

Series 60
Series C8
Series C8P
Series 30

Single Lamp Switch Indicator and Unlighted Switches



stacosystems™
One Step Ahead™

TABLE OF CONTENTS

Single Lamp Switch Indicator and Unlighted Switches

- **Rugged Sealed Design for Tough Environments**
- **QPL's to M22885/18, M22885/99 and M8805/99**
- **Low Cost Versions Boast QPL Like Performance**
- **Attractive Display Pushbuttons Have Legend Versatility**
- **Variety of Easy Panel Mounting Options.**

General Information	1
Product Design and Engineering Data	1
Specifications, Military	2
MIL Spec Cross Reference Listing	2-3
Series 60 Lighted Switches (M22885/18 and M22885/99)	4
Solder Terminations	
Models 65/66 – Dimensions/Specs/Ordering	5
PC or Wire Wrap Terminations	
Models 63/64 – Dimensions/Specs/Ordering	6
Models 61/61 Indicators – Dimensions/Specs/Ordering	7
Series 60 Lighted Pushbutton	8
Ordering Information	9
M22885 QPL Lighted Pushbutton Ordering Information	12
Series C8 Lighted Pushbutton/Switch Indicator	13
Ordering Information	14
Series C8P Lighted Pushbutton/Switch Indicator	16
Dimensions/Specifications	17
Ordering Information	18
Series 30 Unlighted Pushbutton Switches (M8805/99)	19
Dimensions/Specifications	19
Ordering Information	19
Other Staco Systems Products	<i>inside back cover</i>
Controllers	<i>back cover</i>

PRODUCT DESIGN AND ENGINEERING DATA

General Information

Staco Systems products are designed and manufactured to meet exacting specifications of Original Equipment Manufacturers who demand dependability, attractive appearance and maximum value from their products. Combining imaginative engineering with manufacturing know-how Staco Systems offers the most versatile and reliable circuit control components available.

Staco Systems' full line of Lighted Pushbutton Switches and Indicators provide a wide selection of circuitry control capabilities and display screen combinations. Design and performance features, durability, cost saving and realistic delivery schedules all combine to make Staco Systems your best buy. When you compare total costs...purchase, installation, and maintenance...you can't beat Staco Systems.

Quality Control

Staco Systems maintains a Quality Control Department which encompasses all of the functions required to attain the company's high quality objectives in every level of production. The inspection systems and documentation used to control the quality of products manufactured conforms to all requirements of MIL-L-45208A. As an approved manufacturer of Qualified Products List (QPL) parts Staco Systems' program is regularly monitored by the appropriate Defense Department Agencies.

Materials

The basic switch/indicator module is made of premium grade glass filled thermoplastic polyester. This material offers high impact strength, dielectric strength, and insulation resistance. U.L. recognized, the plastic is fire resistant and flame retardant. Though resistant to many common solvents and cleaning solutions, it is recommended that isopropyl alcohol is used for cleaning.

Switch housings are made of aluminum for high structural strength and light weight. Black anodized finish on non-shielded Series 60 and Series 30 Switch/Indicators provide corrosion resistant surface. RFI/EMI shielded units have a conductive chem-film, irradiate finish that is equally corrosion resistant. Commercial grade switch/indicators have clear aluminum housing.

Contact materials are high conductivity precious metal alloys, gold plated. Switch moving contacts are not based on over-center springs. No springs are used as conductors, eliminating all problems of annealing and loss of spring contact pressure.

Pushbutton plastic color chips provide controlled color diffusion and excellent resistance to high temperature. Face plate has high structural strength capable of withstanding 25 pound distributed load and hardness to resist surface scratches.

Heat

Materials used in Staco System units provide excellent resistance to high temperatures. For comfort of human interface, the sing-lamp switches can be operated in most conditions with the lamp continuous duty. Pushbutton temperature is directly related to brightness and power consumption of the lamp selected to provide the required color and brightness as well as ambient temperature conditions and heat sinking capacity of mounting surface. A reduction of temperature can be achieved by reducing the power consumed by the lamp, if lower brightness is acceptable, or by heat transfer designs.

Lighting

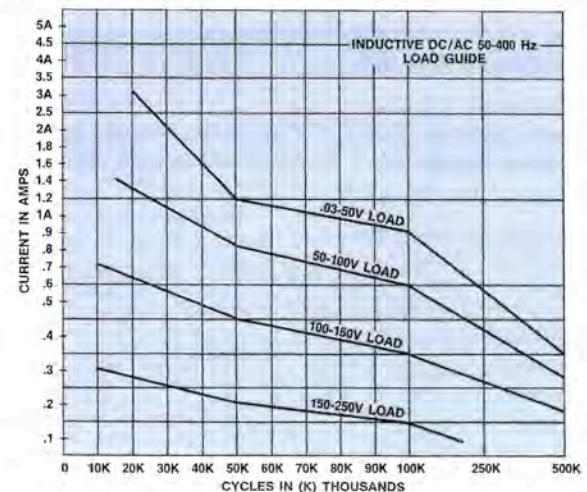
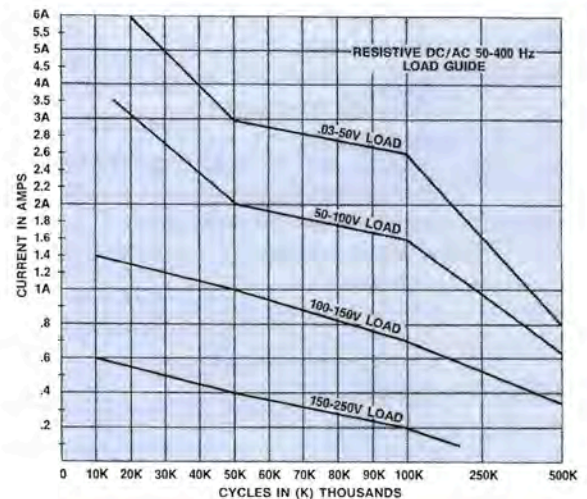
Staco Systems maintains a fully equipped and certified light laboratory. Tests are performed in compliance with National Bureau of Standards and military specifications, including MIL-S-22885, MIL-C-25050, MIL-L-25467, MIL-P-7788D, and Fed STD. No. 3. Among the light laboratory capabilities are brightness, color, contrast, reflectance, angle of observation, high intensity (sunlight readability and contrast), and LED measurement. All measurements and equipment calibrations are traceable to the National Bureau of Standards.

Pushbuttons accept T1-3/4 midget flange base incandescent lamps, M25237 or equivalent, with design voltage ranging from 1.35 to 28 VDC, and neon lamps for operation on 115VAC. Within the parameters of the selected lamp, display colors, and legend type color and brightness within a customer specified range can be furnished.

Loads

Switch load ratings are a function of a number of variables. Life, temperature, duty cycle, and type of load, whether resistive or inductive, are among the considerations. Catalog ratings include a safety margin of 150% of rated loads under prescribed conditions. Switches are capable of switching an open circuit load of 10 times the rated resistive.

The life-load charts below give a relative basis for determining the expected life of a switch once the current, voltage, and type of load is known. The life load rating may not be totally valid for all applications since other factors such as environment, duty cycle, or temperature, will also affect useful life.



MIL SPEC LISTING

Military Specifications

Various Staco Systems switches and accessories have been granted Qualified Product Listings under MIL-S24317, MIL-S-22885, and MIL-S-8805. IN addition these products are designed and manufactured to conform to the following specifications where applicable.

MIL-STD-130	Identification and Marking of U.S. Military Property
MIL-STD-202	Test Methods for Electronic and Electrical Component Parts
MIL-STD-411	Air Crew Station Visual Signals
MIL-E-5272	Environmental Testing, Aeronautical
MIL-E-5400	Electronic Equipment, Aircraft
MIL-T-5422	Testing, Environmental, Aircraft Electronic Equipment
SMIL-S-8805	Switches, Sensitive and Push, Snap Action, Actuators and Enclosures
MIL-M-18012	Markings for Air Crew Station Displays Design and Configuration of
MIL-C-25050	Colors, Aeronautical Lights and Lighting Equipment
MIL-S-22885	Switches, Pushbutton, Illuminated
MIL-S-24317	Switches, Multistation, Pushbutton

These specification are for the purpose of outlining what is to be purchased, its performance, and how it is tested. Listed below are the major requirements to which Staco Systems products are tested in meeting the specifications.

Thermal Shock	-55°C to + 85°C per MIL-STD-202C, Method 107, Testing Condition B14
Shock	50 G's, 11 ± 1 millisecond; per MIL STD202C, Method 213
Vibration	.06 D.A. or 15 G's, 10 to 2,000 Hz per MIL STD202C, Method 204, Test Condition B
High Impact Shock	3 hammer blows each axis per MIL STD-901C. No deformation or damage
Sand and Dust	Per MIL STD 202C, Method 110, Test Condition B
Humidity	10 days, with 10 cycles at 90-98 percent relative humidity at 65°C per MIL-STD-202, Method 106
Salt Spray	48 hr., per MIL STD202C, Method 101, Test Condition B, with pushbutton installed in a mating switch/indicator
Explosion	Unit can be safely operated under load in an explosive atmosphere without danger of explosion, per MIL-STD-202C, Method 109
Temperature	Operating, -55°C to +85°C
Altitude	Seal level to 70,000 feet
Fungus	None of the materials or finishes used in construction of these units will support any fungus encountered in tropical climates

Military Cross Reference

These Series 60 Lighted and Series 30 Unlighted pushbutton switches have been granted Mil Spec Listing under MIL-S-8805. The following is a complete selection of Mil Spec Part Numbers and the corresponding Staco Systems Part Numbers.

Series 60 Switch

M22885/	STACO/PN	M22885/	STACO P/N
18-01	65S07A	18-05	65S07A
18-02	65S07B	18-06	65S07B
18-03	65S04A	18-07	65S04A
18-04	65S04B	18-08	65S04B

Series 60 Pushbuttons

Designations "H" through "R" refer to body styles. The part number rationale does not cover legend display style, character size, or legend copy. These must be specific separately.

