each standard option are available (up to IP68 upon request). \*

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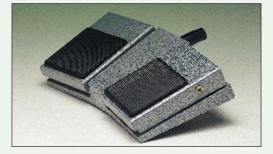
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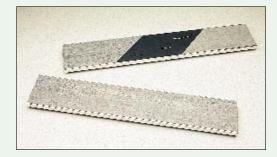


6289-SB (Guard optional)





6289-01



#### Benefits 6289-SB

- Wide choice of switching options
- Various pedal and base colours available
- Robust high repeatability
- Customer logos available upon request

#### Benefits 6289-01

- Sealed to IP40 or IP67 (IP68 upon request)
- Variable switching options
- Custom made lengths on request
- Choice of colour toppings

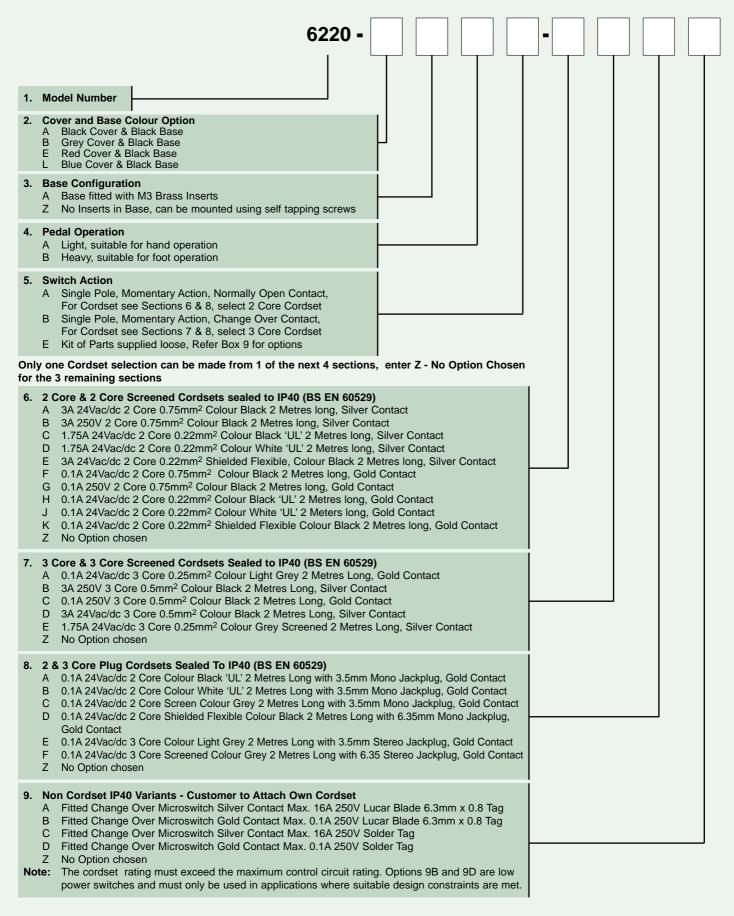
Model No	6289-SB Standard	6289-01 Standard
Depth	100mm	95mm
Width	180mm	760mm (200mm to 3 metres possible)
Height	32mm	25mm
Weight	795g	1200grms
Guard	230mm x 100mm x 100mm (optional extra)	N/A (possible on shorter lengths) see below
Divider Option	Fitted to central boss with or without herga logo	N/A
Material: Body	2 switches on diecast aluminium base	Switch bodies grey hammertone mild steel (underneath)
Tread	Std black polypropylene (grey, red & white also available)	Rubber on aluminium extrusion (or vinyl)
Guard	Painted 18 SWG mild steel	Available up to 300mm long
Colour Option	Grey hammertone (various textures and colours available)	Black rubber tread (vinyl floor types available)
Wiring Configurations	Single and double pole variants (silver as Std)	2 x N/O single pole footswitches (Change over and double pole available upon request)
Contact Configuration	Silver and gold variants available (silver as Std)	Silver and gold variants available
Cable	PVC (other types available upon request)	3 core PVC with earth as standard
Cable Length	2 metres (other lengths/types available upon request)	2 metres (can be provided with extra lengths)
Current Pating	Variations of 24V and 250V available	6 Amp resistive 250V
Current Rating	3 Amp 1/2 HP (dependent on component use)	3 Amp inductive 1/2 HP
Enclosure Rating	IP40 and IP67 (IP68 upon request)	IP40 (IP67 and IP68 available upon request)
Approvals	EN 61058-2-1, EN 61058, EN 60601-1 and EN 60950	EN 61058-2-1, EN 61058, EN 60601-1 and EN 60950

