

Pilot and Signaling Devices

Heavy-Duty 22.5 mm Watertight/Oiltight Special Operators

C-2000

Section 9

Special Operators

600 VAC Max., 300 VDC Max.

10 Amps Continuous AC, 2.5 Amps Continuous DC

Boot is nitride rubber, check for application suitability. For optional silicone boot, contact factory for availability.

Selection Process

Select operator + Select contact block(s) + Select nameplate, if required, = Complete Unit
 below from page 9-93 from pages 9-95 to 9-97



Joysticks

Position Type	Release Type	Operator Style	Mechanical Interlock	Product Number
3-Position	Maintained All Positions	Round Polished Chrome	No	P9CMN2F
3-Position	Maintained All Positions	Round Polished Chrome	Yes	P9CMB2F
3-Position	Maintained All Positions	Round Satin Chrome	No	P9MMN2F
3-Position	Maintained All Positions	Round Satin Chrome	Yes	P9MMB2F
3-Position	Maintained All Positions	Round Engineered Plastic	No	P9XMN2F
3-Position	Maintained All Positions	Round Engineered Plastic	Yes	P9XMB2F
3-Position	Momentary All Positions	Round Polished Chrome	No	P9CMN2T
3-Position	Momentary All Positions	Round Polished Chrome	Yes	P9CMB2T
3-Position	Momentary All Positions	Round Satin Chrome	No	P9MMN2T
3-Position	Momentary All Positions	Round Satin Chrome	Yes	P9MMB2T
3-Position	Momentary All Positions	Round Engineered Plastic	No	P9XMN2T
3-Position	Momentary All Positions	Round Engineered Plastic	Yes	P9XMB2T
3-Position	Up Momentary—Down Maintained	Round Polished Chrome	No	P9CMN2A
3-Position	Up Momentary—Down Maintained	Round Polished Chrome	Yes	P9CMB2A
3-Position	Up Momentary—Down Maintained	Round Satin Chrome	No	P9MMN2A
3-Position	Up Momentary—Down Maintained	Round Satin Chrome	Yes	P9MMB2A
3-Position	Up Momentary—Down Maintained	Round Engineered Plastic	No	P9XMN2A
3-Position	Up Momentary—Down Maintained	Round Engineered Plastic	Yes	P9XMB2A
3-Position	Up Maintained—Down Momentary	Round Polished Chrome	No	P9CMN2B
3-Position	Up Maintained—Down Momentary	Round Polished Chrome	Yes	P9CMB2B
3-Position	Up Maintained—Down Momentary	Round Satin Chrome	No	P9MMN2B
3-Position	Up Maintained—Down Momentary	Round Satin Chrome	Yes	P9MMB2B
3-Position	Up Maintained—Down Momentary	Round Engineered Plastic	No	P9XMN2B
3-Position	Up Maintained—Down Momentary	Round Engineered Plastic	Yes	P9XMB2B
5-Position	Maintained All Positions	Round Polished Chrome	No	P9CMN4F
5-Position	Maintained All Positions	Round Polished Chrome	Yes	P9CMB4F
5-Position	Maintained All Positions	Round Satin Chrome	No	P9MMN4F
5-Position	Maintained All Positions	Round Satin Chrome	Yes	P9MMB4F
5-Position	Maintained All Positions	Round Engineered Plastic	No	P9XMN4F
5-Position	Maintained All Positions	Round Engineered Plastic	Yes	P9XMB4F
5-Position	Momentary All Positions	Round Polished Chrome	No	P9CMN4T
5-Position	Momentary All Positions	Round Polished Chrome	Yes	P9CMB4T
5-Position	Momentary All Positions	Round Satin Chrome	No	P9MMN4T
5-Position	Momentary All Positions	Round Satin Chrome	Yes	P9MMB4T
5-Position	Momentary All Positions	Round Engineered Plastic	No	P9XMN4T
5-Position	Momentary All Positions	Round Engineered Plastic	Yes	P9XMB4T

Special Operators

Cams

Note selection and position of contact block(s) for cam.

