

# Push Buttons and Operator Interface Specifiers Guide

## Type BW, SKYP & XACA Pendant Stations

Class 9001



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**SQUARE D**  
GROUPE SCHNEIDER

# Push Buttons and Operator Interface Specifiers Guide

## Class 9001, Type BW — Pendant Stations

### General Information

#### Type BW Standard Duty Pendant Stations

The Class 9001 Type BW Pendant Station is a pre-assembled, 2 button station well suited for standard hoist applications. Oversized finger grips on the rear of the enclosure make it easy to grip and operate.



#### Features and Options

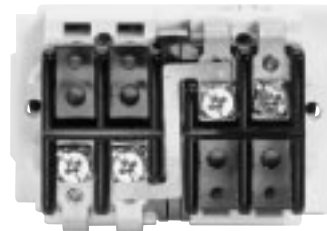
- Made of high impact thermoplastic with self-extinguishing flammability rating (UL 94V)
- NEMA 1, 3, 3R, 4, 4X, 13 Watertight, Dusttight, Oiltight, Corrosion Resistant
- UL Listed and CSA Approved
- 1/2" conduit opening
- Internal strain relief post
- Momentary contact
- Maintained contact
- Single speed
- Two speed
- With or without mechanical interlock
- Optional external hanger bracket and seal
- Ribs on top of enclosure prevent hanger bracket from rotating and coming loose
- Contoured for easy grip
- Easy to hold with one hand

- Interchangeable legend inserts
- Field installable mushroom button
- Full cover gasket to exclude harmful contaminants



Off and Stop are White Letters on a Red Background




- Jumper included on all single speed buttons (except universal types), saves wiring time
- Self-lifting pressure wire connectors for easy wiring



# Push Buttons and Operator Interface Specifiers Guide

## Class 9001, Type BW — Pendant Stations Specifications

### Specifications

Electrical ratings	AC - NEMA B600	DC - NEMA P600
Enclosure type	NEMA Type 1, 3, 3R, 4, and 4X	
Operating temperature	- 25 °C to + 60 °C - 13 °F to + 140 °F	
Housing material	Polycarbonate/PET Polyester Blend	
Storage temperature	- 40 °C to + 70 °C - 40 °F to + 158 °F	
Cable entry	1/2 inch NPT	
Approvals	 File E42259 CCN NKCR   File LR 25490 Class 3211 03  Marking      For Declaration of Conformity, see page 229.	

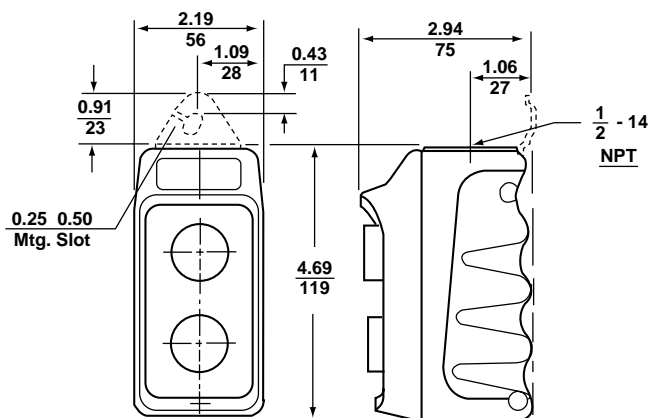
### Electrical Contact Ratings (BW70'S AND BW80'S)

AC – NEMA B600							
Volts ▲	Inductive 35% Power Factor				Continuous Carrying Amperes	Resistive 75% Power Factor	
	Make		Break				Make, Break and Continuous Carrying Amperes
	Amps	VA	Amps	VA			
120	30.0	3600	3.0	360	5	5	
240	15.0	3600	1.5	360	5	5	
480	7.5	3600	0.75	360	5	5	
600	0.6	3600	0.6	360	5	5	

DC – NEMA P600			
Volts	Inductive and Resistive		Continuous Carrying Amperes
	Make and Break Amperes		
120	1.10		5
240	0.55		5
600	0.20		5

▲ OSHA Regulation, Section 1910.170 Overhead and Gantry Cranes, limits the voltage at pendant push buttons to 150 Vac or 300 Vdc.

Approximate Dimensions



Type BW70B through Type BW82Y

Dual Dimensions:  $\frac{\text{Inches}}{\text{mm}}$



# Push Buttons and Operator Interface Specifiers Guide

## Class 9001, Type BW — Pendant Stations

### Application Data and Order Information

The Class 9001 BW70 and BW80 pendant stations are used for hoist applications, requiring either single speed or two speed buttons. The thermoplastic enclosure is provided with a 1/2 inch conduit entrance at top to accept a pendant cable and has internal strain relief provided as standard. The stations are rated NEMA Type 1, 3, 3R, 4 and 4X. The enclosure is available in three colors. All universal stations have double circuit blocks (1 N.O. — 1 N.C.) on each button and come without legends so they can be assembled to fit the application. For convenience, push buttons have interchangeable legend inserts. The complete line is UL listed and C.S.A. certified.



No. of Units	Description	Legend Insert Markings	Mechanical Interlock	Enclosure Color			Contact Symbol	Replacement Interior	
				Yellow	Black	Red		9001 Type	Contact Symbol
2	Single Speed	Up-Down	Yes	BW72Y	BW72B	BW72R	146	BOC368	146
		Forward-Reverse	Yes	BW73Y	BW73B	BW73R	146	BOC368	146
		On-Off ▲	Yes	BW74Y	BW74B	BW74R	10	BOC358	147
		Start-Stop	No	BW75Y	BW75B	BW75R	145	BOC359	25
		Start-Stop ▲	Yes	BW76Y	BW76B	BW76R	10	BOC358	147
		On-Off	No	BW77Y	BW77B	BW77R	146	BOC359	25
		On-Off	No	BW79Y	BW79B	BW79R	145	BOC359	25
		Up-Down	Yes	BW78Y	BW78B	.....	100	...	.....
		W/O Legend Inserts	Yes	BW70YU	BW70BU	BW70RU	25	BOC366	25
		W/O Legend Inserts	No	BW71YU	BW71BU	BW71RU	25	BOC359	25
Two Speed	W/O Legend Inserts ▲	Yes	BW74YU	BW74BU	BW74RU	147	BOC358	147	
		Yes	BW80YU	BW80BU	BW80RU	150	BOC367	150	
	Up-Down	Yes	BW82Y	BW82B	BW82R	150	BOC367	150	

▲ Maintained contact

#### Interchangeable Push Button Legend Inserts

Marking	For NEMA Type 4X Type BW70's and BW80's	Mushroom Button Inserts For NEMA Type 4X Type BW70's and BW80's	Marking	For NEMA Type 4X Type BW70's and BW80's	Mushroom Button Inserts For NEMA Type 4X Type BW70's and BW80's
	Type	Type		Type	Type
Start	B259	B282	On Off Hand Auto Blank-Black-Blank-Red	B257	B280
Stop	B260	B283		B258	B281
Forward	B255	B278		B265	B288
Reverse	B256	B279		B266	B289
Open	B263	B286		B251	B251
Close	B264	B287		B252	B252
Raise	B261	B284			
Lower	B262	B285			
Up	B253	B276			
Down	B254	B277			

Order must specify quantity of 10 or multiples of 10.