M22885/	60H	99-J110	113XX
99-H101	102XX	99-J210	213XX
99-H201	202XX	99-J111	135XX
99H-102	104XX	99-J211	235XX
99-H202	204XX	99-J112	137XX
99H-103	106XX	99-J212	237XX
99-H203	206XX	99-J113	139XX
99H-104	108XX	99-J213	239XX
99-H204	208XX	99-J114	141XX
99H-105	112XX	99-J214	241XX
99-H205	212XX	99-J115	143XX
99H-106	114XX	99-J215	243XX
99-H206	214XX	M22885/	60K
99H-107	116XX	99-K101	102XX
99-H207	216XX	99-K201	202XX
99H-108	118XX	99-K102	104XX
99-H208	218XX	99-K202	204XX
99H-109	120XX	99-K103	106XX
99-H209	220XX	99-K203	206XX
99H-110	113XX	99-K104	108XX
99-H210	213XX	99-K204	208XX
99H-111	135XX	99-K105	112XX
99-H211	235XX	99-K205	212XX
99H-112	137XX	99-K106	114XX
99-H212	237XX	99-K206	214XX
99-H113	139XX	99-K107	116XX
99-H213	239XX	99-K207	216XX
99-H114	141XX	99-K108	118XX
99-H214	241XX	99-K208	218XX
99-H115	143XX	99-K109	120XX
99-H215	243XX	99-K209	220XX
M22885/	60J	99-K110	113XX
99-J101	102XX	99-K210	213XX
99-J201	202XX	99-K111	135XX
99-J102	104XX	99-K211	235XX
99-J102	204XX	99-K112	137XX
99-J103	106XX	99-K212	237XX
99-J103	206XX	99-K113	139XX
99-J104	108XX	99-K213	239XX
99-J104	208XX	99-K114	141XX
99-J105	112XX	99-K214	241XX
99-J105	212XX	99-K115	143XX
99-J106	114XX	99-K215	243XX
99-J206	214XX	M22885/	60L
99-J107	116XX	99-L101	102XX
99-J207	216XX	99-L201	202XX
99-J108	118XX	99-L102	104XX
99-J208	218XX	99-L202	204XX
99-J109	120XX	99-L103	106XX
99-J209	220XX	99-L203	206XX

MILITARY CROSS REFERENCE

Series 60 Pushbuttons (Cont'd)

99-L104	108XX	99-N204	208XX
99-L204	208XX	99-N105	112XX
99-L105	112XX	99-N205	212XX
99-L205	212XX	99-N106	114XX
99-L106	114XX	99-N206	214XX
99-L206	214XX	99-N107	116XX
99-L107	116XX	99-N207	216XX
99-L207	216XX	99-N108	118XX
99-L108	118XX	99-N208	218XX
99-L208	218XX	99-N109	120XX
99-L109	120XX	99-N209	220XX
99-L209	220XX	99-N110	113XX
99-L110	113XX	99-N210	213XX
99-L210	213XX	99-N111	135XX
99-L111	135XX	99-N211	235XX
99-L211	235XX	99-N112	137XX
99-L112	137XX	99-N212	237XX
99-L212	237XX	99-N113	139XX
99-L113	139XX	99-N213	239XX
99-L213	239XX	99-N114	141XX
99-L114	141XX	99-N214	241XX
99-L214	241XX	99-N115	143XX
99-L115	143XX	99-N215	243XX
99-L215	243XX	M22885/ 60P	
M22885/ 60M		99-P101	102XX
99-M101	102XX	99-P201	202XX
99-M201	202XX	99-P102	104XX
99-M102	104XX	99-P202	204XX
99-M202	204XX	99-P103	106XX
99-M103	106XX	99-P203	206XX
99-M203	206XX	99-P104	108XX
99-M104	108XX	99-P204	208XX
99-M204	208XX	99-P105	112XX
99-M105	112XX	99-P205	212XX
99-M205	212XX	99-P106	114XX
99-M106	114XX	99-P206	214XX
99-M206	214XX	99-P107	116XX
99-M107	116XX	99-P207	216XX
99-M207	216XX	99-P108	118XX
99-M108	118XX	99-P208	218XX
99-M208	218XX	99-P109	120XX
99-M109	120XX	99-P209	220XX
99-M209	220XX	99-P110	113XX
99-M110	113XX	99-P210	213XX
99-M210	213XX	99-P111	135XX
99-M111	135XX	99-P211	235XX
99-M211	235XX	99-P112	137XX
99-M112	137XX	99-P212	237XX
99-M212	237XX	99-P113	139XX
99-M113	139XX	99-P213	239XX
99-M213	239XX	99-P114	141XX
99-M114	141XX	99-P214	241XX
99-M214	241XX	99-P115	143XX
99-M115	143XX	99-P215	243XX
99-M215	243XX	M22885/ 60R	
M22885/ 60N		99-R101	102XX
99-N101	102XX	99-R201	202XX
99-N201	202XX	99-R102	104XX
99-N102	104XX	99-R202	204XX
99-N202	204XX	99-R103	106XX
99-N103	106XX	99-R203	206XX
99-N203	206XX	99-R104	108XX
99-N104	108XX	99-R204	208XX

Series 60 Pushbuttons (Cont'd)

99-R105	112XX	99-R210	213XX
99-R205	212XX	99-R111	135XX
99-R106	114XX	99-R211	235XX
99-R206	214XX	99-R112	137XX
99-R107	116XX	99-R212	237XX
99-R207	216XX	99-R113	139XX
99-R108	118XX	99-R213	239XX
99-R208	218XX	99-R114	141XX
99-R109	120XX	99-R214	241XX
99-R209	220XX	99-R115	143XX
99-R110	113XX	99-R215	243XX

Series 30 Switch

M8805/	STACO P/N	M8805/	STACO P/N
99-001	30259-18-A18P	99-049	30559-18-A18P
99-002	30259-18-B18P	99-050	30559-18-B18P
99-003	30259-18-C18P	99-051	30559-18-C18P
99-005	30259-11-A18P	99-053	30559-11-A18P
99-006	30259-11-B18P	99-054	30559-11-B18P
99-007	30259-11-C18P	99-055	30559-11-C18P
99-009	30260-18-A18P	99-057	30559-14-A18P
99-010	30260-18-B18P	99-058	30559-14-B18P
99-011	30260-18-C18P	99-059	30559-14-C18P
99-013	30260-11-A18P	99-061	30560-18-A18P
99-014	30260-11-B18P	99-062	30560-18-B18P
99-015	30260-11-C18P	99-063	30560-18-C18P
99-017	30261-18-A18P	99-065	30560-11-A18P
99-018	30261-18-B18P	99-066	30560-11-B18P
99-019	30261-18-C18P	99-067	30560-11-C18P
99-021	30261-11-A18P	99-069	30560-14-A18P
99-022	30261-11-B18P	99-070	30560-14-B18P
99-023	30261-11-C18P	99-071	30560-14-C18P
99-025	30262-18-A18P	99-073	30561-18-A18P
99-026	30262-18-B18P	99-074	30561-18-B18P
99-027	30262-18-C18P	99-075	30561-18-C18P
99-029	30262-11-A18P	99-077	30561-11-A18P
99-030	30262-11-B18P	99-078	30561-11-B18P
99-031	30262-11-C18P	99-079	30561-11-C18P
99-033	30259-14-A18P	99-080	30561-14-A18P
99-034	30259-14-B18P	99-082	30561-14-B18P
99-035	30259-14-C18P	99-083	30561-14-C18P
99-037	30260-14-A18P	99-085	30562-18-A18P
99-038	30260-14-B18P	99-086	30562-18-B18P
99-039	30260-14-C18P	99-087	30562-18-C18P
99-041	30261-14-A18P	99-089	30562-11-A18P
99-042	30261-14-B18P	99-090	30562-11-B18P
99-043	30261-14-C18P	99-091	30562-11-C18P
99-045	30262-14-A18P	99-093	30562-14-A18P
99-046	30262-14-B18P	99-094	30562-14-B18P
99-047	30262-14-C18P	99-095	30562-14-C18P

SERIES 60 LIGHTED PUSHBUTTON SWITCHES

QPL/Seismic Qualified

Series 60 Lighted Pushbutton Switches are high quality, low cost, single lamp units with MIL-SPEC listings under M22885/18. The switches have been Seismic Qualified to requirements of I.E.E.E. Standard 344-1975 and T.V.A. 2200 Appendix "C." All switches are sealed making them dripproof and resistant to humidity, salt spray, sand and dust environments, as well as explosion proof. Snap action switch mechanisms provide clean switching with minimum contact bounce. Gold plated precious metal alloy contacts provide switching range from 2 amps down to 10 micro amps, compatible with computer requirements. These versatile switches provide maximum flexibility in circuit control, offering design features not available in any other low-cost, military-grade lighted pushbutton switch.

All Series 60 switches can be mounted singly or in keyboard arrangements on 12 and 16 station subpanels available to speed installation. Subpanels are offered with switch spacing to accommodate .50" pushbuttons, either round or square, or with spacing to accommodate pushbuttons up to and including .75" in width.

Standard Options

Select the specific switch to fit your particular application. Models 65 and 66 offer two-circuit or DPDT contact arrangement with solder terminations. Models 63 and 64 are similar to Models 65 and 66 but with PC or wire wrap terminations. All switches are available with either momentary or alternate switch action. Models 63 and 65 accept Series 60 Type 1 screw-in pushbutton lenses for high impact shock and severe vibration environments; Models 64 and 66 accept Series Type 2 snap-in pushbutton lenses.

Matching Indicator

Single lamp indicators, Model 61 for screw-in pushbutton lenses, and Model 62 for snap-in pushbutton lenses, use same display pushbuttons as the switches for look-alike appearance. Mix switches and indicators on same panel or group separately for function control and identification. See page 8 for ordering information on indicators.

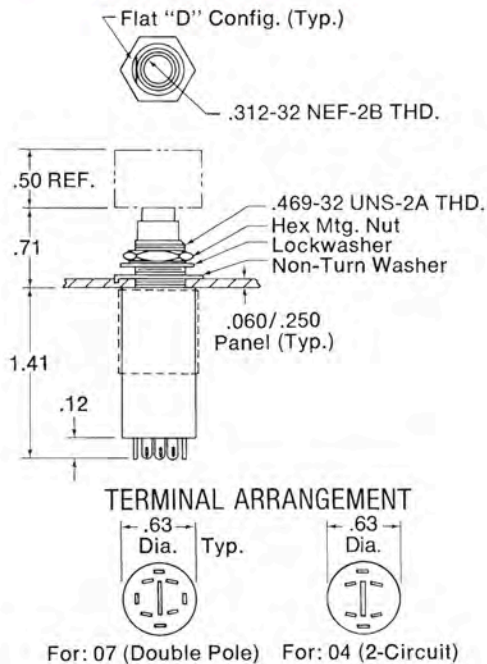
Attractive Display Pushbuttons

Select Staco Systems' new photographic legends or engraved legends. Choose from nine attractive colors in eight different sizes and shapes. Photographic legends offer a wide selection of legend types, including visible or hidden messages, and a choice of black characters on a colored background or colored characters on a black background. Order Series 60 Display Pushbutton Lenses separately. See pages 9-13 for complete details.



