C-2000™ Push Buttons

600 Volts Max. AC/300 Volts Max. DC
10 Amps. Continuous AC/2.5 Amps. Continuous DC

Nameplates

Standard Markings

Metal Nameplates And Inserts For Standard Size Plastic Nameplates Holders

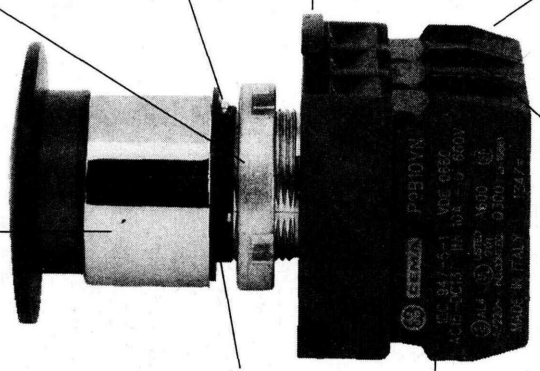
Marking	Metal Nameplate Catalog No.	List Price, GO-10GC	Plastic Insert Catalog No. ①	List Price, GO-10GC
Inch Cut	P9ACP2N276	$1.80	P9ACPBS276	$.50
Inch Return	P9ACP2N277	1.80	P9ACPBS277	.50
Jog Forward	P9ACP2N279	1.80	P9ACPBS279	.50
Jog Reverse	P9ACP2N280	1.80	P9ACPBS280	.50
Jog Run	P9ACP2N245	1.80	P9ACPBS245	.50
Left Right	P9ACP2N246	1.80	P9ACPBS246	.50
Low High	P9ACP2N247	1.80	P9ACPBS247	.50
Lower Raise	P9ACP2N248	1.80	P9ACPBS248	.50
Off On	P9ACP2N233	1.80	P9ACPBS233	.50
Open Close	P9ACP2N234	1.80	P9ACPBS234	.50
Raise Lower	P9ACP2N249	1.80	P9ACPBS249	.50
Rev For	P9ACP2N250	1.80	P9ACPBS250	.50
Run Jog	P9ACP2N251	1.80	P9ACPBS251	.50
Safe Run	P9ACP2N252	1.80	P9ACPBS252	.50
Slow Fast	P9ACP2N253	1.80	P9ACPBS253	.50
Start Cycle	P9ACP2N282	1.80	P9ACPBS282	.50
Start Feed	P9ACP2N283	1.80	P9ACPBS283	.50
Start Jog	P9ACP2N254	1.80	P9ACPBS254	.50
Start Stop	P9ACP2N255	1.80	P9ACPBS255	.50
Stop Cycle	P9ACP2N265	1.80	P9ACPBS265	.50
Stop Feed	P9ACP2N264	1.80	P9ACPBS264	.50
Stop Reset (Red)	P9ACP2R227	1.80	P9ACPBS227	.50
Stop Start	P9ACP2N232	1.80	P9ACPBS232	.50
Up Down	P9ACP2N256	1.80	P9ACPBS256	.50
Off Coolant On	P9ACP2N257	1.80	P9ACPBS257	.50
Auto Off Hand	P9ACP2N258	1.80	P9ACPBS258	.50
For Off Rev	P9ACP2N239	1.80	P9ACPBS239	.50
For Stop Rev	P9ACP2N259	1.80	P9ACPBS259	.50
Hand Off Auto	P9ACP2N261	1.80	P9ACPBS261	.50
Jog Off Run	P9ACP2N298	1.80	P9ACPBS298	.50
Jog Safe Run	P9ACP2N267	1.80	P9ACPBS267	.50
Local Off Remote	P9ACP2N237	1.80	P9ACPBS237	.50
Low Off High	P9ACP2N238	1.80	P9ACPBS238	.50
Lower Off Raise	P9ACP2N268	1.80	P9ACPBS268	.50
Man Off Auto	P9ACP2N269	1.80	P9ACPBS269	.50
Open Off Close	P9ACP2N270	1.80	P9ACPBS270	.50
Slow Off Fast	P9ACP2N271	1.80	P9ACPBS271	.50
Abrir	—	—	P9ACPBS506	.50
Adelante	—	—	P9ACPBS502	.50
Atras	—	—	P9ACPBS508	.50
Atras Adelante	—	—	P9ACPBS518	.50
Atras O Adelante	—	—	P9ACPBS519	.50
Bajar	—	—	P9ACPBS505	.50
Bajo	—	—	P9ACPBS514	.50
Cerrar	—	—	P9ACPBS501	.50
Defecto	—	—	P9ACPBS513	.50
Derecha	—	—	P9ACPBS509	.50
Emergencia	—	—	P9ACPBS516	.50
Izquierda	—	—	P9ACPBS504	.50
Manual	—	—	P9ACPBS503	.50
Marcha	—	—	P9ACPBS510	.50
Paro (Red)	—	—	P9ACPBS511	.50
Paro Marcha	—	—	P9ACPBS517	.50
Paro O Marcha	—	—	P9ACPBS520	.50
Rapido	—	—	P9ACPBS512	.50
Rearme	—	—	P9ACPBS515	.50
Subir	—	—	P9ACPBS507	.50