**Legend Insert Kit** – Kit includes one each of standard legend inserts as indicated below Type No. of kit.

Where Used:		Type
For NEMA Type 4X Type BW70's and BW80	Push Button	B250 (includes 1 each of B253 through B266)
	Mushroom Button	B300 (includes 1 each of B276 through B289)

#### Hanger Bracket



Form

Y236

Addition of External hanger bracket (similar to the one used on Class 9001 Type SKYP Pendant Stations). Use when polymeric cord connectors are required.

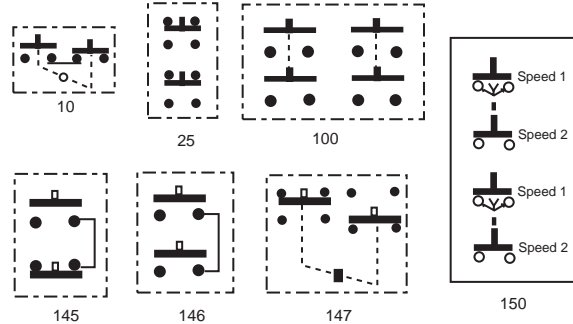
#### Hanger Bracket and Seal Kit



Type

B350

#### Contact Symbol



File E42259

CCN NKCR



File LR 25490

Class 3211 03



Marking

#### Replacement Enclosures 9001BW70'S and 9001BW80'S

Description	Yellow	Red	Black
Box	3110113201	3110113202	3110113203
Cover	3110114750	3110114751	3110114752

Screws not included. Order quantity 4 of a 21930-14281 for the screws.

#### Mushroom Button (less button insert) – For NEMA Type 4X, BW70 and BW80

Color	Type
Red	B303

For Dimensions ..... Page 159



# Push Buttons and Operator Interface Specifiers Guide

## SERIPLEX® Control Bus Version 2 Material Pull Pendant Station

The **Material Pull Pendant Stations** provide an interface between the SERIPLEX® control bus and a single input push button operator enclosed in a pendant station. Single-bit bus interface circuitry is used in this unit. If multiplexed operation is used by the CPU interface card, the pendant is scanned every frame. This pendant is not capable of being multiplexed (See page 9 for details).

### Features

- Durable enclosure rated NEMA Type 12.
- Bus powered lamp modules don't require an auxiliary power supply or additional power conductors.
- Bus powered lamp modules use high visibility, low current consumption LED lamps, providing long life and greater system flexibility.
- Mini-style quick-change connectors provide for easy pendant installation and change out.
- LED indicators provided on the SERIPLEX module show power-on status, input status and output status – a convenient installation and troubleshooting aid.

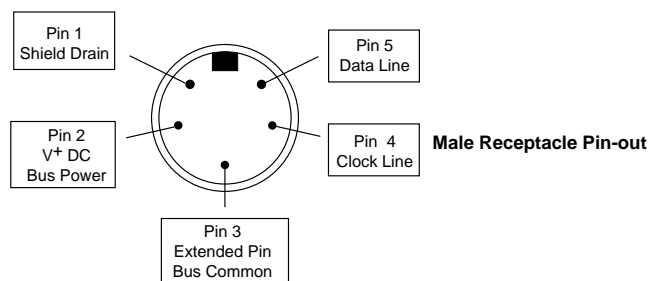
### About Material Pull Systems

A SERIPLEX Material Pull Pendant is used to control the floor stock of parts being installed during a final assembly operation. Typically, as an assembly worker uses parts they monitor the stock of material being used. When stock falls to a predetermined level, the assembly worker pushes the button on the Material Pull Pendant and a signal is sent to the computer requesting parts for that specific assembly operation. The illuminated push button in the pendant flashes to indicate the location where the parts are needed and a lift truck driver is dispatched with the parts. The lift truck driver presses the pendant push button to indicate that the parts have been delivered and to reset the system.

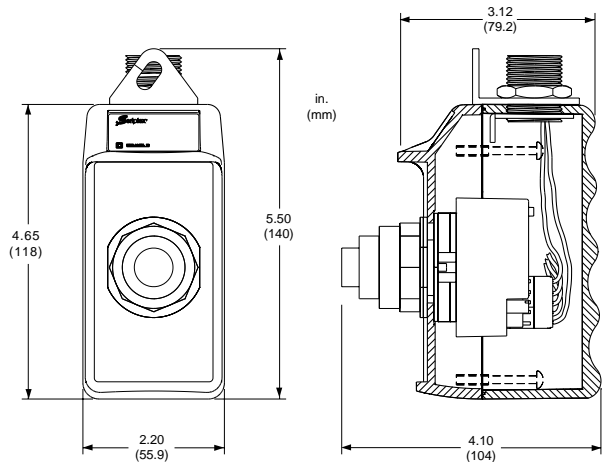
Catalog Number	Input Type Address A	Input Type Address B	Output Type Address B	Description
SPX BWPEND5	—	N.O.	LED Lamp - Amber	Pendant enclosure, single illuminated push button, bus powered amber LED lamp, 5-pin mini-style quick change connector
9001 AEQ3370	—	N.O.	LED Indicator - Red	Pendant enclosure, single non-illuminated push button, red LED indicating lamp inserted in bottom of pendant, 5-pin mini-style quick change connector

### Electrical Specifications

Voltage: 24 Vdc  
Capacitance: 75 pF (typical)  
Max Current: 20 mA



### Dimensions (SPXBWPEND5 only)



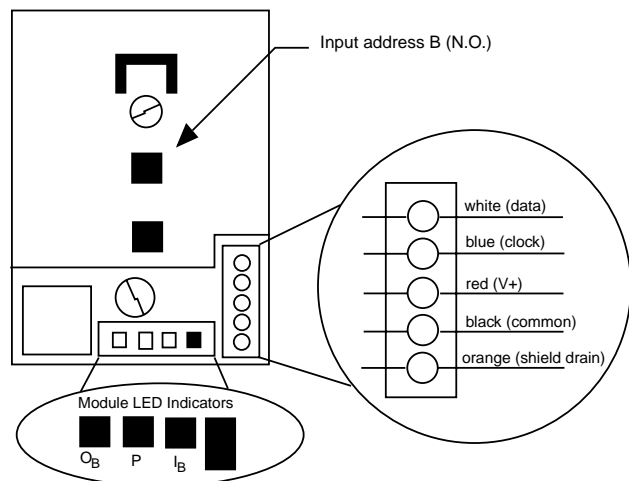
Pendant connector receptacle: Torque nut to 23 - 27 lb-in.  
Pendant enclosure screws: Torque screws to 15 lb-in.  
Operator ring nut: Torque 6 - 8 lb-ft.

