22MM IEC PILOT DEVICES

series 22 iec

c3controls offers the best selection of illuminated and non-illuminated push buttons and selector switches on the market today. We also have a full line of unibody and modular pilot lights, all engineered for superior durability and long life. Check out our multi-voltage LED light module that can be operated at any voltage from 20V to 277V AC or DC. Their modular design and easy-to-create assemblies offer convenience in ordering and assembly. Our line of factory assembled 22mm IEC Compact Control Stations offers the convenience of a single catalog number, shorter control panel bill of material, and easier inventory management.

PROVEN

Conformity to Standards:

PILOT DEVICES
UL 508
CSA C22.2 No. 14
IEC 60947-1, 60947-5-1

ASSEMBLED CONTROL STATIONS
UL 508, 50, 50E
CSA C22.2 No. 14, 94.2-07
IEC 60947-5, 60529

ENCLOSURES
UL 50, 50E
CSA C22.2 No. 94.2-07
IEC 60529

Visit www.c3controls.com to download product certifications.

Certifications:

UL File #: E68568 (Guide NKCR, NKCR7)

CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)

UL File #: E68568 (Guide NKCR, NKCR7)

CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)

UL File #: E470986

CE Marked (per EU Low Voltage Directive 2006/95/EC and RoHS Directive 2011/65/EU)

NOTE: The scope (range, description, price, specifications, dimensions, etc.) of the product featured in this section is subject to change without notice. Refer to www.c3controls.com for product updates.

22MM IEC PILOT DEVICES

c3controls offers a comprehensive line of 22mm IEC Pilot Devices. Each product is designed and manufactured to the needs of the machine builder. Check out all the features of our Series 22 IEC below!

THE MOST INNOVATIVE LINE OF AMERICAN-MADE 22MM IEC PILOT DEVICES.

✓ **Proven**	Our 22mm IEC operators are UL Listed and CE marked meeting global standards requirements.
✓ **Easy to Install**	Our "snap-on" contact blocks are color coded for quick circuit identification and feature 35° angled captive terminal screws and self-lifting pressure plates for fast and easy wiring.
✓ **Quick and Simple**	The "spring loaded" latching mechanism enables the user to wire the contact blocks and light modules separate from the operator and outside the confined space of the control panel.
✓ **Low Profile**	The 22mm line assumes the lead in the industry with the shortest depth behind the panel.
✓ **Rugged Design**	Manufactured to be the highest quality—inside and out. With its metal appearance and sleek design, you know you are getting the quality you deserve.
✓ **Visible Certifications**	Our product certifications and electrical ratings are clearly marked on the outside of the contact blocks for easy reference during installation.
✓ **Flexible**	Our contact blocks can be stacked 2 deep and up to 3 across for a total of 6 circuits, providing the flexibility to operate multiple control circuits from a single operator.
✓ **Heavy Duty**	Polyester construction provides superior durability, corrosion resistance, moisture rejection and electrical insulation.
✓ **Convenient**	Reduce inventory with our interchangeable modular design, providing endless options for appropriate operator interface.
✓ **Environmentally Secure**	With 4/4X and IP66 ratings, our 22mm line of pilot devices are built to last and withstand dust, corrosion, ice, and rain.
✓ **Limited Lifetime Warranty***	Every product is backed by our limited lifetime warranty—unmatched in the industry— bringing you quality components that perform in the most demanding applications.
✓ **Guaranteed Same-Day Shipping***	Product availability reduces inventory, and improves cash-flow—saving you money. With c3controls any order for standard catalog items received by 6:00pm ET is guaranteed to ship same-day.
✓ **Advantage Pricing**	Our approach to product development, manufacturing, and focus on servicing the OEM and Electrical Equipment Builder reduces cost. The result—the best value in the industry.

*See c3controls Terms & Conditions

" *c3controls' 22mm IEC Multi-Voltage Pilot Lights, along with their outstanding customer and delivery services, give us what we need to maintain a competitive edge.* "

Chris Seiler, General Manager • **Fliteway Technologies**

Momentary Push Button
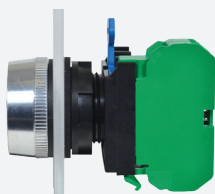
Illuminated E-Stop

Modular Pilot Light

Illuminated Selector Switch

UNIQUE PRODUCT LINE FEATURES

SHORTER DEPTH

Our compact line saves you valuable space in your control panel with our shorter contact blocks and light modules. We deliver the shortest depth 22mm Pilot Devices engineered in the USA, exceeding the demands of our customers and the industry.

EN418 EMERGENCY STOP

c3controls' maintained push-twist-release operators meet the global compliance standards for EN418 - *Safety of Machinery*, and they feature a unique trigger action and are available in both non-illuminated and illuminated versions.

EXCLUSIVE MULTI-VOLTAGE LIGHTS
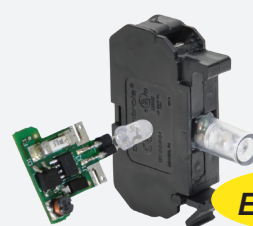
c3 Exclusive!

Our non-relampable multi-voltage light units—the only U.S. engineered multi-voltage light in the industry!—operate at any voltage from 20V to 277V AC or DC without losing intensity, making them easily interchangeable across multiple applications.

ONE CAM DESIGN

Our single cam design eliminates the need for multiple cam and selector switch configurations, reducing inventory and saving you labor time and costs.

LABOR AND COST SAVINGS

Available in non-illuminated and illuminated versions and in a variety of color options, our dual-push button operators do the work of two operators in one 22.5mm hole, saving time, labor and space.

COMPACT CONTROL STATIONS

Factory assembly of our 22mm IEC Compact Control Stations provide the convenience of a single catalog number, no assembly required, shorter control panel bill of materials, and easier inventory management.

FIND IT FAST

22mm IEC Pilot Devices

- Certifications
- Specifications
- Dimension Drawings
- Installation Instructions
- Easy to Buy

www.c3controls.com

IT'S EASY TO BUILD YOUR OWN CONTROL STATION

Simply pick the code number from each of the sections below and combine them to build your part number.