3-Position Joystick

Position			Screw Terminal Contact Block Product No. and Mounting Position	
Up	Center	Down	Position 1	Position 2
X	0	0	P9B11VN	—
0	0	X	—	P9B11VN
0	0	X	—	P9B11VN
X	0	0	—	P9B11VN

5-Position Joystick

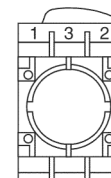
Position					Screw Terminal Contact Block Product No. and Mounting Position	
Up	Right	Center	Down	Left	Position 1	Position 2
0	X	0	0	0	P9B11VN	—
0	0	0	0	X	—	P9B11VN
0	0	0	X	0	—	P9B11VN
X	0	0	0	0	—	P9B11VN



3-Position Joystick

5-Position Joystick

Operator Positions



Contact Block Positions (viewed from rear)



Outlines and Dimensions: See page 9-91
 Accessories: See page 9-102 to 9-111
 Technical Data: See page 9-119 to 9-125

Pilot and Signaling Devices

Heavy-Duty 22.5 mm Watertight/Oiltight Special Operators

Section 9

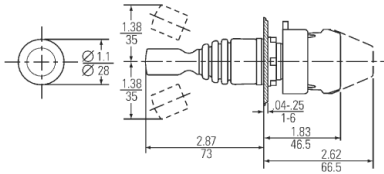
C-2000

Special Operators

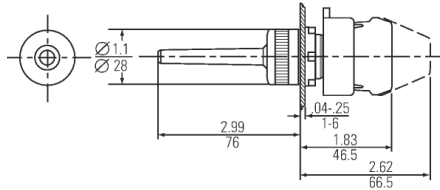
Outlines and Dimensions (in/mm) (For Estimating Only)

600 VAC Max., 300 VDC Max.

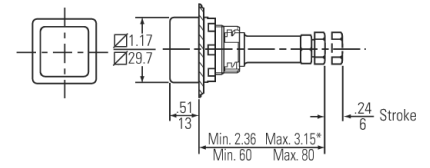
10 Amps Continuous AC, 2.5 Amps Continuous DC