① For use with plastic nameplate holders on page 9-86.

C-2000™ Push Buttons

600 Volts Max. AC/300 Volts Max. DC
10 Amps. Continuous AC/2.5 Amps. Continuous DC

C-2000 Push Buttons Reveal the Beauty of Simplicity in Every Detail



Back-tightened locking rings discourage tampering, accommodate a range of panel thicknesses, and tighten down with either a custom wrench or any flat-bladed screwdriver.

A removable orientation tab allows universal mounting in either notched or round 22mm holes.

With 4-point contact, flanges snap securely onto the operator.

Ultrasonically welded contact block housings hold up longer and resist contamination better, even in the dustiest environments. Double bridge sliding contacts provide excellent performance, even in low-voltage applications. Terminals (both screw and quick-connect) can be wired off the operator, then snapped on. Contacts are rated A600, Q300.

Like contact blocks, power supplies just snap onto the mounting flange. Installation is quicker, labor costs are reduced. You can choose from full-voltage, resistor and transformer power supplies and from incandescent, LED of neon lamps.

Four operator styles—round polished and satin chrome, round and square engineered plastic—all reflect a sleek, distinctive European style and give you precisely the look and function you want in your push buttons. Ergonomic design adds ease of assembly and operation.

The permanently bonded front gasket provides superior sealing against contaminants and makes installation nearly foolproof.

Markings are easy to read and, because they're laser-etched, they'll remain legible—permanently.

C-2000 push buttons bring the beauty of simplicity to heavy-duty 22mm push buttons. You'll see it in their outstanding appearance, thoughtful ergonomics, expansive selection, innovative contact blocks, modular versatility, long-term reliability, and global applicability.

Quick Reference Guide to C-2000 Push Buttons

C-2000™ Push Buttons

600 Volts Max. AC/300 Volts Max. DC
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Technical Data

General Specifications

Conformity to standards	**UL508** (USA) **NEMA ICS-2** (USA) **VDE 0660** (Germany) **BSI** (Great Britain) **CEI EN60947.5.1** (Italy) **CENELEC EN 5000 7** (Europe) **CSA C22.2 No. 14-M91** (Canada) **IEC 947.5.1** (International) **UTE** (France) **NFC 63140** (France) **JIS** (Japan)
Approvals	**UL listed**—File Number E66677 **CSA Certified**—File Number 16661-63 Manufacturing facility is registered to **ISO 9000** CE
Finger protection at terminals	**IP2X** according to IEC 529 Terminal identification per **CENELEC EN 50013**
Enclosure ratings	Suitable for use in **NEMA Types 1, 3, 3R, 3S, 4, 4X, 12, and 13** enclosures. (Multi-function push buttons are suitable for NEMA Type 1 enclosures only unless used with protective rubber cap accessory.) **IP66** per IEC 529, when mounted in enclosures with equal or superior seal.
Ambient temperature	**Operating**: −13° to +158°F; −25° to +70°C **Storage**: −40° to 158°F; −40° to +70°C
Climate suitability/humidity	**Climate Type** / **Temperature** / **Relative Humidity** Temperature / 74°F (23°C) / 50% Wet / 74°F (23°C) / 83% Hot Wet / 104°F (40°C) / 92% Variable Wet / 74° to 104°F (23° to 40°C) / 83% to 92%
Resistance to vibration	Per **IEC 68-2-6.** 16g with a frequency from 40-500 Hz and maximum peak-to-peak amplitude of 0.75mm.
Resistance to shock	According to **MIL 202B, method 202A.** Test was performed for 1/2 sinusoid for 11ms, 38g max for all operators with transformers and 100g for all other operators.
Operating force	Standard push button operator: 2.5 lbs. (11N) Each contact block: 1.3 lbs. (6 N) Selector switch operator: 2.4 in./lb. (0.27 N-m)