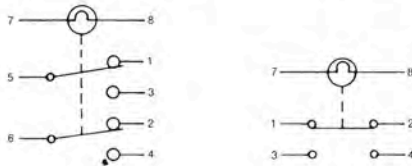
SOLDER TERMINATED LIGHTED SWITCHES - MODELS 65/66

Series 60 (M22885/18)



Schematics

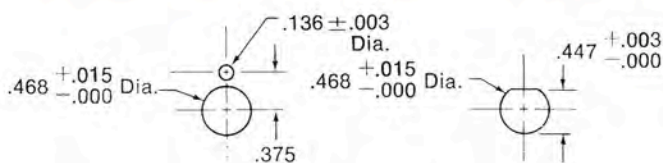
(07 = DPDT) (04 = 2 CKT)



Mounting Information

(with non-turn washer)

(without non-turn washer)



Specifications

ELECTRICAL

Contact Rating	28VDC	115VAC 60/400 Hz
Resistive	2.0 amp	2.0 amp
Inductive	1.5 amp	1.5 amp
Lamp	.5 amp	.5 amp
Dry Circuit	10.0 microamps	

Dielectric	1000 VAC rms
Insulation resistance	1000 megohms min. @ 500 VDC
Life	50,000 cycles

MECHANICAL

Operating Force	2 lbs nominal
Plunger travel	.160 max.
Life	100,000 cycles min.

ENVIRONMENTAL (Enclosure Type "S" only)

Applicable Military Specification — MIL-S-22885
 Salt Spray, Moisture Resistance, Shock, Vibration, Explosion,
 Thermal Shock, Fungus Resistance, Sand and Dust

RECOMMENDED LAMPS

(To be used with the Series 60 Pushbutton/Display Lenses.)

① T 1 3/4	28V (327)
Incandescent	6V (328) 14V (330)
② Neon	105-125 VAC (A1H)

- ① Lamps not supplied with switch
- ② Neon requires 68K series resistance

Ordering Information

Typical Part Number				66	S	4	B
Model	MIL Number	Mounting Bushing	Pushbutton				
65	M22885/18	15/32-32	Screw-in				
66	M22885/18	15/32-32	Snap-in				
Environmental Construction							
S = Moisture tight							
See specifications							
N = Enclosed (No static or dynamic seals)							
Circuit Configuration							
Switch Operation							
A = Momentary Snap action							
B = Alternate Snap action							
Prefix "R" in front of model number (R66) denotes RFI shielded switch body.							

PC or WIREWRAP TERMINATED LIGHTED SWITCHES - MODELS 63/64

Specifications

ELECTRICAL

Contact Rating	28VDC	115VAC 60/400 Hz
Resistive	2.0 amp	2.0 amp
Inductive	1.5 amp	1.5 amp
Lamp	.5 amp	.5 amp
Dry Circuit	10.0 microamps	
Dielectric		1000 VAC rms
Insulation resistance		1000 megohms min. @ 500 VDC
Life		50,000 cycles
MECHANICAL		
Operating Force		2 lbs nominal
Plunger travel160 max.
Life		100,000 cycles min.

Ordering Information

Typical Part Number - R 64 S 07 A 01

Prefix used with RFI/EMI shielding is required. Omit if not required.

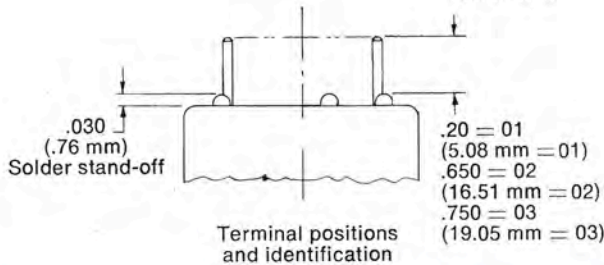
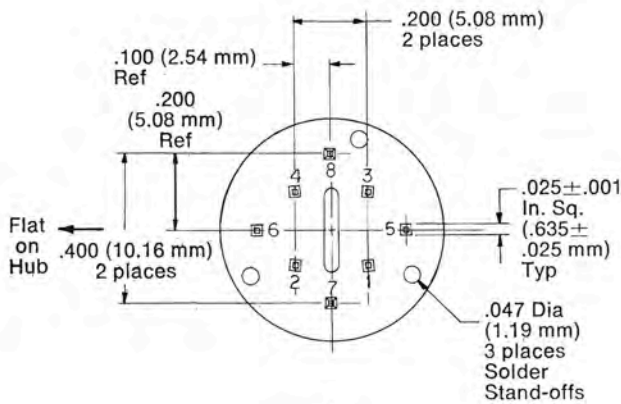
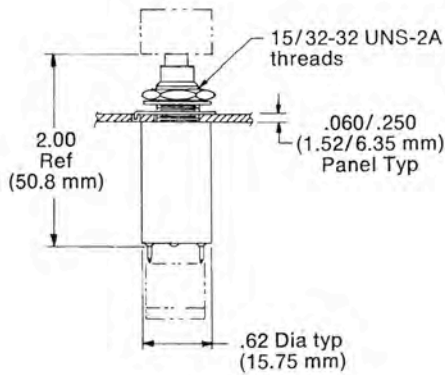
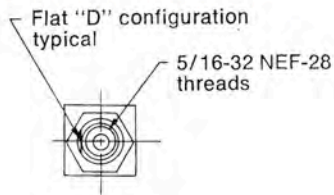
Switch Model Number
 63 = 15/32-32 Mtg. Hub - Screw-in Lens
 64 = 15/32-32 Mtg. Hub - Snap-in Lens

Environmental Construction
 S = Sealed

Circuit Configuration:
 04 = Two Circuit, Double Break
 07 = DPDT

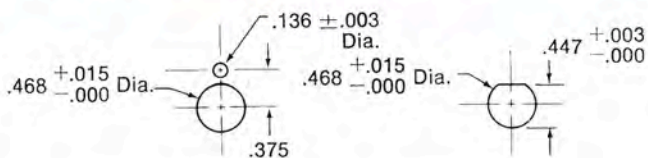
Switch Action
 A = Momentary Snap Action
 B = Alternate Snap Action

Terminal Length:
 01 = .20"
 02 = .65"
 03 = .75"



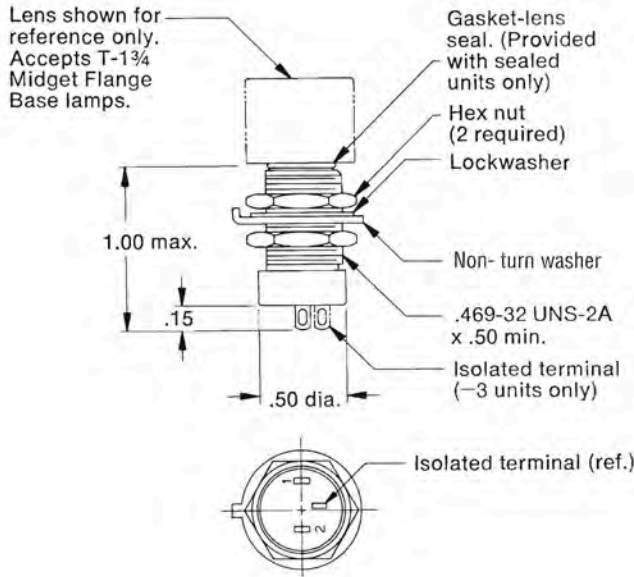
Mounting Information

(with non-turn washer) (without non-turn washer)



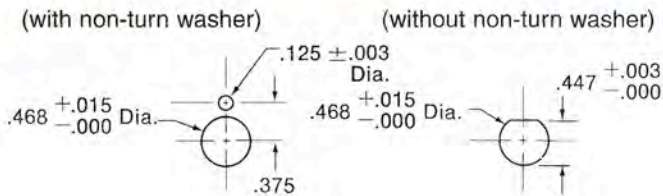
LIGHTED INDICATORS MODELS 61/62

Models 61 and 62 Single Lamp Indicators only are look-alike companions to the Series 60 Lighted Display Pushbutton Switches (Models 63, 64, 65, and 66). The Model 61 Indicator mates with the Screw-in Lens and the Model 62 Indicator mates with the Snap-in Lens. See pages 9-13 for information on Series 60 Display Pushbutton Lenses.



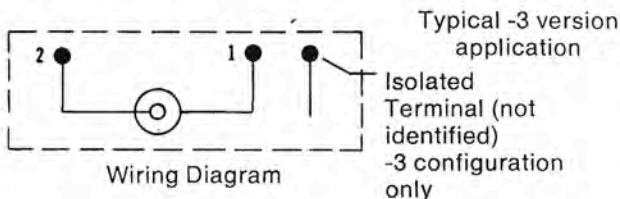
Note: .250 maximum panel thickness

Mounting Information



The -2 version of the Models 61 and 62 Indicators provides two lamp terminals.

The -3 version provides two lamp terminals and one isolated terminal which allows connections for attaching components that are needed due to circuit requirements.



Specifications

MECHANICAL

Contact Spring

Force 12 to 36 oz. per MIL-L-3661

Strength When mounted in a panel with a push button/display lens installed, the indicator is capable of withstanding an axial load of 25 lbs. distributed on the face plate of the pushbutton/display lens per MIL-S-22885.

ELECTRICAL

Dielectric. 1,000 VRMS per MIL-L-3661, para. 4. 7. 2. 1.

ENVIRONMENTAL, Applicable Military Specifications MIL-S-22885 Salt Spray, Moisture Resistance, Thermal Shock, Vibration, Sand and Dust and Fungus Resistance.

