RS-Bestell-Nr. entspricht Teile-Nr.:
AV044746A240K

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AV SERIES
PUSHBUTTON SWITCHES

C

All AV Series models are rugged, durable, cosmetically attractive and feature:

- **Minimum clearance between actuator and bushing, to prevent willful damage by means of insertion of foreign parts or matter.**
- **Protection against crushing of contacts and switch mechanism.**
- **Front panel sealing to IEC specification IP54 with optional sealing to IP65 (closest NEMA equivalents are 3S and 6&6P respectively).**



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

The AV Series consists of 3 categories of pushbutton switches designated **Anti-Vandal**, **Security** and **Snap-Action Security**. The distinctive features are:

Anti-Vandal - Highest impact resistance provided by a knurled back nut or mechanical stop and added ruggedness provided by a stainless steel actuator and bushing. The 19mm models meet IK08 which specifies the switch must withstand a hammer blow to the actuator with a striking energy of 6 joules, while the 22mm models meet IK10 which specifies the switch must similarly withstand 20 joules of energy (see table on next page). In both of these cases, no resulting damage is permissible.

Security - High impact resistance and ruggedness with a large variety of options, including actuator shapes, electrical functions, connections, finish and marking options.

Snap-Action Security - High impact resistance and ruggedness. All of these models feature tactile response and optional illumination and marking.

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EXPLANATION OF DEGREES OF PROTECTION (IP AND IK CODES)

IP... defines the degree of protection provided by the enclosures of electric appliances according to IEC529, DIN 40050 and NFC 20-010. Note - the closest NEMA conversions for IP54 and IP65 are 3S and 6&6P, respectively, however they should not be considered equivalent as the NEMA standards test for environmental conditions while the IEC specifications do not.

IK... defines the degree of protection provided by the enclosures of electric appliances against external mechanical impacts according to EN 50102 (NFC 20-015).

The degree of protection is indicated by 2 letters and 3 numbers.The tables list the degree of protection for the 3 numbers.

Example:

IP659— mechanical protection
(optional)
protection against water
protection against dust

1st number:
Protection against entry of solid objects

IP	Degree of protection
0	Non-protected
1	Protected against solid objects 1.968" (50mm) and greater
2	Protected against solid objects .492" (12.5mm) and greater
3	Protected against solid objects .098" (2.5mm) and greater
4	Protected against solid objects .039" (1mm) and greater
5	Dust protected (no harmful ingress)
6	Dust-tight (no ingress)

2nd number:
Protection against liquids

IP	Degree of protection
0	Non-protected
1	Protected against vertically falling water drops
2	Protected against vertically falling water drops when enclosure is tilted up to 15°
3	Protected against water sprayed vertically at an angle of up to 60°
4	Protected against splashing water
5	Protected against water jets from any direction

3rd number
Protection against external mechanical impacts

	.748" (19mm) dia. models	.866" (22mm) dia. models
Degree of protection according to NFC 20-010 (Oct. 86) Hammer radius 50 mm	1.5 Kg, 40cm — **IP..7** striking energy 6 joules (6 Nm)	5 Kg, 40cm — **IP..9** striking energy 20 joules (20 Nm)
Degree of protection according to EN 50102 (June 95) (NFC 20-015)	1.7 Kg, 29.5cm — **IK08** striking energy 5 joules (5Nm) Hammer rad. 25mm	5 Kg, 40cm — **IK10** striking energy 20 joules (20Nm) Hammer rad. 50mm
Impacts on actuator according to CECC 96000 Hammer radius 10 mm	0.3 Kg, 34cm — 10 strokes striking energy 1 joule 1 Nm	1.5 Kg, 34cm — 10 strokes striking energy 5 joules 5 Nm

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AV SERIES SECURITY PUSHBUTTON SWITCHES

.866" (22mm) bushing diameter

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SPECIFICATIONS

Contact ratings: Max. resistive loads; 6 A 125VAC, 3 A 250VAC & 3 A 24 VDC
Initial contact resistance: 10 milliohms max. at 1 A, 2 V
Insulation resistance: 1000 megohms min. at 500 VDC
Dielectric strength: 3000 V rms min. between terminals and frame
Electrical life: 50,000 cycles at 1 A 24V, 10,000 cycles at full load
Mechanical life: 100,000 cycles at 0.3 A 24V
Operating temperature range: -20°C to +55°C
Panel thickness: .039" (1mm) to .433" (11mm)