Note: Gasket must be in place to maintain enclosure rating.

### Replacement Parts

Part Number	Description
SPXLEDA1	LED Lamp - Amber
9001B350	BW Pendant Hanger Bracket
9001A31	Push button Lens - Amber
SPXHH2P2CABLE	Hand-Held Set-Up Tool Adapter Cable for 5-Pin Mini-style Connectors

### Internal Wiring to SERIPLEX Module



LED	Color	Function and Address
I <sub>B</sub>	yellow	Input B Active
P	green	Bus Power Applied
O <sub>B</sub>	yellow	Output B Active

For additional information, see catalog 8330CT9601R11/96.



# Push Buttons and Operator Interface Specifiers Guide

## Type XACA — Pendant Stations Specifications



XAC pendant stations are designed for standard or medium duty control circuit applications. The enclosures are made from rugged, double insulated thermoplastic material. These stations have been designed for easy handling and operation, even with heavy work gloves.

Two styles of stations are offered; "small hoist" pistol grip stations with integral parts (see page 163), and "general purpose" station components with modular assembly required. The general purpose components are available as custom factory assembled stations. For custom applications, a wide range of operators, contact blocks, legend plates and accessories are offered.



XACA08  
(Shown with optional operators and accessories)




### Features

- 1 and 2 speed versions
- Double insulated
- Shock and corrosion resistant
- 2, 4, 6, 8, 12 element versions
- Ease of operation

### Applications

- Overhead cranes
- Tower cranes
- Fixed hoists
- Beam hoists

### Specifications

Electrical ratings	NEMA A600, Q600
Enclosure	XACAO* NEMA Type 4, 4X (Indoor/Outdoor), 5 IP 65
	XACAO* (Pistol grip) NEMA Type 4, 4X (Indoor), 5 IP 65
Operating temperatures	-15 °C to +70 °C -5 °F to +158 °F
Housing	Yellow polypropylene
Storage temperatures	-40 °C to +70 °C -40 °F to +158 °F
Shock resistance	100 g
Vibration resistance	15 g for f = 40 to 500 Hz
Mechanical life	1 million operations (The product life expressed is based on average usage and normal operating conditions. Actual operating life will vary with conditions. The above statements are not intended to nor shall they create any express or implied warranties as to product operation or life. For information on the limited warranty offered on this product, please refer to Square D terms and conditions of sale found in the Square D Digest.)
Operating force	XACA Multi-element types -with contact ZB2BE: 1 daN (36 oz.) for 1N.O., 1.3 daN (46.8 oz.) for 1N.O./1N.C. -with contact XENG1491: 1.4 daN (50.4 oz.) for 1N.C./2N.O. -with contact XENG1191: 1.4 daN (50.4 oz.) for 1st step, 2.5 daN (89.9 oz.) for 2nd step
Cable entry	XACD - 7 to 18 mm All other models - 8 to 26 mm
Cabling	Screw and captive cable clamp terminals. Recommended torque 15.62 in lbs. Capacity: minimum 1 x .5 mm <sup>2</sup> (20 AWG) solid or stranded, maximum with or without cable end: 2 x 1.5 mm <sup>2</sup> (16 AWG) or 1 x 2.5 mm <sup>2</sup> (14 AWG) or by cable quick connector conforming to NF C 20-20 (on request).
Approvals	 File E164353 CCN NKCR
	 File LR 44087 Class 3211 03
	 Marking





**XACA2013**



**XACA06**



**XACA03**  
(Shown with optional operator)



**ZB2BE10**



**XENG37**



**XENG1191**



**XACS10**

#### Pistol grip stations

Description	Speeds	Function 1 Speed / 2 Speed	Catalog Number
1 N.O. contact per operator 2 Mechanically interlocked operators	1	↕	XACA201▲
2 N.O. (staggered) contacts per operator 2 Mechanically interlocked operators	2	↕↕	XACA207▲
1 N.O. + 1 N.C. 2 Mechanically interlocked operators	1	↕	XACA205▲
1 N.O. contact per direction 1 Mechanically interlocked 2 way toggle	1	↕	XACD21A0101
1 N.O. + N.O. staggered 1 Mechanically interlocked 2 way toggle	2	↕↕	XACD21A1231
1 N.O. & 1 N.C. contact per direction 1 Mechanically interlocked 2 way toggle	1	↕	XACD21A0105
1 N.C. + 1 N.O. + 1 N.O. staggered 1 Mechanically interlocked 2 way toggle	2	↕↕	XACD21A1241

▲ These XACD units are available with factory installed E-stops. Add a "3" to the end of the catalog number for standard E-stop or add a "4" for a "Trigger Action" E-stop.

#### General purpose pendants\*

Enclosures	Catalog Number
2 hole enclosure	XACA02
3 hole enclosure	XACA03
4 hole enclosure	XACA04
6 hole enclosure	XACA06
8 hole enclosure	XACA08
12 hole enclosure	XACA12

\* Standard enclosures include internal mounting plate, cable sleeve for 8 to 26 mm, internal cable clamp, suspension ring and cable tie.

#### Contact Blocks For Operators In Cover

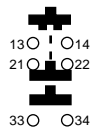
Description	Wiring Diagram	Catalog Number
1 N.O./spring return/1 speed	—	ZB2BE101
1 N.C./spring return/1 speed	—	ZB2BE102
1 N.O. early close & 1N.C.&1N.O./spring return/2 speed	Fig. 1	XENG1191
1 N.C. & 2 N.O./spring return/1 speed	Fig. 2	XENG1491
1 N.O. & 1 N.O. latching/1 speed/interlocked	Fig. 3	XENG3781
1 N.O. & 1 N.C. latching/1 speed/interlocked	Fig. 4	XENG3791

#### For operators in base of enclosure†

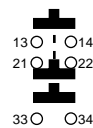
1 N.O./1 speed	XACS101
1 N.C./1 speed	XACS102
2 N.O./1 speed	XACS103
2 N.C./1 speed	XACS104
1 N.O. & 1 N.C./1 speed	XACS105

† Cannot be used with XACA03 pendant.