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### For IP40/IP41 Single Pole Switching



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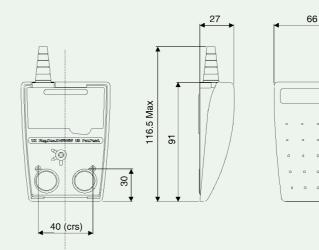
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### For IP40/IP41 Single Pole Switching





#### Benefits

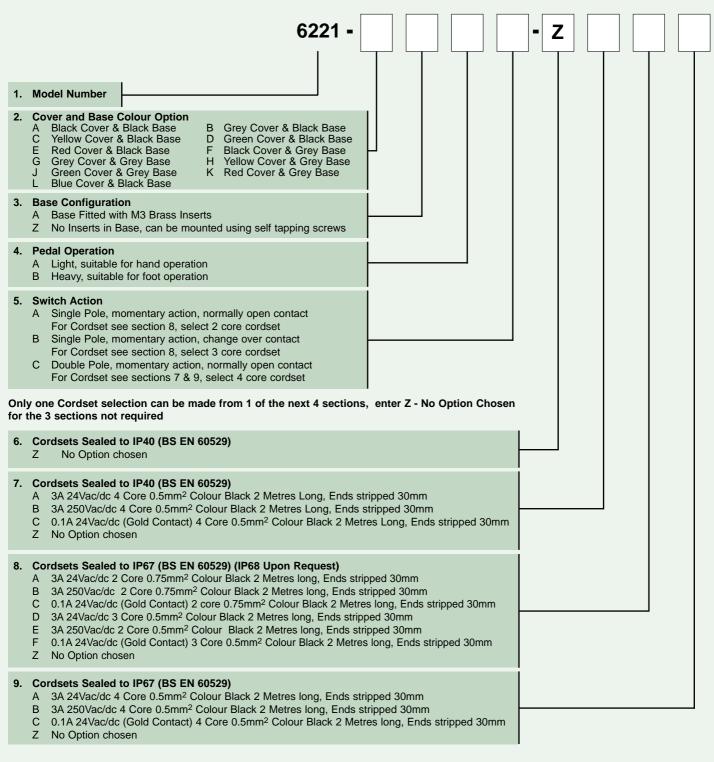
- Front hinged low profile footswitch designed for improved user comfort
- All plastic construction with pimple tread pattern, ideal for palm or foot operation
- Its versatility and innovative design make it an ideal product for OEM use
- Switches are designed to meet medical, industrial and office/commercial standards
- Enclosure rating IP41
- Choice of operating force
- Options for customers to fit their own cables

Depth/Length	91mm
Width	66mm
Height	27mm
Weight	212g (including cable)
Guards	Available - please contact herga for details
Material	Glass filled Nylon 6
Number of Poles	Single pole momentary
Contact Configuration	Normally open, normally closed and common (change over)
Enclosure Rating	IP40/IP41
Standards	EN 61058-2-1
(dependent upon application chosen)	EN 61058
	EN 60601-1
	EN 60950
Options for OEM Customers	<ul> <li>Special versions considered</li> </ul>
	Customised labels available
	<ul> <li>Additional colours may be available - please contact herga for details if your preferred colour is not shown</li> </ul>

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### For IP67 and Double Pole Switching

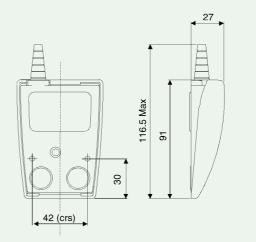


- Other feasible switching solutions can be considered upon request. \*
- Unlimited cordset options are available upon request.