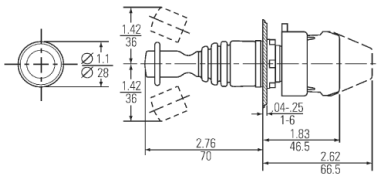
Round Joysticks



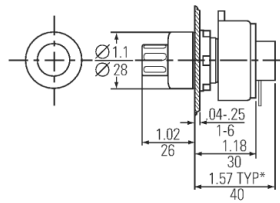
Round Wobble Stick



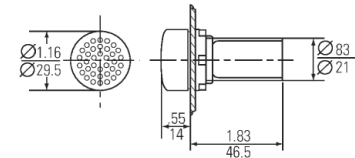
Square Reset Push Button



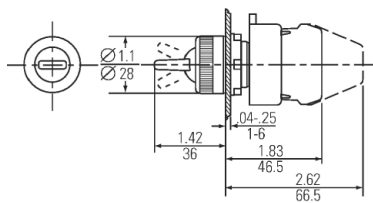
Round Joystick With Interlock



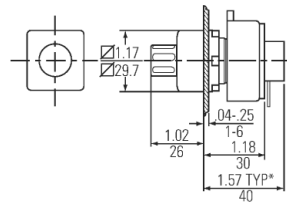
Round Potentiometer Operator



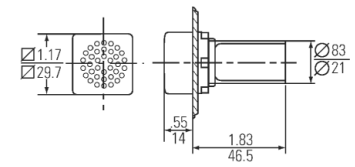
Round Buzzer



Round Toggle Switch

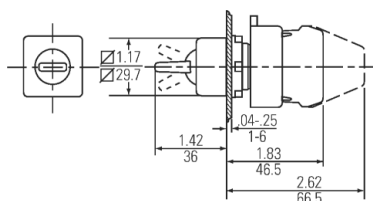


Square Potentiometer¹ Operator

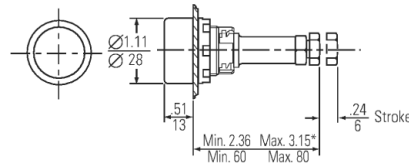


Square Buzzer

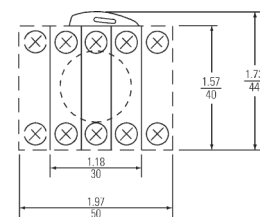
¹Potentiometer supplied by customer



Square Toggle Switch



Round Reset Push Button



Typical Back Side View



Pilot and Signaling Devices Heavy-Duty 22.5 mm Watertight/Oiltight Accessories

Section 9

C-2000

Power Supplies and Contact Blocks

600 VAC Max., 300 VDC Max.

10 Amps Continuous AC, 2.5 Amps Continuous DC

Resistor Power Supplies AC/DC

Bulb Type	Terminal type	Lamp Operational Mode	Voltage	Product Number
Incandescent	Screw Terminal	Steady	110-120V	P9PRNVJ
Incandescent	Screw Terminal	Steady	220-240V	P9PRNVN
Incandescent	Screw Terminal	Steady with Diode	220-240V	P9PRDVN
Incandescent	Screw Terminal	Steady Long Life	110-120V	P9PRLVJ
Incandescent	Screw Terminal	Panel Test	220-240V	P9PRTVN

Full-Voltage Power Supplies Low-Level Energy (Reed)

Bulb Type	Terminal type	Lamp Operational Mode	Voltage	Product Number
Incandescent	Quick-Connect Terminal	Steady	-	P9PDHF ¹

¹For use with Reed Logic flange only.

Contact Blocks

Terminal type	Contact Block Type	Contact Configuration	Product Number
Screw Terminal	Standard	1NO	P9B10VN
Screw Terminal	Standard	1NC	P9B01VN
Screw Terminal	Standard	1NO-1NC	P9B11VN
Screw Terminal	Standard	2NO	P9B20VN
Screw Terminal	Standard	2NC	P9B02VN
Screw Terminal	Early Make	1NO	P9B10VA
Screw Terminal	Late Opening	1NC	P9B01VR
Screw Terminal	Base Mount	1NO	P9B10BN
Screw Terminal	Base Mount	1NC	P9B01BN
Quick-Connect Terminal	Standard	1NO	P9B10FN
Quick-Connect Terminal	Standard	1NC	P9B01FN
Quick-Connect Terminal	Reed	1NO	P9B10FH ²
Quick-Connect Terminal	Reed	1NC	P9B01FH ²

²Requires special flange (P9ACFSM).

Order on page 9-110.



Pilot and Signaling Devices Heavy-Duty 22.5 mm Watertight/Oiltight Accessories

C-2000

Nameplates

600 VAC Max., 300 VDC Max.

10 Amps Continuous AC, 2.5 Amps Continuous DC

Standard Metal

Nameplate Marking	Product Number
Auto	P9ACP2N219
Auto Cut	P9ACP2N272
Auto Return	P9ACP2N273
CLOSE	P9ACP2N205
Control Off	P9ACP2N262
Control On	P9ACP2N286
Cycle On	P9ACP2N266
DECREASE	P9ACP2N274
DOWN	P9ACP2N203
EMERGENCY STOP (Red)	P9ACP2R229
Emergency Stop Pull to Reset (RED)	P9ACP2R230
FAST	P9ACP2N208
Fault	P9ACP2N218
FORWARD	P9ACP2N214
Hand	P9ACP2N220
HIGH	P9ACP2N221
IN	P9ACP2N275
INCH	P9ACP2N209
INCREASE	P9ACP2N278
JOG	P9ACP2N210
LEFT	P9ACP2N222
LOW	P9ACP2N223
LOWER	P9ACP2N217
Off (Red)	P9ACP2R213
ON	P9ACP2N212
OPEN	P9ACP2N206
OUT	P9ACP2N293
Overload Tripped	P9ACP2N226
POWER ON	P9ACP2N240
Push-to-Stop/Pull-to-Start	P9ACP2N241
RAISE	P9ACP2N216
RESET	P9ACP2N291
RETURN	P9ACP2N242
REVERSE	P9ACP2N215
RIGHT	P9ACP2N224
RUN	P9ACP2N211
Safe	P9ACP2N281
SLOW	P9ACP2N207
Spindle Closed	P9ACP2N294
Spindle Open	P9ACP2N295
START	P9ACP2N202
STOP (Red)	P9ACP2R201
Stop Rotate-to-Reset	P9ACP2N228
Sub SPD Closed	P9ACP2N296
Sub SPD Open	P9ACP2N297
TEST	P9ACP2N225
UP	P9ACP2N204
Feed Hold	P9ACP2N263
FOR REV	P9ACP2N231
HAND AUTO	P9ACP2N243
HIGH LOW	P9ACP2N244
H.P. Coolant	P9ACP2N290
Inch Cut	P9ACP2N276
Inch Return	P9ACP2N277
JOG FORWARD	P9ACP2N279
JOG REVERSE	P9ACP2N280
JOG RUN	P9ACP2N245
LEFT RIGHT	P9ACP2N246
LOW HIGH	P9ACP2N247
LOWER RAISE	P9ACP2N248
OFF ON	P9ACP2N233
OPEN CLOSE	P9ACP2N234
RAISE LOWER	P9ACP2N249
REV FOR	P9ACP2N250
RUN JOG	P9ACP2N251
SAFE RUN	P9ACP2N252
SLOW FAST	P9ACP2N253
START CYCLE	P9ACP2N282
Start Feed	P9ACP2N283
START JOG	P9ACP2N254