Ordering Information

Example: **61 S 001 2**

Indicator Model Number

61 = Screw-in Lens

62 = Snap-in Lens

S = Moisture tight (applies only with lens and seal installed)

001 = Indicator

Number of Lamp Terminals

-2 = 2

-3 = 2 plus one isolated terminal

Prefix "R" in front of model number (R61) denotes RFI shielded indicator body.

SERIES 60 LIGHTED PUSHBUTTON/DISPLAY LENS

Specifications

MECHANICAL

Strength Faceplate will withstand 25 pound distributed load.
 Relamping..... Relamp from front of panel without use of tools.

ELECTRICAL

Dielectric Strength
 Seal Level..... 1056 VRMS
 70,000 Feet..... 450 VRMS
 Insulation Resistance 1000 megohms min. @ 500 VDC

ENVIRONMENTAL

Applicable Military Specifications MIL-S-22885 Salt Spray, Moisture Resistance, Thermal Shock, Vibration, Sand and Dust, and Fungus Resistance.

Display Types

Select from seven legend display types, all standard options. Hidden or visible messages...legend characters in black or color...photographic film or engraved legends...wide selection of designed matched colors...they all add up to a multitude of attractive display combinations, and they're all standard. Whatever your requirements there is a Series 60 Lighted Pushbutton/Display to meet your exact needs.

Photographic Film Legends

Series 60 Lighted Pushbuttons are now available with your photographic film legend to protect characters from wear and contamination from dirt. The legend plates have clear, sharp characters and are permanently protected under a clear plastic cap. Legend characters may be black on a color background or in color on a black background. Choose from 10, 12, or 18 point character height. One, two, or three line legends are available depending on character height and pushbutton style.

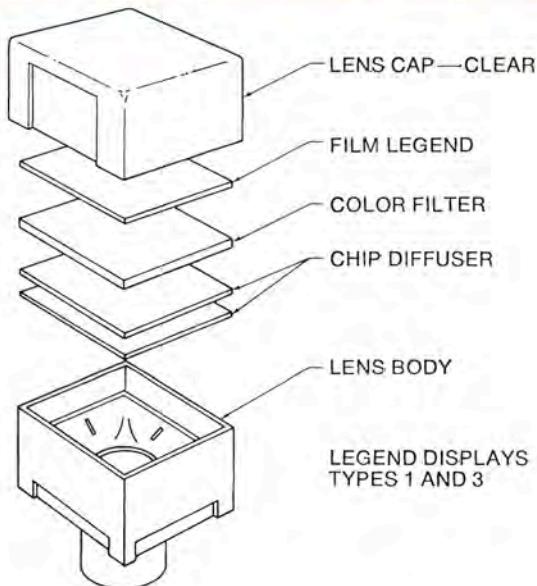
Engraved Legends

Translucent color pushbuttons have engraved legends, Display Type 5, with characters filled with a contrasting color for easy reading. Black fill is used on white, yellow, or amber pushbuttons; white fill is used on red, green or blue pushbuttons.

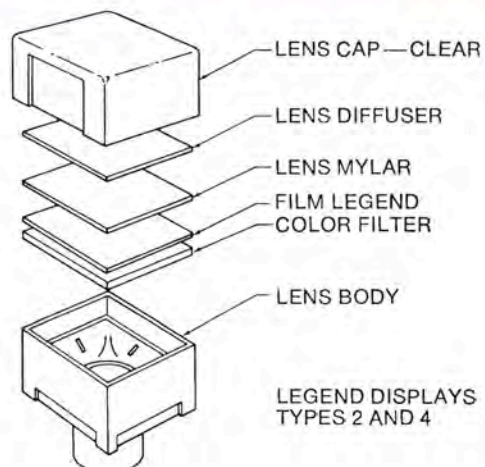
Other Features

Pushbuttons are available in screw-in style for high impact and vibration environments, Type 1, for Model 61 Indicator and Models 63 and 65 Switches; and a snap-in style, Type 2, for Model 62 Indicator and Models 64 and 66 Switches. Type 2 snap-in style has positive index for proper orientation of legend. Pushbuttons have fingertip grip for easy removal for relamping. All accommodate T-1 ¼ midget flange base incandescent lamps. See page 16 for ordering information on lamps. The pushbuttons are designed to meet requirements of MIL-S-22885 and MIL-L-3661 when installed in a Staco Systems sealed switch or indicator and with QPL lamp installed.

Style "M" .750 Sq. Pushbutton



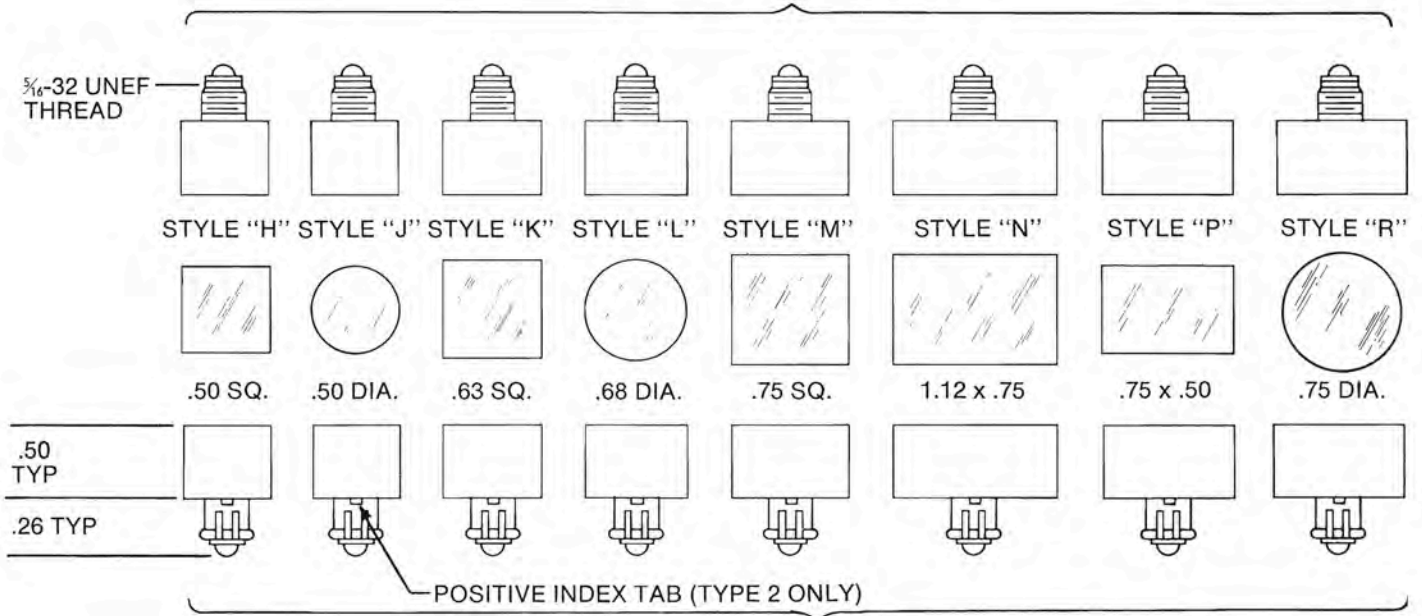
Style "K" .630 Sq. Pushbutton



SERIES 60 LIGHTED PUSHBUTTON/DISPLAY LENS

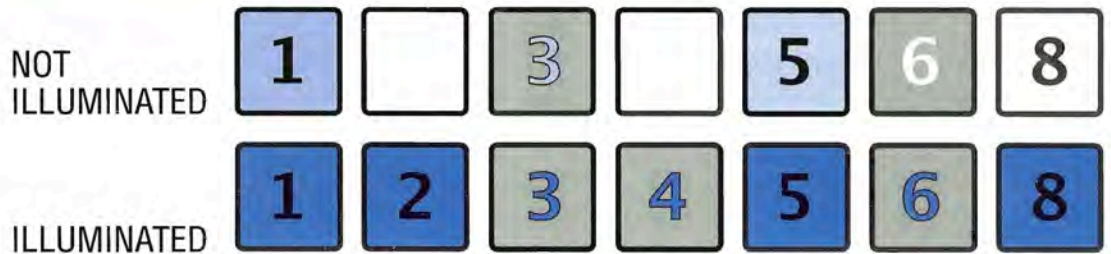
Body Styles

MOUNTING BASE TYPE 1 SCREW-IN



MOUNTING BASE TYPE 2 SNAP-IN (POSITIVE INDEX) — TYPE 3 SNAP-IN

Legend Display Options – Table 1



TYPE	NON-ILLUMINATED		ILLUMINATED	
	LEGEND	BACKGROUND	LEGEND	BACKGROUND
1.	Black ^①	Translucent Color	Black	Color
2.	Hidden (Not Easily Discernable) ^①	Translucent White	Black	Color
3.	Translucent Color ^①	Black	Visible in Color	Black
4.	Hidden (Not Easily Discernable) ^①	Translucent White	Visible in Color	Opaque
5.	Black Filled Engraving on External Surface ^②	Translucent Color Cap	Black	Color
6.	Translucent White ^①	Black	Visible in Color	Black
8.	Black ^①	Translucent White	Black	Color

NOTE: ^① = Film Legend

^② = Engraved. Black fill on white, yellow or amber background. White fill on all other colors. Applies to both translucent colored caps and clear caps with translucent color filters.