### For IP67 and Double Pole Switching







#### **Benefits**

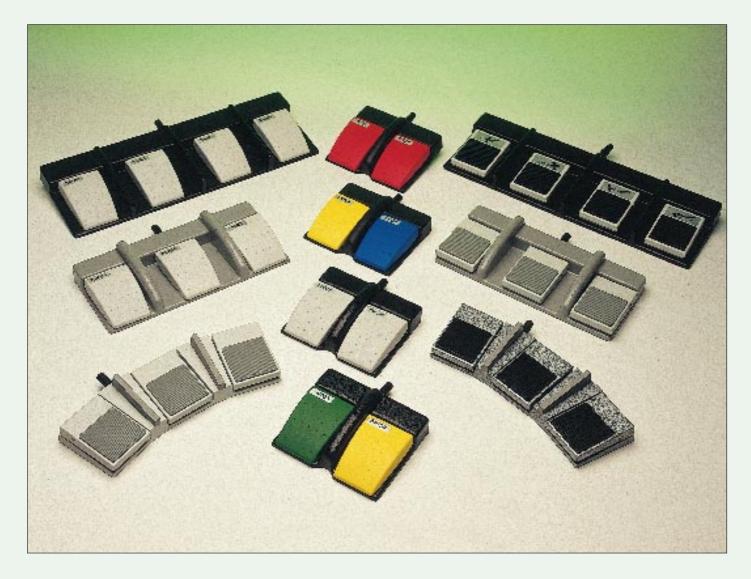
- Front hinged low profile footswitch designed for improved user comfort
- \* All plastic construction with pimple tread pattern, ideal for palm or foot operation
- Choice of operating force

- \* Switches are designed to meet medical, industrial and office/commercial standards
- Enclosure rating IP67 (IP68 upon request)
- \* Its versatility and innovative design make it an ideal product for OEM use

Depth/Length	91mm
Width	66mm
Height	27mm
Weight	212g (including cable)
Guards	Available - please contact herga for details
Material	Glass filled Nylon 6
Number of Poles	Single pole momentary or double pole momentary
Contact Configuration	Normally open, normally closed and common (change over)
Enclosure Rating	IP67 (IP68 available upon request)
Standards	EN 61058-2-1
(dependent upon application chosen)	EN 61058
	EN 60601-1
	EN 60950
Options for OEM Customers	<ul> <li>Special versions considered</li> </ul>
	<ul> <li>Customised labels available</li> </ul>
	Additional colours may be available - please contact herga for details if your preferred colour is not shown

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#### Benefits

- Using all of the options available with the multi-pedal footswitching, we can meet a wide variety of OEM applications and comply to the differing international Standards
- Multi-pedal bases are made from a tough ABS with textured finish in grey or black or painted diecast aluminium
- Sealed to IP40 & IP67 (IP68 upon request)
- Maximum electrical ratings are determined by application
- Other pedal versions are also feasible

In keeping with our innovative design of the Leptron and 6289 styles, we can now offer equally attractive 2, 3 and 4 pedal Footswitches (larger pedals can be considered). Talk to us about your requirements for multi-pedal Footswitches. Multipedal bellow variants are also available for non electrical switching.