#### Wiring diagrams



**Fig. 1**



**Fig. 2**



**Fig. 3**



**Fig. 4**

# Push Buttons and Operator Interface Specifiers Guide

## Type XACA — Pendant Stations

### Operators and Accessories



Booted push button



Mushroom head



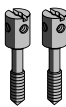
Selector switch



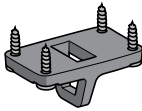
Selector switch (key operated)



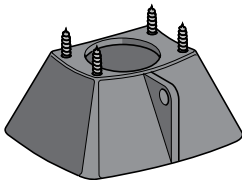
Wobble stick



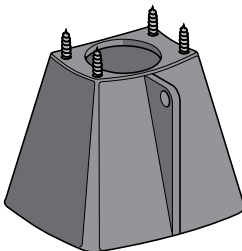
XACB961



XACA971



XACA982



XACA983

#### Operators▲

Description	Color	Catalog Number
Booted push button	White	XACA9411
	Black	XACA9412
	Green	XACA9413
	Red	XACA9414
	Yellow	XACA9415
	Blue	XACA9416
	Brown	XACA9419

Description	Mushroom Size	Color	Catalog Number
Mushroom head, momentary	30 mm	Black	ZA2BC24
		Red	ZA2BC44
Mushroom head, momentary	40 mm	Black	ZA2BC2
		Red	ZA2BC4
Mushroom head, push to maintain/turn to release	30 mm	Red	ZA2BS44
		Red	ZA2BS54
Mushroom head, push to maintain/turn to release (trigger action)*	30 mm	Red	ZA2BS834
		Red	ZA2BS844
Mushroom head, push to maintain/key turn to release	30 mm	Red	ZA2BS74
		Red	ZA2BS14
Mushroom head, push to maintain/key turn to release (trigger action)*	40 mm	Red	ZA2BS844

Description	Color	Catalog Number
Selector switch/2 position - maintained**	Black	ZA2BD2
Selector switch/3 position - maintained**	Black	ZA2BD3
Selector switch/2 position - maintained key operated - key removal from left or right position**	NA	ZA2BG4
Selector switch/3 position - maintained key operated - key removal from left or right position**	NA	ZA2BG5
Wobble stick (bottom mounting recommended)	Black	ZA2BB2
	Red	ZA2BB4

#### Pilot light components

Description	Color	Catalog Number
Direct supply base/without lamp (for 6 to 120 V applications) (AC/DC)		ZB2BV006
Resistor supply base/with 130 V lamp (for 220-240 V applications) (AC/DC)		ZB2BV007
Pilot light operators for incandescent lamps	Green	ZA2BV03
	Red	ZA2BV04
	Amber	ZA2BV05
	Blue	ZA2BV06
	Clear	ZA2BV07
Pilot light operators for LED lamps	Green	ZA2BV033
	Red	ZA2BV043
	Amber	ZA2BV053

▲ Booted push buttons are for cover mounting only. All other operators can be mounted on cover or bottom.

\* Trigger action mushroom heads are "tamper proof" whereby a change of contact state is not possible by "teasing" or floating the operator.

\*\* Not for use with XEN G contact blocks.

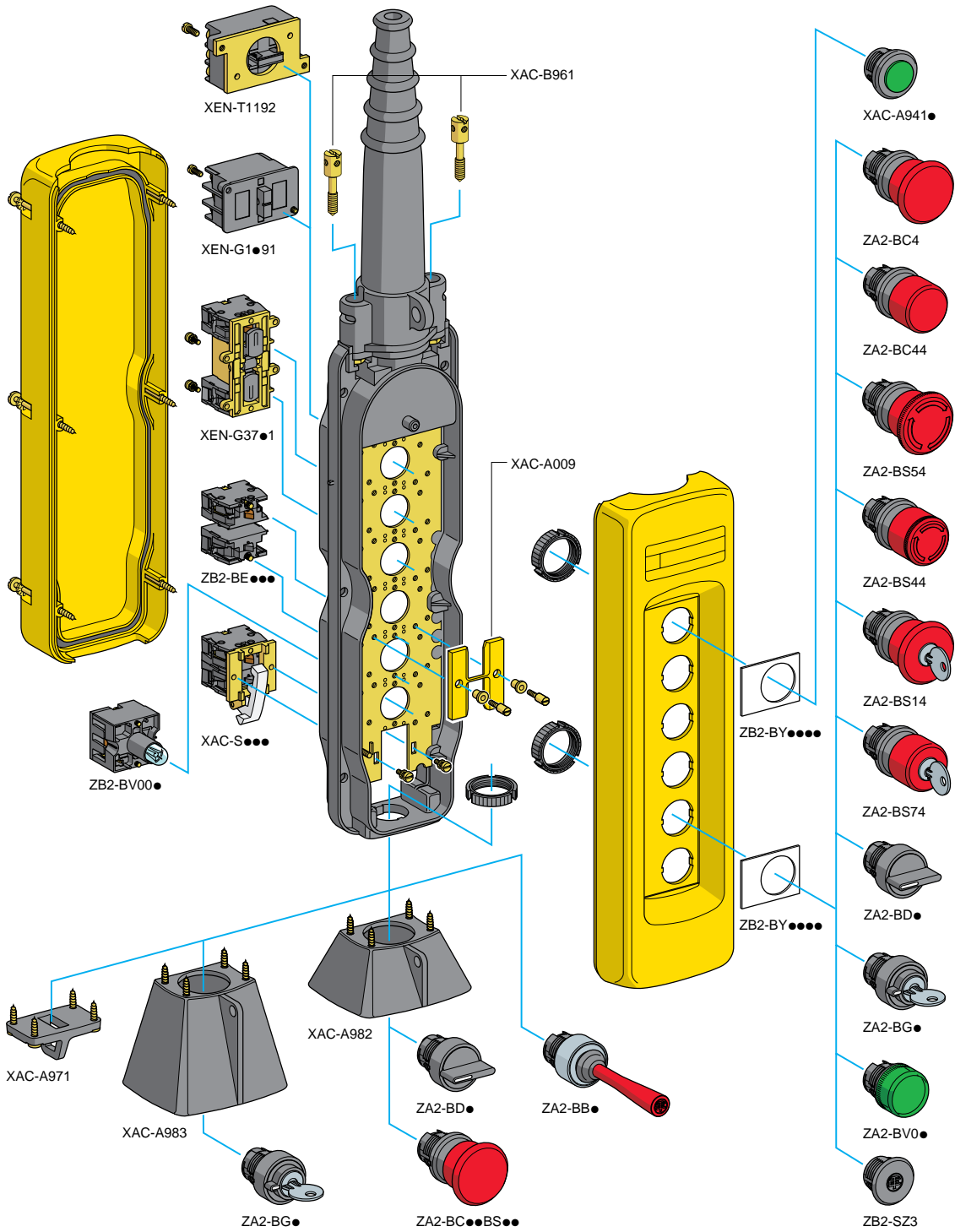
#### Enclosure Accessories

Description	Catalog Number
Blank hole plug	ZB2SZ3
Mechanical interlock (momentary). For use with XAC booted operators only	XACA009
Adapter for self-supporting cable	XACB961
Low suspension ring for single row station	XACA971
Protective guard for bottom mounted mushroom head	XACA982
Protective guard for bottom mounted selector switch or key switch	XACA983