Compact Control Stations (Polycarbonate)

EC W22 ☐ – ☐ – ☐ ☐ ☐ ☐ – ☐ ☐ ☐ ☐ – ☐ ☐ ☐ ☐

I   II   III   IV   V   VI   VII   VIII   V   VI   VII   VIII   V   VI   VII   VIII

Position 1   Position 2   Position 3

Example: To build one of our most popular Control Stations, the part number would be EC + W22 + III + IV + V + VI + VII + VIII or ECW22V-H2P1-04R23-01G22

Position 1
Position 2
Position 3

Position 1
Position 2

I. ENCLOSURE CONSTRUCTION

CODE	DESCRIPTION
EC	Enclosed Control Station (Polycarbonate)

II. HOLE DIAMETER

CODE	DESCRIPTION
W22	22.5mm (7/8")

III. CONDUIT ENTRY ORIENTATION

CODE	DESCRIPTION
V	Vertical
H	Horizontal*

*NOTE: Dual Push Button operators available in horizontal orientation only.

IV. NUMBER OF POSITIONS & ENCLOSURE DIMENSION

CODE	# OF POSITIONS	COVER COLOR	ENCLOSURE DIMENSION (H x W x D)	LIST
H1P1	1	Grey	75mm x 80mm x 57mm	$ 22.50
H1P1Y	1	Yellow	75mm x 80mm x 57mm	$ 22.50
H2P1	2	Grey	119mm x 80mm x 57mm	$ 30.50
H3P1	3	Grey	163mm x 80mm x 57mm	$ 39.00

Not finding what you need in our assembled compact control stations?

An endless variety of assemblies are available. Our polycarbonate enclosures are optimized for use with our line of 22mm IEC pilot and signaling devices. Consult factory or see page 314 for details.

DISCOUNT SCHEDULE **E**

SEE OPPOSITE PAGE FOR PART BUILDER CHARTS V – VIII

SOME OF OUR POPULAR CONFIGURATIONS:

COMPACT CONTROL STATIONS						
CODE	**# OF POSITION(S)**	**OPERATOR(S)**	**CAP TYPE/COLOR**	**CONTACT(S)**	**LEGEND / COLOR**	**LIST**
ECW22V-H1P1Y-10R04R	1	Push-Twist-Release Main. Non Illum.	40mm Mushroom/Red	NC	Emergency Stop / Yellow	$ 77.60
ECW22H-H1P1-2657	1	Dual-Push Button Mom. Non-Illum.	Flush/Green (Top) Extended/Red (Bottom)	NO NC	On Off / Black	$ 67.70
ECW22V-H2P1-04R23-01G22	2	2 Push Buttons Mom. Non-Illum.	Flush/Green (Pos. 2) Extended/Red (Pos. 1)	NO NC	Start / Black Stop / Black	$ 82.70
ECW22H-H3P1-01G22-04R23-03B18	3	3 Push Buttons Mom. Non-Illum.	Flush/Green (Pos. 1) Extended/Red (Pos. 2) Flush/Blue (Pos. 3)	NO NC NO	Start / Black Stop / Black Reset / Black	$117.30
ECW22V-H3P1-04R23-01G22-25RMD20	3	Pilot Light 2 Push Buttons Mom. Non-Illum.	Red/Lens (Pos. 3) Flush/Green (Pos. 2) Extended/Red (Pos. 1)	— NO NC	Run / Black Start / Black Stop / Black	$142.00

22MM IEC PILOT DEVICES

CONTROL STATION PART BUILDER (CONT.)

V. OPERATOR TYPE*

CODE	DESCRIPTION	LIST
MOMENTARY, NON-ILLUMINATED PUSH BUTTON		
01	Flush Cap with 1 NO Contact Block	$22.10
02	Flush Cap with 1 NC Contact Block	$22.10
03	Extended Cap with 1 NO Contact Block	$22.10
04	Extended Cap with 1 NC Contact Block	$22.10
05	Guarded Cap with 1 NO Contact Block	$38.10
06	Guarded Cap with 1 NC Contact Block	$38.10
MAINTAINED, NON-ILLUMINATED 2-POSITION PUSH-PULL		
07	40mm (1-9/16") Mushroom Cap with 1 NO Contact Block	$39.10
08	40mm (1-9/16") Mushroom Cap with 1 NC Contact Block	$39.10
MAINTAINED, NON-ILLUMINATED 2-POSITION PUSH-TWIST-RELEASE		
09	40mm (1-9/16") Mushroom Cap with Yellow Housing and 1 NO Contact Block	$46.10
10	40mm (1-9/16") Mushroom Cap with Yellow Housing and 1 NC Contact Block	$46.10
MAINTAINED, NON-ILLUMINATED SELECTOR SWITCH		
11	2 Position with 1 NO Contact Block	$27.20
12	3 Position with 2 NO Contact Blocks	$35.30
MOMENTARY, ILLUMINATED PUSH BUTTON		
13	Flush Lens with 1 NO Contact Block	$28.10
14	Flush Lens with 1 NC Contact Block	$28.10
15	Extended Lens with 1 NO Contact Block	$28.10
16	Extended Lens with 1 NC Contact Block	$28.10
17	Guarded Lens with 1 NO Contact Block	$54.10
18	Guarded Lens with 1 NC Contact Block	$54.10
MAINTAINED, ILLUMINATED 2 & 3-POSITION PUSH-PULL RELEASE		
19	40mm (1-9/16") Mushroom Lens with 1 NO Contact Block	$34.10
20	40mm (1-9/16") Mushroom Lens with 1 NC Contact Block	$34.10
MAINTAINED, ILLUMINATED 2-POSITION PUSH-TWIST-RELEASE		
21	40mm (1-9/16") Mushroom Cap with Yellow Housing and 1 NO Contact Block	$59.10
22	40mm (1-9/16") Mushroom Cap with Yellow Housing and 1 NC Contact Block	$59.10
MAINTAINED, ILLUMINATED SELECTOR SWITCH		
23	2-Position with 1 NO Contact Block	$33.10
24	3-Position with 2 NO Contact Blocks	$41.20
PILOT LIGHT		
25	Modular Pilot Light	$20.80
MOMENTARY, DUAL PUSH BUTTON**		
26	Non-Illuminated, Extended Red (Bottom) with 1 NC Contact Block and Flush Green (Top) with 1 NO Contact Block	$40.20
27	Illuminated, Extended Red (Bottom) with 1 NC Contact Block and Flush Green (Top) with 1 NO Contact Block and Clear Lens (Middle)	$40.20

NOTE: *All operators come standard with a black polyester (Type 4X) clamp ring.
**Dual Push Button operators available in horizontal conduit entry orientation only.