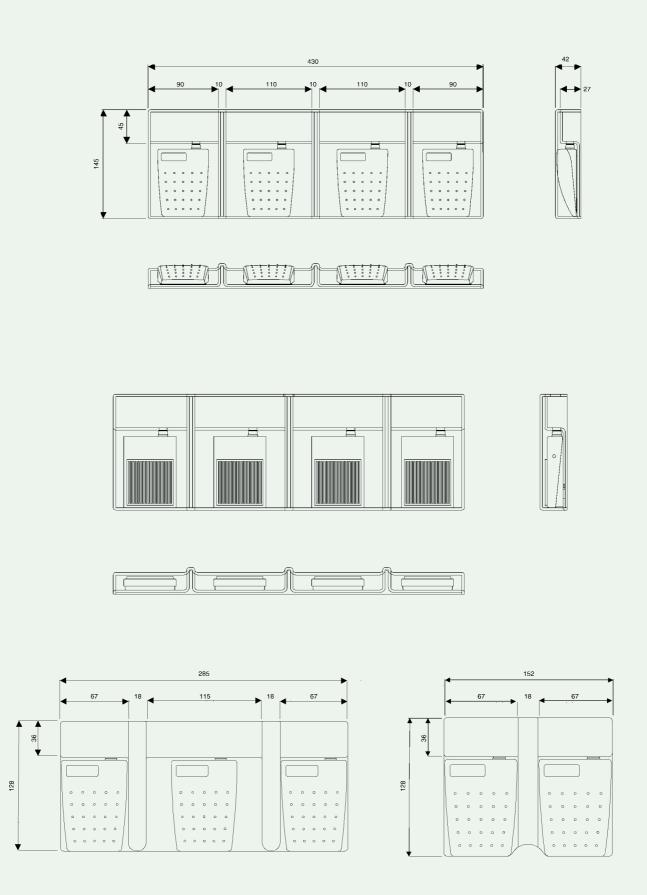
#### Help on Standards

Herga has many years of experience of international standards. With the huge choice of footswitches available, we believe that together we can offer you the correct model to meet the various standards. However, as no one understands your market better than yourselves, the final design and responsibility of meeting the correct standards is yours.

### **Multi-Pedal Footswitches**



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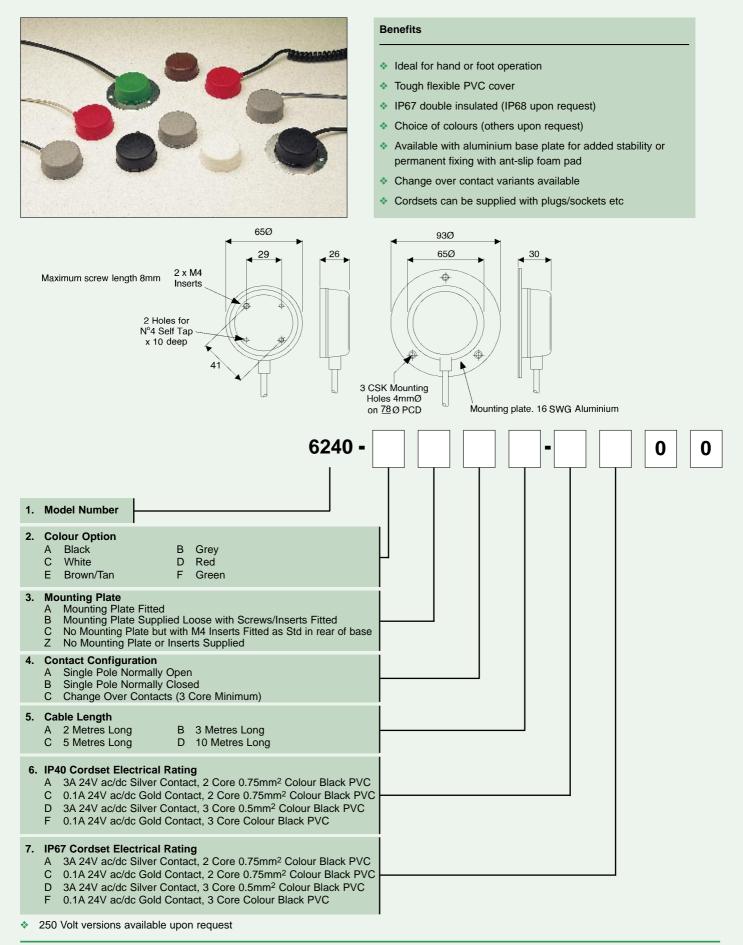


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### 6240 ~ Footswitch Bellows



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### Your Guide To Certification Markings



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Country	Agency	<u>Mark</u>	<u>Country</u>	<u>Agency</u>	<u>Mark</u>
Australia	SAA	$\bigtriangledown$	Japan	MITI	
Austria	OVE	OVE	Netherlands	KEMA	KEUR
Belgium	CEBEC		New Zealand	SECV SECQ	ROVED TO
Canada	CSA			SECWA EANSW ETSA HECT SANZ	THE ZEALAND STANDT
Denmark	DEMKO	D	Nerver		
Europe	MANY	CE	Norway	NEMKO	
Finland	FEI	(FI)	Republic of South Africa	SABS	
			Sweden	SEMKO	S
France	UTE		Switzerland	SEV	(+) S
Germany	VDE		United Kingdom	ASTA	A\$A
				BSI	
India	ISI	Ŀ		BEAB	BEAB
Ireland	IIRS	$\bigcirc$	United States	UL	
Italy	IMQ				<b>S</b>

