

Selection guide - Section B2 ermec@ermec.com

AV series

								
Page	B2-78	B2-79	B2-80	B2-81	B2-83	B2-86	B2-87, B2-100	B2-89
General specifications								
Anti-vandal (IK08/IK10)	X	X						
Security			X	X		X	X	X
Approval (optional)	UL/CSA	UL/CSA			UL/CSA			
Sealing	Up to IP65	Up to IP65	Up to IP65	Up to IP65	Up to IP65	IP65, IP69K	Up to IP67	Up to IP65
Illumination							X	X
Marking					X			
Electrical specifications								
Maximum current	2A 48VDC (4A 250VAC)*	2A 48VDC (4A 250VAC)*	0,2A 48VDC	1A 24VDC	2A 48VDC (4A 250VAC)*	5A 15VDC 5A 250VAC	1A 30VDC	2A 48VDC
Momentary (NO)	X	X			X			
Momentary (NO) tactile			X					
Momentary (NO/NC)						X	X	
Latching				X				X
Diameter and shape								
Ø 16 (.629)	Flat		AV063	AV061				
	Curved		AV163	AV161				
Ø 19 (.748)	Flat	AV09			AV09	AV19LP	AV9	AV09..EA
	Curved	AV19			AV19	AV19LB		AV19..EA
Ø 22 (.866)	Flat		AV03				AV3	
	Curved		AV02					

() * See applicable approvals

								
Page	B2-91	B2-93, B2-95	B2-97	B2-98	B2-98	B2-102	B2-104	B2-106
General specifications								
Security	X	X	X	X	X	X	X	X
Approval (optional)			UL/CSA					
Sealing	Up to IP65	Up to IP67, IP69K	Up to IP65	Up to IP65	Up to IP65	Up to IP65	IP'65	IP65
Illumination	X	X				X		
Marking	X	X		X	X			
Electrical specifications								
Maximum current	50mA 24VDC	50mA 24VDC	2A 48VDC (4A 250VAC)*	2A 250VAC	3(1,5)A 250VAC	2A 48VDC	5A 250VAC	5A 250VAC
Momentary (NO)			X					
Momentary (NC)				X				
Momentary (NO) tactile	X	X	Mom. (NO)					
Momentary (NO/NC)							X	X
Latching						X		
Alternate action					X			
Diameter and shape								
Ø 19 (.748)	Flat	AV09C7	AV9S					
	Curved	AV19C7						
Ø 22 (.866)	Flat		AV3S	AV03	AV031200	AV044700	AV03..EA	AV22LP
	Curved			AV02	AV021200		AV02..EA	AV22LB
Ø 24 (.944)	Flat							AV22PNA
	Concave							

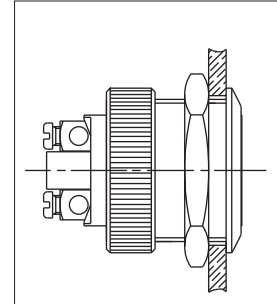


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Anti-vandal and security pushbutton switches

Distinctive features

- ❑ **Attractive, robust and durable**
 - Irremovable
 - Anti-jamming construction : reduced travel to prevent insertion of foreign parts
 - Contact and mechanism protected against crushing
 - Fire resistant
 - Long life
- ❑ **Different bushing sizes and actuator shapes**
- ❑ **Sealed versions**
- ❑ **Degree of protection of sealed versions (switches mounted on vertical panels) : IP65 to IP67 or IP69K depending on models**
- ❑ **UL/CSA approved models**



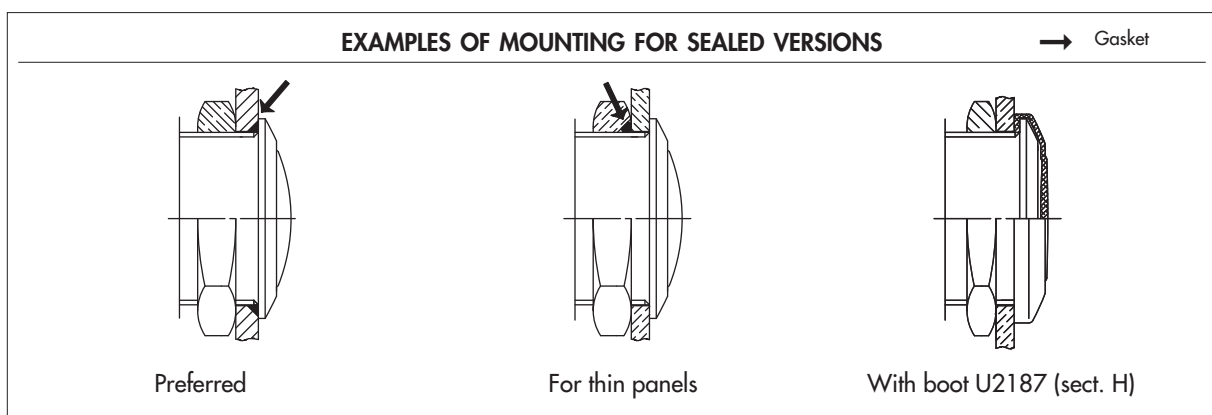
The AV series is a large range of very robust pushbutton switches, consisting of 2 families :

ANTI-VANDAL PUSHBUTTON SWITCHES (pages 77-79)

- Great robustness (impact resistance IK08 (Ø 19 mm) and IK10 (Ø 22 mm))
- Actuator and bushing : stainless steel
- Bushing Ø 19 mm (.748) or 22 mm (.866)

SECURITY PUSHBUTTON SWITCHES (pages 80-106)

- Large variety of models
- Actuator and bushing : nickel plated, chrome plated or polished varnished brass, stainless steel
- Bushing diameter 16 mm (.629), 19 mm (.748), 22 mm (.866) or 24 mm (.944)
- Marking, illumination, tactile feedback
- Numerous electrical functions (momentary or maintained)



Dimensions : first dimensions are in mm while inches are shown as bracketed numbers.



Packaging unit : specified on the following pages.



Mounting accessories : Standard and special hardware are presented in section I.



Sealing boots are available for models with Ø 19 mm (.748) bushing. See Section H.



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- Very robust**
Impact resistance IK08 for model Ø 19 mm (.748)
and IK10 for model Ø 22 mm (.866)
- Stainless steel actuator and bushing**
- UL-CSA approved (long case only)**

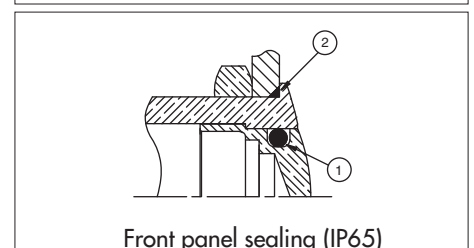
SPECIFICATIONS
<ul style="list-style-type: none"> • Max. current/voltage rating with resistive load : <ul style="list-style-type: none"> - A contacts : 4A 12VDC, 500.000 cycles - C contacts : 2A 48 VDC, 10.000 cycles • Initial contact resistance : 10 mΩ max. • Insulation resistance : 1.000 MΩ min. at 500VDC • Dielectric strength : 2.000 Vrms 50 Hz min. between terminals and frame 2.000 Vrms 50 Hz min. between terminals • Torque : 5 Nm min.- 14 Nm max. applied to nut • Panel thickness : 1 (.039) to 11 mm (.433) max. • Operating temperature : -30°C to +70°C • Low level or mechanical life : 1.000.000 cycles • Hand soldering : 300°C, 3 sec. max. • Packaging unit : 20 pieces (models Ø 22) or 40 pieces (models Ø 19)

MATERIALS
<ul style="list-style-type: none"> • Case : PBT • Contacts : silver (A) or brass, silver plated (C) • Bushing : stainless steel • Actuator : stainless steel

CUT-OUT
<ul style="list-style-type: none"> • Panel cut-out : Ø 19,2 mm (.755) or Ø 22,2 mm (.874) • Min. pitch for matrix mounting : 30 mm x 30 mm (1.181x1.181)

ROBUSTNESS			
Model Ø 19 mm (.748)		Model Ø 22 mm (.866)	
Degree of protection according to EN 50102, June 95 (NFC 20-015)		IK08 Striking energy: 5 joules (5Nm)	
	Hammer radius 25 mm	Hammer radius 50 mm	

SEALING (OPTION T)



Front panel sealing (IP65)

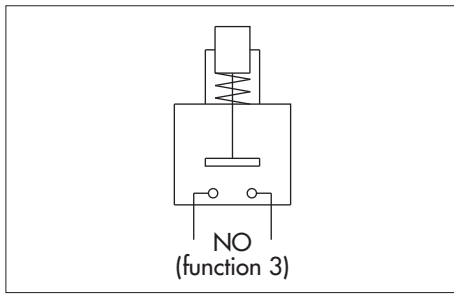
① internal gasket ② external gasket

Option N does not include ① nor ②.

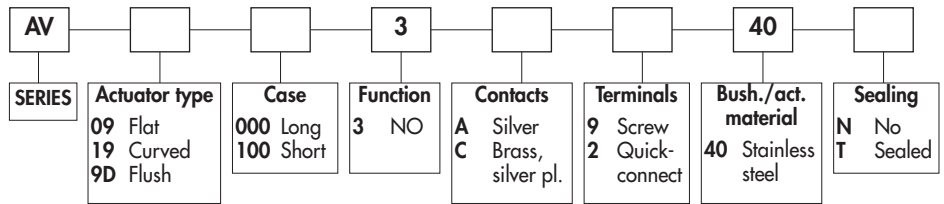
Increased impact resistance provided by a nut or mechanical stop.

Anti-vandal pushbutton switches Ø 19 mm (.748)

Momentary (NO)



ORDER FORMAT



B2

In the following model numbers, replace • with elements selected in the above order format.

Flat actuator - short case - 48VDC - AV09100

Hex nut 22 (.866) across flats



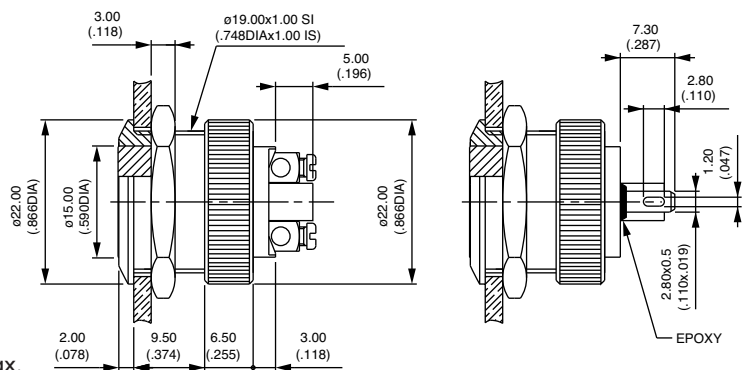
Screw terminals
AV091003•940•



Solder lug / quick-connect term.
AV091003•240•



Screw terminals for wires 1,5 mm² max.



Flat actuator - long case - 4A 250VAC/8A 125VAC - UL/CSA - AV09000

Hex nut 22 (.866) across flats

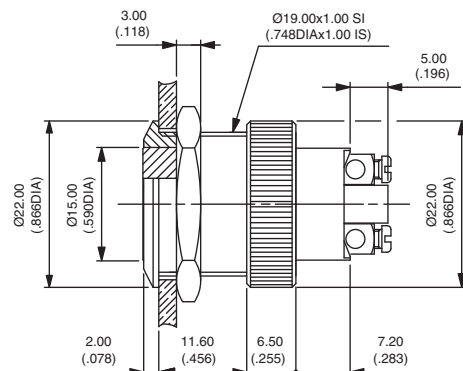


Screw terminals
AV090003A940•

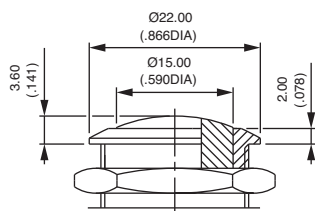


To order switches marked UL-CSA, add "UU" at the end of model number.

Screw terminals for wires 1,5 mm² max.



Curved actuator - AV19



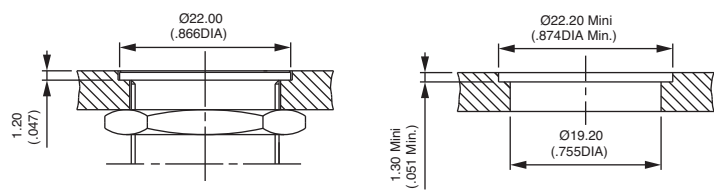
Screw terminals

AV19•003•940•

Solder lug/quick-connect term. (short case)

AV191003•240•

Flush model - AV9D



Screw terminals

AV9D•003•940•

Solder lug / quick-connect terminals (short case only)

AV9D1003•240•

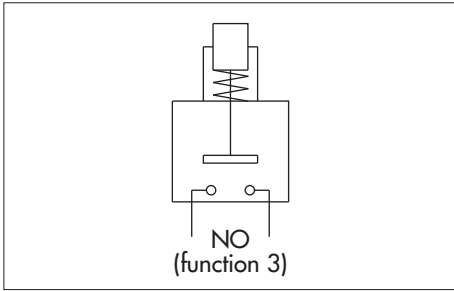
Panel cut-out

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Anti-vandal pushbutton switches Ø 22 mm (.866)

Momentary (NO)



ORDER FORMAT

AV			3			40	
SERIES	Bushing/act. configuration	Case	Function	Contacts	Terminals	Bush./act. material	Sealing
	03 Flat act. 02 Curved act. M3 Flat act + flattened bush. M2 Curved act.+ flattened bush.	000 Long 100 Short	3 NO	A Silver C Brass, silver pl.	9 Screw 2 Quick-connect	40 Stainless steel	N No Sealed T Sealed

In the following model numbers, replace • with elements selected in the above order format.