# Push Buttons and Operator Interface Specifiers Guide Type XACA — Pendant Stations Exploded Drawing



30075-16

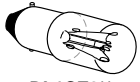
# Push Buttons and Operator Interface Specifiers Guide

## Type XACA — Pendant Stations

### Lamps and Legend Plates

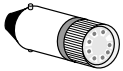


#### Lamps



**DL1CE0\*\*  
(Incandescent)**

Type	Voltage (AC/DC)	Watts	Catalog Number
Replacement bulbs (Type BA9s) Incandescent	6	1.2	DL1CB006
	12	2.0	DL1CE012
	24	2.0	DL1CE024
	48	2.4	DL1CE048
	130	2.6	DL1CE130
Neon (use with direct supply light module)	120	-	NE51HRT120V
	220	-	NE51HRT220V
	380	-	NE51HRT380V



**DL1CJUS\*\*\*\*  
(LED)**

Type	Color	Voltage	Part Number
LED, BA9s base for Direct Supply blocks	Green	6 volt ac/dc	DL1CJUS0063
	Red	6 volt ac/dc	DL1CJUS0064
	Amber	6 volt ac/dc	DL1CJUS0065
	Green	12 volt ac/dc	DL1CJUS0123
	Red	12 volt ac/dc	DL1CJUS0124
	Amber	12 volt ac/dc	DL1CJUS0125
	Green	24 volt ac/dc	DL1CJUS0243
	Red	24 volt ac/dc	DL1CJUS0244
	Amber	24 volt ac/dc	DL1CJUS0245
	Green	120 volt ac/dc	DL1CJUS1203
	Red	120 volt ac/dc	DL1CJUS1204
	Amber	120 volt ac/dc	DL1CJUS1205

#### PVC Standard legend plates 30 x 40mm



Text★	Catalog number
Bridge Forward	ZB2BY2343
Bridge Reverse	ZB2BY2344
Close	ZB2BY2314
Down	ZB2BY2308
Emergency Stop	ZB2BY2330
Fast	ZB2BY2328
Forward	ZB2BY2305
For Rev	ZB2BY23
For-O-Rev	ZB2BY2384
Hand Off Auto	ZB2BY2387
High	ZB2BY2338
High Low	ZB2BY2369
Hoist Down	ZB2BY2342
Hoist Up	ZB2BY2341
In	ZB2BY2503
Inch	ZB2BY2321
Jog For	ZB2BY2381
Jog Rev	ZB2BY2380
Jog Run	ZB2BY2365
Left	ZB2BY2310
Low	ZB2BY2336
Lower	ZB2BY2337
Man Auto	ZB2BY2372

Text★	Catalog number
Off	ZB2BY2312
On	ZB2BY2311
Off On	ZB2BY2367
Open	ZB2BY2313
Open Close	ZB2BY2376
Open-O-Close	ZB2BY2388
Out	ZB2BY2339
Power On	ZB2BY2326
Raise	ZB2BY2335
Reset	ZB2BY2323
Reverse	ZB2BY2306
Right	ZB2BY2309
Run	ZB2BY2334
Slow	ZB2BY2327
Start	ZB2BY2303
Stop	ZB2BY2304
Stop Start	ZB2BY2366
Trolley Right	ZB2BY2345
Trolley Left	ZB2BY2346
Up	ZB2BY2307
Up Down	ZB2BY2370
Up-O-Down	ZB2BY2389

★ All nameplates are black w/white lettering except "Stop", "Emergency Stop" and "Reset" which are red w/white lettering. For black "Reset" change final digit of catalog number to 2.

Type	Description	Catalog number
PVC blank legend	Blank	Black or red background-30 mm x 40 mm
	Blank	Yellow or white background-30 mm x 40 mm
PVC custom engraved	Special engraving†	Black background, white letters-30 mm x 40 mm
	Special engraving†	Red background, white letters-30 mm x 40 mm
	Special engraving†	White background, black letters-30 mm x 40 mm
	Special engraving†	Yellow background, black letters-30 mm x 40 mm

† Please specify lettering when ordering. Two lines with 11 characters (including spaces) maximum on each line.

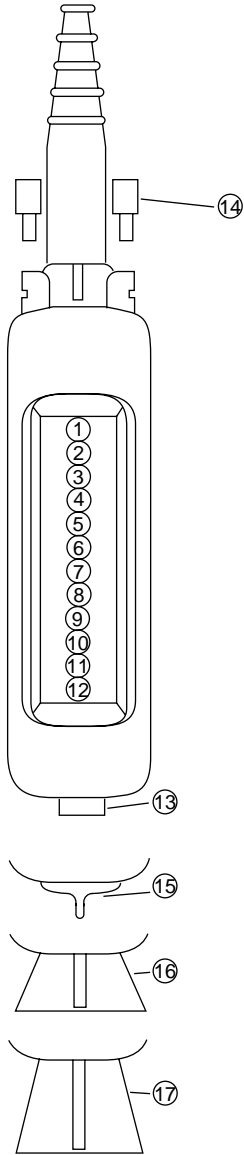


# Push Buttons and Operator Interface Specifiers Guide Type XACA — Pendant Stations Order Form

**XACA Order guide instructions**

Custom built pendant stations

1. The first step in putting together your pendant station is to determine the number of operators that you require. This enables you to choose the enclosure based on the number of holes needed.
2. Select the type of operator, contact block and appropriate nameplate for each function required from pages 163-166. Enter the components for each function on the order form below.
3. Check for special functions that may be required. These items could include mechanical interlocks, adapters for self-supporting cable, lower support rings, protective guards etc.