Wire Terminals

Wire capacity and terminal torque requirements (for all power supplies and contact blocks)	Suitable for #22-#12 AWG stranded or solid copper wires, single or parallel conductors of same size. Terminal torque: 7-12 in./lb. Parallel conductor size combinations (stranded or solid wire): **Parallel Conductor Size Combinations (Stranded or Solid Wire)** / **Terminal Torque** #12 with #14 / 12 in./lb. #14 with #16 / 12 in./lb. #16 with #18 / 12 in./lb. #16 with #20 / 12 in./lb. #16 with #22 / 12 in./lb. #18 with #22 / 10-12 in./lb. #18 with #20 / 10-12 in./lb. #20 with #22 / 7-12 in./lb.
Quick connect terminals	Suitable for one female tab connector measuring 0.25 x 0.03 inches (6.35 x 0.8 mm) or two female tab connectors measuring 0.11 x 0.03 inches (2.8 x 0.8 mm).

Contact Data

Electrical reliability data	Electrical life and reliability in low level current: 80 million operations at 12V, 5mA, resistive load. (32 contacts tested successfully for 2.5 million operations.)
Dust resistance	In extremely dusty environments, electrical life at low level current is 250,000 operations at 12 V, 5mA, resistive load. In a clean environment, electrical life at low level current is 10 million operations at 12 V, 5mA, resistive load.
Thermal current	Ith = 10A per IEC 947-5-1
Insulation voltage	Ui = 660 Volts ac/dc (opposite polarity) except 2NO and 2NC blocks 300 Vac/dc
Protection from electrical shock	Class I per IEC 536 for metal operators Class II (double insulation) per IEC 536 for plastic operators
Insulation category	Group "C" per VDE 0110
Dielectric strength	2500 Volts
Short circuit protection	10A type gG fuse, per IEC 269.1 & 269.3
Pilot duty ratings	**A600** (maximum make volt-amperes = 7200; maximum break volt-amperes = 720; PF = .25)

Volts (V)	12	24	48	60	120	240	480	600
Continuous (A)	10	10	10	10	10	10	10	10
Making (A)	100	100	100	100	60	30	15	12
Breaking (A)	10	10	10	10	6	3	1.5	1.2

Q300 (maximum make or break volt-amperes = 69)

Volts (V)	12	24	48	60	125	250	300
Continuous (A)	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Making (A)	2.5	2.5	1.4	1.1	0.55	0.27	0.23
Breaking (A)	2.5	2.5	1.4	1.1	0.55	0.27	0.23

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Technical Data (continued)

Materials

Component	Material
Cap/levers/knobs (nonilluminated)	Polyamide/acetal
Cap/levers/knobs (illuminated)	Polycarbonate
Metal housing	Copper-nickel-chrome plated zinc/aluminum alloy
Plastic housing	Polyamide/acetal
Plunger	Polyester
Springs	Stainless steel
Body-to-panel gasket	Polyester elastomer
Cap-to-body gasket	Vinyl nitrile rubber
Lubricant	Lithium grease
Cams for nonilluminated selector switches	Polyamide/acetal
Cams for illuminated selector switches	Polyester
Cam followers	Polyamide/acetal
Contact block and power supply housings	Polyamide/acetal
Contacts	Pure silver
Conductors	Brass alloy
Flanges	Polyamide/acetal
Flange latches	Polyamide/acetal
Printed circuit board adapter	Polyamide/acetal
Joystick protective housing	Vinyl nitrile rubber
Joystick plunger, lever & cam	Acetal resin
Joystick actuator	Polyamide/acetal
Push-to-latch, turn-to-release actuator & plunger	Polyamide/acetal
Wobble stick	Polycarbonate
Toggle switch lever	Polyamide/acetal
Protective caps (clear)	Silicon rubber
Protective caps (colored)	Vinyl nitrile rubber
Push button protective guards	Polycarbonate
Mushroom-head guards	Polyamide/acetal
Padlockable cover	Polycarbonate and zinc-plated zinc/aluminum alloy
Metal locking rings	Zinc-plated zinc/aluminum alloy
Keys	Plated brass
Nameplate holders	Polyamide/acetal
Nameplate inserts	Laminated polyester
Hole plug	Polyamide/acetal