Standard Metal (continued)

Nameplate Marking	Product Number
START STOP	P9ACP2N255
Stop Cycle	P9ACP2N265
Stop Feed	P9ACP2N264
Stop Reset (Red)	P9ACP2R227
STOP START	P9ACP2N232
UP DOWN	P9ACP2N256
OFF COOLANT ON	P9ACP2N257
Auto Off Hand	P9ACP2N258
FOR OFF REV	P9ACP2N239
FOR STOP REV	P9ACP2N259
HAND OFF AUTO	P9ACP2N261
JOG OFF RUN	P9ACP2N298
JOG SAFE RUN	P9ACP2N267
Local Off Remote	P9ACP2N237
LOW OFF HIGH	P9ACP2N238
LOWER OFF RAISE	P9ACP2N268
MAN OFF AUTO	P9ACP2N269
OPEN OFF CLOSE	P9ACP2N270
SLOW OFF FAST	P9ACP2N271

Plastic Insert

Nameplate Marking	Product Number ¹
Auto	P9ACPBS219
Auto Cut	P9ACPBS272
Auto Return	P9ACPBS273
CLOSE	P9ACPBS205
Control Off	P9ACPBS262
Control On	P9ACPBS286
Cycle On	P9ACPBS266
DECREASE	P9ACPBS274
DOWN	P9ACPBS203
EMERGENCY STOP (Red)	P9ACPBS229
Emergency Stop Pull to Reset (RED)	P9ACPBS230
FAST	P9ACPBS208
Fault	P9ACPBS218
FORWARD	P9ACPBS214
Hand	P9ACPBS220
HIGH	P9ACPBS221
IN	P9ACPBS275
INCH	P9ACPBS209
INCREASE	P9ACPBS278
JOG	P9ACPBS210
LEFT	P9ACPBS222
LOW	P9ACPBS223
LOWER	P9ACPBS217
Off (Red)	P9ACPBS213
ON	P9ACPBS212
OPEN	P9ACPBS206
OUT	P9ACPBS293
Overload Tripped	P9ACPBS226
POWER ON	P9ACPBS240
Push-to-Stop/Pull-to-Start	P9ACPBS241
RAISE	P9ACPBS216
RESET	P9ACPBS291
RETURN	P9ACPBS242
REVERSE	P9ACPBS215
RIGHT	P9ACPBS224
RUN	P9ACPBS211
Safe	P9ACPBS281
SLOW	P9ACPBS207
Spindle Closed	P9ACPBS294
Spindle Open	P9ACPBS295
START	P9ACPBS202
STOP (Red)	P9ACPBS201
Stop Rotate-to-Reset	P9ACPBS228
Sub SPD Closed	P9ACPBS296
Sub SPD Open	P9ACPBS297
TEST	P9ACPBS225

¹For use with plastic nameplate holders on page 9-96.