Flat actuator - short case - 48VDC - AV03100

Hex nut 25 (.984) across flats



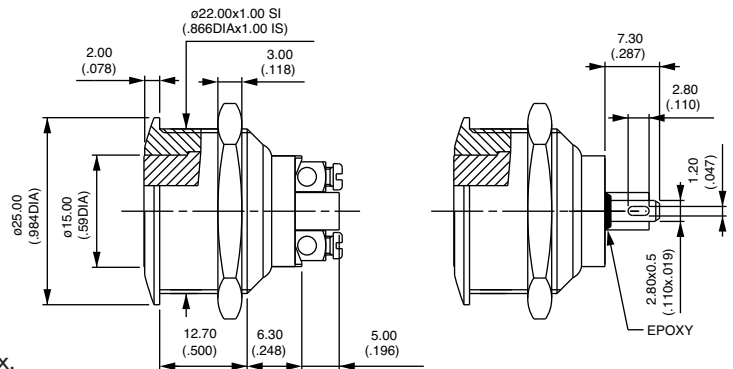
Screw terminals
AV031003•940•



Solder lug / quick-connect term.
AV031003•240•



Screw terminals for wires 1,5 mm² max.



Flat actuator - long case - 4A 250VAC/8A125VAC - UL/CSA - AV03000

Hex nut 25 (.984) across flats

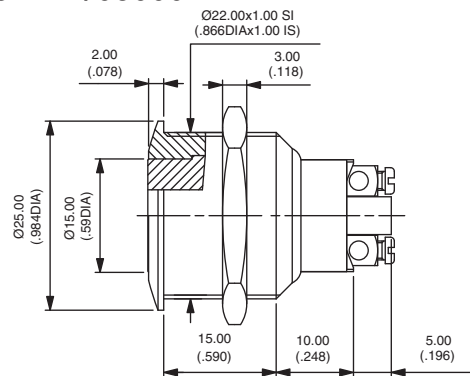


Screw terminals
AV030003A940•

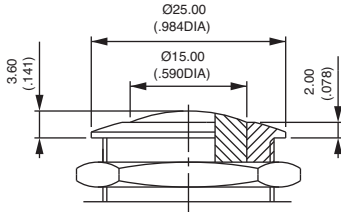


To order switches **marked UL-CSA**, add "UU" at the end of model number.

Screw terminals for wires 1,5 mm² max.



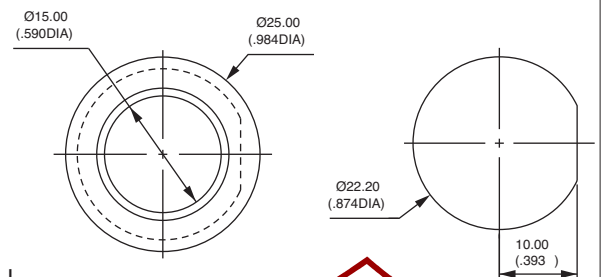
Curved actuator - AV02



Screw terminals
AV02•003•940•

Solder lug / quick-connect (short case)
AV021003•240•

Flatted bushing - AVM3 and AVM2



Flat actuator, screw terminals
AVM3•003•940•

Curved actuator, screw terminals
AVM2•003•940•

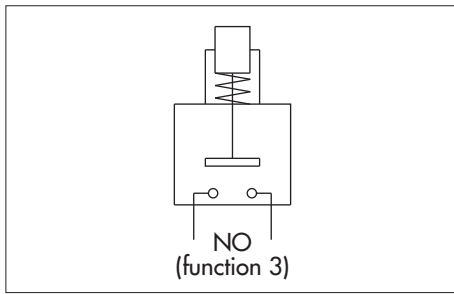
ERMEC Flatted cut-out
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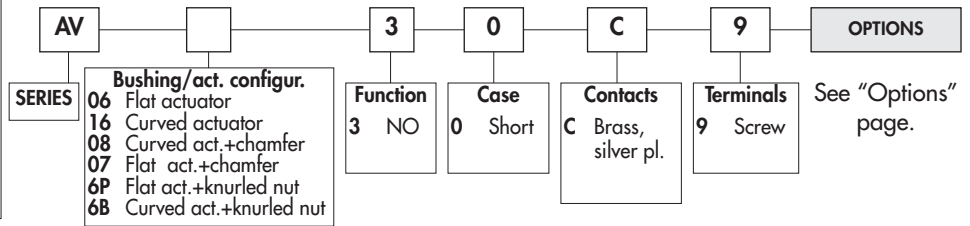


Snap action security pushbutton switches Ø 16 mm (.629)

Momentary (NO)



ORDER FORMAT



SPECIFICATIONS

- **Travel : 1,60 mm (.063) ± 0,3 mm (.011)**
- **Max. current/voltage rating with resistive load : 200mA 48 VDC - 100mA 48VDC**
- **Initial contact resistance : 50 mΩ max.**
- **Insulation resistance : 1.000 MΩ min. at 500VDC**
- **Dielectric strength : 2.000 Vrms 50 Hz min. between terminals and frame**
- **Electrical life : 50.000 cycles at 200mA 48VDC
100.000 cycles at 100mA 48VDC**
- **Torque : 5 Nm min.- 14 Nm max. applied to nut**
- **Panel thickness : 1 (.039) to 6 mm (.236) max.**
- **Operating temperature : -30°C to +70°C**
- **Low level or mechanical life : 1.000.000 cycles**
- **Packaging unit : 60 pieces**

MATERIALS

- **Case : PBT**
- **Contacts : brass, silver plated (C)**
- **Bushing and actuator : see "Options" page**

CUT-OUT

- **Panel cut-out : Ø 16,2 mm (.637)**
- **Min. pitch for matrix mounting : 24 mm x 24 mm (.944 x .944) (AV6P & AV6B : 20 mm x 20 mm)**

To order a product, select a basic model below and add the desired options.

BASIC MODEL

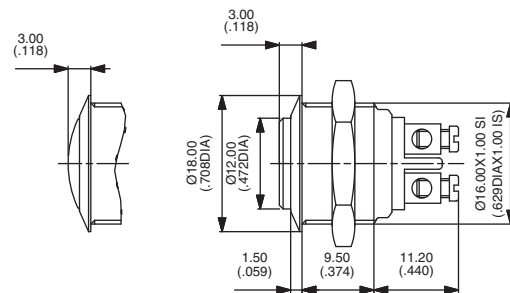
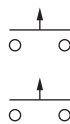
Flat or curved actuator - screw terminals

Hex nut 19 (.748) across flats



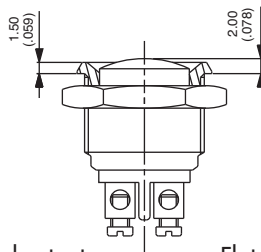
Flat actuator
AV0630C9

Curved actuator
AV1630C9



Screw terminals for wires 1,5 mm² max.

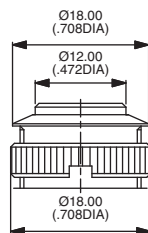
With chamfer



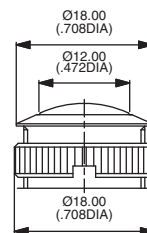
Curved actuator
AV0830C9

Flat actuator
AV0730C9

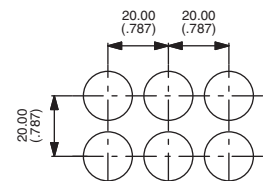
With knurled nut for matrix mounting 20 x 20 - AV6P and AV6B



Flat actuator
AV6P30C9

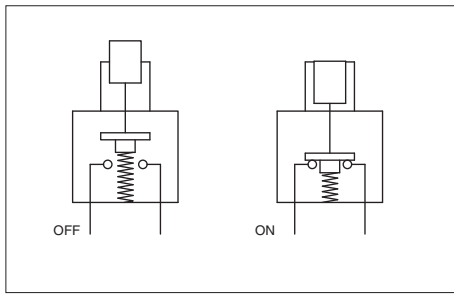


Curved actuator
AV6B30C9

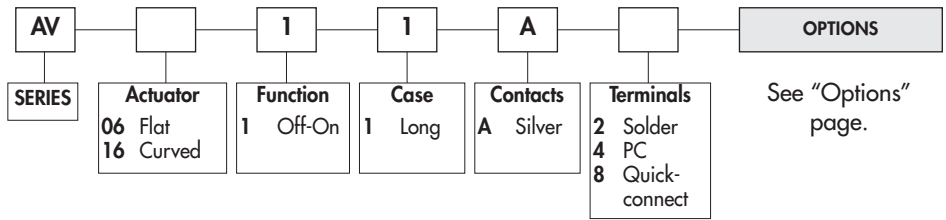


ERMEC Wrench available
P/N U1990.
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ORDER FORMAT



SPECIFICATIONS

- Max. current/voltage rating with resistive load : 1A 24VDC
- Initial contact resistance : 50mΩ max.
- Insulation resistance : 1 GΩ min. at 500VDC
- Dielectric strength : 1.500 Vrms 50 Hz min. between terminals
1 000 Vrms 50 Hz between terminals and frame
- Electrical life : 100.000 cycles at 1,5A 250VAC
40.000 cycles at 1A 24VDC
- Torque : 5 Nm min. - 14 Nm max. applied to nut
- Panel thickness : 1 (.039) to 6 mm (.236) max.
- Operating temperature : -30°C to +70°C
- Low level or mechanical life : 200.000 cycles
- Hand soldering : 300°C, 5 sec. max.
- Packaging unit : 25 pieces

MATERIALS

- Case : PA-6T, UL94-V0
- Contacts : silver (A)
Gold plated silver (AD) on request
- Bushing and actuator : see "Options" page

CUT-OUT

- Panel cut-out : Ø 16,2 mm (.637)
- Min. pitch for matrix mounting : 24 mm x 24 mm (.944 x .944)

To order a product, select a basic model below and add the desired options.

BASIC MODEL

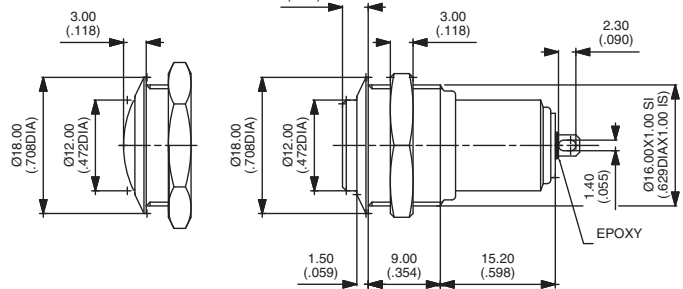
Flat or curved actuator - solder lug terminals

Hex nut 19 (.748) across flats

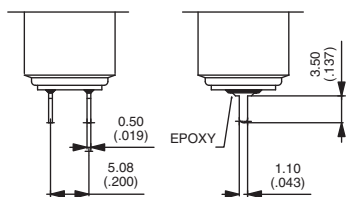


Flat actuator
AV0611A2 OFF - ON

Curved actuator
AV1611A2 OFF - ON



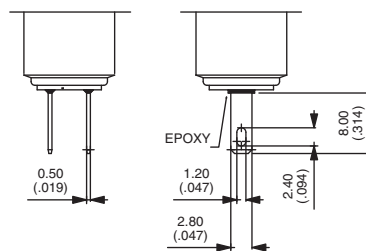
Straight PC terminals



Flat actuator
AV0611A4

Curved actuator
AV1611A4

Quick-connect terminals



Flat actuator
AV0611A8

Curved actuator
AV1611A8



AV series

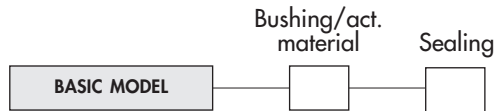
Security pushbutton switches Ø 16 mm (.629)

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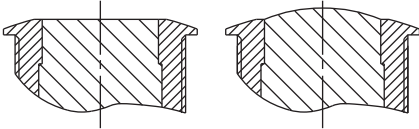
Options

After selecting basic model number, fill in last 2 boxes with desired options.



BUSHING/ACTUATOR MATERIALS

Flat or curved metal actuator



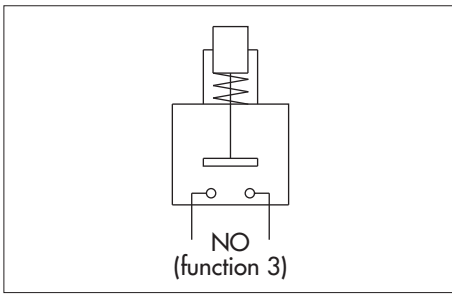
CODE	BUSHING	ACTUATOR
00 (standard)	Nickel plated brass	Nickel plated brass
10	Nickel plated brass	Stainless steel
40	Stainless steel	Stainless steel

SEALING

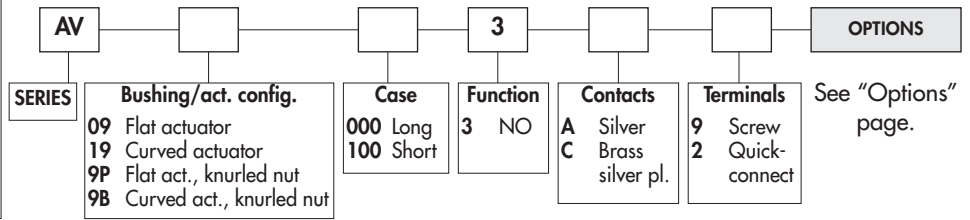
Blank	No sealing
K	Front panel sealing (IP65)



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ORDER FORMAT



SPECIFICATIONS

- Max. current/voltage rating with resistive load :
 - A contacts : 4A 12VDC, 500.000 cycles
 - C contacts : 2A 48 VDC, 10.000 cycles
- Approved ratings of models with long case and A contacts (AV.000) :
 - UL-CSA : 4A 250VAC - 8A 125VAC - 6.000 cycles
- Initial contact resistance : 10 mΩ max.
- Insulation resistance : 1.000 MΩ min. at 500VDC
- Dielectric strength : 2.000 Vrms 50 Hz min. between terminals and frame
2.000 Vrms 50 Hz min. between terminals
- Torque : 5 Nm min.- 14 Nm max. applied to nut
- Panel thickness : 1 (.039) to 11 mm (.433) max.
- Operating temperature : -30°C to +70°C
- Low level or mechanical life : 1.000.000 cycles
- Hand soldering : 300°C, 3 sec. max.
- Packaging unit : 40 pieces

MATERIALS

- Case : PBT
- Contacts : silver (A) or brass, silver plated (C)
- Bushing and actuator : see "Options" page

CUT-OUT

- Panel cut-out : Ø 19,2 mm (.755)
- Min. pitch for matrix mounting : 30 mm x 30 mm (1.181x1.181) (AV9P & AV9B : 25 mm x 25 mm)

To order a product, select a basic model below and add the desired options.