SERIES 60 LIGHTED PUSHBUTTON/DISPLAY LENS

Pushbutton Color Combinations – Table 2

CODE NO.	CAP DESCRIPTION	TRANSLUCENT COLOR FILTER	BODY DESCRIPTIONS	MIL-SPEC PART NUMBER	LEGEND DISPLAYS AVAILABLE	
01	Red - Translucent	None	White - Opaque		Use Type 5 Engraved Legend Only	
02	Red - Translucent	None	White - Translucent	M22885/99-XX01		
03	Green - Translucent	None	White - Opaque			
04	Green - Translucent	None	White - Translucent	M22885/99-XX02		
05	Yellow - Translucent	None	White - Opaque			
06	Yellow - Translucent	None	White - Translucent	M22885/99-XX03		
07	Blue - Translucent	None	White - Opaque			
08	Blue - Translucent	None	White - Opaque	M22885/99-XX04		
09	Amber - Translucent	None	White - Translucent			
10	Amber - Translucent	None	White - Opaque			
11	White - Translucent	None	White - Translucent			
12	White - Translucent	None	White - Opaque	M22885/99-XX05		
①13	White - Translucent	Blue - White	White - Translucent	M22885/99-XX10		
14	White - Translucent	Red	White - Opaque	M22885/99-XX06		
15	White - Translucent	Red	White - Translucent			
16	White - Translucent	Green	White - Opaque	M22885/99-XX07		
17	White - Translucent	Green	White - Translucent			
18	White - Translucent	Yellow	White - Opaque	M22885/99-XX08		
19	White - Translucent	Yellow	White - Translucent			
20	White - Translucent	Blue	White - Opaque	M22885/99-XX09		
21	White - Translucent	Blue	White - Translucent			
22	White - Translucent	Amber	White - Opaque			
23	White - Translucent	Amber	White - Translucent			
24	Opal White - Translucent	Red	White - Opaque			
25	Opal White - Translucent	Red	White - Translucent			
26	Opal White - Translucent	Green	White - Opaque			
27	Opal White - Translucent	Green	White - Translucent			
28	Opal White - Translucent	Yellow	White - Opaque			
29	Opal White - Translucent	Yellow	White - Translucent			
30	Opal White - Translucent	Blue	White - Opaque			
31	Opal White - Translucent	Blue	White - Translucent			
32	Opal White - Translucent	Amber	White - Opaque			
33	Opal White - Translucent	Amber	White - Translucent			
34	Clear - Transparent	Red	White - Opaque			Use Photographic Legend Types 1, 2, 3, 4, 6 or 8; or Engraved Type 5
35	Clear - Transparent	Red	Black - Opaque	M22885/99-XX11		
36	Clear - Transparent	Green	White - Opaque			
37	Clear - Transparent	Green	Black - Opaque	M22885/99-XX12		
38	Clear - Transparent	Yellow	White - Opaque			
39	Clear - Transparent	Yellow	Black - Opaque	M22885/99-XX13		
40	Clear - Transparent	Blue	White - Opaque			
41	Clear - Transparent	Blue	Black - Opaque	M22885/99-XX14		
42	Clear - Transparent	White	White - Opaque			
43	Clear - Transparent	White	Black - Opaque	M22885/99-XX15		
44	Clear - Transparent	Amber	White - Opaque			
45	Clear - Transparent	Amber	Black - Opaque			
46	Smoke Gray - Transparent	Red	White - Opaque			Use Photographic Legend Types 1, 2, 3, 4, 6 or 8; or Engraved Type 5
47	Smoke Gray - Transparent	Red	Black - Opaque			
48	Smoke Gray - Transparent	Green	White - Opaque			
49	Smoke Gray - Transparent	Green	Black - Opaque			
50	Smoke Gray - Transparent	Yellow	White - Opaque			
51	Smoke Gray - Transparent	Yellow	Black - Opaque			
52	Smoke Gray - Transparent	Blue	White - Opaque			
53	Smoke Gray - Transparent	Blue	Black - Opaque			
54	Smoke Gray - Transparent	White	White - Opaque			
55	Smoke Gray - Transparent	White	Black - Opaque			
56	Smoke Gray - Transparent	Amber	White - Opaque			
57	Smoke Gray - Transparent	Amber	Black - Opaque			

10 ① Recommended for military applications for white pushbuttons.

SERIES 60 LIGHTED PUSHBUTTON/DISPLAY LENS

Legend Display – Table 3

Character Style — Alternate Gothic No. 2

Character Height — A = 10 Point High (approx. .10")

B = 12 Point High (approx. .12")

C = 18 Point High (approx. .18")

Typical maximum character and number of lines per pushbutton style and character size.

Pushbutton Style	A =10 Point				B =12 Point				C =18 Point			
	No. Char/Line		No. Lines		No. Char/Line		No. Lines		No. Char/Line		No. Lines	
	Engrv.	Film	Engrv.	Film	Engrv.	Film	Engrv.	Film	Engrv.	Film	Engrv.	Film
H Body Style	4	5	2	2	3	4	1	1	2	3	1	1
J Body Style	4	5	2	2	3	4	1	1	2	3	1	1
K Body Style	5	7	2	2	4	6	2	2	3	4	2	2
L Body Style	5	8	2	2	4	6	2	2	3	4	1	1
M Body Style	6	9	4	4	5	7	3	3	3	5	2	2
N Body Style	9	11	4	4	7	9	3	3	5	6	2	2
P Body Style	6	9	3	3	5	7	2	2	3	5	1	1
R Body Style	6	8	2	2	5	7	1	1	3	5	1	1

Part Number Code

Typical Part Number **60 K 2 44 6 B (FILL)**

Pushbutton Series

Body Style

H = .50 Sq. M = .75 Sq.

J = .50 Dia. N = 1.12 x .75 Rect.

K = .63 Sq. P = .75 x .50 Rect.

L = .68 Dia. R = .75 Dia.

Mounting Base

1 = Screw-in

2 = Snap - in (Positive Index)

3 = Snap-in (No Positive Index)

Pushbutton Color Combinations

01 thru 57. See Table 2, Page 11

Legend Display Types

1 thru 6 and 8. See Table 1, Page 10

Legend Character Size

A = 10 point B = 12 point C = 18 point

See Table 3, Page 12

Legend

MIL SPEC Part Number

Typical Part Number – M22885/99 **K 1 01**

MIL-SPEC Number

Body Style

H = .50 Sq. L = .68 Dia. P = .75 x .50 Rect.

J = .50 Dia. M = .75 Sq. R = .75 Dia.

K = .63 Sq. N = 1.12 x .75 Rect.

Mounting Base

1 = Screw-in 2 = Snap - in (Positive Index)

Pushbutton Color Combinations

01 thru 15. (See MIL-SPEC column, Table 2, Page 11)

NOTE: Part Number does not cover legend character size, or legend copy.

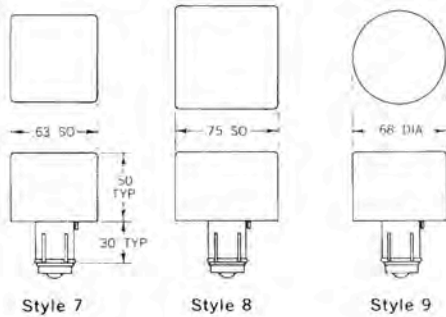
These must be specified separately.

QPL SERIES 60 PUSHBUTTON DISPLAY LENSES

Single Lamp – Translucent, Diffusing Plastic – Standard Colors

Snap-in Pushbuttons

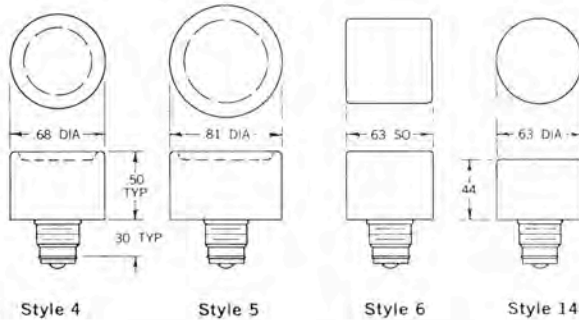
Mate with Models 62, 64, and 66 Switch/Indicator



NOTE: Snap-in push buttons, above, have a non-adjustable index key. This does not allow for position changes after installation of switch. Consult STACO® for non-standard orientation.

Screw-In Pushbuttons

Mate with Models 61, 63, and 65 Switch/Indicator



NOTE: Screw-in push buttons, above, have an adjustable orientation feature. This allows engraved push buttons to be positioned after installation of the switch.

Specifications

Color MIL-S-22885
 Temperature -55°C to + 85°C
 Lamps Accept T-1-3/4 1.35V to 28V
 Lamps not supplied with switch or pushbutton

Qualified Products Listing under MIL-S-22885 has been granted to all of the pushbutton display lenses listed below. Those listed under M22885/19 have snap-in mounting base and fit Models 62, 64, and 66 Switch/Indicator. Pushbuttons listed under M22885/22 have a screw-in mounting base and fit Models 61, 63, and 65 Switch/Indicators. All pushbuttons are made of translucent plastic in standard colors, per MIL-S-22885. **100 piece minimum quantity required on all orders.** Engraved legends only are available for these Pushbutton display lenses.

Ordering Information

PART NO.	MILITARY PART NO.	DESCRIPTION
20765-71	M22885/19-03	Pushbutton - .63 Sq., Snap-in, Red
20765-72	M22885/19-04	Pushbutton - .63 Sq., Snap-in, Green
20765-74	M22885/19-02	Pushbutton - .63 Sq., Snap-in, White
20765-75	M22885/19-01	Pushbutton - .63 Sq., Snap-in, Yellow
20765-76	M22885/19-05	Pushbutton - .63 Sq., Snap-in, Blue
20767-91	M22885/19-08	Pushbutton - .68 Sq., Snap-in, Red
20767-92	M22885/19-09	Pushbutton - .68 Sq., Snap-in, Green
20767-94	M22885/19-07	Pushbutton - .68 Sq., Snap-in, White
20767-95	M22885/19-06	Pushbutton - .68 Sq., Snap-in, Yellow
20767-96	M22885/19-10	Pushbutton - .68 Sq., Snap-in, Blue
20766-81	M22885/19-13	Pushbutton - .75 Sq. Red, Snap-in
20766-82	M22885/19-14	Pushbutton - .75 Sq. Green, Snap-in
20766-84	M22885/19-12	Pushbutton - .75 Sq. White, Snap-in
20766-85	M22885/19-11	Pushbutton - .75 Sq. Yellow, Snap-in
20766-86	M22885/19-15	Pushbutton - .75 Sq. Blue, Snap-in
20741-51	M22885/22-03	Pushbutton - .81 Sq. Red, Screw-in
20741-52	M22885/22-04	Pushbutton - .81 Sq. Green, Screw-in
20741-54	M22885/22-02	Pushbutton - .81 Sq. White, Screw-in
20741-55	M22885/22-01	Pushbutton - .81 Sq. Yellow, Screw-in
20741-56	M22885/22-05	Pushbutton - .81 Sq. Blue, Screw-in
20742-61	M22885/22-08	Pushbutton - .63 Sq. Red, Screw-in
20742-62	M22885/22-09	Pushbutton - .63 Sq. Green, Screw-in
20742-64	M22885/22-07	Pushbutton - .63 Sq. White, Screw-in
20742-65	M22885/22-06	Pushbutton - .63 Sq. Yellow, Screw-in
20742-66	M22885/22-10	Pushbutton - .63 Sq. Blue, Screw-in
20774-141	M22885/22-13	Pushbutton - .63 Sq. Red, Screw-in, Push/Pull
20774-142	M22885/22-14	Pushbutton - .63 Sq. Green, Screw-in, Push/Pull
20774-144	M22885/22-12	Pushbutton - .63 Sq. White, Screw-in, Push/Pull
20774-145	M22885/22-11	Pushbutton - .63 Sq. Yellow, Screw-in, Push/Pull
20774-146	M22885/22-15	Pushbutton - .63 Sq. Blue, Screw-in, Push/Pull
20740-41	M22885/22-18	Pushbutton - .68 Sq. Red, Screw-in
20740-42	M22885/22-19	Pushbutton - .68 Sq. Green, Screw-in
20740-44	M22885/22-17	Pushbutton - .68 Sq. White, Screw-in
20740-45	M22885/22-16	Pushbutton - .68 Sq. Yellow, Screw-in
20740-46	M22885/22-20	Pushbutton - .68 Sq. Blue, Screw-in

