

Harmony™ 9001K/SK/KX

30 mm push buttons

9001K

Environmental specifications			
Conforming to standards	 		EN/IEC 60947-1, EN/IEC 60947-5-1, EN/IEC 60947-5-4, JIS C 4520 and 852, UL 508, CSA C22-2 n° 14, CE marked, RoHS compliant
Product certifications	 File E78403 CCN NKCR  File LR25490 Class 3211-03		UL File E78403, CCN NKCR and CSA File LR25490, Class 3211-03
Protective treatment standard version			"TC"
Ambient air temperature around the device	Storage	°F (°C)	-40 to +158 (-40 to +70)
	Operation	°F (°C)	-13 to +158 (-25 to +70)
Vibration resistance	Conforming to IEC 60068-2-6		Frequency: 2 to 500 Hz: 7gn Ford Standard EA-1
Shock resistance	Conforming to IEC 60068-2-27		Half sine wave: 50 gn
Electric shock protection	Conforming to IEC 61140		Class II
Degree of protection	Conforming to EN/IEC 60529		IP 66
	Conforming to NEMA		Types 1, 2, 3, 3R, 4, 12 and 13
Mechanical life (in millions of operating cycles)	Push buttons, spring return		5
	Illuminated push buttons		5
	Selector switches and key switches		0.5
Mounting position			All positions

Electrical characteristics of contact blocks				
Rated operational characteristics	~ AC-15		3 A, 240 V	
	--- DC-13		0.55 A, 125 V	
Rated insulation voltage	Conforming to EN/IEC 60947-1	V	U _i = 250 degree of pollution 3 (except pilot lights with incandescent bulb: degree of pollution 2)	
Rated impulse withstand voltage	Conforming to EN/IEC 60947-1	kV	U _{imp} = 2.5	
Contact material	Normal environment and usage		Silver alloy	
Contact operation	"N/C" ou "N/O"		Slow break	
Positive operation	Conforming to EN/IEC 60947-5-1	N	N/C contact(s) with positive opening operation	
Short-circuit protection	Conforming to EN/IEC 60947-5-1	A	Cartridge fuse mounted upstream: 10	
Cabling capacity (9001KA contact blocks and 9001KM light modules)	Conforming to EN/IEC 60947-1	mm ² mm ²	Screw clamp terminals (cross headed/slotted screw) Mini: 1 x 0.22 Maxi: 2 x 1.5 Recommended tightening torque: 0.8 N.m (10 in-lbs)	
Thermal current	I _{th}	A	10	
Maximum operation current	a.c. supply: utilization category AC-15 NEMA A600	Contact making capacity		
		V	120 240 480 600	
		A VA	60 30 15 12 7200 7200 7200 7200	
			Breaking capacity	
	V	120 240 480 600		
	A VA	6 3 1.5 1.2 720 720 720 720		
d.c. supply: utilization category DC-13 NEMA Q600	Contact making capacity and breaking capacity			
	V A	125 250 600 0.55 0.27 0.1		

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Basic Operators

(For Color Caps, Mushroom Buttons, Knobs, Selector Switch Cams, Contact Blocks, Light Modules and Legend Plates, see page 21.)

Description	UL Types/NEMA Types 4, 13
Non Illuminated Push Button (Full Guard)	9001KR1
Non Illuminated Push Button (Extended Guard)	9001KR2
Non Illuminated Push Button (No Guard)	9001KR3
Non Illuminated Push Button (Mushroom Button/screw on)	9001KR20
Non Illuminated Dual Push Button (Momentary)	9001KR6
Non Illuminated Dual Push Button (Momentary Interlocked)	9001KR67
Non Illuminated Dual Push Button (Maintained Interlocked)	9001KR7
Momentary Pull - Maintained Neutral - Momentary Push	9001KR8 (1) (4)
Maintained Pull - Maintained Push	9001KR9 (1) (4)
Illuminated Push Button (Full Guard - Plastic Top)	9001K1L (2)
Illuminated Push Button and Push-to-test (No Guard)	9001K2L (2) (3)
Illuminated Push Button (Full Guard - Metal Top)	9001K3L (2)
Standard Pilot Light	9001KP
2-Position Selector Switch	9001KS1 (1), 9001KS2 (1), 9001KS3 (1)
3-Position Selector Switch	9001KS4 (1), 9001KS5 (1), 9001KS6 (1), 9001KS7 (1)
4-Position Selector Switch	9001KS8 (1)
Trigger-Action Emergency Stop	9001KR16 (1)

- (1) Operator can be converted to an illuminated operator by removing the liner (6509704901) and adding a light module.
 (2) Operator can be converted to a non-illuminated operator by adding liner (6509704901).
 (3) Operator includes jumper wires for push-to-test conversion.
 (4) These operators can be supplied with 1-3/8" or 2-1/4" dia. mushroom buttons. For 1-3/8" Add *20 to reference number. The * refers to the color chosen - see page 10.
 For 2-1/4": Add *21 to reference number. The * refers to the color chosen - see page 10. Voids UL and NEMA Type 6 Rating.

