

CR104P Heavy-Duty Potentiometers

600 Volts Maximum AC/DC
10 Amperes Continuous

All Forms

One-step selection and pricing of all forms.



Potentiometer Operator Only

Description	Catalog Number CR104P	List Price, GO-10P1
Potentiometer operator only	XP	\$70.20

Assembled Operator and Potentiometer

Note: Potentiometer operators are designed for 2-watt potentiometers with shafts 2" long and .25" in diameter. Potentiometers offered here fit that description and also are available as Clarostat model 380C1.

Potentiometer values Ω	Catalog Number CR104P	List Price, GO-10P1
100 ohm	XP01	\$118.20
250 ohm	XP02	118.20
500 ohm	XP03	118.20
1,000 ohm	XP04	118.20
2,500 ohm	XP05	118.20
5,000 ohm	XP06	118.20
10,000 ohm	XP07	118.20
25,000 ohm	XP08	118.20
50,000 ohm	XP09	118.20
100,000 ohm	XP10	118.20
250,000 ohm	XP11	118.20
500,000 ohm	XP12	118.20
1 million ohm	XP13	118.20
2.5 million ohm	XP14	118.20
5 million ohm	XP15	118.20

Suitable for use in NEMA Types 1, 3, 3R, 4, 4X, 12, and 13 applications when mounted in enclosures rated for those same applications. For some NEMA Type 4X applications, protective caps will improve corrosion resistance.

Nameplates pages 9-33, 9-34
 Technical Data pages 9-3 to 9-5
 Drilling Plan and
 Dimensions page 9-4



Section 9

The GE push button offering includes a complete line of control units and stations in both full size push buttons (30 mm) and in miniature size devices (22 mm) which are designed to be used in numerous types of industrial applications.

The CR104P full-size, heavy-duty oiltight and watertight line is complete with a variety of accessories and enclosures.

Light Tower Status Indicating Lights provide information at a glance in industrial or commercial environments where you need to transmit and receive information across a distance. Modularity and versatility make them valuable in a broad range of applications.

GE's C-2000™ 22mm Global Push Buttons are designed to be applied in just about any application worldwide. C-2000 push buttons conform to all major world standards and are UL listed and CSA Certified. All devices except the double push button are rated for NEMA 1, 3, 3R, 3S, 4, 4X, 12, 13, and IP66 when mounted in a suitable enclosure. C-2000 push buttons are manufactured in an ISO 9000 facility, assuring you that these products comply with quality standards that are recognized worldwide. Pre-engraved nameplates are available in French, Spanish, Italian, German, and English. The C-2000 push button line is globally available under the same catalog numbers, packaging, and markings anywhere in the world.

An entire listing of CR2943 and CR2941 standard-duty push button control stations is available, suitable for NEMA Type 1, 4, 4X, and 7 and 9 applications.



Heavy-Duty 30mm Push Buttons, Selector Switches, Indicating Lights, Accessories (CR104P Series)	9-2 to 9-36
Light Tower Status Indicating Lights (SL Series)	9-37 to 9-47
C-2000™ 22mm Global Push Buttons (P9 Series)	9-48 to 9-100
Standard-Duty Push Button Control Stations (CR2943 and CR2941 Series)	9-101 to 9-103
Palm Switches	9-104

References:
See Publication Index, Section 18.

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CR104P Heavy-Duty Push Buttons

600 Volts Maximum AC/DC
10 Amperes Continuous

Technical Data General Specifications

Standards & approvals	UL listed —File Number E2403 CSA Certified —LR15492, Class 321103 NEMA —ICS2 — 1988 IEC 947.5.1 VDE 0660		
Enclosure ratings	All units are suitable for use in NEMA Type 1, 3, 3R, 4, 4X, 12, and 13 applications when mounted in enclosures rated for those same applications. For some NEMA 4X applications, protective caps will provide improved corrosion resistance.		
Finger protection at terminals	IP2X according to IEC 529 Terminal identification per CENELEC EN 50013		
Temperature range	<u>Operating</u> -25° to +70°C -13° to +158°F		<u>Storage</u> -40° to +70°C -40° to +158°F
Climate suitability/humidity	<u>Climate Type</u> Temperate Wet Hot Wet Variable Wet	<u>Temperature</u> 74°F (23°C) 74°F (23°C) 104°F (40°C) 74° to 104°F (23° to 40°C)	<u>Relative Humidity</u> 50% 83% 92% 83%-92%
Shock and vibration	Resistance to shock —50g, 11ms Frequency range —1-100 Hz Vibration amplitude —1-13.2 Hz—displacement ±1mm 13.2-100 Hz—acceleration ±0.7g		
Operating force		<u>Standard recessed push buttons</u>	<u>Standard flush push buttons</u>
	Without contact blocks With 1NO contact block With 2 NO contact blocks With 3 NO contact blocks	1.625 lb./f. 2.5 lb./f. 3.5 lb./f. 4.0 lb./f.	2.5 lb./f. 2.875 lb./f. 3.5 lb./f. 4.375 lb./f.
Wire size	22-12 AWG stranded or solid copper wire		
Torque requirements	Terminal screws: 10-14 in./lb. Contact block mounting screws: 10-14 in./lb.		

Contacts

Electrical reliability data	With indicating light loads, tested for 5,000,000 operations at 40mA and 115 V resistive loads with no failures observed.		
Electrical characteristics	<u>Characteristic</u>	<u>Value</u>	
	Thermal current	10A per IEC 947-5-1	
	Insulation voltage	Ui = 660 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 V	
	Short-circuit protection	10A time-delay fuse gG per IEC 269.1 & 269.3	
Finger-safe terminals	Available for silver and gold single- and double-circuit contact blocks, as components and as assembled versions.		
Contact characteristics	NC: slow make, double break (positive opening) NO: slow make, double break Opposite polarity Self-cleaning below 300 volts NO and NC snap action (for use on joysticks)		
AC Ratings, NEMA A600 Heavy Pilot Duty	Maximum AC voltage	Continuous current amperes	AC Voltamperes @ 60/50 Hz Ⓢ
	600	10	Make Break 7200 720
	Ⓢ Maximum make and break currents are 60 and 6 amperes respectively for voltages of 120 and below.		
DC Ratings, NEMA P600	Maximum make or break amperes		
	125 V	250 V	600 V
	1.1	0.55	0.2
Reed switch block ratings	AC ratings		DC ratings
	Operating voltage	2-120 Vac	2-30 Vdc
	Continuous current (maximum)	.001-.15A	.001-.15A
	Resistive, watts (VA)	8 VA maximum	4.5 VA maximum
Power supply resistor values	<u>Input</u> 120 Vac/dc 240 Vac/dc	<u>Resistor value</u> 750 ohms ±5%, 5 watts, 2 resistors in series 2700 ohms ±5%, 5 watts, 2 resistors in series	

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