Pilot and Signaling Devices Heavy-Duty 22.5 mm Watertight/Oiltight Accessories

Section 9

C-2000

Nameplates

600 VAC Max., 300 VDC Max.

10 Amps Continuous AC, 2.5 Amps Continuous DC

Plastic Insert (continued)

Nameplate Marking	Product Number ¹
UP	P9ACPBS204
Feed Hold	P9ACPBS263
FOR REV	P9ACPBS231
HAND AUTO	P9ACPBS243
HIGH LOW	P9ACPBS244
H.P. Coolant	P9ACPBS290
Inch Cut	P9ACPBS276
Inch Return	P9ACPBS277
JOG FORWARD	P9ACPBS279
JOG REVERSE	P9ACPBS280
JOG RUN	P9ACPBS245
LEFT RIGHT	P9ACPBS246
LOW HIGH	P9ACPBS247
LOWER RAISE	P9ACPBS248
OFF ON	P9ACPBS233
OPEN CLOSE	P9ACPBS234
RAISE LOWER	P9ACPBS249
REV FOR	P9ACPBS250
RUN JOG	P9ACPBS251
SAFE RUN	P9ACPBS252
SLOW FAST	P9ACPBS253
START CYCLE	P9ACPBS282
Start Feed	P9ACPBS283
START JOG	P9ACPBS254
START STOP	P9ACPBS255
Stop Cycle	P9ACPBS265
Stop Feed	P9ACPBS264
Stop Reset (Red)	P9ACPBS227
STOP START	P9ACPBS232
UP DOWN	P9ACPBS256
OFF COOLANT ON	P9ACPBS257
Auto Off Hand	P9ACPBS258
FOR OFF REV	P9ACPBS239
FOR STOP REV	P9ACPBS259
HAND OFF AUTO	P9ACPBS261
JOG OFF RUN	P9ACPBS298
JOG SAFE RUN	P9ACPBS267
Local Off Remote	P9ACPBS237
LOW OFF HIGH	P9ACPBS238
LOWER OFF RAISE	P9ACPBS268
MAN OFF AUTO	P9ACPBS269
OPEN OFF CLOSE	P9ACPBS270
SLOW OFF FAST	P9ACPBS271

¹For use with plastic nameplate holders.

Plastic Insert

Nameplate Marking	Product Number ¹
Abrir	P9ACPBS506
Adelente	P9ACPBS502
Atras	P9ACPBS508
Atras Adelante	P9ACPBS518
Atras O Adelante	P9ACPBS519
Bajar	P9ACPBS505
Bajo	P9ACPBS514
Cerrar	P9ACPBS501
Defecto	P9ACPBS513
Derecha	P9ACPBS509
Emergencia	P9ACPBS516
Izquierda	P9ACPBS504
Manual	P9ACPBS503
Marcha	P9ACPBS510
Paro (Red)	P9ACPBS511
Paro Marcha	P9ACPBS517
Paro O Marcha	P9ACPBS520
Rapido	P9ACPBS512
Reame	P9ACPBS515
Subir	P9ACPBS507

¹For use with plastic nameplate holders.

Plastic Nameplates with Blank Inserts

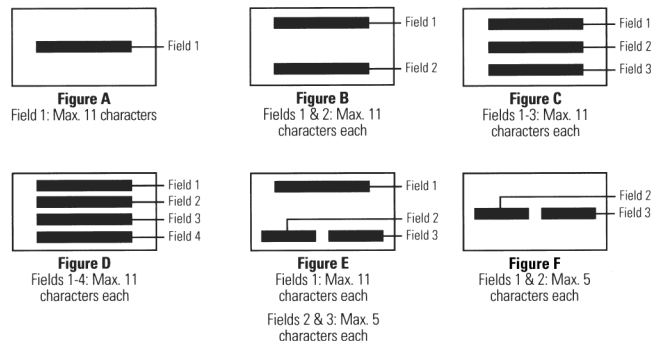
Nameplate Type	Operator Style	Nameplate Size	Product Number ²
Plastic w/ Blank Inserts	Round Polished Chrome	Standard	P9ARTBS
	Round Satin Chrome		
	Round Engineered Plastic		
Plastic w/ Blank Inserts	Round Polished Chrome	Jumbo	P9ARTBM
	Round Satin Chrome		
	Round Engineered Plastic		
Plastic w/ Blank Inserts	Square Engineered Plastic	Standard	P9ASTBS
	Spare Blank Insert	Round Polished Chrome	Standard
Round Satin Chrome			
Round Engineered Plastic			
Spare Blank Insert	Round Polished Chrome	Jumbo	P9ARPBPM
	Round Satin Chrome		
	Round Engineered Plastic		
Transparent Insert	Round Polished Chrome	Standard	P9ACPTS
	Round Satin Chrome		
	Round Engineered Plastic		
Transparent Insert	Round Polished Chrome	Jumbo	P9ARPTM
	Round Satin Chrome		
	Round Engineered Plastic		