BASIC MODEL

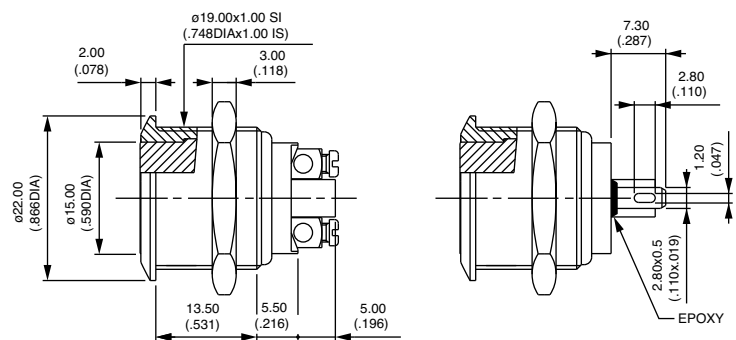
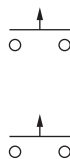
Flat actuator - short case - 48VDC - AV09100

Hex nut 22 (.866) across flats



Screw terminals
AV091003•9

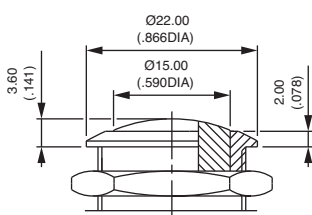
Solder lug / quick-connect term.
AV091003•2



Screw terminals for wires 1,5 mm² max.

Contacts : replace • with A (silver) or C (silver plated brass).

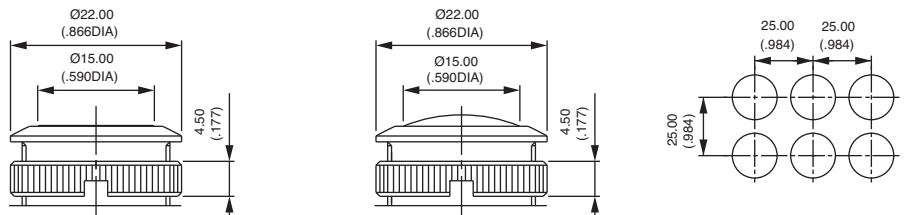
Curved actuator - short case



Screw terminals
AV191003•9

Solder lug / quick-connect terminals
AV191003•2

With knurled nut for matrix mounting 25 x 25 - AV9P and AV9B



Flat actuator, screw terminals
AV9P1003•9

Flat actuator, solder lug term.
AV9P1003•2

Curved actuator, screw terminals
AV9B1003•9

Curved actuator, solder lug term.
AV9B1003•2



AV series

Security pushbutton switches Ø 19 mm (.748)

Momentary (NO)

Flat actuator - long case - 4A 250VAC/8A 125VAC - UL/CSA - AV09000

Hex nut 22 (.866) across flats

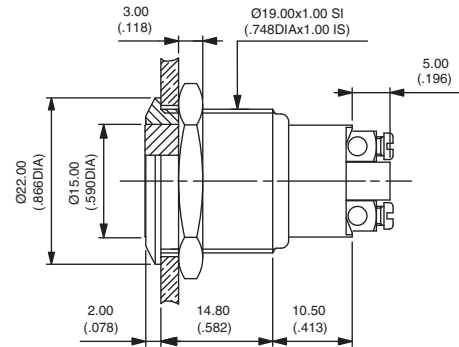


Screw terminals
AV090003A9



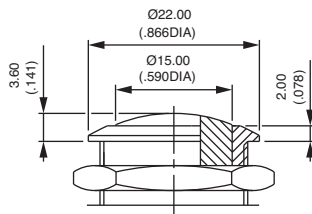
To order switches marked **UL-CSA**, add "UU" at the end of model number.

Screw terminals for wires 1,5 mm² max.



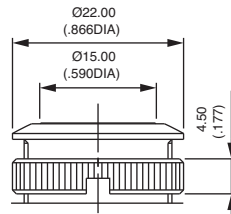
B2

Curved actuator - long case

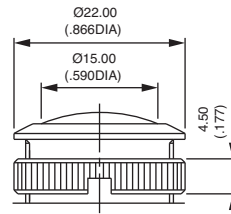


Screw terminals
AV190003A9

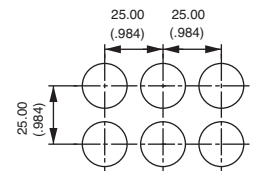
With knurled nut for matrix mounting 25 x 25 - AV9P and AV9B



Flat actuator, screw terminals
AV9P0003A9



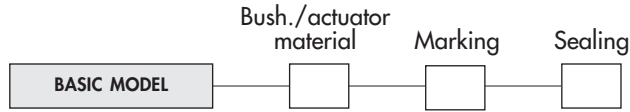
Curved actuator, screw terminals
AV9B0003A9



Wrench available under P/N U1929.

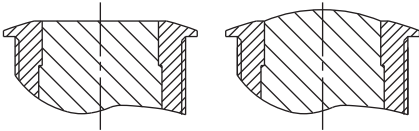


After selecting basic model number, fill in last 3 boxes with desired options.



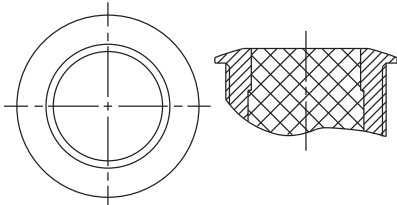
BUSHING/ACTUATOR MATERIALS

Flat or curved metal actuator



CODE	BUSHING	ACTUATOR
00 (standard)	Nickel plated brass	Nickel plated brass
10	Nickel plated brass	Stainless steel
12	Nickel plated brass	Chrome plated brass
20	Chrome plated brass	Chrome plated brass
30	Chrome plated brass	Stainless steel
40	Stainless steel	Stainless steel
80	Varnished polished brass	Varnished polished brass

Flat thermoplastic actuator

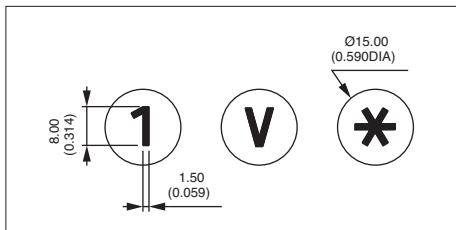


CODE	BUSHING	ACTUATOR COLOUR
0• (standard)	Nickel plated brass	Replace • with one of the following codes.
2•	Chrome plated brass	1 : blue - 1/4 : dark blue - 2 : black - 3 : green
8•	Varnished polished brass	4 : grey - 5 : yellow - 6 : red - 7/1 : white
		9 : orange

MARKING

- By engraving on flat or curved brass actuator (stainless steel on request)
- by hot stamping on flat thermoplastic actuator

Select an option from each of the two tables below.



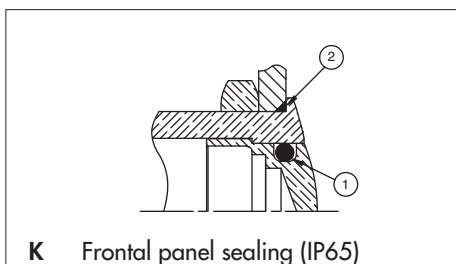
TYPE OF MARKING	
CODE	TYPE
0 to 9	Numbers 0 to 9
X	Symbol *
Y	Symbol #
A to N	Letters A to N
P to W	Letters P to W
0	Letter O

Letter O : same code and same design as number 0.
For special symbols, consult factory.
Minimum order : 500 pieces

COLOUR OF MARKING	
CODE	COLOUR
Brass actuator	
0 (standard)	Same as finish
2	Black
Note : a finished product supplied in version "0" cannot be modified to version "2".	
Thermoplastic actuator	
2	Black
7	White

SEALING

Blank No sealing

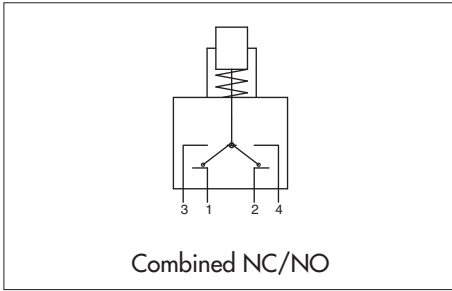


- ① internal gasket
- ② external gasket

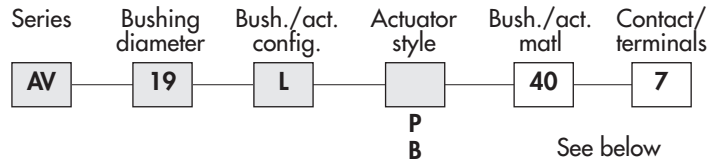


Security pushbutton switches Ø 19 mm (.748)

Momentary (NC/NO)



ORDER FORMAT



SPECIFICATIONS

- Max. current/voltage rating with resistive load :
5A 250VAC - 5A 125VAC - 6.000 cycles
5A 15VDC - 3A 30VDC - 50.000 cycles
- Initial contact resistance : 100 mΩ max.
- Insulation resistance : 1.000 MΩ min. at 500VDC
- Dielectric strength : 2.000 Vrms 50 Hz min. between term. and frame
- Torque : 5 Nm min.- 14 Nm max. applied to nut
- Panel thickness : 1 (.039) to 9 mm (.354) max.
- Operating temperature : -20°C to +85°C
- Low level or mechanical life : 1.000.000 cycles
- Front panel sealing : IP65 and IP69K
- Packaging unit : 20 pieces

MATERIALS

- Case : PA 6/6
- Contacts : silver
- Bushing : stainless steel (std)
- Actuator : stainless steel (std)

CUT-OUT

- Panel cut-out : Ø 19,2 mm (.755)
- Min. pitch for matrix mounting :
30 mm x 30 mm (1.181x1.181)

All model numbers below are for switches with standard bushing/actuator material.

BASIC MODEL

Solder lug terminals - AV19..407



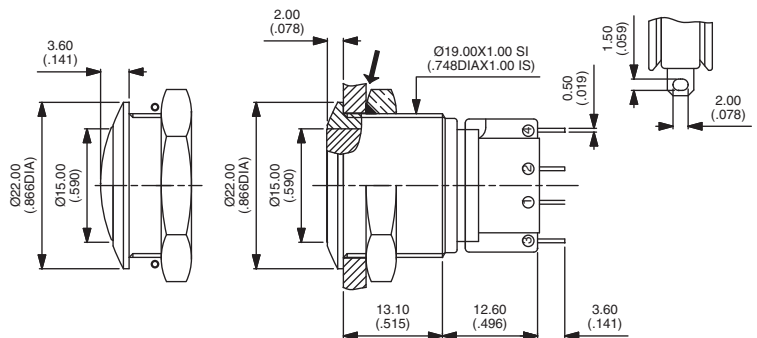
Flat actuator
AV19LP407

Curved actuator
AV19LB407



→ O-ring

Hex nut 22 (.866) across flats



BUSHING/ACTUATOR MATERIALS

For non-standard material, replace **40** with one of the following codes.

CODE	BUSHING	ACTUATOR
00	Nickel plated brass	Nickel plated brass
20	Chrome plated brass	Chrome plated brass

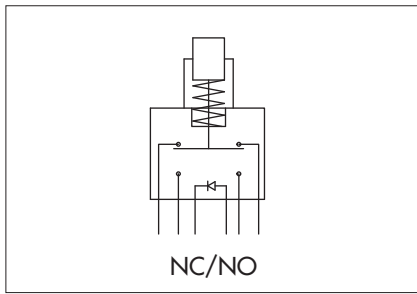


www.ermec.com



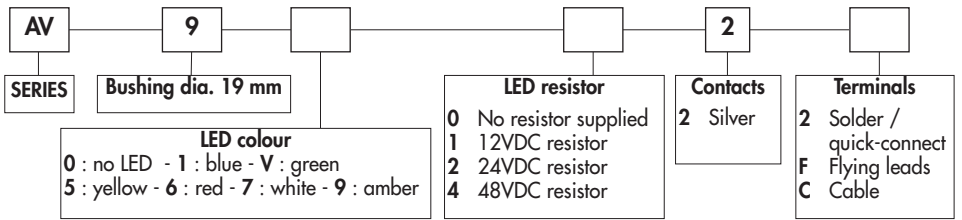
Security pushbutton switches Ø 19 mm (.748)

With illuminated ring - momentary (NC/NO)



ORDER FORMAT

Options : see next page.