Non Hazardous Locations:



Hazardous Locations (Reed contact blocks, see page 23):



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9001K – Specialty operators

Note: When ordering, add prefix “9001” to the reference.



Without Latch

Joy Stick Operators—UL Types 4, 13/NEMA 4, 13. For use in hazardous locations, see page 23. Contact blocks and legend plate not included unless noted.

Description	Operator With Contacts	Operator Without Contacts (1)
3-Position—Center Off Momentary Contact—Spring Return to Center Maintained Contact	Without Latch K71H7	K71
	With Latch K70H7	K70
	Without Latch K73H7	K73
	With Latch K72H7	K72
3-Position—Center Off Momentary Contact—Spring Return to Center Maintained Contact	Without Latch K31H8	K31
	With Latch K30H8	K30
	Without Latch K33H8	K33
	With Latch K32H8	K32
5 Position—Center Off Momentary Contact—Spring Return to Center Maintained Contact	Without Latch K35H2	K35
	With Latch K34H2	K34
	Without Latch K37H2	K37
	With Latch K36H2	K36

(1) These operators can be ordered complete with contact blocks—a total of four (4) contact blocks can be used. Add the “H” number chosen from page 21 to the operator reference number and add the cost of the “H” number to the operator cost.



With Latch

Contact Arrangements

Operator Positions	Contact Block Reference	Contact Block Location	Contact Handle position (with reference to Nib)					
			1 ↑	2 →	OFF	3 ↓	4 ←	
3	K3	POS 1 (3)	A	—	1	0	—	0
	KA3	POS 2 (4)	A	—	0	0	—	1
3	KA2	POS 1 (3)	B	1	—	0	0	—
	KA2	POS 2 (4)	B	0	—	0	1	—
5	KA1	POS 1 (3)	A	0	1	0	0	0
			B	1	0	0	0	0
	KA1	POS 2 (4)	A	0	0	0	0	1
			B	0	0	0	1	0

The joy stick operator is ideal for applications where only one circuit is to be energized at one time. The three position joy stick closes one circuit in each Up-Down or Right-Left position with all circuits open in center position. The five position operator closes one circuit in each Up, Down, Left and Right position with all circuits open in center position.

Momentary contact operators are spring return to the center position. Maintained operators remain in position and must be returned manually. Operators with latch cannot be operated until the latch button in center of handle is pressed.

(1) Contact Closed (0) Contact Open

For use in hazardous locations, see page 23. Legend plate and contact block not included. Inserts are field convertible. For colors not listed, order operator without insert, plus separate color insert from page 28. Up to two 9001KA contact blocks can be mounted in tandem (total of four blocks). Selector push buttons cannot be illuminated.



Selector Push Button 9001KQ

Selector Push Button Operators—UL Types 4, 13/NEMA 4, 13

Contact Block Required (4)	Mount on Side	Two Position Operators									
		0—Contact Open		1—Contact Closed		F—Free		D—Depressed			
Quantity and Type		Left F	Right D	Left F	Right D	Left F	Right D	Left F	Right D	Left F	Right D
1 KA1 	#2	0 0	1 0	0 0	1 0	0 0	1 1	1 1	1 0	1 0	0 0
		0 1	0 1	0 1	0 0	0 1	0 0	0 0	0 1	0 1	0 1
1 KA1 	#1	0 0	1 1	0 0	1 0	1 1	0 0	1 0	1 1	1 1	0 0
		0 1	0 0	0 1	0 0	0 0	0 1	0 1	0 0	0 0	0 1
Cam (3)		P		R		S		T		Y	
Color Insert		Reference		Reference		Reference		Reference		Reference	
Without Insert (2) Black		KQ11		KQ12		KQ13		KQ14		KQ15	
		KQ11B		KQ12B		KQ13B		KQ14B		KQ15B	

(2) Order color inserts from page 28.

(3) Cams are not interchangeable.

(4) To order Contact Blocks, see pages 20 to 23.

For use in hazardous locations, see page 23. Key operated push buttons are used wherever unauthorized use of a push button is discouraged. Examples are locking a Start push button in the extended position or locking a Stop push button in the depressed position. The operator can also be locked in the flush position—holding all contacts open. Up to two 9001KA contact blocks can be mounted in tandem (total of four blocks). Legend Plate and Contact Block Not Included (“x” = locked position).