See page 319 for Lamp Replacement Chart and page 320 for Lamp Technical Data.

c3controls LED lamps last 100,000 hours—that's 11.4 years!

VI. OPERATOR CAP/LENS COLOR

CODE	COLOR	NON-ILLUMINATED	ILLUMINATED	DUAL*
(Blank)	None	—	—	✓
A	Amber	—	✓	—
K	Black	✓	—	—
B	Blue	✓	✓	—
C	Clear	—	✓	—
G	Green	✓	✓	—
E	Grey	✓	—	—
R	Red	✓	✓	—
W	White	✓	✓	—
Y	Yellow	✓	✓	—

*NOTE: Dual Push Button operators come standard with Extended Red (Bottom) and Flush Green (Top). Consult factory if you require a different color.

VII. ILLUMINATION

CODE	LIGHT MODULE	VOLTAGE	LAMP TYPE/COLOR	LIST
(Blank)	None*	—	—	—
	*NOTE: For use with non-illuminated operators only.			
MC	Full Voltage	24V AC/DC	LED**	$26.00
MD	Full Voltage	120V AC/DC	LED**	$26.00
MV	Multi-Voltage, Non-Relampable	20-277V AC/DC	LED/White	$37.00

**NOTE: LED lamp color will match selected lens color.

VIII. LEGEND PLATE*

CODE	LEGEND LEFT/TOP**	LEGEND CENTER	LEGEND RIGHT/BOTTOM**	LIST
(Blank)	No Legend Plate			—
00		(Blank)		$ 4.00
01		AUTO		$ 4.00
02		CLOSE		$ 4.00
03		DOWN		$ 4.00
04		EMERGENCY STOP		$ 4.00
04R		EMERGENCY STOP***		$ 9.00
07		FORWARD		$ 4.00
12		OFF		$ 4.00
13		ON		$ 4.00
14		OPEN		$ 4.00
16		POWER ON		$ 4.00
18		RESET		$ 4.00
20		RUN		$ 4.00
22		START		$ 4.00
23		STOP		$ 4.00
25		UP		$ 4.00
56	OFF		ON	$ 5.00
57	ON		OFF	$ 5.00
61	START		STOP	$ 5.00
72	UP		DOWN	$ 5.00
83	HAND	OFF	AUTO	$ 5.00

NOTE: *Legend plates are standard 1-3/4" x 1-3/4" (h x w) and face color is black with white letters (uppercase) unless otherwise specified. Consult factory for details.
**Top and bottom text location for Dual Push Buttons only.
***The 04R Emergency Stop legend plate, for use with a 1 position enclosure only, is round 2-13/32" diameter and face color is yellow with black letters (uppercase).

22mm IEC Compact Control Stations – Polycarbonate

Our 22mm IEC Compact Control Stations feature polycarbonate construction for superior corrosion resistance, moisture rejection, UV resistance, electrical insulation and high-impact resistance. A variety of pilot devices are available, including non-illuminated and illuminated push buttons, emergency stop push buttons, momentary dual push buttons (flush green and extended red), maintained selector switches (2- and 3-position), and pilot lights for operation and indication. Designed for the most severe outdoor conditions, enclosures are suitable for use in equipment with vibration, frequent wash-down and varying temperatures from -40 to +55° C.

Product Features

- Factory assembly of our 22mm IEC Compact Control Stations provide the convenience of a single catalog number, no assembly required, shorter control panel bill of materials, and easier inventory management.

- Contact blocks available up to one deep and three across providing multiple circuits in a compact space.

- Our compact, high performance, polycarbonate enclosures are UL Listed and are rated for Type 1, 2, 3, 3R, 4/4X, 12, 13 and IP66, making them suitable for the most demanding applications – including wash-downs and corrosive environments.

- Manufactured with all stainless steel hardware including #8 thread form screws, ensuring 100% reliability in corrosive environments.

- For easy installation, the enclosure has two lateral M20 conduit entries and two base conduit entries.

- Enclosure cover is keyed for enhanced safety and to prevent misalignment during installation.

- Screw cover accessory, included as standard, prevents debris build-up.

UNIQUE PRODUCT FEATURES

Designed with Seamless Compatibility in Mind!

1. The compact design of our polycarbonate enclosure is a custom fit specifically optimized for use with our 22mm IEC pilot and signaling devices—leading the industry with the shortest depth behind the panel.

2. All c3controls 22mm IEC pilot and signaling devices, including illuminated options with up to three contact blocks, are compatible for factory assembly and installation with our new polycarbonate enclosure. See page 314 for details.

3. The panel gasket provides an environmentally secure fit—creating a squeegee effect and forming a permanent watertight seal that provides Type 4/4X and IP66 ingress protection.
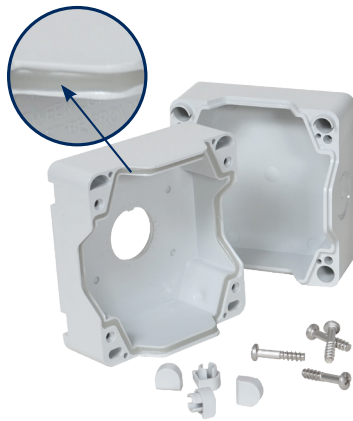
POLYCARBONATE ENCLOSURES

Polycarbonate Enclosures –
Optimized for use with 22mm IEC Pilot and Signaling Devices

POLYCARBONATE ENCLOSURE CONFIGURATION

CODE	# OF HOLES	FRAME DIMENSIONS (H x W x D)	COLOR	LIST
ECP1-A22H1	1	75mm x 80mm x 57mm (2-61/64" x 3-5/32" x 2-1/4")	Grey	$22.50
ECP1-A22H1Y	1	75mm x 80mm x 57mm (2-61/64" x 3-5/32" x 2-1/4")	Yellow	$22.50
ECP1-B22H2	2	119mm x 80mm x 57mm (4-11/16" x 3-5/32" x 2-1/4")	Grey	$30.50
ECP1-C22H3	3	163mm x 80mm x 57mm (6-27/64" x 3-5/32" x 2-1/4")	Grey	$39.00

DISCOUNT SCHEDULE **E**

CONSTRUCTION

- Rugged Polycarbonate construction, lightweight with high impact resistance.
- UV and corrosion resistant.
- Stainless steel hardware including #8 thread form screws.
- Enclosure cover is keyed for enhanced safety and to prevent misalignment during installation.
- Screw cover accessory, included as standard, to prevent debris build-up.
- For easy installation, the enclosure has two (2) lateral M20 conduit entries and two (2) base conduit entries.
- Standard colors: Grey and Yellow
- Available as fully-assembled control stations, see pages 311 – 313.