SERIES C8 LIGHTED PUSHBUTTON SWITCH/INDICATOR



Low Cost Dependability

The low cost dependable Staco Systems Series C8 is an attractive versatile single lamp switch with the same basic switch mechanism used in its QPL counterpart, the Series 60. Price includes complete switch and pushbutton lens assembly and all necessary mounting hardware. Matching indicator only is available for look-alike appearance when intermixed with switches on the control panel.

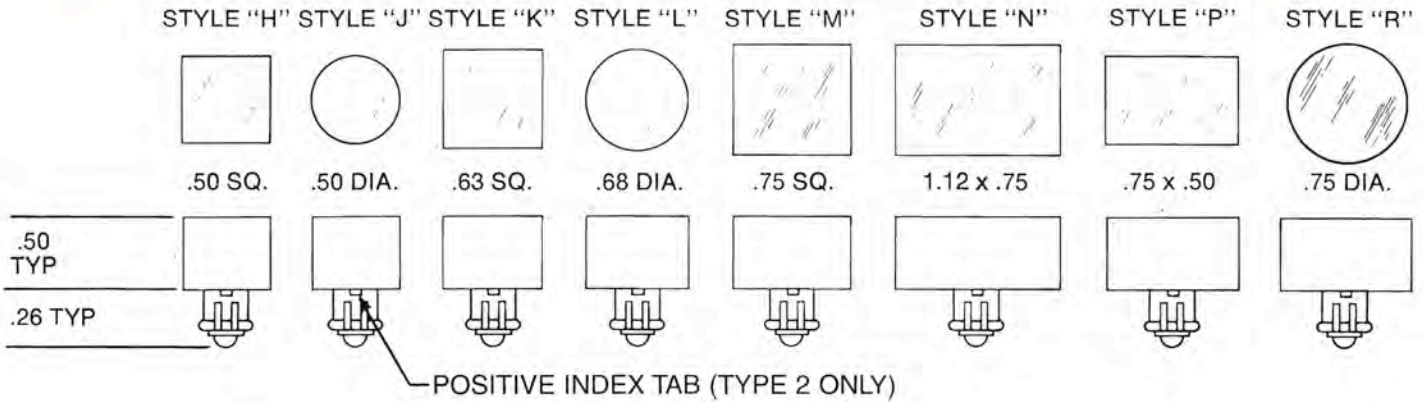
Features

Switch is available with momentary or alternate snap action in two circuit arrangements; DPDT or two circuit double break. Choice of standard operating force, 32 ounces nominal or low operating force, 20 ounces nominal. Select either solder terminals or PC terminals available in three different lengths. Wide switching range handles resistive loads from 3 amps down to low level computer capability. Gold plated contacts available for low level loads. Rugged metal body and switch mechanism provide longest life possible. Switches may be mounted directly on display panel or on a sub-panel with pushbutton lenses inserted through an overlay panel for low-profile appearance. Twelve and 16 station sub-panels are available as accessories. Lens serves as both display screen and pushbutton to activate switch.

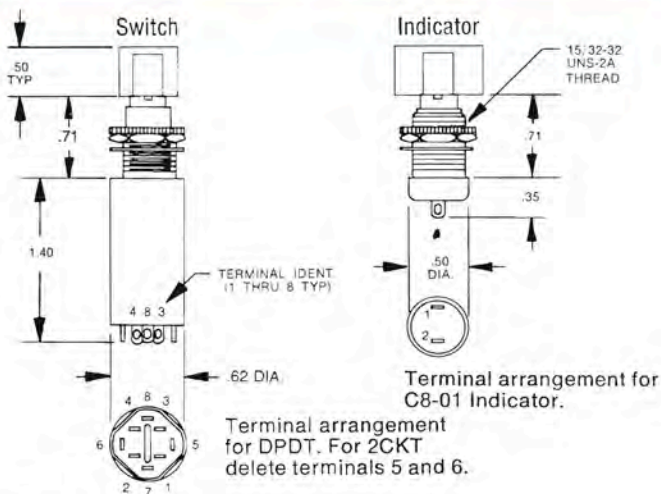
Pushbutton Display Lens

Select from wide assortment of lens shapes, sizes, and colors. Legends are available as photographic film with choice of seven display types or as an engraved legend with contrasting color fill. Photographic legends offer hidden or visible messages with black characters on a color background or characters in color on a black background. Legends are permanently protected under a clear plastic cap. Engraved legends are offered on translucent color lens or on white translucent lens that in the illuminated condition may have either a white or color background. All legends are clear and sharp for positive reading. Pushbutton lenses accept T-1-3/4 midget flange base lamps. See page 15 for lamp ordering information.

SERIES C8 LIGHTED PUSHBUTTON SWITCH/INDICATOR

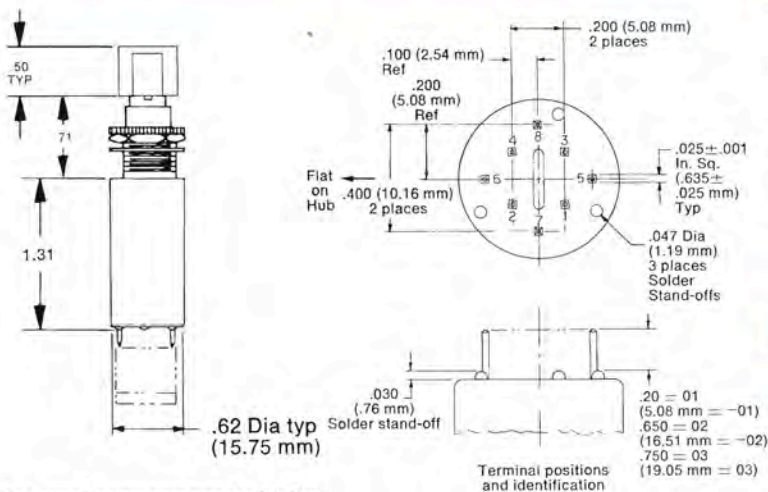


Solder Terminals



NOTE: .250" maximum panel thickness

Printed Circuit Terminals



Terminal arrangement for DPDT. For 2CKT delete terminals 5 and 6. For Indicator only delete terminals 1 through 6.

Specifications

MECHANICAL

Standard Operating Force2 lbs. nominal
 Low Operating Force20 ozs. Nominal
 Mechanical Life100,000 cycles

ELECTRICAL

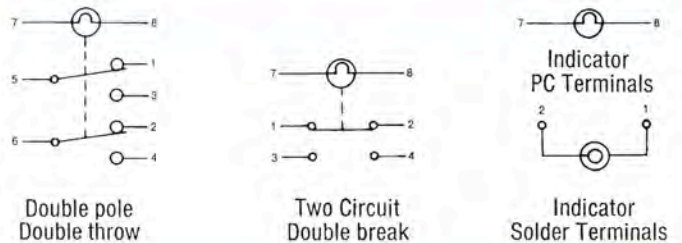
Contact Load Rating 28VDC/115VAC
 Resistive3.0 amp
 Lamp1.0 amp
 Low Level10 microamps, DC only
 (gold plated contacts)
 Insulation resistance1000 megohms min.
 @ 500 VDC

Terminal No. 8 is common with lamp shell on switches and PC indicator; terminal No. 1 is common with lamp shell on solder indicator.

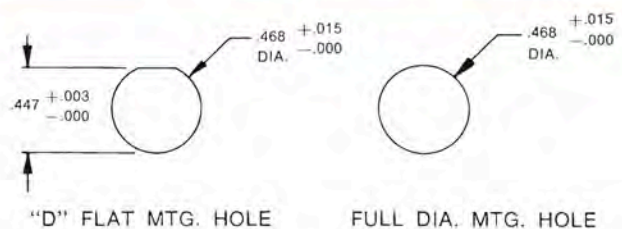
ENVIRONMENTAL

Temperature-55°C to +85°C

Circuit Schematic



Mounting Information



SERIES C8 LIGHTED PUSHBUTTON SWITCH/INDICATOR

Switch/Indicator Body - Table 4

Standard Operating Force

P/N Suffix	Circuit	Action	Terminations
01	Indicator Only	None	Solder
02	Indicator Only	None	P.C. — .20"
03	Indicator Only	None	P.C. — .65"
04	Indicator Only	None	P.C. — .75"
05	2 Circuit	Momentary	Solder
06	2 Circuit	Momentary	P.C. — .20"
07	2 Circuit	Momentary	P.C. — .65"
08	2 Circuit	Momentary	P.C. — .75"
09	2 Circuit	Alternate	Solder
10	2 Circuit	Alternate	P.C. — .20"
11	2 Circuit	Alternate	P.C. — .65"
12	2 Circuit	Alternate	P.C. — .75"
13	2PDT	Momentary	Solder
14	2PDT	Momentary	P.C. — .20"
15	2PDT	Momentary	P.C. — .65"
16	2PDT	Momentary	P.C. — .75"
17	2PDT	Alternate	Solder
18	2PDT	Alternate	P.C. — .20"
19	2PDT	Alternate	P.C. — .65"
20	2PDT	Alternate	P.C. — .75"

Low Operating Force

P/N Suffix	Circuit	Action	Terminations
21	2 Circuit	Momentary	Solder
22	2 Circuit	Momentary	P.C. — .20"
23	2 Circuit	Momentary	P.C. — .65"
24	2 Circuit	Momentary	P.C. — .75"
25	2 Circuit	Alternate	Solder
26	2 Circuit	Alternate	P.C. — .20"
27	2 Circuit	Alternate	P.C. — .65"
28	2 Circuit	Alternate	P.C. — .75"
29	2PDT	Momentary	Solder
30	2PDT	Momentary	P.C. — .20"
31	2PDT	Momentary	P.C. — .65"
32	2PDT	Momentary	P.C. — .75"
33	2PDT	Alternate	Solder
34	2PDT	Alternate	P.C. — .20"
35	2PDT	Alternate	P.C. — .65"
36	2PDT	Alternate	P.C. — .75"

Part Number Code

Typical Part Number **G C8 17 K 47 1 B (FILL)**

Prefix used when gold plated contacts are required. Omit if not required.