SPECIFICATIONS

- Travel : 2 mm ± 0,3 mm (.003)
 - Max. current/voltage rating with resistive load : 1A 30VDC
 - LED voltage : 12VDC, 24VDC or 48VDC
(If not supplied by APEM, a resistor must be series-connected by the user)**
 - Initial contact resistance : 100 mΩ max.
 - Insulation resistance : 10 MΩ min. at 500VDC
 - Dielectric strength : 500 Vrms 50 Hz min. between terminals
1.000 Vrms 50 Hz min. between terminals and frame
 - Electrical life : 250.000 cycles at full load
 - Operating force : 5N ± 2N
 - Torque : 5 Nm min. - 14 Nm max. applied to nut
 - Panel thickness : 1 (.039) to 6 mm (.236) max.
 - Low level or mechanical life : 1.000.000 cycles
 - Operating temperature : -20°C to +55°C
 - Hand soldering : 350°C, 5 seconds max.
 - Packaging unit : flying lead/cable models : 1 piece - other models : 40 pieces
- ** Resistor value = $\frac{\text{supply voltage} - \text{LED forward voltage}}{\text{LED forward current}}$

MATERIALS

- Case : polyamide, glass filled
- Contacts : silver
- Bushing : see next page
- Actuator : see next page
- Elastomeric membrane : silicone
- LED

CUT-OUT

- Panel cut-out : Ø 19,2 mm (.755)
- Min. pitch for matrix mounting : 30 mm x 30 mm (1.181x1.181)

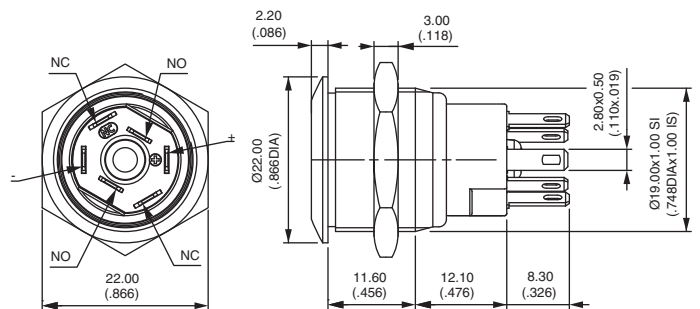
To order a product, select a basic model below and add the desired LED colour and voltage. Then select the desired options on next page.

Flat actuator - solder lug terminals

Hex nut 22 (.866) across flats



Illuminated (select LED colour above) *
AV9•022
 Non-illuminated
AV90022



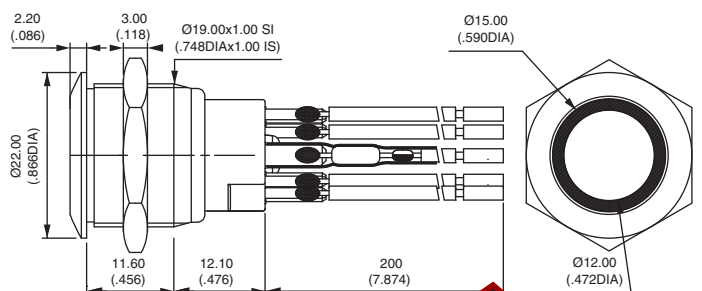
* No LED resistor supplied on this model.

Flat actuator - flying lead terminals

Hex nut 22 (.866) across flats



Illuminated (select LED colour & resistor above)
AV9••2F
 Non-illuminated
AV9002F



Wire colours : black: NC, orange: NO, red: LED anode (+), blue: LED cathode (-)



Security pushbutton switches Ø 19 mm (.748)

With illuminated ring - momentary (NC/NO)

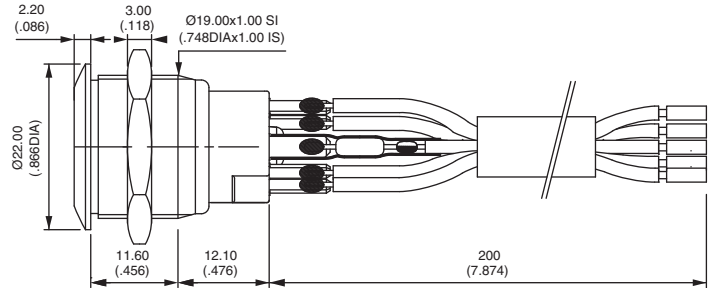
Flat actuator - cable terminals

Hex nut 22 (.866) across flats



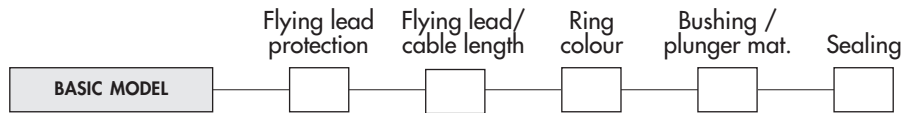
Illuminated (select colour & resistor)
AV9••2C

Non-illuminated
AV9002C



B2

After selecting basic model No., fill in last 5 boxes with desired options.



FLYING LEAD PROTECTION

- 0 No protection and/or no flying leads
- 1 Heat-shrink sleeves
- 2 Tube + epoxy

FLYING LEAD/CABLE LENGTH

- 000 No flying leads / no cable
- 020 Length 20 cm (standard)
- XXX Length in centimeters

RING COLOURS

CODE	COLOUR	CODE	COLOUR
1	Blue	6	Red
2	Black *	7	Opal white (std)
3	Green	8	Translucent
4	Grey *	9	Orange
5	Yellow		

* non-illuminated only

BUSHING/PLUNGER MATERIALS

CODE	BUSHING	ACTUATOR
00	Brass, nickel plated	Brass, nickel plated
40	Stainless steel 303	Stainless steel 303
4A	Stainless steel 304	Stainless steel 304
4B	Stainless steel 316	Stainless steel 316

Other : on request.

SEALING

Blank No sealing



K Front panel sealing (IP67)

① internal membrane

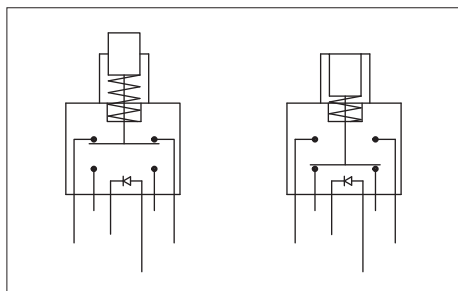
② external gasket



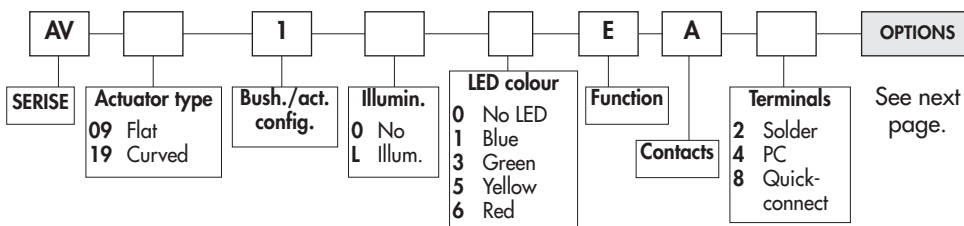
www.ermec.com

Security pushbutton switches Ø 19 mm (.748)

Illuminated and non-illuminated - latching



ORDER FORMAT



SPECIFICATIONS

- Max. current/voltage rating with resistive load : 2A 48 VDC
 - LED voltage and consumption : blue 3,5V 10mA, green : 2V 10mA yellow & red : 2V 20mA (a resistor must be series-connected by the user)**
 - Initial contact resistance : 50 mΩ max.
 - Insulation resistance : 1.000 MΩ min. at 500VDC
 - Dielectric strength : 1 000 Vrms 50 Hz min. between terminals 500 Vrms 50 Hz min. between terminals and frame
 - Electrical life : 500.000 cycles at 2A 48VDC
 - Torque : 5 Nm min.- 14 Nm max. applied to nut
 - Panel thickness : 1 (.039) to 9 mm (.354) max.
 - Operating temperature : -30°C to +70°C
 - Low level or mechanical life : 1.000.000 cycles
 - Hand soldering : 300°C, 4 seconds max.
 - Packaging unit : 20 pieces
- ** Resistor value = $\frac{\text{supply voltage} - \text{LED forward voltage}}{\text{LED forward current}}$

MATERIALS

- Case : PA6T UL94-V0
- Contacts : silver
- Bushing and actuator : see next page
- LED

CUT-OUT

- Panel cut-out : Ø 19,2 mm (.755)
- Min. pitch for matrix mounting : 30 mm x 30 mm (1.181 x 1.181)

To order a product, select a basic model below and add the desired options selected on next page.

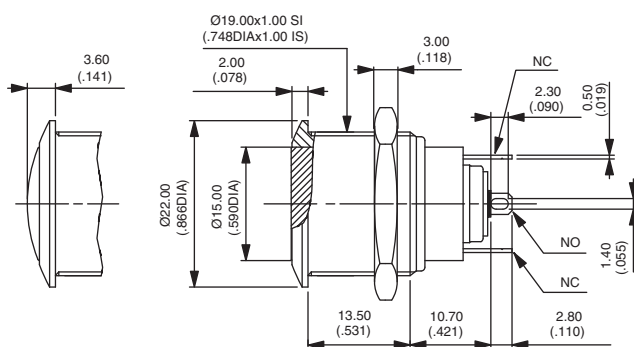
Standard actuator position : the actuator is flush in the non-latched position and recessed in the latched position.

Non-illuminated - solder lug terminals

Hex nut 22 (.866) across flats



- Flat actuator *
AV09100EA2 ON - ON
- Curved actuator
AV19100EA2 ON - ON



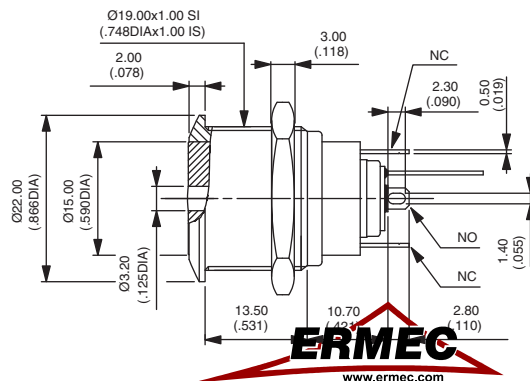
* Also available with prominent actuator in the non-latched position

Illuminated - solder lug terminals

Hex nut 22 (.866) across flats



- Flat actuator
AV091L•EA2 ON - ON

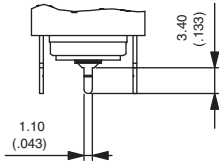


Replace • with desired LED colour.

Security pushbutton switches Ø 19 mm (.748)

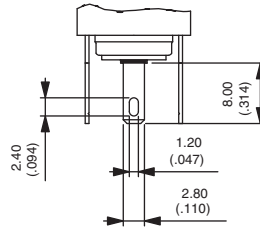
Latching - Options

Straight PC terminals



Replace 2 with 4 at the end of the model numbers shown on previous page.

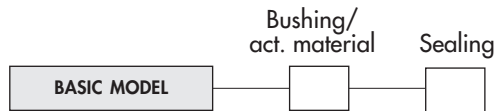
Quick-connect terminals



Replace 2 with 8 at the end of the model numbers shown on previous page.

B2

After selecting basic model number, fill in last 2 boxes with desired options.

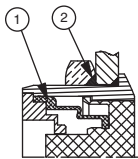


BUSHING/ACTUATOR MATERIALS

CODE	BUSHING	ACTUATOR
00 (std)	Nickel plated brass	Nickel plated brass
10	Nickel plated brass	Stainless steel
40	Stainless steel	Stainless steel
50	Stainless steel	Nickel plated brass

SEALING

Blank No sealing



K Frontal panel sealing (IP65)

- ① elastomeric membrane
- ② external gasket

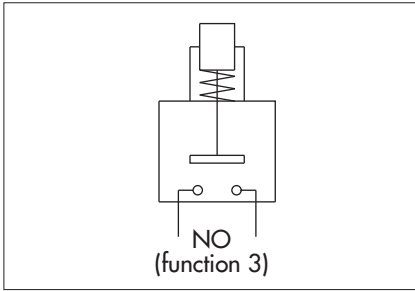


www.ermec.com

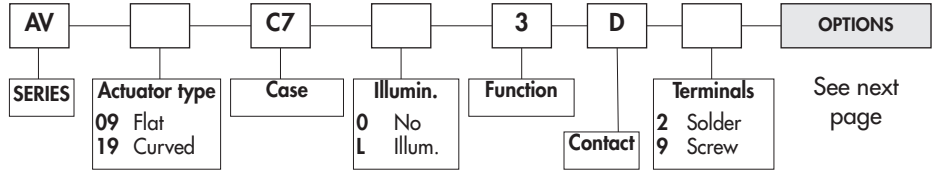


Snap-action security pushbutton switches Ø 19 mm (.748)

Illuminated and non-illuminated - momentary (NO)



ORDER FORMAT



SPECIFICATIONS

- **Travel : 0,7 mm (.027) ±0,1 mm (.003)**
 - **Max. current/voltage rating with resistive load : 50mA 24VDC**
 - **LED voltage and consumption : 2-colour LED : 2V (3V max.) 20mA**
Other colours : 2V (3V max.) 10mA
A resistor must be series-connected by the user **
 - **Initial contact resistance : 100 mΩ max.**
 - **Insulation resistance : 1.000 MΩ min. at 500VDC**
 - **Dielectric strength : 500 Vrms 50 Hz min. between terminals**
2.000 Vrms 50 Hz min. between terminals and frame
 - **Electrical life : 1.000.000 cycles at full load**
 - **Operating force : 7 N ±2N**
 - **Torque : 5 Nm min.- 14 Nm max. applied to nut**
 - **Panel thickness : 1 (.039) to 6 mm (.236) max.**
 - **Operating temperature : -30°C to +70°C**
 - **Hand soldering : 270°C, 3 seconds max.**
 - **Packaging unit : 40 pieces**
- ** Resistor value = $\frac{\text{supply voltage} - \text{LED forward voltage}}{\text{LED forward current}}$

MATERIALS

- **Case : PBT UL94-V0**
- **Terminals : brass, gold plated**
- **Contacts : gold plated dome**
- **Bushing and actuator : see next page**
- **LED**

CUT-OUT

- **Panel cut-out : Ø 19,2 mm (.755)**
- **Min. pitch for matrix mounting : 30 mm x 30 mm (1.181x1.181)**

To order a product, select a basic model below and add the desired options selected on next page.