RATINGS / APPROVALS

- UL Listed Type 1, 2, 3, 3R, 4/4X, 12, 13
- IP66 protection
- Operating temperatures from -40 to +55° C (-40 to +131° F)

MOUNTING FOOT KIT

Field installable mounting foot kit enables enclosure to be panel mounted and includes mounting feet and screws.

DISCOUNT SCHEDULE **E**

CODE	DESCRIPTION	LIST
ECP1-MFKIT	Mounting Foot Kit (4 mounting feet and screws)	$ 8.00

ENDLESS POSSIBILITIES

The compact design of our Polycarbonate Enclosure is a custom fit optimized for use with our 22mm IEC pilot and signaling devices—leading the industry with the shortest depth behind the panel.

We offer the option to configure and assemble the control station for you, under a single catalog number. Your control station will arrive factory assembled providing a shorter bill of material, reducing installation time, simplifying inventory management, and ultimately reducing cost.

Ordering a custom assembled compact control station is easy. Either choose from our already pre-configured assemblies on pages 311-312 or,

- Simply choose your enclosure frame size and number of holes, see options above.
- Select your operator(s) from our line of 22mm IEC pilot and signaling devices, see pages 279-310.
- Select your legend plate style, color, and designation, see page 315.
- Contact factory to complete your order.
- Custom assembled compact control stations are not available for guaranteed same-day shipping—ships within 3 days.

IT'S EASY TO BUILD YOUR OWN LEGEND PLATE

Simply pick the code number from each of the sections below and combine them to build your part number.

Legend Plates

| I | II | – | III | – | IV |

Legend plates feature 2 lines of text with approximately 16 characters per line. Uppercase is standard unless specified. *The short legend plate (22LPS) features 1 line of text with approximately 16 characters and the Potentiometer legend plate comes standard with a scale and one or two lines of text, see chart D below. **The Dual Push Button legend plates (22LPDHL, 22LPDHR & 22LPDV) feature one line of text for each of the two push buttons, 5 characters per line.

I. LEGEND PLATE TYPE

CODE	DESCRIPTION	LIST
	FOR USE WITH 22MM IEC OPERATORS	
22LP	Standard 1-3/4"h x 1-3/4"w	$ 4.00
22LPN	Narrow 1-3/4"h x 1-1/2"w	$ 4.00
22LPS	Short 1-1/2"h x 1-3/4"w*	$ 4.00
22LPT	Tall 2"h x 1-3/4"w	$ 5.00
22LPJ	Jumbo 2"h x 2"w	$ 5.00
22LPR	Standard Round 2-13/32" Dia.	$ 9.00
22LPRM	Medium Round 2-3/4" Dia.	$11.00
22LPRJ	Jumbo Round 3-3/4" Dia.	$12.00
22LPDHL	Text left of Dual Push Buttons (one line top, one line bottom, 5 characters per line) 51mm h x 48mm w**	$ 5.00
22LPDHR	Text right of Dual Push Buttons (one line top, one line bottom, 5 characters per line) 51mm h x 48mm w**	$ 5.00
22LPDV	Vertical—One line above (one line below Dual Push Buttons, 5 characters per line) 71mm h x 28mm w**	$ 5.00
	FOR USE WITH POLYCARBONATE ENCLOSURES OPTIMIZED FOR 22MM IEC OPERATORS	
22ECLP	Standard 1-47/64" h x 1-47/64" w	$ 4.00
22ECLPR	Round 2-21/64" Dia.	$ 9.00

II. FACE AND LETTER COLOR

CODE	FACE COLOR	LETTER COLOR
AL	Aluminum	Black
(Blank)	Black	White
BE	Blue	White
GN	Green	White
RD	Red	White
WE	White	Black
YW	Yellow	Black

SEE OPPOSITE PAGE FOR PART BUILDER CHART III

DISCOUNT SCHEDULE E

SOME OF OUR POPULAR CONFIGURATIONS:

LEGEND PLATES

CATALOG NO.	DESIGNATION	LIST
22LPRYW-04	EMERGENCY STOP	$9.00
22LP-22	START	$4.00
22LPT-83	HAND OFF AUTO	$5.00

LEGEND PLATE PART BUILDER (CONT.)

III. LEGEND DESIGNATION

A. PUSH BUTTONS AND LIGHTS

CODE	DESCRIPTION
00	(Blank)
01	AUTO
02	CLOSE
31	CYCLE START
100	CYCLE STOP
03	DOWN
102	EMERGENCY
04	EMERGENCY STOP
06	FAST
101	FAULT
07	FORWARD
08	HAND
32	HIGH
33	IN
09	INCH
10	JOG
38	JOG FORWARD
39	JOG REVERSE
34	LOW
35	LOWER
11	MANUAL
26	MOTOR RUN
12	OFF
13	ON
14	OPEN
36	OUT
27	OVERLOAD
15	POWER OFF
16	POWER ON
30	PUSH TO RESET
17	PUSH TO TEST
37	RAISE
109	READY
18	RESET
19	REVERSE
20	RUN
21	SLOW
22	START
23	STOP
24	TEST
29	TRIP
25	UP

B. 2-POSITION SELECTOR

CODE	LEGEND LEFT	LEGEND RIGHT
00	(Blank)	(Blank)
50	AUTO	HAND
68	AUTO	MANUAL
51	DOWN	UP
63	FAST	SLOW
52	FWD	REV
53	HAND	AUTO
73	HIGH	LOW
54	INCH	RUN
75	LEFT	RIGHT
70	LOCAL	REMOTE
55	MANUAL	AUTO
56	OFF	ON
57	ON	OFF
58	OPEN	CLOSE
65	PULL START	PUSH STOP
66	PUSH OFF	PULL ON
64	PUSH ON	PUSH OFF
67	PUSH TO STOP	PULL TO START
71	RAISE	LOWER
59	REV	FWD
60	RUN	JOG
69	SLOW	FAST
61	START	STOP
62	STOP	START
74	SUMMER	WINTER
72	UP	DOWN