**TO BE COMPLETED BY SQUARE D**

Name		Branch/Sales office	
Date		Order No.	Delivery date

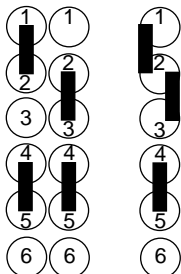
**TO BE COMPLETED BY CUSTOMER**

Firm		Sheet No.	
Date	Cust. Order No.	Delivery date	

No. of identical units required  Unit reference of enclosure **XACA**

Functions (optional)	Mechanical interlock (draw a line between the 2 units to be interlocked★)	Legends	Contact blocks and pilot light bodies	push button pilot light or blanking plug
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

**\* Mechanical interlock**



Possible combinations      Impossible combinations

★ Mechanical interlock XACA009 Number of XAC A009 required

**Unit mounted in base of station (facing downwards)**

13			
----	--	--	--

**Attachments**

	Position	Type	Catalog No.
Cross the appropriate box if required	14	Adapters for self supporting cable type BBAP (only available with 8 to 26 mm dia. cable sleeve)	XACB961
	15	Lower support ring	XACA971
	16	Protective guard for base mounted selector switch or 40 mm emergency stop push button	XACA982
	17	Protective guard for key switch	XACA983

Photocopy this form and complete all information.



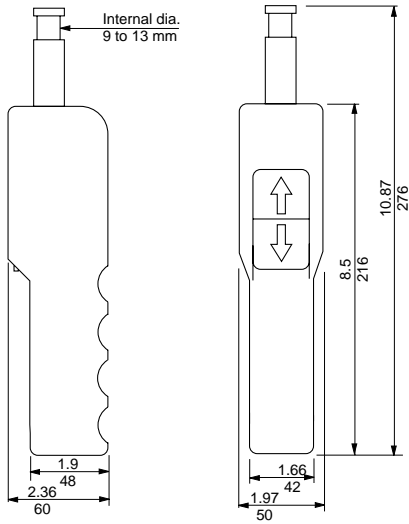
# Push Buttons and Operator Interface Specifiers Guide

## Type XACA — Pendant Stations

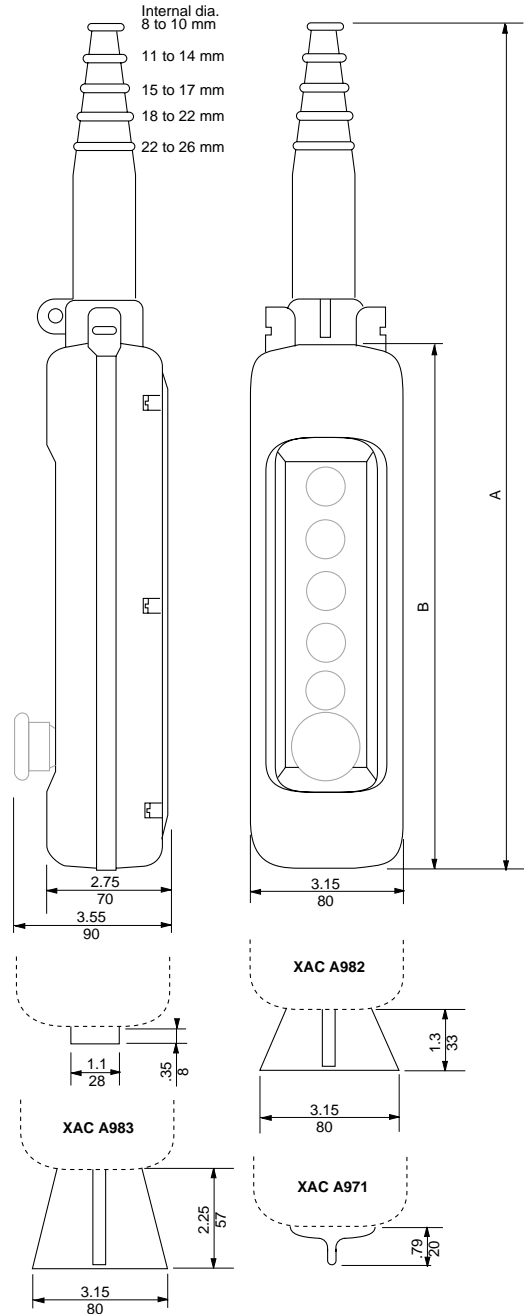
### Dimensions



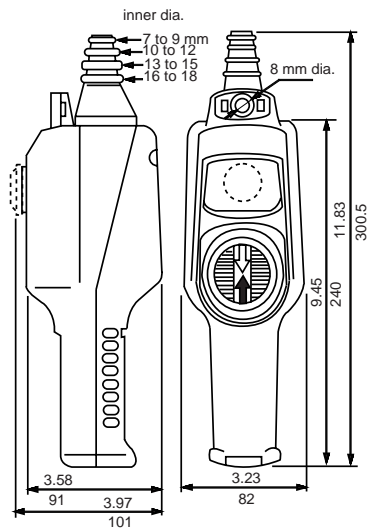
**Small hoist type**  
XACA201 and A205



**General purpose type**  
XACA●●●●






**Small hoist**  
XACD



No. of Holes IN/mm	2		3		4		6		8		12	
	IN	mm	IN	mm	IN	mm	IN	mm	IN	mm	IN	mm
A	15.00	380	15.00	380	17.33	440	19.70	500	22.10	560	26.78	680
B	7.50	190	7.50	190	9.85	250	12.20	310	14.57	370	19.30	490

# Push Buttons and Operator Interface Specifiers Guide

## Class 9001, Type SKYP — Pendant Stations Specifications

Specifications	
Electrical ratings	Types SKRU2 - SKRU5: AC - Nema B300 DC - Nema P600 Types SKRU1, 10, 11: AC - Nema A600: DC - Nema P600
Enclosure type	UL Type 1, 3, 3R, 4, 4X, and 13
Operating temperature	- 30 °C to + 60 °C - 13 °F to + 140 °F
Housing material	Polycarbonate
Storage temperature	- 40 °C to + 70 °C - 40 °F to + 158 °F
Cable entry	1/2 inch NPT
Approvals	 File E42259 CCN NKCR   File LR 25490 Class 3211 03  Marking      For Declaration of Conformity, see page 229.

### Electrical Contact Ratings (Types SKRU2 Through SKRU5)\*

AC – NEMA Type B300						
Volts▲	Inductive 35% Power Factor				Continuous Carrying Amperes	Resistive 75% Power Factor Make, Break and Continuous Carrying Amperes
	Make		Break			
	Amps	VA	Amps	VA		
120	30	3600	3	360	5	5
240	15	3600	1.5	360	5	5

### Electrical Contact Ratings (Types SKRU1, 10 and 11)\*

AC – NEMA Type A600					DC - Standard Duty - NEMA P600		
Volts*	Inductive 35% Power Factor			Resistive 75% Power Factor Make, Break and Continuous Carrying Amperes	Volts	Inductive and Resistive	
	Make Amperes	Break Amperes	Continuous Carrying Amperes			Make and Break Amperes	Continuous Carrying Amperes
120	60	6	10	10	120	1.1	10
240	30	3	10	10	240	0.55	10
480	15	1.5	10	10	600	0.2	10
600	12	1.2	10	10			

▲ OSHA Regulation, Section 1910.170 Overhead and Gantry Cranes, limits the voltage at pendant push buttons to 150 Vac or 300 Vdc.