Flat actuator - non-illuminated

Hex nut 22 (.866) across flats

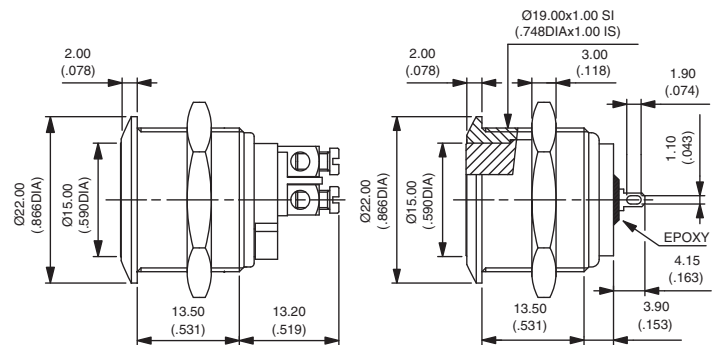


Solder lug terminals
AV09C703D2

Screw terminals
AV09C703D9



Also available with curved actuator :
AV19C703D2 or **AV19C703D9**



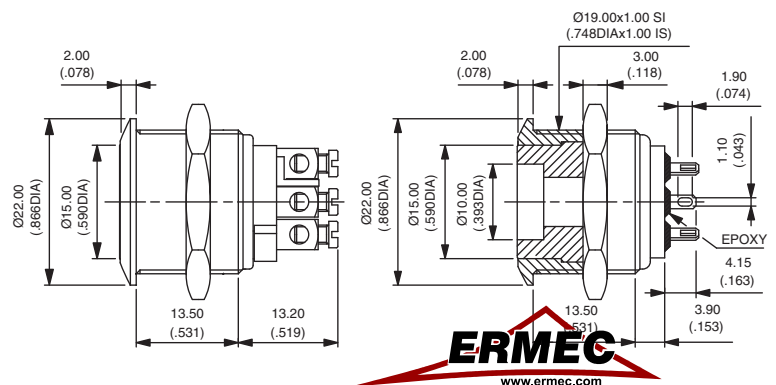
Flat actuator - illuminated

Hex nut 22 (.866) across flats



Solder lug terminals
AV09C713D2

Screw terminals
AV09C713D9

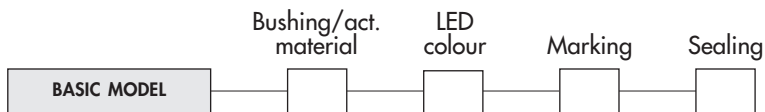




Snap-action security pushbutton switches Ø 19 mm (.748)

Options

After selecting basic model no., fill in last 4 boxes with desired options.



BUSHING/ACTUATOR MATERIALS

Non-illuminated models

CODE	BUSHING	ACTUATOR
00 (std)	Nickel plated brass	Nickel plated brass
10	Nickel plated brass	Stainless steel
30	Chrome plated brass	Stainless steel
40	Stainless steel	Stainless steel
80	Varnished polished brass	Varnished polished brass

Illuminated models

CODE	BUSHING	ACTUATOR
00 (std)	Nickel plated brass	Nickel plated brass
20	Chrome plated brass	Chrome plated brass
40	Stainless steel	Stainless steel
50	Stainless steel	Nickel plated brass
80	Varnished polished brass	Varnished polished brass

LED COLOURS

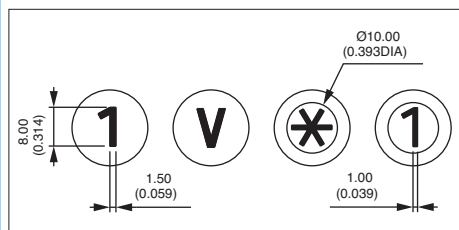
Blank No LED

1 : Blue - 3 : Green - 5 : Yellow - 6 : Red - 7 : White - 9 : Amber - 2 : Red/green

MARKING

For flat or curved actuator.

- by engraving on non-illuminated brass actuator (stainless steel on request).
- by hot stamping on thermoplastic insert (illuminated actuators)



TYPE OF MARKING

CODE	TYPE
0 to 9	Numbers 0 to 9
X	Symbol *
Y	Symbol #
A to N	Letters A to N
P to W	Letters P to W
0	Letter O

Letter O : same code and same design as number 0.

For special symbols, consult factory.
Minimum order : 500 pieces

COLOUR OF MARKING

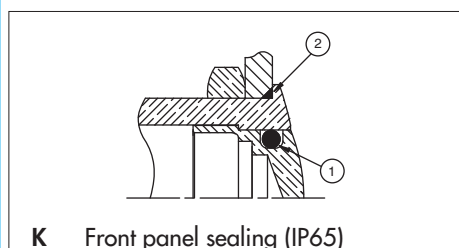
CODE	COLOUR
Non-illuminated actuators	
0 (standard)	Same as finish
2	Black

Note : a finished product supplied in version "0" cannot be modified to version "2".

CODE	COLOUR
Illuminated actuators	
2	Black (on white)

SEALING

Blank No sealing



① internal gasket

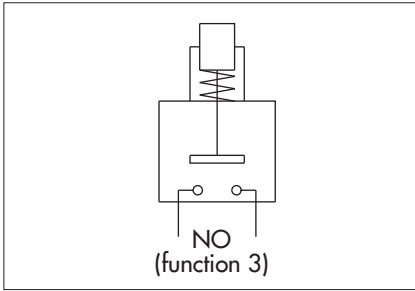
② external gasket



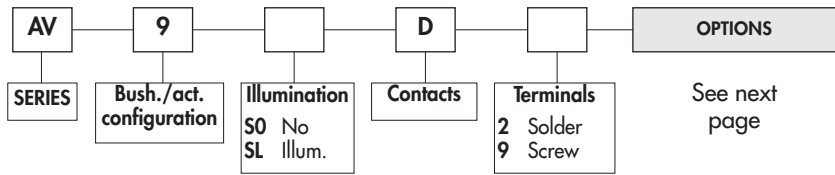
www.ermec.com

Snap-action security pushbuttons Ø 19 mm (.748) with overmolded actuator

Illuminated and non-illuminated - momentary (NO)



ORDER FORMAT



SPECIFICATIONS

- Travel : 0,7 mm (.027) ± 0,1 mm (.003)
- Max. current/voltage rating with resistive load : 50mA 24VDC
- LED voltage and consumption : 2-colour LED : 2V (3V max.) 20mA
Other colours : 2V (3V max.) 10mA
(a resistor must be series-connected by the user)**
- Initial contact resistance : 100 mΩ max.
- Insulation resistance : 1.000 MΩ min. at 500VDC
- Dielectric strength : 500 Vrms 50 Hz min. between terminals
2.000 Vrms 50 Hz min. between terminals and frame
- Electrical life : 1.000.000 cycles at full load
- Operating force : 7 N ±2N
- Torque : 5 Nm min.- 14 Nm max. applied to nut
- Panel thickness : 1 (.039) to 6 mm (.236) max.
- Operating temperature : -30°C to +70°C
- Hand soldering : 270°C, 3 sec. max.
- Packaging unit : 16 pieces

** Resistor value = $\frac{\text{supply voltage} - \text{LED forward voltage}}{\text{LED forward current}}$

MATERIALS

- Case : PBT UL94-V0
- Terminals : brass, gold plated
- Contacts : gold plated dome
- Bushing : see next page
- Actuator : stainless steel, with thermoplastic overmolding
- LED

CUT-OUT

- Panel cut-out : Ø 19,2 mm (.755)
- Min. pitch for matrix mounting : 30 mm x 30 mm (1.181x1.181)

To order a product, select a basic model below and add the desired options selected on next page.

Flat actuator - solder lug terminals

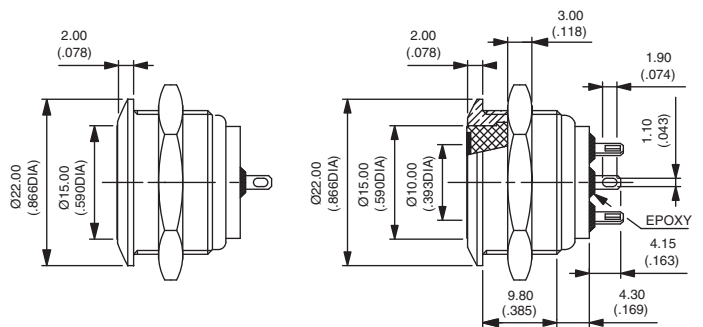
Hex nut 22 (.866) across flats



Illuminated
AV9SLD2



Non-illuminated
AV9SOD2



Also available with bushing Ø 22 (.866) : on request.

Flat actuator - screw terminals

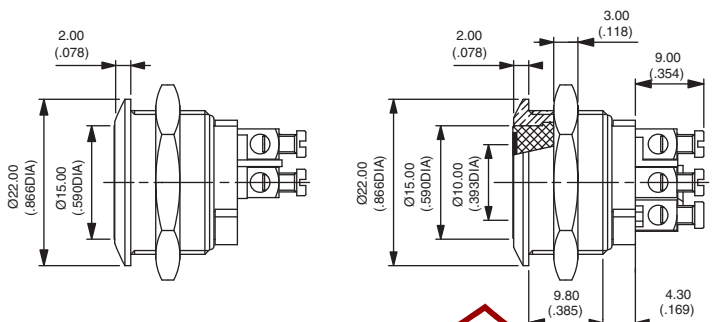
Hex nut 22 (.866) across flats



Illuminated
AV9SLD9



Non-illuminated
AV9SOD9



Also available with bushing Ø 22 (.866) : on request.

ERMEC
www.ermec.com

www.ermec.com

Snap-action security pushbuttons Ø 19 mm (.748) with overmolded actuator

Options

After selecting basic model no., fill in last 5 boxes with desired options.



BUSHING MATERIALS

CODE	MATERIAL
0 (std)	Nickel plated brass
2	Chrome plated brass
4	Stainless steel
5	Gold plated brass
6	Chrome plated brass, satin
7	Chrome pl. brass, matt black
8	Varnished polished brass
9	Polished brass

OVERMOLDING COLOURS

CODE	COLOUR	CODE	COLOUR
1	Blue	6	Red
2	Black *	7	White
3	Green	8	Translucent
4	Grey *	9	Orange
5	Yellow		

* non-illuminated only

LED COLOURS






CODE	COLOUR
Blank	No LED
1	Blue
2	Red/green
3 **	Green
V **	Green, high intensity
5	Yellow
6	Red
7	White
9	Amber






** To order a green LED for actuator style 002, always use code V. Other actuator styles can be ordered with LED code 3 or V.

ACTUATOR STYLES

The ring and symbols are obtained by photochemical engraving of a stainless steel insert. The insert is then overmolded in the desired colour.

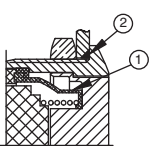
The following actuator styles are available. For other types, consult factory.

CODE	001	002	003	004	005
DESCRIPTION	Illuminated ring and disc	Illuminated ring	Arrow	Loudspeaker OFF	Opening
RING/SYMBOL					

CODE	006	008	009	010	011
DESCRIPTION	Validation	Closing	Standby	Cancel	Power
SYMBOL					

SEALING

Blank No sealing



K Front panel sealing (IP67)

- ① internal membrane
- ② external gasket

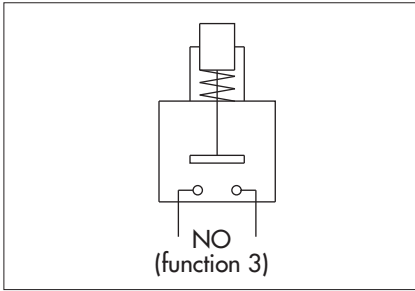
Recommended panel mounting for IP69K



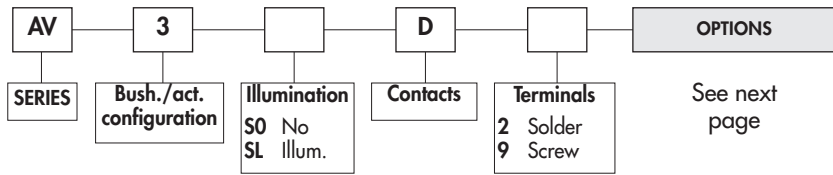
K Front panel sealing (IP69K)

Snap-action security pushbuttons Ø 22 mm (.866) with overmolded actuator

Illuminated and non-illuminated - momentary (NO)



ORDER FORMAT



SPECIFICATIONS

- Travel : 0,7 mm (.027) ± 0,1 mm (.003)
- Max. current/voltage rating with resistive load : 50mA 24VDC
- LED voltage and consumption : 2-colour LED : 2V (3V max.) 20mA
Other colours : 2V (3V max.) 10mA
(a resistor must be series-connected by the user)**
- Initial contact resistance : 100 mΩ max.
- Insulation resistance : 1.000 MΩ min. at 500VDC
- Dielectric strength : 500 Vrms 50 Hz min. between terminals
2.000 Vrms 50 Hz min. between terminals and frame
- Electrical life : 1.000.000 cycles at full load
- Operating force : 7 N ±2N
- Torque : 5 Nm min.- 14 Nm max. applied to nut
- Panel thickness : 1 (.039) to 6 mm (.236) max.
- Operating temperature : -30°C to +70°C
- Hand soldering : 270°C, 3 sec. max.
- Packaging unit : 16 pieces

** Resistor value = $\frac{\text{supply voltage} - \text{LED forward voltage}}{\text{LED forward current}}$

MATERIALS

- Case : PBT UL94-V0
- Terminals : brass, gold plated
- Contacts : gold plated dome
- Bushing : see next page
- Actuator : stainless steel, with thermoplastic overmolding
- LED

CUT-OUT

- Panel cut-out : Ø 22,2 mm (.874)
- Min. pitch for matrix mounting : 30 mm x 30 mm (1.181x1.181)

To order a product, select a basic model below and add the desired options selected on next page.