Key Operated Push Button 9001KR

Key Operated Push Button – UL Types 4, 13/NEMA 4, 13

Description	Lockable Positions			Reference
	Extended	Flush	Depressed	
Push button operable only with key in lock. Key is removable in locked position only.	x	—	—	KR131 KR132 KR133 KR137
Push button operable with or without key in lock. Push button can be locked with key only. Key removable in both locked or unlocked position.	x	—	—	KR141 KR142 KR143 KR147
To lock the unit, rotate the key with the button in the extended position. Then, push the button to lock it in the position indicated at right. Key is removable only in this position.	—	x	—	KR152 KR153

Note: All key operated push buttons are furnished as standard with Square D no. E10 key change. See catalog 9001CT0001 for other key changes.

Harmony™ 9001K/SK/KX

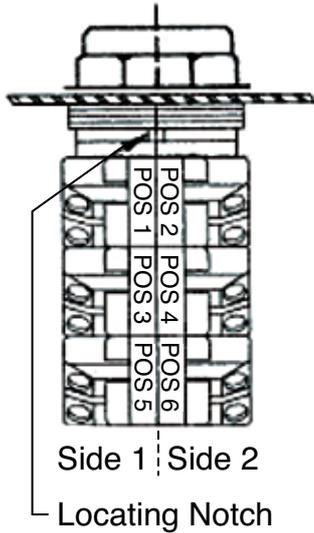
30 mm push buttons

9001K – Contact blocks

Note: When ordering, add prefix “9001” to the reference.

Contact Block “H” Codes

The design of the 9001KA contact blocks allows them to be mounted side by side and/or in tandem. This enables you to specify an operator and a particular arrangement of contact blocks (shipped completely assembled) with a single reference number. See page 20 for a description of contact blocks.

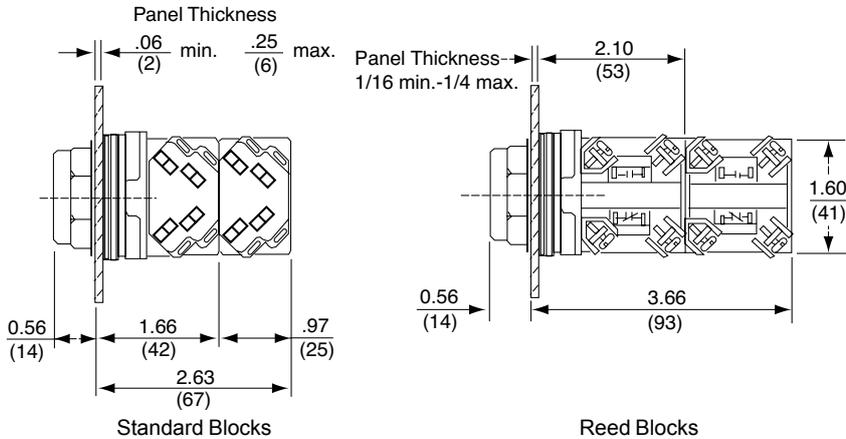


Example: A 9001KR1B push button with 2 9001KA1 contact blocks would be 9001KR1BH2.

Suffix No. (Add to Operator Reference)	Positions					
	1	2	3	4	5	6
H1	KA1					
H2	KA1	KA1				
H3	KA1	KA1	KA1			
H4	KA1	KA1	KA1	KA1		
H5	KA2					
H6	KA3					
H7	KA2	KA2				
H8	KA3	KA3				
H9	KA4	KA1				
H10	KA4	KA5				
H11	KA1	KA1		KA1		
H12	KA2	KA3	KA2	KA3		
H13		KA1				
H14		KA3				
H15	KA2	KA3	KA2			
H16	KA2	KA3		KA3		
H17	KA1	KA1	KA2			
H18	KA3	KA1	KA3		KA3	
H19	KA1	KA1	KA1	KA1	KA1	
H21	KA2	KA3				
H23	KA1	KA1	KA1	KA1	KA1	KA1
H24	KA1	KA2				
H25	KA5	KA3				

Note: For “H” Codes not shown in this table, contact your local Schneider Electric representative.

Dimensions When Using Contact Blocks



Maximum Contact Block Usage:

- 2 blocks mounted side by side only:** Any 2, 3 or 4-Position spring return selector switch (non-illuminated, illuminated or keyed).
- 2 blocks mounted in tandem on one side only:** Any 2 operator interlocked push button.
- 2 blocks mounted in tandem (total of four blocks):** Any selector push button, keyed push button, 2, 3, or 4-Position maintained selector switch (non-illuminated, illuminated or keyed), push pull operators (non-illuminated or illuminated), joy stick, dual push button.
- 3 blocks mounted in tandem (total of six blocks):** Single momentary push buttons (non-illuminated or illuminated).