FEATURES

- **Double pole alternate action (ON-ON).**
- **Standard - panel sealing protection per IP54.**
- **Optional - panel sealing protection per IP65.**
- **Extremely rugged and durable.**

MATERIALS

Contacts: Silver
Bushing & Actuator: Nickel plated brass
Case: PBT **Hex. Mounting Nut**: Nickel plated brass

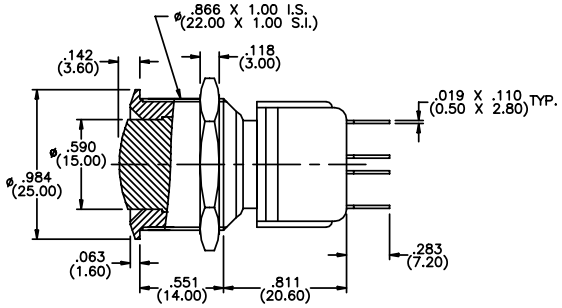
ORDER FORMAT: For complete model no., fill in empty boxes with selected options shown below. Example of complete model no. - **AV044746A200**

Series	Bush./Act. Config.	Case Style	Function	Cont.Matl.	Term.Type	Bush./Act. Matl.*	Marking*	Sealing
AV	04	474	6	A	2	00		(NONE) K

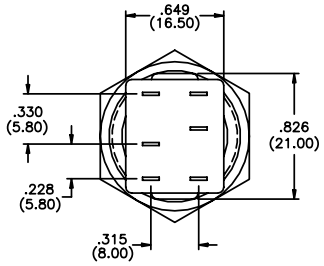
* - see Options page

22mm

Bushing/Actuator configurations



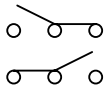
Solder lug/quick-connect terminals (2)



04 curved Act. & Bush.

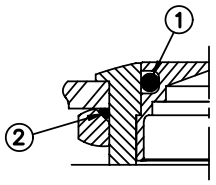


AV044746A200
(Model shown)



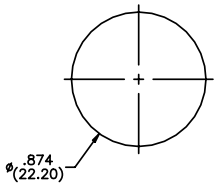
Schematic

(NONE) - no sealing - meets IP54



K (1) Internal seal & (2) front panel seals meet IP65

Sealing



Min. dimensions for matrix mounting: 1.181" (30mm) x 1.181" (30mm).

Mounting Hole

STANDARD STOCK MODEL:
AV044746A200

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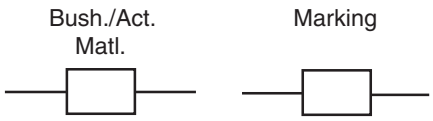
AV SERIES SNAP-ACTION SECURITY PUSHBUTTON SWITCHES

New! Options - Bushing/Actuator materials and marking

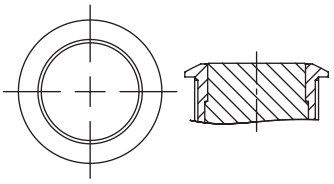
C

After selecting basic model number from previous page of AV Series Snap-action Security Pushbutton switches, fill in indicated boxes with desired options below.



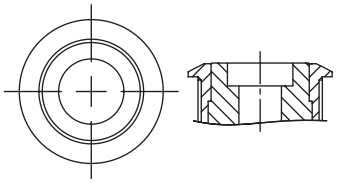
BUSHING/ACTUATOR MATERIAL Replace **00** with one of the following codes.

Non-illuminated models:



Code	Bushing	Actuator
00 (std'd)	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

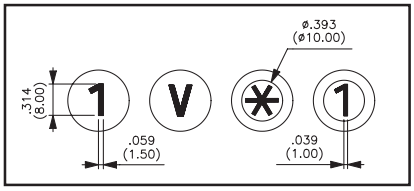
Illuminated models:



Code	Bushing	Actuator
00 (std'd)	Nickel plated brass	Nickel plated brass
20	Chrome plated brass	Chrome plated brass
40	Stainless steel	Stainless steel
45	Stainless steel	Nickel plated brass
80	Varnished polished brass	Varnished polished brass

MARKING Select an option from each of the two tables. Consult factory for special symbols.

For models with flat actuator only.
Marking method: by engraving on metal actuators,(brass only)
by hot stamping on thermoplastic insert (illuminated actuators)



MARKING	
Code	Mark
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 design as number 0.

MARKING COLOR	
Code	Color
Non-illuminated actuators	
0 (std'd)	Same as finish
2	Black

Note: Code '0' finish cannot be modified to code '2'.

Illuminated actuators	
2	Black (on white)

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