C. 3-POSITION SELECTOR

CODE	LEGEND LEFT	LEGEND CENTER	LEGEND RIGHT
00	(Blank)	(Blank)	(Blank)
108	A	O	H
92	AUTO	OFF	HAND
93	AUTO	MAN	OFF
80	DOWN	OFF	UP
81	FWD	AUTO	REV
82	FWD	OFF	REV
107	H	O	A
83	HAND	OFF	AUTO
94	HIGH	OFF	LOW
99	JOG	OFF	AUTO
90	LOCAL	OFF	REMOTE
84	MANUAL	OFF	AUTO
89	OFF	RUN	START
85	OFF	START	RUN
86	OFF	1	2
95	OPEN	OFF	CLOSE
91	RAISE	OFF	LOWER
96	SLOW	OFF	FAST
97	SUMMER	OFF	WINTER
98	UP	OFF	DOWN
87	1	OFF	2
88	1	2	3

D. POTENTIOMETER

CODE	DESCRIPTION
40	Blank Legend 0 - 10
41	"SPEED" 0 - 10
43	Blank Legend 0 - 100
44	"SPEED" 0 - 100

E. DUAL PUSH BUTTONS

CODE	LEGEND TOP	LEGEND BOTTOM
00	(Blank)	(Blank)
63	FAST	SLOW
52	FWD	REV
57	ON	OFF
71	RAISE	LOWER
60	RUN	JOG
61	START	STOP
62	STOP	START
72	UP	DOWN

IV. ADHESIVE BACK

CODE	DESCRIPTION
(Blank)	No Adhesive Back
A	Adhesive Back

NOT FINDING WHAT YOU NEED IN A STANDARD PLATE?

We offer Special and Custom Engraving up to 12" x 24" (304.8mm x 609.6mm). Consult factory or see page 317 for details.
While our standard legend plates are available for same day shipping, our special and custom legend plates are not.

IT'S EASY TO BUILD YOUR OWN LEGEND PLATE

Simply pick the code number from each of the sections below and combine them to build your part number.

Special Legend Plates

[I] [II] – SP – [IV]
  I   II   III   IV

All legend plates are a 2-ply laminated plastic, laser engraved for a permanent and quality appearance. Uppercase is standard unless specified.

I. LEGEND PLATE TYPE

CODE	DESCRIPTION	LIST
FOR USE WITH 22MM IEC OPERATORS		
22LP	Standard 1-3/4"h x 1-3/4"w	$ 4.00
22LPN	Narrow 1-3/4"h x 1-1/2"w	$ 4.00
22LPS	Short 1-1/2"h x 1-3/4"w*	$ 4.00
22LPT	Tall 2"h x 1-3/4"w	$ 5.00
22LPJ	Jumbo 2"h x 2"w	$ 5.00
22LPR	Standard Round 2-13/32" Dia.	$ 9.00
22LPRM	Medium Round 2-3/4" Dia.	$11.00
22LPRJ	Jumbo Round 3-3/4" Dia.	$12.00
FOR USE WITH POLYCARBONATE ENCLOSURES OPTIMIZED FOR 22MM IEC OPERATORS		
22ECLP	Standard 1-47/64" h x 1-47/64" w	$ 4.00
22ECLPR	Round 2-21/64" Dia.	$ 9.00

Legend plates feature 2 lines of text with approximately 16 characters per line.

*The short legend plate (22LPS) features 1 line of text with 16 characters per line.

II. FACE AND LETTER COLOR

CODE	FACE COLOR	LETTER COLOR
AL	Aluminum	Black
(Blank)	Black	White
BE	Blue	White
GN	Green	White
RD	Red	White
WE	White	Black
YW	Yellow	Black

III. LEGEND DESIGNATION

CODE	DESCRIPTION	LIST
SP	Special Legend	$14.00

NOTE: $6.00 each when ordering 3 or more of the same exact legend plate.

IV. ADHESIVE BACK

CODE	DESCRIPTION
(Blank)	No Adhesive Back
A	Adhesive Back

DISCOUNT SCHEDULE E

Upon receipt of your order, legend plates will be set-up as specified and a proof will be sent to you prior to production to ensure accuracy.

To order, submit your drawing to:

Mail: c3controls
Attn: Customer First
PO Box 496
Beaver, PA 15009

Fax: 724.775.5283

Email: legendplates@c3controls.com

To help simplify your order process, templates are available by calling our factory at 724.775.7926 or reference one of the drawings shown on page 331.

Special legend plates are not available for same day shipping.

(Sample custom plate)

CUSTOM LEGEND PLATES

- ***Add your Corporate Logo!*** Send us your corporate logo electronically to promote your company image in a clean professional legend plate.
- Available in 2-ply 304.8mm x 609.6mm (12" x 24") sheets of laminated plastic for custom laser engraving.
- To order, specify part number 22LP-CP (no adhesive back) or 22LP-CP-A (adhesive back).
- Initial Set-Up Fee Per Legend Plate: $50/hour (minimum fee $50.00).
- $2.00/Square Inch (minimum $18.00).
- Design services available. Consult factory for details and hourly rate.
- Custom legend plates are not available for same-day shipping.

To order, submit your drawing to:
Mail: c3controls
Attn: Customer First
PO Box 496
Beaver, PA 15009

Fax: 724.775.5283

Email: legendplates@c3controls.com

22MM IEC PILOT DEVICES

ELECTRICAL RATINGS

Lamp	Industry Number	Rated Volts	Lumens (MSCD)	Design Life (Hrs.)	Current Draw (mA)	Lamp Type	Shock & Vibration	Leakage Protection
FVB6	1866	6.3V	0.65	5,000	250	Incandescent	Very Good	N/A
FVB12	756	14V	0.31	15,000	80	Incandescent	Good	N/A
FVB24	757	28V	0.62	7,500	80	Incandescent	Good	N/A
FVB55	1835	55V	1.1	5,000	50	Incandescent	Good	N/A
FVB120	**	130V	0.36	10,000	20	Incandescent	Good	N/A
LED6	**	6V†	Varies w/ Color 2000 mcd Typical	100,000	50	LED*	Excellent	14 mA
LED12	**	12V†		100,000	<20	LED*	Excellent	4 mA
LED24	**	24V†		100,000	<20	LED*	Excellent	4 mA
LED130	**	120/130V†		100,000	<10	LED*	Excellent	2 mA
W22UNR-12L	**	12V AC/DC†	Varies w/ Color 2000 mcd Typical	100,000	<18	LED*	Excellent	<3 mA
W22UNR-24L	**	24V AC/DC†		100,000	<18	LED*	Excellent	<3 mA
W22UNR-120L	**	110-130V AC/DC†		100,000	<18	LED*	Excellent	<3 mA
W22UNR-240L	**	220-240V AC†		100,000	<18	LED*	Excellent	<3 mA