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### Your Guide to IP Ratings

EN 60529 outlines an international classification system for the sealing effectiveness of enclosures of electrical equipment against the intrusion into the equipment of foreign bodies (i.e. tools, dust, fingers) and moisture. This classification system utilises the letters "IP" ("Ingress Protection") followed by two or three digits. (A third digit is sometimes used. An "x" is used for one of the digits if there is only one class of protection; i.e. IPX4 which addresses moisture resistance only.)

#### **Degrees of Protection - First Digit**

The first digit of the IP code indicates the degree that persons are protected against contact with moving parts (other than smooth rotating shafts, etc.) and the degree that equipment is protected against solid foreign bodies intruding into an enclosure.

- 0 No special protection.
- 1 Protection from a large part of the body such as a hand (but no protection from deliberate access); from solid objects greater than 50mm in diameter.
- 2 Protection against fingers or other object not greater than 80mm in length and 12mm in diameter.
- 3 Protection from entry by tools, wires, etc., with a diameter or thickness greater than 2.5mm.
- 4 Protection from entry by solid objects with a diameter or thickness greater than 1.0mm.
- 5 Protection from the amount of dust that would interfere with the operation of the equipment.
- 6 Dust tight.

#### **Degrees of Protection - Second Digit**

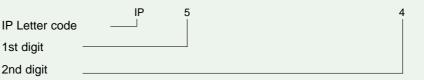
The second digit indicates the degree of protection of the equipment inside the enclosure against the harmful entry of various forms of moisture (e.g. dripping, spraying, submersion, etc.)

- 0 No special protection.
- 1 Protection from dripping water.
- 2 Protection from vertically dripping water.
- 3 Protection from sprayed water.
- 4 Protection from splashed water.
- 5 Protection from water projected from a nozzle.
- 6 Protection against heavy seas, or powerful jets of water.
- 7 Protection against immersion.
- 8 Protection against complete, continuous submersion in water. Submersion depth and time must be specified by the enduser. The requirement must be more onerous than IP67.

#### The IP Code Symbols

The chart at the right illustrates the use of special symbols in the IP classification system. In the "1st digit" column, note the grid-like symbols next to numbers 5 and 6. In the "2nd digit" column numbers 3-8 are symbolised by teardrop shaped symbols, sometimes enclosed in a box or a triangle, sometimes unenclosed (#7-8). These symbols can be placed on equipment to illustrate the IP protection provided.

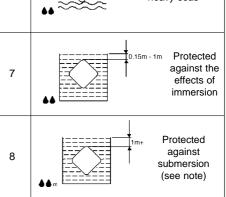
#### IP54 =

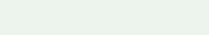


1st Digit	Protection form solid objects	2nd Digit	Protection from moisture
0	Non protected	0	Non protected
1	Protected against somm solid objects greater than 50mm	1	Protected against dripping water
2	Protected against solid objects greater than 12mm	2	Protected against dripping water when tilted up to 15°
3	Protected against 2.5mm solid objects greater than 2.5mmØ	3	Protected against spraying water
4	Protected against solid objects greater than 1.0mmØ	4	Protected against splashing water
5	Dust protected	5	Protected against water jets
6	Dust tight	6	Protected against heavy seas
Note: E	N 60529 does not specify sealing	7	0.15m - 1m Protected against the effects of immersion

### Note: EN 60529 does not specify sealing effectiveness against the following:

mechanical damage of the equipment; the risk of explosions; certain types of moisture conditions, e.g. those that are produced by condensation; corrosive vapours; fungus; vermin.