# Push Buttons and Operator Interface Specifiers Guide

## Class 9001, Type SKYP — Pendant Stations

### Application Data and Order Information

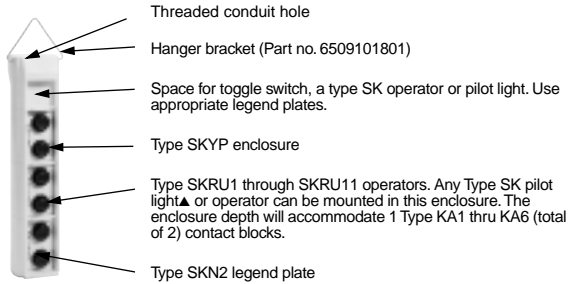
This line of pendant stations consists of polymeric enclosures (2 through 10 units), push button units (1 through 5 speed) and laminated legend plates. All enclosures have an extra single unit space near the top which permits the installation of a toggle switch ①, a Type SK operator or pilot light ② or a warning label. All enclosures come with a stainless steel hanger bracket and internal strain relief post, as standard. Enclosures are yellow and have a threaded opening in the top. The complete line is UL Listed and CSA Certified with NEMA Type environmental ratings 1, 3, 4, 4X and 13.

#### Enclosures

Size	Conduit Entrance Size	Enclosure Only▲	Enclosure For Assembled Station●
		Type	Type
2 Button	3/4"-14 NPT	SKYP2	SKYP20
4 Button	3/4"-14 NPT	SKYP4	SKYP40
6 Button	1"-11 1/2 NPT	SKYP6	SKYP60
8 Button	1 1/4"-11 1/2 NPT	SKYP8	SKYP80
10 Button	1 1/4"-11 1/2 NPT	SKYP10	SKYP100

▲ Class 9001 SK push-to-test pilot lights and remote test pilot lights will not fit in these enclosures.

● Assembled pendant stations consist of an enclosure, operators and legend plates. The price of the total station consists of the prices of the individual components - there is no charge for assembly. All custom orders must include the pendant key sheet available as shown on page 173.

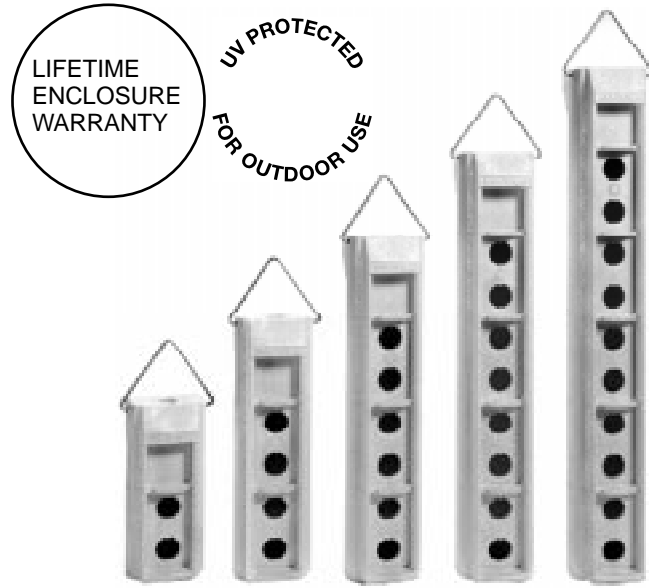
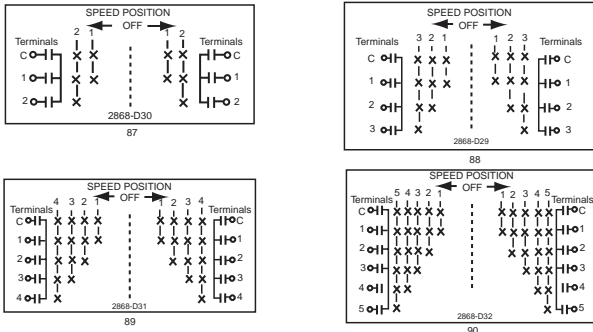


#### Push Button Units

Image	Number of Buttons Per Unit	Description	Contact Symbol – See Below	Type*
	2	Single Speed – Momentary Interlocked	7	SKRU1
	2	Single Speed – Momentary Non-Interlocked	5	SKRU10
	2	Single Speed – Maintained Interlock	10	SKRU11
	2	Two Speed – Momentary Interlocked	87	SKRU2
	2	Three Speed – Momentary Interlocked	88	SKRU3
	2	Four Speed – Momentary Interlocked	89	SKRU4
	2	Five Speed – Momentary Interlocked	90	SKRU5

\* Types SKRU 1, 10 and 11 use Type KA contact blocks. Types SKRU 2 thru 5 are factory enclosed contact blocks.

#### Multispeed Contact Symbols ("X" = Contact Closed)



#### Legend Plates

Image	Where Used	Marking	Type
	For SKRU1 through SKRU11	Blank-Blank Hoist: Up-Down Trolley: East-West Trolley: Fwd.-Rev. Trolley: North-South Bridge: Fwd.-Rev. Bridge: East-West Bridge: North-South Start-Stop Reset-Stop Aux Hoist: Up-Down Power: On-Off Specify Marking	SKN200⑤ SKN201 SKN202 SKN203 SKN204 SKN205 SKN206 SKN207 SKN208 SKN209 SKN210 SKN211 SKN299⑤
	With Toggle Switch① in Top Space of Enclosure	Blank Off-On On-Off Specify Marking	SKN500③ SKN544③ SKN545③ SKN599③
	With Type SK Operator or Pilot Light② in Top Space of Enclosure	Blank On Off Emerg. Stop Run Power On Off-On Specify Marking	SKN100④ SKN103 SKN104 SKN105 SKN124 SKN138 SKN144 SKN199④

① Can be supplied by Square D as Class 9001 Type SKSTS1 - includes boot for NEMA Type 4X.

② See Class 9001 Type SK on page 171.

③ Includes legend plate, gasket and ground plate to be used with toggle switch.