Transformer Burden 2VA

* Specify lamp color when ordering

** Designates a lamp design optimized for c3controls Illuminated Devices. See LED replacement lamps on page 319.

† LED voltage tolerance is +/- 10%

MULTI-VOLTAGE POWER CONSUMPTION & CURRENT DRAW

System Voltage (V)	AC Current Draw (mA)	DC Current Draw (mA)	Power Consumption (W)
24	21	20	
48	17	7	
120	3.5	—	
125	—	3	AC: <1 DC: <1/2
240	2.5	—	
250	—	2	
277	2.5	—	

DIELECTRIC STRENGTH (MECHANICAL CONTACTS)   2200V FOR 1 MINUTE

STANDARD CONTACTS

		Utilization Category				
		IEC	UL	Make Rating	Break Rating	Ith-Thermal Current
	AC	AC-15	A600	7200VA	720VA	10A
	DC	DC-13	Q600	69VA	69VA	2.5A

NOTE: For AC voltage below 72V AC the maximum allowed switching current is 10A=Ith. For DC voltages below 28V DC the maximum allowed switching current is 2.5A=Ith.

	UNITS	
ENVIRONMENTAL RATINGS		
Operators		Rated and Certified for use in Type 1, 2, 3, 3R, 4/4X, 12 & 13
		IP-66 [per EN60529]
Aluminum Bezel		Type 4
Operating Temperature	°C / °F	-40 to +55 / -40 to +131
Storage Temperature	°C / °F	-40 to +85 / -40 to +185

NOTE: Operating Environments for below freezing temperatures are assumed to be absent of freezing liquids or pollutants.

TERMINAL & WIRING CONSIDERATION

AWG Conductor		22-12 CU (Copper Only - Solid & Stranded) [.5 ~ 4mm²] One or Two wires permitted per termination
Recommended Torque	Lb-in. [Nm]	7 – 10 [.8]

22MM IEC PILOT DEVICES

22MM IEC PILOT DEVICES (CONTINUED)		
	UNITS	
CONSTRUCTION		
OPERATING FORCES		
PUSH BUTTONS (OPERATORS ONLY)		
Momentary	lbs. [N]	1.0 [4.45]
Illuminated (Momentary)	lbs. [N]	1.0 [4.45]
Maintained	lbs. [N]	1.0 [4.45]
Illuminated 2-Position (Maintained)	lbs. [N]	8.13 [36.18]
Illuminated 3-Position (Maintained Center and Depressed)	lbs. [N]	8.13 [36.18]
Illuminated 3-Position (All to Center)	lbs. [N]	11.5 [51.187]
SELECTOR SWITCHES (OPERATORS ONLY)		
Maintained	in-lbs. [Nm]	1.5 [.17]
Momentary	in-lbs. [Nm]	1.5 [.17]
Key Operated Maintained	in-lbs. [Nm]	1.5 [.17]
Key Operated Momentary	in-lbs. [Nm]	1.5 [.17]
CONTACT BLOCKS (SINGLE POLE)		
NO/EM	lbs. [N]	.80 [3.56]
NC/DB	lbs. [N]	.55 [2.45]
INDICATING LIGHTS		Refer to the appropriate Lamp Data
MECHANICAL ENDURANCE		
PUSH BUTTONS		
Momentary	Ops.	5,000,000
Maintained	Ops.	100,000
Dual	Ops.	1,000,000
EMERGENCY STOP (EN418)	Ops.	100,000
SELECTOR SWITCHES	Ops.	500,000
STANDARD CONTACT BLOCKS	Ops.	5,000,000
INDICATING LIGHTS		Refer to the appropriate Lamp Data
MATERIALS		
Operator Housings (Glass Reinforced Grades)		Thermoplastic Polyester and Polyester Blends (UV Stabilized for outdoor use)
Operator Caps and Handles - Non-Illuminated (Glass Reinforced Grades)		Thermoplastic Polyester and Polyester Blends (UV Stabilized for outdoor use)
Mounting Rings and Nuts (Glass Reinforced Grades)		Thermoplastic Polyester and Polyester Blends (UV Stabilized for outdoor use)
Thrust Washer		Thermoplastic Polyester and Polyester Blends (UV Stabilized for outdoor use)
Trim Washer		Thermoplastic Polyester and Polyester Blends (UV Stabilized for outdoor use)
Pilot Light Lens		High Impact Polycarbonate (UV Stabilized for outdoor use)
Transparent Push Buttons and Mushroom Caps		High Impact Polycarbonate (UV Stabilized for outdoor use)
Certain CAM and Bearing Parts		Custom Polymers: Teflon, Silicon and Moly-Disulfide impregnated for improved wearability
Seals		Neoprene Gaskets, BUNA N - Rubber - Teflon Coated, Thermoplastic - Elastomer Molded Seals
Push Pull Bushings		Brass (Plated and Unplated)
Detents for Maintained Devices		Brass (Plated and Unplated)
Springs		Stainless Steel throughout
ROHS COMPLIANCE		For RoHS compliance documentation by product, refer to www.c3controls.com

22MM IEC COMPACT CONTROL STATIONS		
	UNITS	
CONSTRUCTION		
Enclosure		Polycarbonate
Assembly Screw		Stainless Steel
Gasket		Formed in place
Enclosure Conduit Entries		2 Lateral M20, (1/2 NPT) & 2 Base M16
Installation Torque (Cover to Base)	Nm [Lb-in.]	1 – 1.4 [8 – 12]
ENVIRONMENTAL RATINGS		
Ingress Protection		UL Listed Type 1, 2, 3, 3R, 4/4X, 12, 13 and IP66
Ambient Operating Temperature	°C / °F	-40 to +55 / -40 to +131
Ambient Storage Temperature	°C / °F	-40 to +85 / -40 to +185
ROHS COMPLIANCE		For RoHS compliance documentation by product, refer to www.c3controls.com