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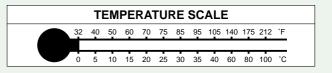
### Your Guide to Standards and **Comparisons of Wire Size and Ratings**



European							Ame	erican	
Rating Amps	Conducto Imperial	r Standing Metric	Cross Sect. Area mm <sup>2</sup>		Cross Sect. Area mm <sup>2</sup>		AWG	Conductor Regular	r Standing Hi Flex
1.5	7/.0076"		0.193						
1.75		7/0.2mm		0.22	0.22	24	7/.008"	19/.0050"	
					0.357	22	7/.010"	19/.0063"	
3	14/.0076"		0.377						
3		16/0.2mm		0.5					
					0.510	20	10/.010"		
6	23/.0076"		0.65						
6		24/0.2mm		0.75					
					0.816	18	16/.010	41/.0063"	
10		32/0.2mm		1.0					
13	40/.0076"		1.1						
					1.32	16	26/.010"	56/.0063"	
15		30/0.25mm		1.50					
18	70/.0076"		1.93						
					2.09	14	41/010"		
20		50/0.25mm		2.50					
24	110/.0076"		3.1						
					3.31	12	65/.010"		
25		56/0.3mm		4.0					
31	162/.0076"		4.5						
					5.26	10	65/0.129"		

#### **Important Notice**

Foot controls should only be used where devices have been properly installed and are utilised so that it is impossible for the operators hands to remain within the point of operation during the machine cycle.



### **Standard Switch Contact Configurations**

Description	Form	Symbol
SPST-NO Single pole, single throw, normally open	Α	
SPST-NC Single pole, single throw, normally closed	В	t
SPDT Single pole, double throw, break before make	С	
SPST-NO Single pole, single throw, normally open, double break	х	
SPST-NC Single pole, single throw, normally closed, double break	Y	t
SPDT Single pole, double throw, break before make, double break moving contact of same polarity	Za	

Description	Form	Symbol
SPDT Single pole, double throw, break before make, double break moving contacts are electrically separate	Zb	
<b>DPST-NO</b> Double pole, single throw, normally open	AA	
<b>DPST-NC</b> Double pole, single throw, normally closed	BB	
DPST Double pole, single throw, break before make	AB	
DPDT Double pole, double throw, break before make	сс	

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### **Rapid Response Form (Photostat and fax back)**



It is our goal to give you a response within 24 hours. By completing this form it will help us to help you! Thank you.

CUSTOMER									
CONTACT NAME	TEL: FAX:								
PLEASE TICK THE B	OXES	YOU NEED AND FILL IN YOU	JR R	REQUIREMENTS					
PLEASE:		QUOTE		PROVIDE PRODUCT REF	SAMPLE			TIME SCALE	
[									
BASIC MODEL:		6251	믐	6289 -		6210 -			
PLEASE REFER TO CLOSEST STANDARD		6252 BG	냼	6289 MULTIPEDAL		6240 OTHER MULTIPEDAL		6220	
OR MATRIX OPTION		6253 POTENTIOMETER	믐	TREADLE 6254				6221	
				0234				]	
SWITCH ACTION:		DOUBLE ACTION		MOMENTARY		LATCHING		OTHER	
CONTACTS:			H	NORMALLY CLOSED					
			Ħ						
L									
MULTI PEDAL:		2 PEDAL		3 PEDAL		4 PEDAL		OTHER	
BASE:				VAC FORM GREY		VAC FORM BLACK		OTHER	
CONTACTS:		PEDAL 1:	PE	DAL 2:	PE	DAL 3:	PE	EDAL 4:	
SWITCH ACTION:		PEDAL 1:	PE	DAL 2:	PE	DAL 3:	PE	DAL 4:	
RATING:		STANDARD		OTHER			🗆	GOLD CONTACT	
SEALED TO:		<b>IP40</b>		IP67		IP68		OTHER	
COLOUR:		STANDARD				POWDER PAINT		WET PAINT	
FINISH:		STANDARD							
								1	
CABLE:		STANDARD		N/A TERMINAL VERSION		SPECIAL		FREE ISSUE	
CABLE TYPE:						SCREENED		NGTH:	
PLUG/SOCKET:		N/A		SPECIFY		FITTED		FREE ISSUE	
FL00/30CKE1.						THILD		FREE 1350E	
APPROVALS:		□ N/A							
APPLICATION:						INDUSTRIAL		MEDICAL	
L								-	
LABEL:		HERGA STD		CUSTOMER LOGO (ATT	ACH	ED INFORMATION)		]	
PACKAGING:		BOXES		POLY BAGS		TRAYS IF AVAILABLE		OTHER	
QUANTITY		PER ANNUM		SAMPLES:		SCHEDULED O	RDER		
Notes:									
			_				_		