Model

Switch/Indicator 01 thru 36. See table 4.

Pushbutton Style

H = .50 Sq. K = .63 Sq. M = .75 Sq. P = .75 x .50 Rect.

J = .50 Dia. L = .68 Dia. N = 1.12 x .75 Rect. R = .75 Dia.

Pushbutton Color Combinations 01 thru 57. See Table 2, Page 11

Legend Display Types 1 thru 6 and 8. See Table 1, Page 10

Legend Character Size A = 10 point B = 12 point C = 18 point See Table 3, Page 12

Legend

Lamps

T-1-3/4 midget flange based incandescent lamps, available in various voltages, fit all

Staco Systems units. Lamps are not included with switches or indicators and must be ordered separately. See chart at right for part numbers and specification. Part numbers referenced with an asterisk (*) are stocked by Staco Systems. All are available from local distributors.

PART NUMBER	MILITARY PART NUMBER	DESIGN VOLTS	DESIGN AMPS	M.S.C.P.	R.A.L.L.
331		1.35	.06	.01	5,000
338	25237-338	2.7	.06	.04	6,000
7332*		5	.06	.03	30,000
7333		5	.06	.05	25,000
7335		5	.115	.15	20,000
345		6	.04	.04	10,000
328*	25237-328	6	.20	.34	1,000

PART NUMBER	MILITARY PART NUMBER	DESIGN VOLTS	DESIGN AMPS	M.S.C.P.	R.A.L.L.
380		6.3	.04	.03	20,000
377		6.3	.075	.23	1,000
350		6.3	.15	.45	3,000
349		6.3	.20	.55	20,000
381		6.3	.20	.40	20,000
344		10	.014±10%	.006	50,000
367X		10	.04	.08	5,000
394		12	.04	.10	10,000
330*	25237-330	14	.08	.50	2,500
382		14	.08	.30	40,000
370		18	.08	.15	10,000
459		22	.038-.042	.30	5,000
327*	25237-327	28	.04	.34	4,000
387*	25237-387	28	.04	.30	7,000

NOTE: * Available from Staco Systems stock
M.S.C.P. = Mean Spherical Candle Power
R.A.L.L. = Rated Average Lab. Life (Hours)

SERIES C8P LIGHTED PUSHBUTTON SWITCH/INDICATOR



Attractive Snap-In Bezel Mount

Series C8P is a dependable, long lasting single lamp switch/indicator with convenient snap-in bezel mounting. Available in four bezel styles, with or without barriers, and in choice of black, white or gray, these attractive switches will enhance most modern panel designs. The same proven switch mechanism is used in both the C8 and C8P Switches and is the same basic element used in their QPL counterpart, the Series 60. The low price of the C8P is one of its remarkable features...remarkable because of its high quality and great looks. Price includes switch or indicator and mounting bezel with pushbutton lens. The matching indicator only provides look-alike appearance when intermixed with switches.

Features

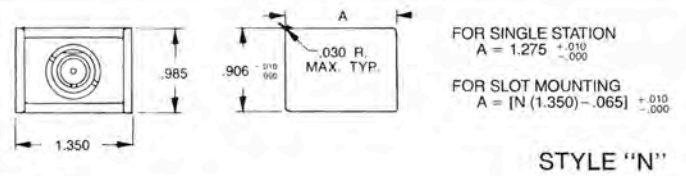
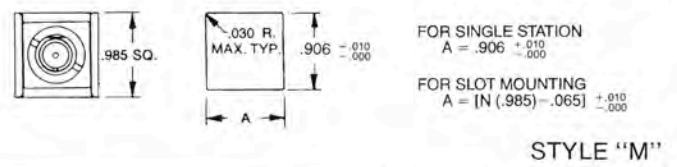
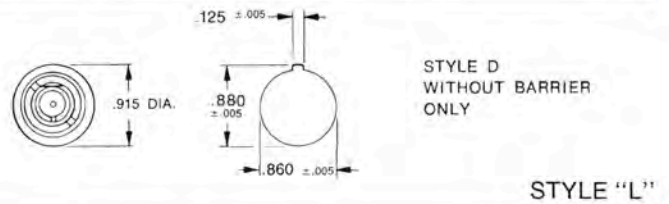
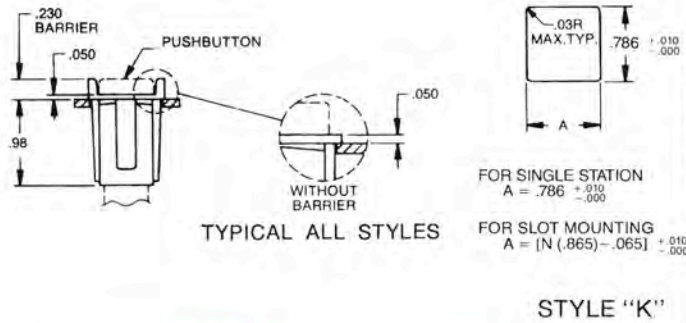
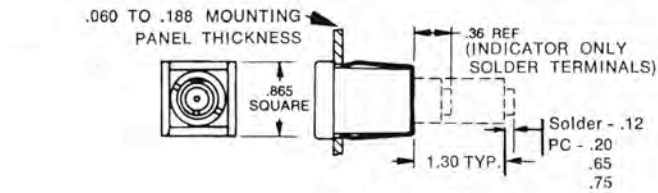
Switch is available with momentary or alternate snap action in two circuit arrangements; DPDT or two circuit double break. Choice of standard operating force, 32 ounces nominal, or low operating force, 20 ounces nominal. Select either solder terminals or PC terminals available in three different lengths. Wide switching range handles resistive loads from 3 amps down to low level computer capability. Gold plated contacts available for low level loads. Rugged metal body and proven switch mechanism made of premium grade materials assure longest life possible. Lamp and switch terminations are on the same plane for ease in wiring.

Pushbutton Display Lens

The colorful, attractive lens serves as both the display screen and the pushbutton to activate the switch. Select from four sizes in a wide assortment of colors and legend types. Photographic legends offer choice of hidden or visible messages with black character on a color background, or characters in color on a black background. Legends are permanently protected under a clear plastic cap. Engraved legends are available on translucent color lens or on a white translucent lens that in the illuminated condition may have either a white or color background. All legends are clear and sharp for easy reading. Pushbuttons accept T-1-3/4 midget flange lamps. See page 16 for lamp ordering information.

SERIES C8P LIGHTED PUSHBUTTON SWITCH/INDICATOR

Bezel Styles



See Series C8 Switch/Indicator, page 14 for terminal arrangement.

Specifications

MECHANICAL

Standard Operating Force 2 lbs. nominal
 Low Operating Force 20 ozs. Nominal
 Mechanical Life 100,000 cycles

ELECTRICAL

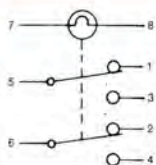
Contact Load Rating **28VDC/115VAC**
 Resistive 3.0 amp
 Lamp 1.0 amp
 Low Level 10 microamps, DC only
 (gold plated contacts)
 Insulation resistance 1000 megohms min.
 @ 500 VDC

Terminal No. 8 is common with lamp shell on switches and PC indicator; terminal No. 1 is common with lamp shell on solder indicator.

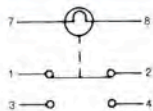
ENVIRONMENTAL

Temperature -55°C to +85°C

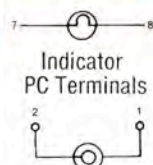
Circuit Schematic



Double pole
Double throw



Two Circuit
Double break



Indicator
Solder Terminals

SERIES C8P LIGHTED PUSHBUTTON SWITCH/INDICATOR

Switch/Indicator Body - Table 4

Standard Operating Force

P/N Suffix	Circuit	Action	Terminations
01	Indicator Only	None	Solder
02	Indicator Only	None	P.C. — .20"
03	Indicator Only	None	P.C. — .65"
04	Indicator Only	None	P.C. — .75"
05	2 Circuit	Momentary	Solder
06	2 Circuit	Momentary	P.C. — .20"
07	2 Circuit	Momentary	P.C. — .65"
08	2 Circuit	Momentary	P.C. — .75"
09	2 Circuit	Alternate	Solder
10	2 Circuit	Alternate	P.C. — .20"
11	2 Circuit	Alternate	P.C. — .65"
12	2 Circuit	Alternate	P.C. — .75"
13	2PDT	Momentary	Solder
14	2PDT	Momentary	P.C. — .20"
15	2PDT	Momentary	P.C. — .65"
16	2PDT	Momentary	P.C. — .75"
17	2PDT	Alternate	Solder
18	2PDT	Alternate	P.C. — .20"
19	2PDT	Alternate	P.C. — .65"
20	2PDT	Alternate	P.C. — .75"

Low Operating Force

P/N Suffix	Circuit	Action	Terminations
21	2 Circuit	Momentary	Solder
22	2 Circuit	Momentary	P.C. — .20"
23	2 Circuit	Momentary	P.C. — .65"
24	2 Circuit	Momentary	P.C. — .75"
25	2 Circuit	Alternate	Solder
26	2 Circuit	Alternate	P.C. — .20"
27	2 Circuit	Alternate	P.C. — .65"
28	2 Circuit	Alternate	P.C. — .75"
29	2PDT	Momentary	Solder
30	2PDT	Momentary	P.C. — .20"
31	2PDT	Momentary	P.C. — .65"
32	2PDT	Momentary	P.C. — .75"
33	2PDT	Alternate	Solder
34	2PDT	Alternate	P.C. — .20"
35	2PDT	Alternate	P.C. — .65"
36	2PDT	Alternate	P.C. — .75"