POLYCARBONATE COMPACT CONTROL STATIONS – 1 POSTITION

ECW22✳-H1P1 OR ECW22✳-H1P1Y

44.5mm (1-3/4")
40mm (1-37/64")
75mm (2-61/64")
63mm (2-31/64")
15.3mm (19/32")
80mm (3-5/32")
ø22.5mm (57/64")
68mm (2-43/64")

57mm (2-1/4")
22mm (55/64")
40mm (1-37/64")
M20
1/2 NPT
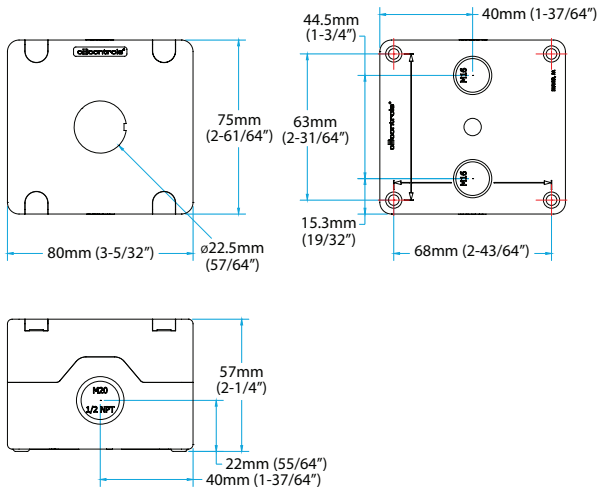
ECW22✳-H1P1 OR ECW22✳-H1P1Y
(SHOWN WITH EMERGENCY STOP PUSH BUTTON)

91.7mm (3-39/64")
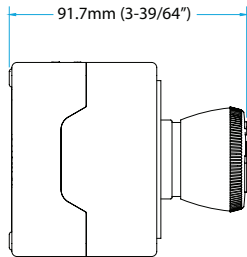
ECW22✳-H1P1 OR ECW22✳-H1P1Y
(SHOWN WITH SELECTOR SWITCH)

87.3mm (3-7/16")
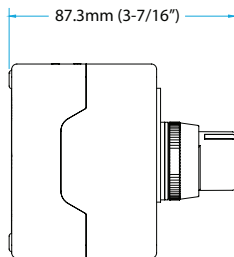
ECW22✳-H1P1 OR ECW22✳-H1P1Y
(SHOWN WITH FLUSH PUSH BUTTON)
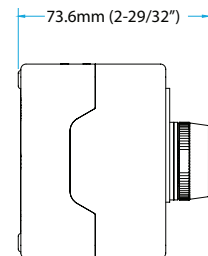
73.6mm (2-29/32")

POLYCARBONATE COMPACT CONTROL STATIONS – 2 POSTITION

ECW22✳-H2P1

40mm (1-37/64")
119mm (4-11/16")
107mm (4.-7/32")
15.3mm (19/32")
80mm (3-5/32")
88.5mm (3-31/64")
68mm (2-43/64")

57mm (2-1/4")
22mm (55/64")
40mm (1-37/64")
M20
1/2 NPT

POLYCARBONATE COMPACT CONTROL STATIONS – 3 POSTITION

ECW22✳-H3P1

132.5mm (5-7/32")
40mm (1-37/64")
163mm (6-27/64")
151mm (5-15/16")
15.3mm (19/32")
80mm (3-5/32")
68mm (2-43/64")

57mm (2-1/4")
22mm (55/64")
40mm (1-37/64")
M20
1/2 NPT
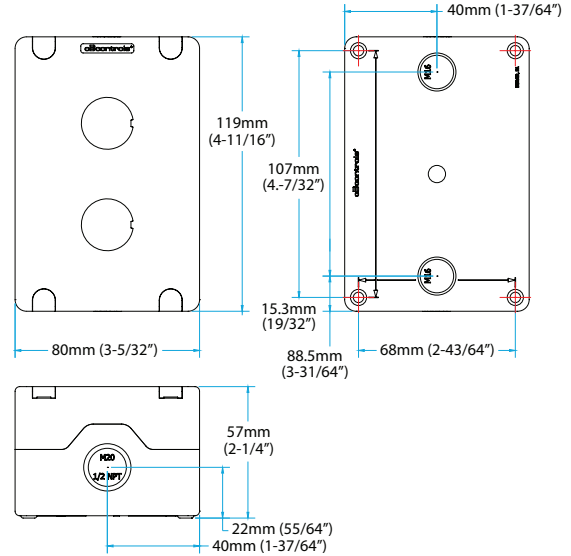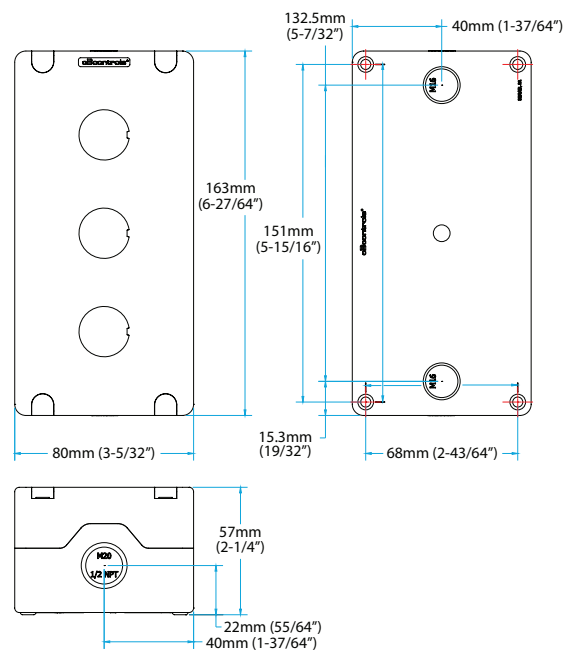
NOTE: ✳Represents the conduit entry orientation code. Refer to page 297.