Power Supply Selection

Type	Principle of Operation	Benefit
Full voltage	Supplies input voltage directly to bulb.	Smallest and least expensive. Can be used with LEDs.
Transformer	Utilizes a transformer to step the input voltage down to 6 volts.	Transformer has the effect of damping the inrush current and voltage spikes from the switching device seen when the light is turned on, actually protecting the bulb from these factors that shorten life. Generates less heat than the resistor power supplies. Reduces unsafe supply voltages (up to 600 V) down to a safe level for lamp servicing. Can be used with LEDs. Able to withstand a short circuit of the lamp or lamp socket without damage.
Normal resistor	Utilizes a resistor in series with the incandescent lamp to drop the lamp voltage to 50% of the input voltage.	Least expensive way to reduce unsafe supply voltages (up to 240 V) down to a safe level for lamp servicing.
Diode resistor	Utilizes a resistor and a diode in series with the lamp to rectify and drop a 240 Vac input voltage to operate a 130 V incandescent lamp.	Provides the same function as the normal resistor, but takes up only one position in the flange rather than two. Generates less heat than the normal resistor power supplies.
Long-life resistor	Utilizes a resistor in series with the 130 V incandescent lamp to provide a lamp voltage 80% that of the input voltage.	Extends life of a 130 V incandescent bulb by 1300% (from 2000 to 28,000 hours).
Flashing (full-voltage or transformer)	Utilizes a flashing circuit which can be enabled or disabled by externally switching (shorting) two connections.	Allows the lamp to be switched between OFF, ON, and FLASHING modes.
Panel test (full-voltage or standard resistor)	Utilizes a diode to isolate the lamp test circuit from the supply circuit.	Allows use of indicating lights and "panel test" feature rather than individual push-to-test illuminated push buttons. Eliminates the need for the NO/NC contacts used on conventional push-to-test pilot lights.

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Nameplates

Plastic Nameplates With Blank Inserts

(Includes black holder with black/red reversible insert.)

For Use With	Size	Holder and Insert Catalog No.	List Price, ① GO-10GC	Spare Blank Insert Catalog No.	List Price, ① GO-10GC	Transparent Insert Catalog No.	List Price, ① GO-10GC
◕ Polished Chrome ○ Satin Chrome ● Round Engineered Plastic	Standard	P9ARTBS	**$1.00** each	P9ACPBS	**$.50** each	P9ACPTS	**$.50** each
	Jumbo	P9ARTBM	**1.50** each	P9ARPBM	**.50** each	P9ACPTM	**.50** each
□ Square Engineered Plastic	Standard	P9ASTBS	**2.00** each	P9ACPBS	**.50** each	P9ACPTS	**.50** each

① Package quantity is five, order in multiples of (5).

Plastic Nameplate Holders With Custom Engraved Inserts

For Use With	Size	Catalog No.	List Price, GO-10GC
◕ Polished Chrome ○ Satin Chrome ● Round Engineered Plastic	Standard	P9ARTBSEN	**$8.00**
	Jumbo	P9ARTBMEN	**8.00**
□ Square Engineered Plastic	Standard	P9ASTBSEN	**8.00**

For custom engraved engineered plastic nameplates, specify Figure corresponding to desired field configuration, characters desired for each field, and color (black or red) of field.