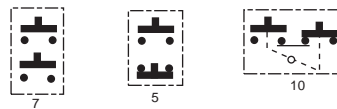
④ Tri-laminated legend plate having a yellow or red background on a black core.

⑤ 19 characters each side max.

#### Closing Plate

Image	Type
	SK52

#### Single Speed Contact Symbols



Dimensions ..... Page 172  
Key Sheet for Custom Assembled Pendant ..... Page 173




# Push Buttons and Operator Interface Specifiers Guide

## Class 9001, Type SK — Operators

### Application Data and Order Information

#### Non-illuminated


	Description	Color	Catalog
	2 Position	Red	SKR9R
	Maintained Pull	Red (1)	SKR9R05
	Maintained Push	(2)	SKR9 (2)

(1) Red knob available with "Push Emergency Stop" printed on the red knob.  
See note (3) below for additional options.

Color	(2) Other Color Codes
Black	B ▲
Red	R
Green	G
Blue	L
Yellow	Y
White	W ▲
Orange	S
Clear	C
Amber	A





▲ These colors are not available on illuminated push buttons.


#### Illuminated

	Description	Color	Voltage	Catalog
	2 Position	Red	120 Vac/dc - Full Voltage	SKR9P58R
	Maintained Pull	Red (1)	24 Vac/dc - Full Voltage	SKR9P55R05
	Maintained Push	(2)	24 Vac/dc - Full Voltage	SKR9P55 (2)

(1) Red knob available with "Push Emergency Stop" printed on the red knob.  
See note (3) below for additional options.


#### Contact Blocks (3)

Description	Symbol	Catalog
 (Clear Cover)		KA1
 (Red Cover)		KA3

Both N.C. contacts are direct opening. 

#### Shallow Depth Light Modules For Type SK Control Units

- UL listed and CSA certified
- LED light modules use lamp with 7 element LED cluster that provides illumination similar to incandescent illumination.
- LED light modules require the color cap color and the LED color be the same or use a clear color cap.

	Voltage	Description	For Use With Single Lamp III. Operators as Indicated ①	Light Module Type No.	Voltage Assembly Code	Rating	Replacement Lamps	
							Lamp Number (ANSI)	Lamp Part Number
	24-28 Vac-dc	Full Voltage	All	KM55	55	1.2 VA	757	2550101002
	24-28 Vac-dc	LED Red	All	KM55LR	55LR	0.5 VA		6508805204
	24-28 Vac-dc	LED Green	All	KM55LG	55LG	0.5 VA		6508805206
	24-28 Vac-dc	LED Yellow	All	KM55LY	55LY	0.5 VA		6508805205
	110-120 Vac-dc	Full Voltage	All	KM58	58	3.0 VA	120MB	2550101027
	110-120 Vac-dc	LED Red	All	KM58LR	58LR	0.5 VA		6508805204
	110-120 Vac-dc	LED Green	All	KM58LG	58LG	0.5 VA		6508805206
	110-120 Vac-dc	LED Yellow	All	KM58LY	58LY	0.5 VA		6508805205

① 9001 SK

#### Maximum Current Ratings For Control Circuit Contacts – Types KA1-KA6, KA21-25, KA31-35, KA1G-KA6G

Volts	AC						Volts	DC				
	Inductive (NEMA Type A600) 35% Power Factor					Resistive 75% Power Factor Make, Break and Continuous Amperes		Inductive and Resistive (NEMA Type P600)				
	Make		Break		Continuous Carrying Amperes			Make and Break				Continuous Carrying Amperes
	Amperes	VA	Amperes	VA				KA1	KA2 KA3	KA4	KA5 KA6	
120	60	7200	6.0	720	10	10	125	1.1	1.1	1.1	1.1	10
240	30	7200	3.0	720	10	10	250	0.55	0.55	–	0.55	10
480	15	7200	1.5	720	10	10	600	0.2	0.2	–	0.2	10
600	12	7200	1.2	720	10	10						

(3) For additional Type SK push button operators (illuminated and non-illuminated), light modules, and contact blocks, see document 9001CT9601: 30mm Push Buttons Type K and SK. All illuminated push button operators must use a shallow depth light module listed above. Only standard pilot lights and non-illuminated selector switches can be used in Type SKYP enclosures.



**Push Buttons and Operator Interface Specifiers Guide**  
**Class 9001, Type SKYP — Pendant Stations**  
**Dimensions**



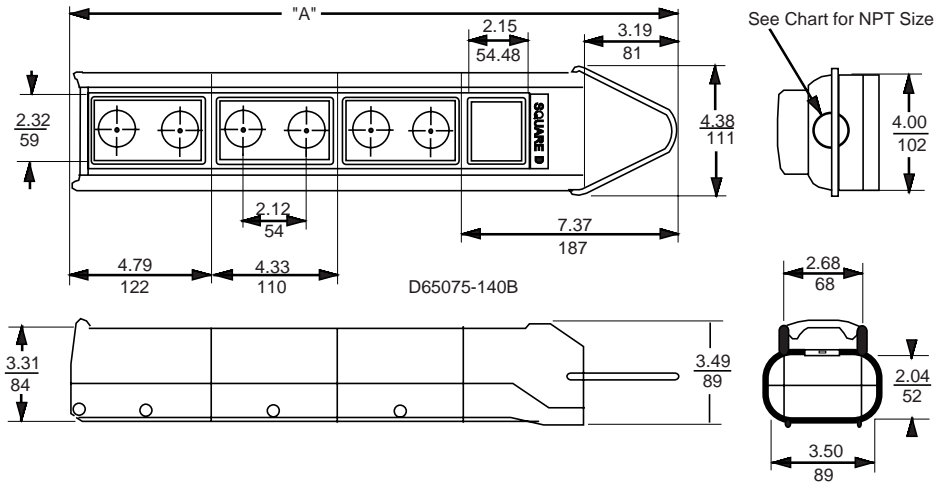
Approximate Dimensions

Units	"A" Dimensions		Conduit Opening
	Inches	mm	NPT
2	11.70	297	3/4" -14
4	16.03	407	3/4" -14
6	20.36	517	1" -11 1/2
8	24.69	627	1 1/4" -11 1/2
10	29.02	737	1 1/4" -11 1/2

**Type SKYP**

Class 9001 Type SK Push-To-Test Pilot Lights and Remote Test Pilot Lights **will not** fit in these enclosures.

Standard Pilot Lights **will fit** in these enclosures. For illuminated operators, in the SKYP, the shallow depth light module (9001KM55 or 9001KM58) must be used.



Dual Dimensions:  $\frac{\text{Inches}}{\text{Millimeters}}$

Type SKYP







# Push Buttons and Operator Interface Specifiers Guide