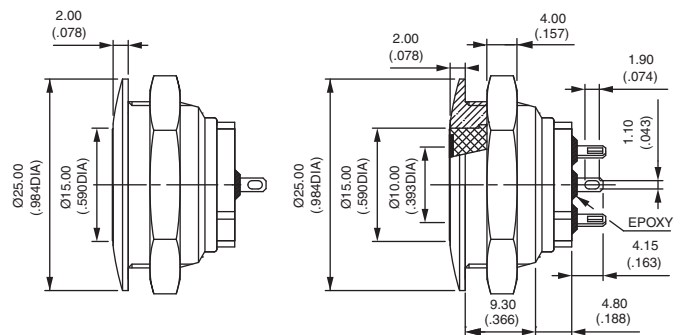
Flat actuator - solder lug terminals



Illuminated
AV3SLD2



Non-illuminated
AV3SOD2



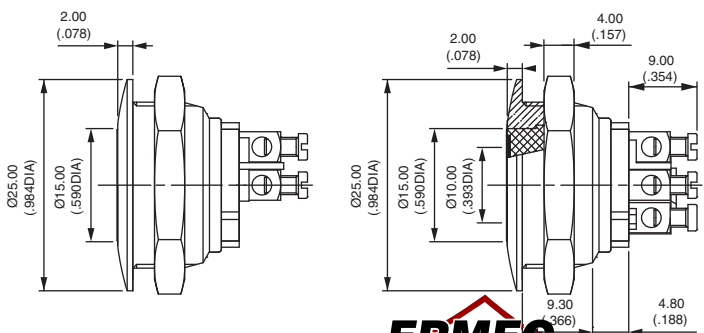
Flat actuator - screw terminals



Illuminated
AV3SLD9



Non-illuminated
AV3SOD9



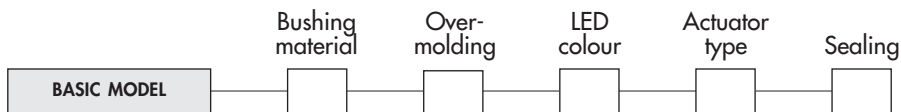
ERMEC
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www.ermec.com

Snap-action security pushbuttons Ø 22 mm (.866) with overmolded actuator

Options

After selecting basic model no., fill in last 5 boxes with desired options.



BUSHING MATERIALS

CODE	MATERIAL
0 (std)	Nickel plated brass
2	Chrome plated brass
4	Stainless steel
5	Gold plated brass
6	Chrome plated brass, satin
7	Chrome pl. brass, matt black
8	Varnished polished brass
9	Polished brass

OVERMOLDING COLOURS

CODE	COLOUR	CODE	COLOUR
1	Blue	6	Red
2	Black *	7	White
3	Green	8	Translucent
4	Grey *	9	Orange
5	Yellow		

* non-illuminated only

LED COLOURS

CODE	COLOUR
Blank	No LED
1	Blue
2	Red/green
3 **	Green
V **	Green, high intensity
5	Yellow
6	Red
7	White
9	Amber

** To order a green LED for actuator style 002, always use code V. Other actuator styles can be ordered with LED code 3 or V.

ACTUATOR STYLES

The ring and symbols are obtained by photochemical engraving of a stainless steel insert. The insert is then overmolded in the desired colour.

The following actuator styles are available. For other types, consult factory.

CODE	001	002	003	004	005
DESCRIPTION	Illuminated ring and disc	Illuminated ring	Arrow	Loudspeaker OFF	Opening
RING/SYMBOL					

CODE	006	008	009	010	011
DESCRIPTION	Validation	Closing	Standby	Cancel	Power
SYMBOL					

SEALING

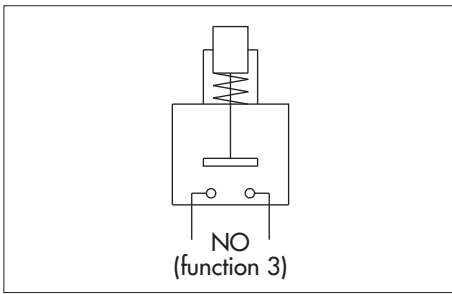
Blank No sealing

K Front panel sealing (IP67)

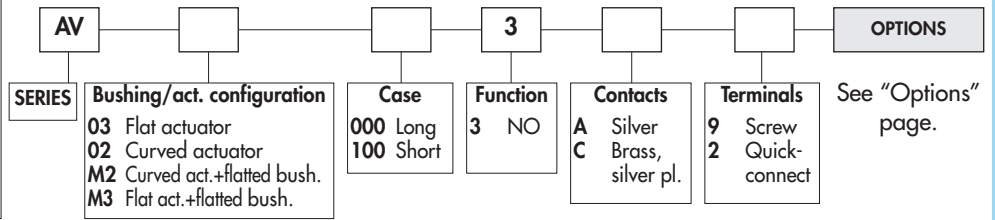
- ① internal membrane
- ② external gasket

Recommended panel mounting for IP69K

K Front panel sealing (IP69K)



ORDER FORMAT



SPECIFICATIONS

- Max. current/voltage rating with resistive load :
 - A contacts : 4A 12VDC, 500.000 cycles
 - C contacts : 2A 48 VDC, 10.000 cycles
- Approved ratings of models with long case and A contacts (AV.000) :
 - UL-CSA : 4A 250VAC - 8A 125VAC - 6.000 cycles
- Initial contact resistance : 10 mΩ max.
- Insulation resistance : 1.000 MΩ min. at 500VDC
- Dielectric strength : 2.000 Vrms 50 Hz min. between terminals and frame
2.000 Vrms 50 Hz min. between terminals
- Torque : 5 Nm min.- 14 Nm max. applied to nut
- Panel thickness : 1 (.039) to 11 mm (.433) max.
- Operating temperature : -30°C to +70°C
- Low level or mechanical life : 1.000.000 cycles
- Hand soldering : 300°C, 3 sec. max.
- Packaging unit : 20 pieces

MATERIALS

- Case : PBT
- Contacts : silver (A) or brass, silver plated (C)
- Bushing and actuator : see "Options" page

CUT-OUTS

- Panel cut-out : Ø 22,2 mm (.874)
- Min. pitch for matrix mounting : 30 mm x 30 mm (1.181x1.181)

To order a product, select a basic model below or on next page and add the desired options.

BASIC MODEL

Flat actuator - short case - 48VDC - AV03100

Hex nut 25 (.984) across flats

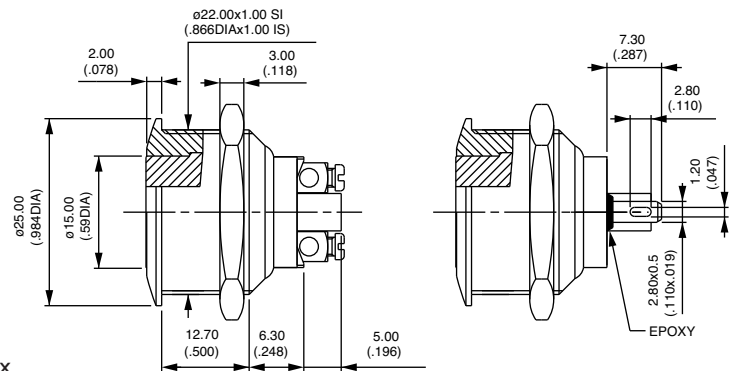


Screw terminals
AV031003•9

Solder lug / quick-connect term.
AV031003•2

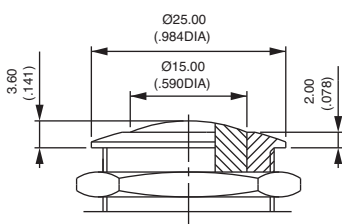


Screw terminals for wires 1,5 mm² max.



Contacts : replace • with A (silver) or C (silver plated brass).

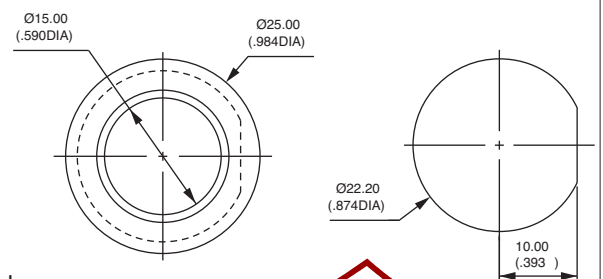
Curved actuator - short case



Screw terminals
AV021003•9

Solder lug / quick-connect terminals
AV021003•2

Flatted bushing - short case - AVM3 and AVM2



Flat actuator, screw terminals
AVM31003•9

Curved actuator, screw terminals
AVM21003•9





Flat actuator - long case - 4A 250VAC/8A 125VAC - UL/CSA - AV03000

Hex nut 25 (.984) across flats

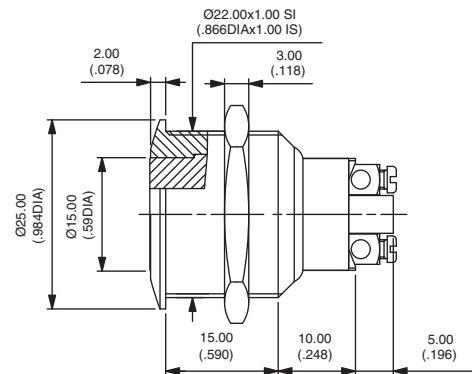


Screw terminals
AV030003A9

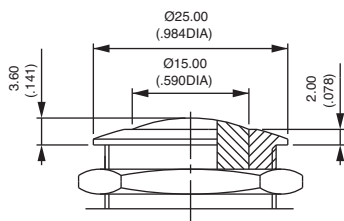


To order switches marked **UL-CSA**, add "UU" at the end of model number.

Screw terminals for wires 1,5 mm² max.

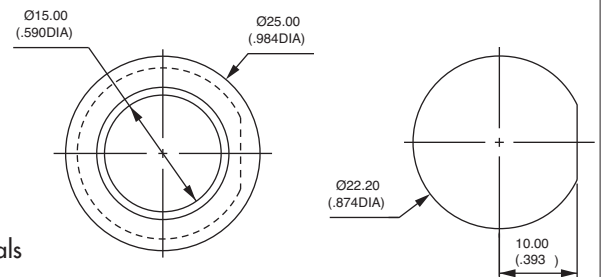


Curved actuator - long case



Screw terminals
AV020003A9

Flatted bushing - long case - AVM3 and AVM2



Flat actuator, screw terminals
AVM30003•9
Curved actuator, screw terminals
AVM20003•9

MOMENTARY NORMALLY CLOSED MODEL (NC)

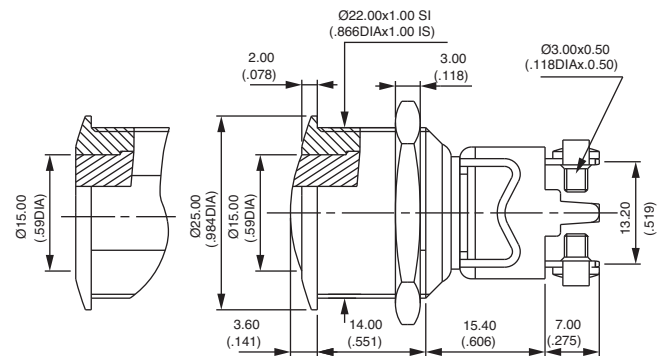
Bushing Ø 22 (.866) - AV..1200

Hex nut 25 (.984) across flats

- Single pole, screw terminals, without marking
- Silver plated copper contacts (C)
- Max. current/voltage rating with resistive load : 2A 250VAC - 3A 125VAC - 2,5A 24VDC
- Dielectric strength : 2.000 Vrms 50 Hz min. betw. term. and frame 2.000 Vrms. 50 Hz min. between terminals
- Electrical life : 100.000 cycles at 0,3A 24VAC or DC 10.000 cycles at full load
- Packaging unit : 20 pieces

Flat actuator
AV031202C900

Curved actuator
AV021202C900

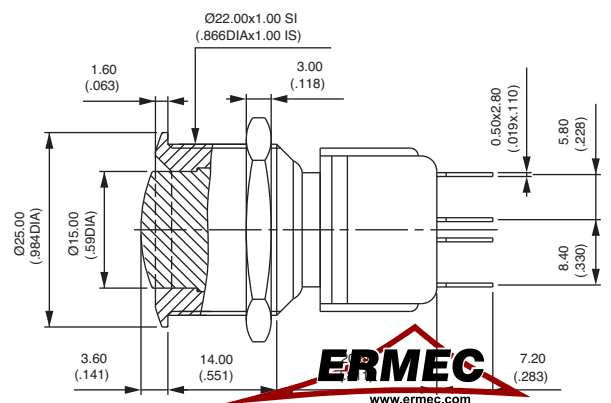


Bushing Ø 22 (.866) - alternate action - AV..4700

Hex nut 25 (.984) across flats

- Double pole, solder lug/quick-connect term., curved actuator
- Silver contacts
- Max. current/voltage rating with resistive load : 3(1,5)A 250VAC - 6A 125VAC - 3A 24VAC or DC
- Dielectric strength : 3.000 Vrms min. between terminals and frame
- Electrical life : 10.000 cycles at full load 50.000 cycles at 1A 24VAC or DC
- Mechanical life : 100.000 cycles
- Packaging unit : 10 pieces

AV044746A200

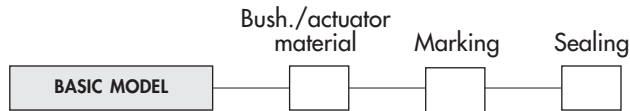


ERMEC
www.ermec.com

Further specifications : see previous page. Bushing/actuator materials, marking and sealing : see "options" on next page.