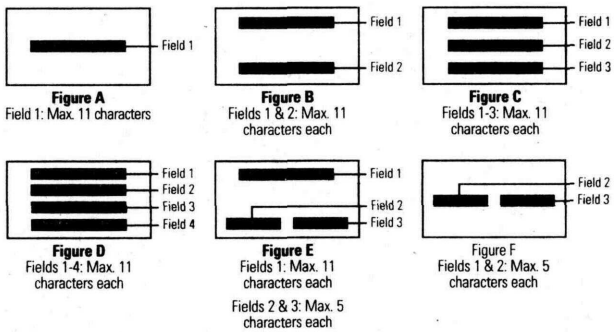


Figure A Field 1: Max. 11 characters

Figure B Fields 1 & 2: Max. 11 characters each

Figure C Fields 1-3: Max. 11 characters each

Figure D Fields 1-4: Max. 11 characters each

Figure E Fields 1: Max. 11 characters each
Fields 2 & 3: Max. 5 characters each

Figure F Fields 1 & 2: Max. 5 characters each

Blank Metal Nameplates

Type	Size	Color	Catalog No.	List Price, GO-10GC
Metal	Standard	Black	P9ACP2N	**$1.80**
		Red	P9ACP2R	**1.80**
Metal (Joystick)	Joystick	Black	P9ACP3N	**1.80**
		Red	P9ACP3R	**1.80**

Custom Engraved Metal Nameplates

Figure	Size	Maximum Characters/Field	Black Catalog No.	Red Catalog No.	List Price, GO-10GC
1	Standard	Field 1: 13	P9ACP2NBEN	P9ACP2RBEN	**$8.00**
2		Fields 1 & 2: 13 each	P9ACP2NCEN	P9ACP2RCEN	**8.00**
3		Fields 1 & 2: 6 each	P9ACP2NFEN	P9ACP2RFEN	**8.00**
4		Fields 1 & 3: 6 each, Fields 2: 13	P9ACP2NGEN	P9ACP2RGEN	**8.00**
5		Fields 1-4: 13 each	P9ACP2NHEN	P9ACP2RHEN	**8.00**
7	Joystick	Fields 1 & 2: 17 each	P9ACP3NJEN	P9ACP3RJEN	**8.00**
8		Fields 1 & 2: 17 each; Fields 3 & 4: 4 each	P9ACP3NKEN	P9ACP3RKEN	**8.00**

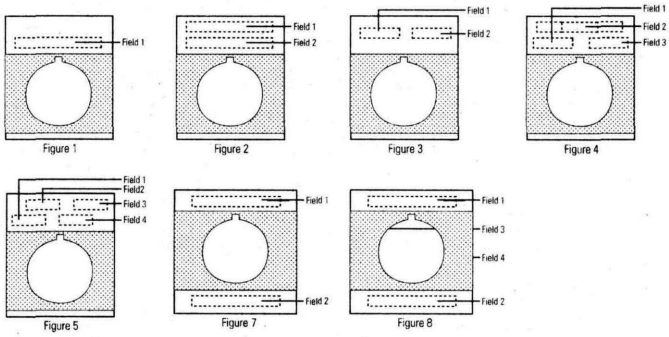


Figure 1 Figure 2 Figure 3 Figure 4

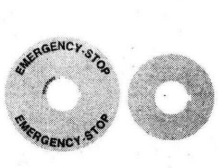
Figure 5 Figure 7 Figure 8

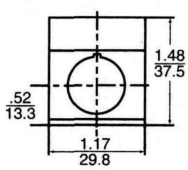
For custom engraved metal nameplates, specify Figure corresponding to desired field configuration and characters desired for each field.

Yellow Emergency Nameplates

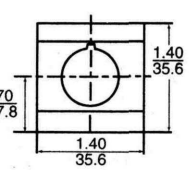
Description	Diameter	Catalog No.	List Price, GO-10GC ①
Blank Round	59mm	080XTGR	**$2.00**
	78mm	080XTG8	**2.00**
Round Engraved "Emergency Stop"	59mm	080XTGR02	**2.00**
	78mm	080XTG802	**2.00**

① Package quantity is five, order in multiples of (5).

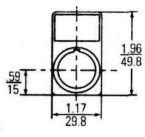




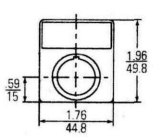
Standard Metal Nameplate



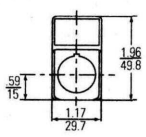
Metal Joystick Nameplate



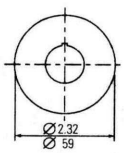
Round Standard Plate Holder



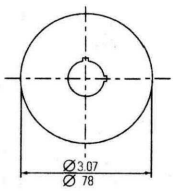
Round Large Plate Holder



Square Standard Plate Holder



Round Yellow Nameplate (59 mm)



Round Yellow Nameplate (78 mm)