²Package quantity is five, order in multiples of 5. Includes black holder with black/red reversible insert.

Plastic Nameplate Holders With Custom Engraved Inserts

Operator Style	Nameplate Size	Product Number
Round Polished Chrome	Standard	P9ARTBSEN
Round Satin Chrome		
Round Engineered Plastic		
Round Polished Chrome	Jumbo	P9ARTBMEN
Round Satin Chrome	Standard	P9ASTBSEN
Round Engineered Plastic		
Square Engineered Plastic		

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.



Legend for Custom Engraved Inserts

Blank Metal

Nameplate Size	Color	Product Number
Standard	Black	P9ACP2N
Standard	Red	P9ACP2R
Joystick	Black	P9ACP3N
Joystick	Red	P9ACP3R



Pilot and Signaling Devices

Heavy-Duty 22.5 mm Watertight/Oiltight Accessories

C-2000

Section 9

Nameplates

600 VAC Max., 300 VDC Max.

10 Amps Continuous AC, 2.5 Amps Continuous DC

Custom Engraved Metal

Color	Figure	Nameplate Size	Max. Characters per Field	Product Number
Black	1	Standard	Field 1: 13	P9ACP2NBEN
Black	2	Standard	Fields 1 & 2: 13 each	P9ACP2NCEN
Black	3	Standard	Fields 1 & 2: 6 each	P9ACP2NFEN
Black	4	Standard	Fields 1 & 3: 6 each, Fields 2: 13	P9ACP2NGEN
Black	5	Standard	Fields 1-4: 13 each	P9ACP2NHEN
Black	7	Joystick	Fields 1 & 2: 17 each	P9ACP3NJEN
Black	8	Joystick	Fields 1 & 2: 17 each; Fields 3 & 4: 4 each	P9ACP3NKEN
Red	1	Standard	Field 1: 13	P9ACP2RBEN
Red	2	Standard	Fields 1 & 2: 13 each	P9ACP2RCEN
Red	3	Standard	Fields 1 & 2: 6 each	P9ACP2RFEN
Red	4	Standard	Fields 1 & 3: 6 each, Fields 2: 13	P9ACP2RGEN
Red	5	Standard	Fields 1-4: 13 each	P9ACP2RHEN
Red	7	Joystick	Fields 1 & 2: 17 each	P9ACP3RJEN
Red	8	Joystick	Fields 1 & 2: 17 each; Fields 3 & 4: 4 each	P9ACP3RKEN

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

Yellow Emergency Round

Nameplate Marking	Nameplate Diameter	Product Number ¹
Blank	59 mm	080XTGR
Blank	78 mm	080XTG8
Engraved	59 mm	080XTGR02
EMERGENCY STOP	78 mm	080XTG802

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

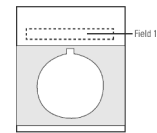


Figure 1

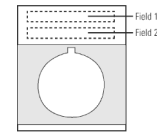


Figure 2

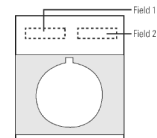


Figure 3

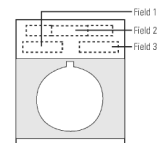


Figure 4

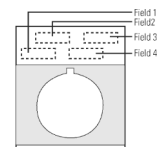


Figure 5

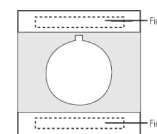


Figure 7

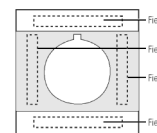


Figure 8



Blank and Yellow Emergency Stop