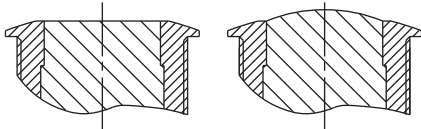


After selecting basic model number, fill in last 3 boxes with desired options.



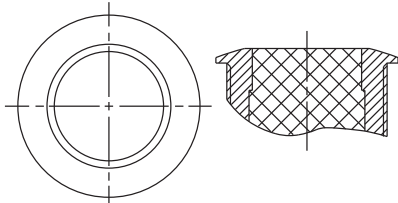
BUSHING/ACTUATOR MATERIALS

Flat or curved metal actuator



CODE	BUSHING	ACTUATOR
00 (standard)	Nickel plated brass	Nickel plated brass
10	Nickel plated brass	Stainless steel
12	Nickel plated brass	Chrome plated brass
20	Chrome plated brass	Chrome plated brass
30	Chrome plated brass	Stainless steel
40	Stainless steel	Stainless steel
80 **	Varnished polished brass	Varnished polished brass

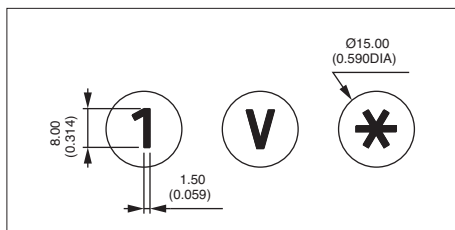
Flat thermoplastic actuator



CODE	BUSHING	ACTUATOR COLOUR
0• (standard)	Nickel plated brass	Replace • with one of the following codes.
2•	Chrome plated brass	1 : blue - 1/4 : dark blue - 2 : black - 3 : green
8•	Varnished polished brass	4 : grey - 5 : yellow - 6 : red - 7/1 : white
		9 : orange

MARKING

- By engraving on flat or curved brass actuator (stainless steel on request)
- by hot stamping on flat thermoplastic actuator



Select an option from each of the two tables below.

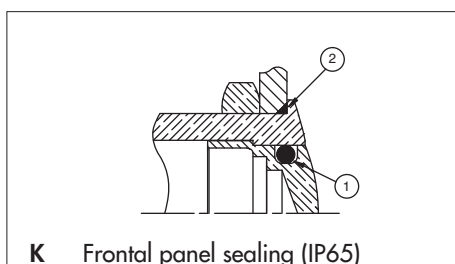
TYPE OF MARKING	
CODE	TYPE
0 to 9	Numbers 0 to 9
X	Symbol *
Y	Symbol #
A to N	Letters A to N
P to W	Letters P to W
0	Letter O

Letter O : same code and same design as number 0.
For special symbols, consult factory.
Minimum order : 500 pieces

COLOUR OF MARKING	
CODE	COLOUR
Brass actuator	
0 (standard)	Same as finish
2	Black
Note : a finished product supplied in version "0" cannot be modified to version "2".	
Thermoplastic actuator	
2	Black
7	White

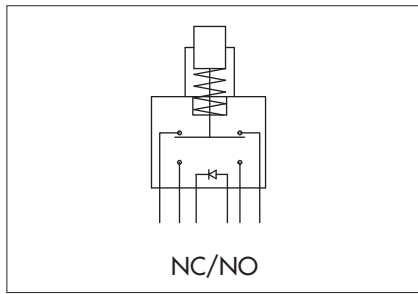
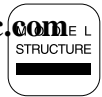
SEALING

Blank No sealing

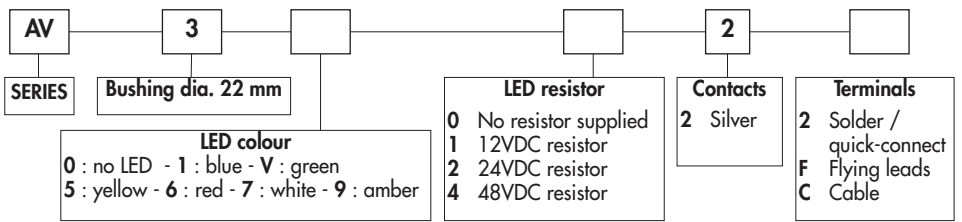


- ① internal gasket
- ② external gasket





ORDER FORMAT



SPECIFICATIONS

- Travel : 2 mm ± 0,3 mm (.003)
 - Max. current/voltage rating with resistive load : 1A 30VDC
 - LED voltage : 12VDC, 24VDC or 48VDC
 (If not supplied by APEM, a resistor must be series-connected by the user)**
 - Initial contact resistance : 100 mΩ max.
 - Insulation resistance : 10 MΩ min. at 500VDC
 - Dielectric strength : 500 Vrms 50 Hz min. between terminals
 1.000 Vrms 50 Hz min. between terminals and frame
 - Electrical life : 250.000 cycles at full load
 - Operating force : 5N ± 2N
 - Torque : 5 Nm min. - 14 Nm max. applied to nut
 - Panel thickness : 1 (.039) to 6 mm (.236) max.
 - Low level or mechanical life : 1.000.000 cycles
 - Operating temperature : -20°C to +55°C
 - Hand soldering : 350°C, 5 seconds max.
 - Packaging unit : flying lead/cable models : 1 piece - other models : 40 pieces
- ** Resistor value = $\frac{\text{supply voltage} - \text{LED forward voltage}}{\text{LED forward current}}$

MATERIALS

- Case : polyamide, glass filled
- Contacts : silver
- Bushing : see next page
- Actuator : see next page
- Elastomeric membrane : silicone
- LED

CUT-OUT

- Panel cut-out : Ø 22,2 mm (.874)
- Min. pitch for matrix mounting : 30 mm x 30 mm (1.181x1.181)

To order a product, select a basic model below and add the desired LED colour and voltage. Then select the desired options on next page.

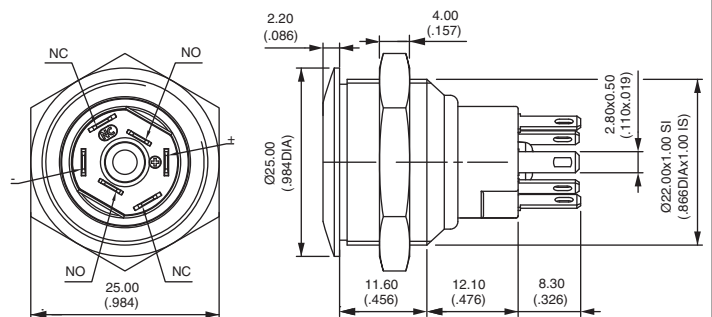
Flat actuator - solder lug terminals

Hex nut 25 (.984) across flats



Illuminated (select LED colour above) *
AV3•022
 Non-illuminated
AV30022

* No LED resistor supplied on this model.

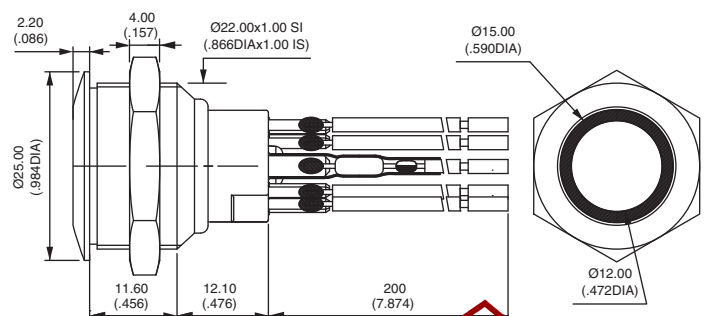


Flat actuator - flying lead terminals

Hex nut 25 (.984) across flats



Illuminated (select LED colour & resistor above)
AV3••2F
 Non-illuminated
AV3002F



Wire colours : black: NC, orange: NO, red: LED anode (+), blue: LED cathode (-)





Security pushbutton switches Ø 22 mm (.866)

With illuminated ring - momentary changeover (NC/NO)

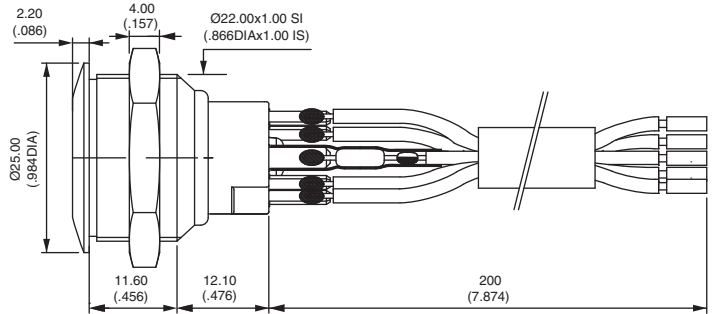
Flat actuator - cable terminals

Hex nut 25 (.984) across flats

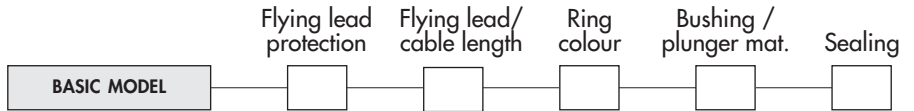


Illuminated (select colour & resistor)
AV3••2C

Non-illuminated
AV3002C



After selecting basic model No., fill in last 5 boxes with desired options.



FLYING LEAD PROTECTION

- 0** No protection and/or no flying leads
- 1** Heat-shrink sleeves
- 2** Tube + epoxy

WIRE/CABLE LENGTH

- 000** No flying leads / no cable
- 020** Length 20 cm (7.874) - standard
- XXX** Length in centimeters

RING COLOURS

CODE	COLOUR	CODE	COLOUR
1	Blue	6	Red
2	Black *	7	Opal white (std)
3	Green	8	Translucent
4	Grey *	9	Orange
5	Yellow		

* non-illuminated only

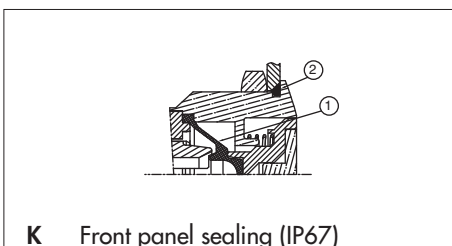
BUSHING/PLUNGER MATERIALS

CODE	BUSHING	ACTUATOR
00	Brass, nickel plated	Brass, nickel plated
40	Stainless steel 303	Stainless steel 303
4A	Stainless steel 304	Stainless steel 304
4B	Stainless steel 316	Stainless steel 316

Other : on request.

SEALING

Blank No sealing



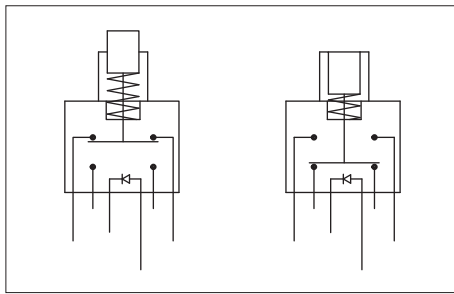
- ① internal membrane
- ② external gasket



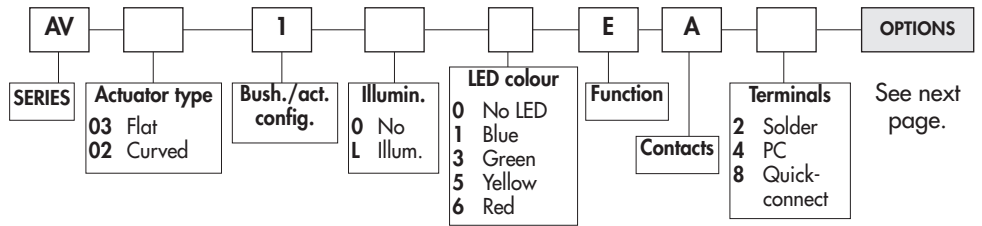
www.ermec.com

Security pushbutton switches Ø 22 mm (.866)

Illuminated and non-illuminated - latching



ORDER FORMAT



SPECIFICATIONS

- Max. current/voltage rating with resistive load : 2A 48 VDC
 - LED voltage and consumption : blue 3,5V 10mA, green : 2V 10mA yellow & red : 2V 20mA (a resistor must be series-connected by the user)**
 - Initial contact resistance : 50 mΩ max.
 - Insulation resistance : 1.000 MΩ min. at 500VDC
 - Dielectric strength : 1 000 Vrms 50 Hz min. between terminals 500 Vrms 50 Hz min. between terminals and frame
 - Electrical life : 500.000 cycles at 2A 48VDC
 - Torque : 5 Nm min.- 14 Nm max. applied to nut
 - Panel thickness : 1 (.039) to 9 mm (.354) max.
 - Operating temperature : -30°C to +70°C
 - Low level or mechanical life : 1.000.000 cycles
 - Hand soldering : 300°C, 4 seconds max.
 - Packaging unit : 20 pieces
- ** Resistor value = $\frac{\text{supply voltage} - \text{LED forward voltage}}{\text{LED forward current}}$

MATERIALS

- Case : PA6T UL94-V0
- Contacts : silver
- Actuator and bushing : see next page
- LED

CUT-OUT

- Panel cut-out : Ø 22,2 mm (.874)
- Min. pitch for matrix mounting : 30 mm x 30 mm (1.181x1.181)

To order a product, select a basic model below and add the desired options selected on next page.