LEGEND PLATES

FOR USE WITH 22MM IEC OPERATORS

22LP Standard

22LPN Narrow

22LPS Short

22LPT Tall

22LPJ Jumbo

ø22.2mm (ø7/8")
3.5mm (1/64")
10.2mm (25/64")
A
12.1mm (31/64")
3.1mm (1/64")
B
1.6mm (1/16")

44.5mm (1-3/4")
44.5mm (1-3/4")
1.6mm (1/16")
15.9mm (5/8")

38.1mm (1-1/2")
44.5mm (1-3/4")
1.6mm (1/16")
15.9mm (5/8")

44.5mm (1-3/4")
38.1mm (1-1/2")
1.6mm (1/16")
15.9mm (5/8")

44.5mm (1-3/4")
50.8mm (2")
1.6mm (1/16")
15.9mm (5/8")

50.8mm (2")
50.8mm (2")
1.6mm (1/16")
22.9mm (29/32")

22LP-40 Standard POTO

22LPS-40 Short POTO

22LPT-40 Tall POTO

22LPJ-40 Jumbo POTO

44.5mm (1-3/4")
44.5mm (1-3/4")
1.6mm (1/16")
19.1mm (3/4")

44.5mm (1-3/4")
35.1mm (1-1/2")
1.6mm (1/16")
15.9mm (5/8")

44.5mm (1-3/4")
50.8mm (2")
1.6mm (1/16")
15.9mm (5/8")

50.8mm (2")
50.8mm (2")
1.6mm (1/16")
22.9mm (29/32")

22LPR Standard Round

22LPRM Medium Round

22LPRJ Jumbo Round

3.5mm (1/64")
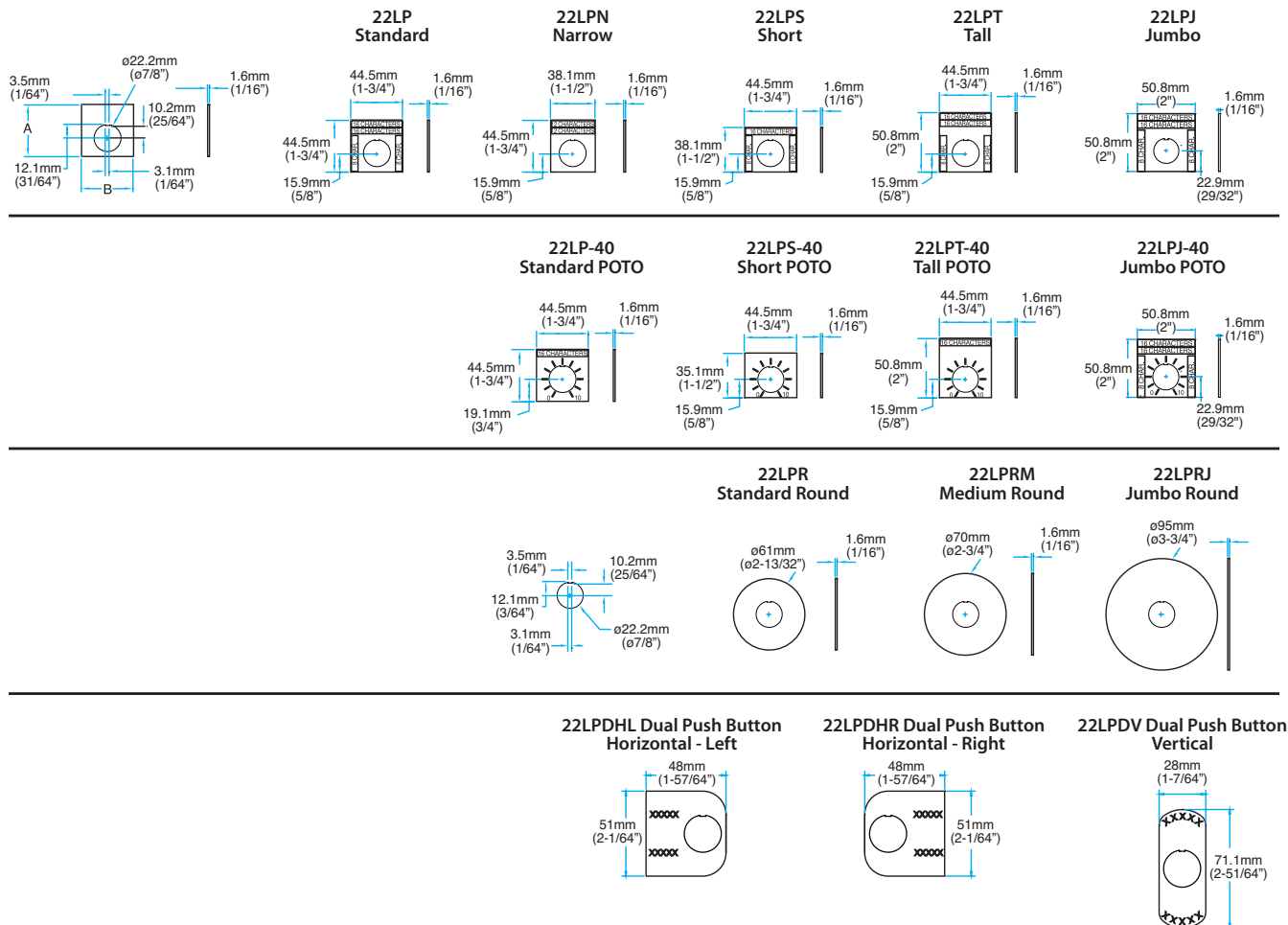10.2mm (25/64")
12.1mm (3/64")
3.1mm (1/64")
ø22.2mm (ø7/8")

ø61mm (ø2-13/32")
1.6mm (1/16")

ø70mm (ø2-3/4")
1.6mm (1/16")

ø95mm (ø3-3/4")
1.6mm (1/16")

22LPDHL Dual Push Button Horizontal - Left

22LPDHR Dual Push Button Horizontal - Right

22LPDV Dual Push Button Vertical

48mm (1-57/64")
51mm (2-1/64")

48mm (1-57/64")
51mm (2-1/64")

28mm (1-7/64")
71.1mm (2-51/64")

Note: Legend plates feature a tab for optional break-away positioning and can be used in conjunction with the Thrust & Trim Washer accessory.

FOR USE WITH POLYCARBONATE ENCLOSURES OPTIMIZED FOR 22MM IEC OPERATORS

22ECLP Standard

22ECLPR Round

3.6mm (9/64")
44mm (1-47/64")
2.3mm (3/32")
44mm (1-47/64")
9.8mm (25/64")
15.9mm (5/8")
22mm (55/64")
ø22.2mm (7/8")
1.6mm (1/16")

ø59mm (2-21/64")
2.3mm (3/32")
3.6mm (9/64")
ø22.2mm (7/8")
9.1mm (23/64")
1.6mm (1/16")