Snap-in Bezel Mount - Table 5

P/N Suffix	Bezel Style	Bezel Color	Barrier
K1	.63 Sq. P/B; .865 Sq. Bezel	Black	With Barriers
K2	.63 Sq. P/B; .865 Sq. Bezel	Black	Without Barriers
K3	.63 Sq. P/B; .865 Sq. Bezel	Gray	With Barriers
K4	.63 Sq. P/B; .865 Sq. Bezel	Gray	Without Barriers
K5	.63 Sq. P/B; .865 Sq. Bezel	White	With Barriers
K6	.63 Sq. P/B; .865 Sq. Bezel	White	Without Barriers
L1	.68 Dia. P/B; .915 Dia. Bezel	Black	No Barriers
L2	.68 Dia. P/B; .915 Dia. Bezel	Gray	No Barriers
L3	.68 Dia. P/B; .915 Dia. Bezel	White	No Barriers
M1	.75 Sq. P/B; .985 Sq. Bezel	Black	With Barriers
M2	.75 Sq. P/B; .985 Sq. Bezel	Black	Without Barriers
M3	.75 Sq. P/B; .985 Sq. Bezel	Gray	With Barriers
M4	.75 Sq. P/B; .985 Sq. Bezel	Gray	Without Barriers
M5	.75 Sq. P/B; .985 Sq. Bezel	White	With Barriers
M6	.75 Sq. P/B; .985 Sq. Bezel	White	Without Barriers
N1	.75 x 1.12 P/B; .985 x 1.35 Bezel	Black	With Barriers
N2	.75 x 1.12 P/B; .985 x 1.35 Bezel	Black	Without Barriers
N3	.75 x 1.12 P/B; .985 x 1.35 Bezel	Gray	With Barriers
N4	.75 x 1.12 P/B; .985 x 1.35 Bezel	Gray	Without Barriers
N5	.75 x 1.12 P/B; .985 x 1.35 Bezel	White	With Barriers
N6	.75 x 1.12 P/B; .985 x 1.35 Bezel	White	Without Barriers

Part Number Code

Typical Part Number **G** **C8P** **13** **M2** **09** **5** **B (FILL)**

Prefix used when gold plated contacts are required. Omit if not required

Model

Switch/Indicator Body
01 thru 36. See Table 4

Snap-in Mounting bezel
K1 thru N6. See Table 5.

Pushbutton Color Combinations
01 thru 57. See Table 2, Page 11.

Legend Display Type
1 thru 6 and 8. See Table 1, Page 10

Legend Character Size
A = 10 point B = 12 point C = 18 point
See Table 3, Page 12

Legend

SERIES 30 UNLIGHTED PUSHBUTTON SWITCHES

QPL Listed

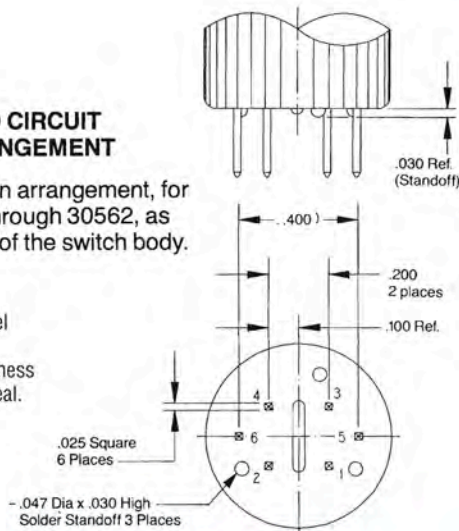
Models 30259-30262, with solder termination, and Models 30559-30562, with PC or wire terminations, have been granted Qualified Products Listings under MIL-S-8805. All switches meet high shock and vibration environment requirements. Staco Systems' long proven roll type snap action provides clean, positive switching, with a minimum of contact bounce. Wide switching range, from 2 amp resistive down to 10 micro amp, plus choice of 2PDT or 2 circuit double break, provides the circuit control flexibility to meet your specific switching requirements. The 2 circuit configuration can be easily converted to a SPDT by merely adding a jumper between terminations 1 and 3. See Circuit Schematic drawing at bottom of page 17.

Optional mounting Dress Rings provide attractive appearance to panel face. Panel seal option available in the Dress Rings provides moisture seal on face of display panel.

PRINTED CIRCUIT PIN ARRANGEMENT

PC or wire wrap pin arrangement, for Models 30559 through 30562, as viewed from base of the switch body.

NOTE: .250 Max. panel thickness with nut.
.110 max. panel thickness with dress ring and seal.



Specifications

MECHANICAL

Operating Force --- 4 lbs. ± 1 lb.
Plunger travel ---- 176" max.
Mounting Threads -- 15/32-32
UNS - 2A

Mounting Hardware -----
MS25082-821 Hex Nut
MS35333-136 Lockwasher
Dielectric -----1000 VRMS
Insulation Resistance-----
1000 meg-ohm min. @ 500VDC
Life -----100,000 cycles

ELECTRICAL

Contact Rating
28VDC/115VAC . 60/400 Hz
Resistive -----2.0 amp
Inductive -----1.5 amp
Lamp----- .5 amp

Solder Terminals - M8805/99

Part Number Code - 30260 - 11 - A 18 P

Basic Part Number

Part Number	Switch Action	Contact Arrangement
Solder Terminals -		
30259	Alternate	2 Circuit
30260	Mom.	2 Circuit
30261	Alternate	DPDT
30262	Mom.	DPDT
PCB Terminals -		
30559	Alternate	2 Circuit
30560	Mom.	2 Circuit
30561	Alternate	DPDT
30562	Mom.	DPDT

Specified Pushbutton Color

11 = Red
18 = Black
14 = White (100 pc. min.)

Specifies Dress Ring Style

A,B, or C = Dress Ring Style
N = Hex Nut, No Dress Ring

Specifies Dress Ring Color

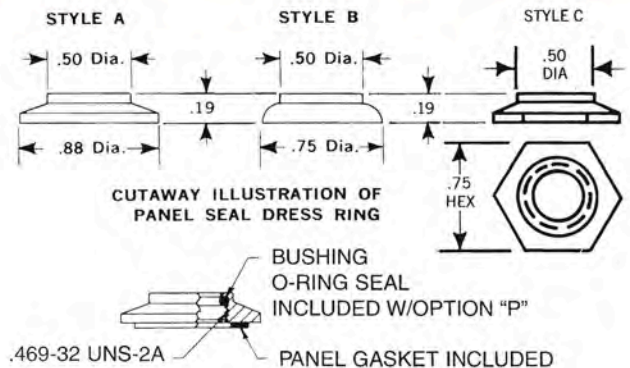
18 = Black
19 = Clear

Panel Seal

P= Dress Ring with Seal
(omit if not required)

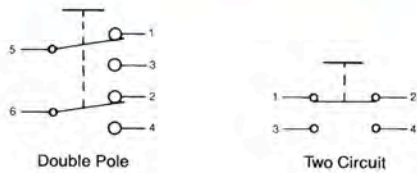
Optional Panel Dress Rings and Seals

Fits all switches with 15/32 mounting thread

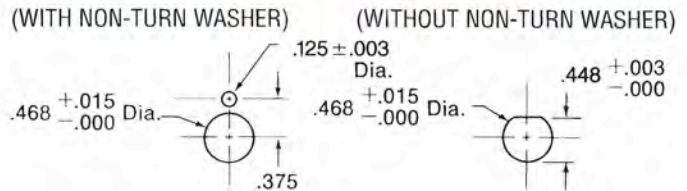


SERIES 30 UNLIGHTED PUSHBUTTON SWITCHES

Circuit Schematic



Mounting Information



OTHER STACOSWITCH PRODUCTS

Series 80 Sunlight Readable Display Switches

- M22885/103, /104, /105 QPL
- Lighted legend is clearly legible even in 10,000 footcandle light
- Uniform lighting, no hot spots even when dimmed for night viewing
- Dead front hidden legend, avoids false energized appearance
- Individual or Matrix mount, 4PDT or 2PDT
- MOM, ALT, SOL and IND
- Request Staco Systems Catalog GC-6/6



Series 90 SLR/NVG Display Switches

- Compact, lightweight, moisture resistant
- Meets or exceeds MIL-22885/101 and MIL-S-22885/111
- Sunlight Readable/NVG Compatible
- Four lamp incandescent or Integral 100,000 hour LED
- Individual or Matrix mount
- MOM, ALT, and IND
- Optional Dripproof or Imersion Proof Seals
- Request Staco Systems Catalog GC-6/8
- New MIL-C-39029/22-192 crimp pins
- New receptacle trims 0.130" down to 0.67" making it the world's shortest crimp switch assembly @ 2.5"
- Ideal for retrofitting M39029/22-192 terminated writing harnesses for upgrade or conversion to Series 90 Switch/Indicator



Series 50 Dripproof Display Switches

- For applications exposed to rain, open deck spray, or condensation
- Meets or exceeds MIL-STD-108 and MIL-S-22885
- Captive rubber pushbutton seal closes moisture paths into switch
- Legend area is not covered by seal so light message remains bright and clear
- Request Staco Systems Catalog GC-6/7



Series 40 QPL and Industrial Display

- M22885/52, /53, /56, /86 QPL
- Individual or Matrix Mount
- Standard Lighted Displays
- MOM, ALT, Latchdown, and solenoid Held
- 4PDT, 2PDT or IND
- Square or Rectangular
- Solder, PC Wirewrap or Crimp Termination
- Meets or exceeds all applicable MIL Specs
- Request Staco Systems Catalog GC-6/2



Lighting and Switching Controllers

- Intelligent bulk dimming module, DDM111
- Interface Controller, IFC 211, 212, 213
- Available in both Military and Industrial versions
- Request Staco Systems Catalog GC-6/9

stacosystems™

One Step Ahead™

7 Morgan • Irvine, CA 92618

Fax: 949.297.8789

Telephone: 949.297.8700

www.stacosystems.com