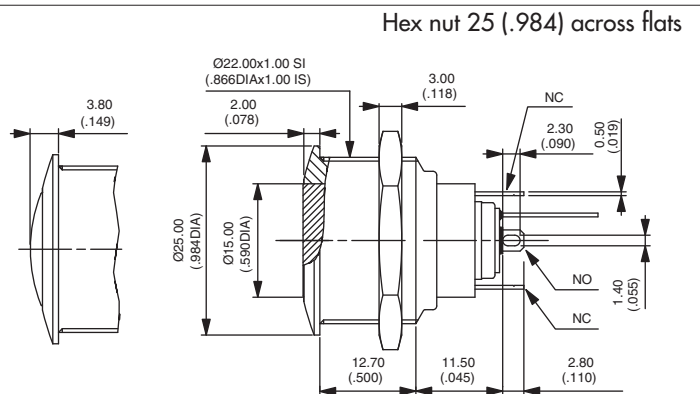
Standard actuator position : the actuator is flush in the non-latched position and recessed in the latched position.

Non-illuminated - solder lug terminals



Flat actuator *
AV03100EA2 ON - ON

Curved actuator
AV02100EA2 ON - ON

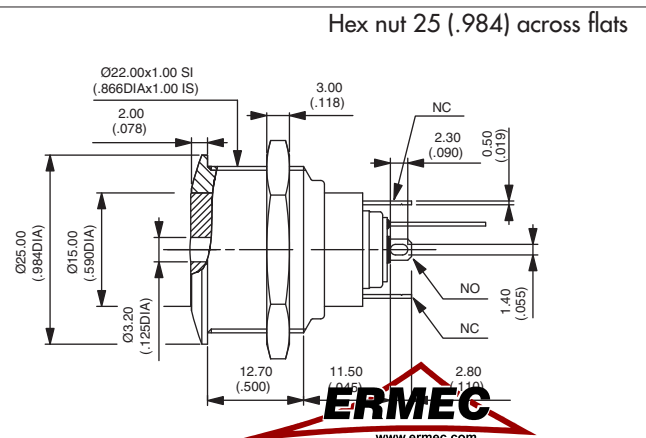


* Also available with prominent actuator in the non-latched position

Illuminated - solder lug terminals



Flat actuator
AV031L•EA2 ON - ON

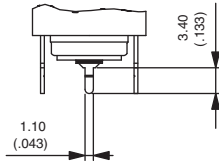


Replace • with desired LED colour.

Security pushbutton switches Ø 22 mm (.866)

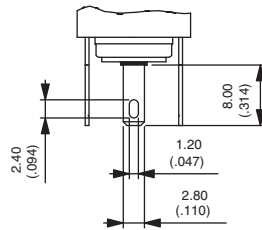
Illuminated and non-illuminated - latching

Straight PC terminals



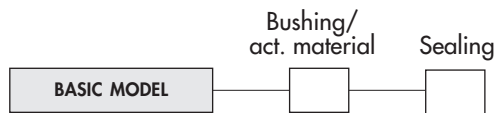
Replace 2 with 4 at the end of the model numbers shown on previous page.

Quick-connect terminals



Replace 2 with 8 at the end of the model numbers shown on previous page.

After selecting basic model number, fill in last 2 boxes with desired options.

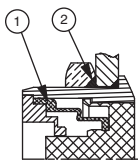


BUSHING/ACTUATOR MATERIALS

CODE	BUSHING	ACTUATOR
00 (std)	Nickel plated brass	Nickel plated brass
10	Nickel plated brass	Stainless steel
40	Stainless steel	Stainless steel
50	Stainless steel	Nickel plated brass

SEALING

Blank No sealing



K Frontal panel sealing (IP65)

- ① elastomeric membrane
- ② external gasket

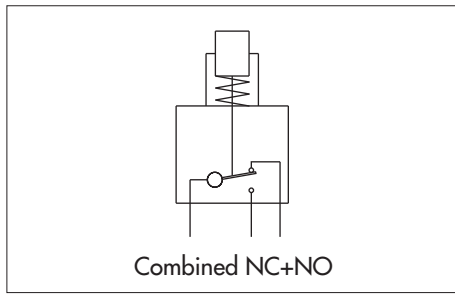


www.ermec.com

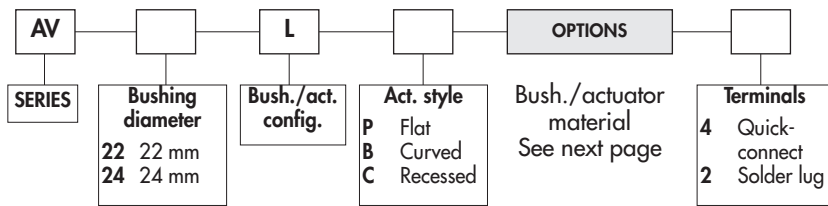


Security pushbutton switches Ø 22 mm (.866) or 24 mm (.944) with large actuator

Momentary (combined NC+NO)



ORDER FORMAT



SPECIFICATIONS

- Max. current/voltage rating with resistive load : 5A 250VAC
- Initial contact resistance : 100 mΩ max.
- Insulation resistance : 1.000 MΩ min. at 500VDC
- Dielectric strength : 2.000 Vrms 50 Hz min. between terminals and frame
- Electrical life : 1.000.000 cycles at 1A 250VAC
100.000 cycles at full load
- Torque : 5 Nm min.- 14 Nm max. applied to nut
- Panel thickness : 1 (.039) to 6 mm (.236) max.
- Operating temperature : -20°C to +55°C
- Low level or mechanical life : 3.000.000 cycles
- Front panel sealing : IP65
- Hand soldering : 300°C, 5 sec. max.
- Packaging unit : 20 pieces (except black chrome plated : 16 pieces)

MATERIALS

- Case : polyester, glass filled
- Contacts : silver/nickel alloy
- Bushing and actuator : see next page.

CUT-OUT

- Panel cut-out : Ø 22,2 mm (.874) or Ø 24,2 mm (.952)
- Min. pitch for matrix mounting : 30 mm x 30 mm (1.181x1.181) or 33 mm x 33 mm (1.299x1.299)

To order a product, select a basic model below or on next page and add the desired bushing/actuator materials.

BASIC MODEL

Flat actuator - AV22LP

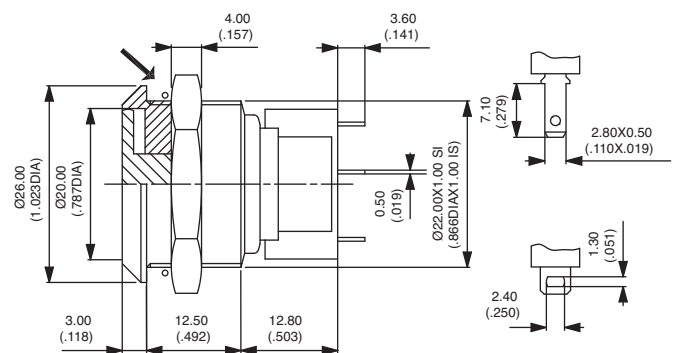


Quick-connect terminals
AV22LP••4

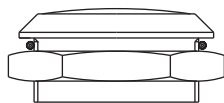
Solder lug terminals
AV22LP••2

→ O-ring

Hex nut 25 (.984) across flats

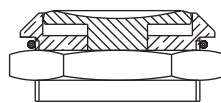


Curved actuator - AV22LB



Quick-connect terminals
AV22LB••4
Solder lug terminals
AV22LB••2

Recessed actuator - AV22LC



Quick-connect terminals
AV22LC••4
Solder lug terminals
AV22LC••2



www.ermec.com



Security pushbutton switches Ø 22 mm (.866) or 24 mm (.944) with large actuator

Momentary (combined NC+NO)

BASIC MODEL

Flat actuator - low profile - AV24LP



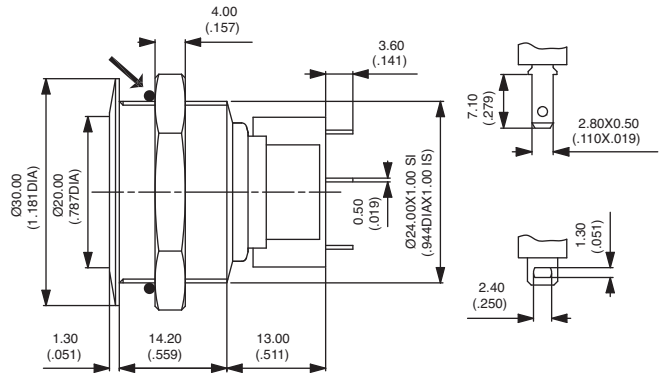
Quick-connect terminals
AV24LP••4

Solder lug terminals
AV24LP••2

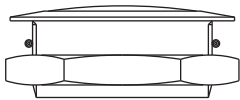


→ O-ring

Hex nut 27 (1.062) across flats

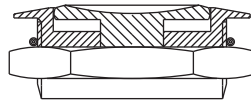


Curved actuator - AV24LB



Quick-connect terminals
AV24LB••4
Solder lug terminals
AV24LB••2

Recessed actuator - AV24LC



Quick-connect terminals
AV24LC••4
Solder lug terminals
AV24LC••2

BUSHING/ACTUATOR MATERIALS

Models with non-anodized actuator

CODE	BUSHING	ACTUATOR
40 (standard)	Stainless steel	Stainless steel
20	Chrome plated brass	Chrome plated brass

Models with anodized actuator

CODE	BUSHING	ACTUATOR COLOUR
1•	Black chrome plated brass	Replace • with one of the following codes :
2•	Chrome plated brass	1 : blue - 2 : black - 3 : pale green - 3F : dark green - 4 : natural - 5 : gold yellow
4•	Stainless steel	6 : red - 6B : maroon

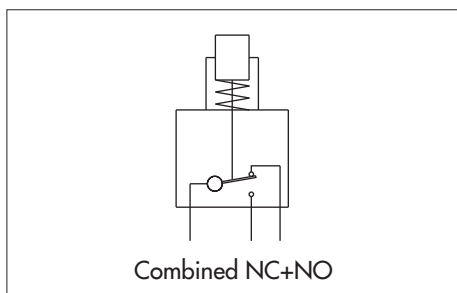


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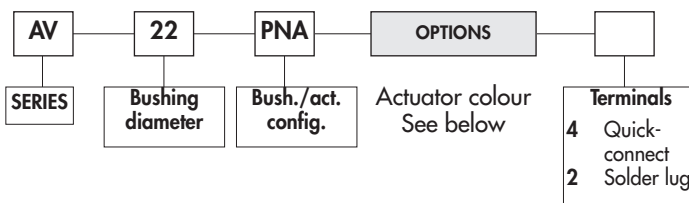


Mushroom head security pushbutton switches Ø 22 mm (.866)

Momentary (combined NC+NO)



ORDER FORMAT



SPECIFICATIONS

- Max. current/voltage rating with resistive load : 5A 250VAC
- Initial contact resistance : 100 mΩ max.
- Insulation resistance : 1.000 MΩ min. at 500VDC
- Dielectric strength : 2.000 Vrms 50 Hz min. between terminals and frame
- Electrical life : 1.000.000 cycles at 1A 250VAC
50.000 cycles at full load
- Torque : 5 Nm min.- 14 Nm max. applied to nut
- Panel thickness : 1 (.039) to 6 mm (.236) max.
- Operating temperature : -20°C to +55°C
- Low level or mechanical life : 1.000.000 cycles
- Front panel sealing : IP65
- Hand soldering : 300°C, 5 sec. max.
- Packaging unit : 16 pieces

MATERIALS

- Case : polyester, glass filled
- Contacts : silver/nickel alloy
- Bushing : brass, nickel plated
- Actuator : aluminium, anodized

CUT-OUT

- Panel cut-out : Ø 22,2 mm (.874)
- Min. pitch for matrix mounting : 30 mm x 30 mm (1.181x1.181)

To order a product, select a basic model below and add the desired actuator colour.

BASIC MODEL

Mushroom head actuator - AV22PNA

→ O-ring

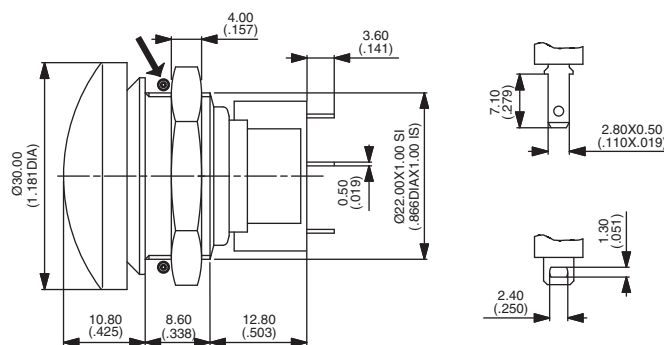
Hex nut 25 (.984) across flats



Quick-connect terminals
AV22PNA•4



Solder lug terminals
AV22PNA•2



ACTUATOR ANODIZATION COLOURS

1 : blue - 2 : black - 3 : pale green - 3F : dark green - 4 : natural - 5 : gold yellow - 6 : red - 6B : maroon



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