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## Notes or Sketches

### You may find it necessary to attach further information to Fax Back Form























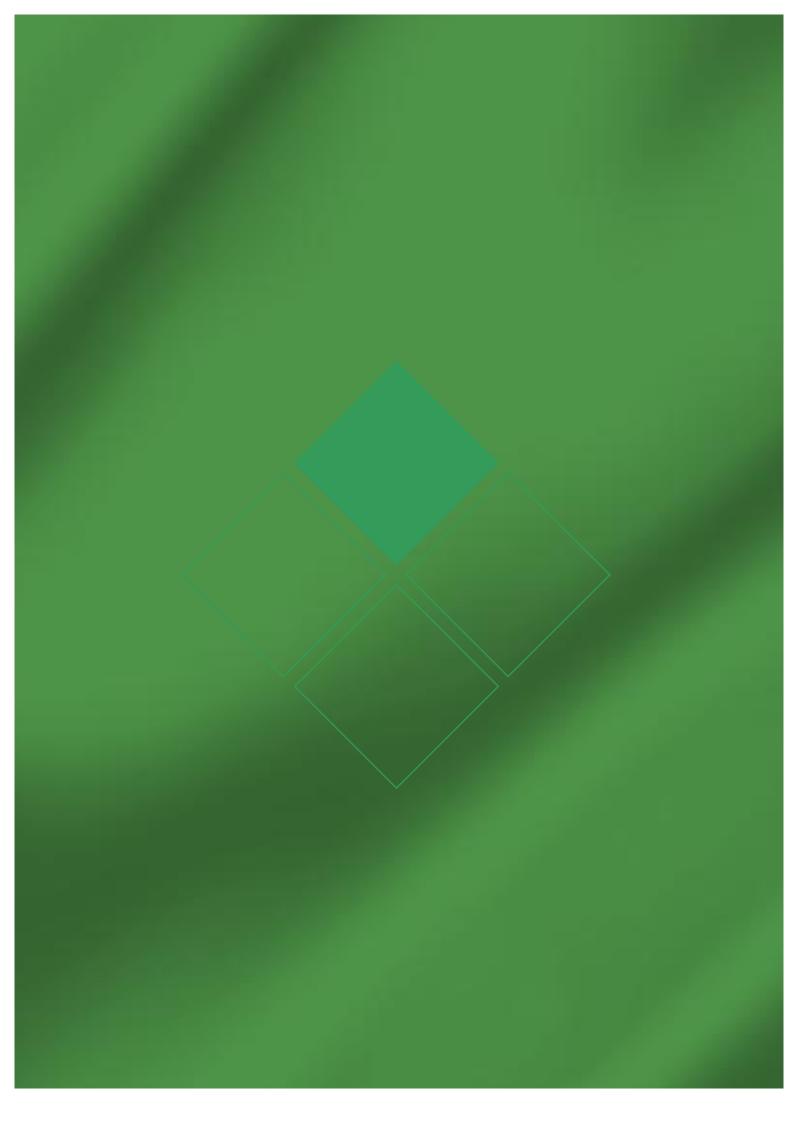






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Click to view products by Herga manufacturer:

Other Similar products are found below :

 139B
 173P
 266
 491-SC36
 642-S
 1295
 12BC2202-GR
 2238
 2241
 2242
 2243
 227
 236
 237
 2410.0301-01
 262
 270
 271
 121-0626/I-GR

 121-0426/IM-GR
 121-0626/T-GR
 121-0826/T-GR
 121-1026/I-GR
 12BH617T-GR
 123-5025-GR
 12BC269-GR
 12BH615D-GR
 121 

 0624/O-GR
 GEM-V36
 531-SWHOX
 971-SB
 T-91-SC3
 632-DA
 634-DA
 636-S
 632-S
 632S TWIN DIVIDER
 3C-30A2-S
 3B-30A2-S

 534-SS
 491-S
 L-2-S
 971-SO
 972-S
 606-1300-011
 606-1800-012
 616-1800-247
 6254-OB
 6289-PP
 6289-CC