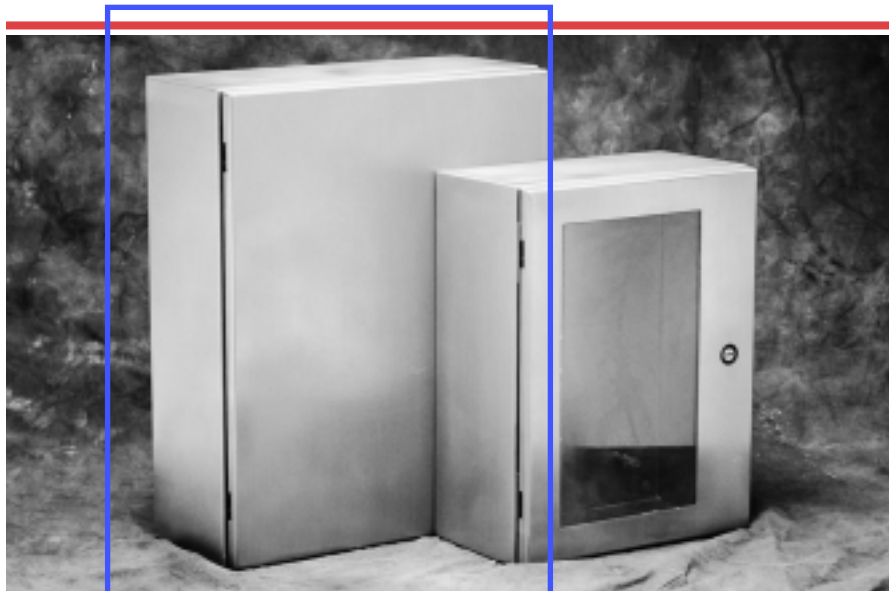


Section 11

CONCEPT® Stainless Steel Wall-Mount Enclosures

Rev C January 2002



Application

The CONCEPT® stainless steel enclosure, with its streamlined design and UL Type 4X rating, is a perfect fit for mounting electrical or high-tech electronic equipment in a variety of indoor and outdoor settings. It is typically used in the following areas where corrosion-resistant protection is needed: food processing plants, pharmaceutical manufacturing facilities, petrochemical plants, pulp and paper processing, and waste water treatment facilities.

Construction

Manufactured from 16 or 14 gauge Type 304 or Type 316L stainless steel

- Seams continuously welded and ground smooth
- Minimum width body flange provides maximum door opening
- Body flange trough excludes liquids and contaminants
- Panel mounting studs fit optional CONCEPT panels and other accessories
- Mounting holes in back of body for direct mounting or for optional external mounting feet
- Type 304 stainless steel hidden hinges promote clean aesthetic appearance
- Standard full access 170° opening
- Doors are interchangeable and easily removable by pulling captive hinge pins
- For extra rigidity, door bars and center stiffener furnished on doors 36.00 x 36.00 and larger
- Provision on door (except window door style) for thermoplastic data pocket
- Provision on door (except window door style) for optional doorstop kit
- Quarterturn latches (or a 3-point latch system on larger enclosures) furnished with flush slotted insert. Optional handles or inserts are available.
- Window door enclosures have a clear polycarbonate window mounted flush with door surface
- Hinge mounting brackets for wire management or optional accessories
- Seamless foam-in-place one piece gasket provides oil-tight and dust-tight seal against contaminants
- Self-grounding latch system with double seal provides maximum protection against leakage
- Integral body grounding stud
- Furnished hardware kit consists of panel mounting nuts, grounding hardware, and sealing washers for wall mounting holes

- Installation instructions for enclosure and accessories are provided

Finish

Enclosures are unpainted. Cover and body have smooth brushed finish.

- Optional CONCEPT panels are white painted or zinc plated.
- Optional NEMA panels are white painted, zinc plated, aluminum or stainless steel.

Industry Standards

NOTE: Mounting feet required to maintain UL/CSA ratings. Some models also require internal panel; see order table.

UL508, File No. E61997: Type 4, Type 4X and Type 12
NEMA/EEMAC Type 4, Type 4X, Type 12, and Type 13
CSA File No. LR42186: Type 4, Type 4X and Type 12
VDE IP66
IEC 60529, IP66

Accessories

See General Accessories: CONCEPT® Enclosure Accessories, pages 11.66-11.71

Corrosion Inhibitors
Data pocket (except window door style)
Door Stop Kit (except window door style)
Lighting Kits
Panels (See table)
Panels, NEMA
Terminal Kit Assembly
Wiring Duct

Modification Services Program

You can customize this product to your unique requirements by specifying from these options:

- Enclosure height, width, depth
- Holes and cutouts in body, doors, subpanels
- Tapped holes, fasteners, mounting channel in enclosure and subpanel
- Mounting (adds and deletes)
- Doors
- Subpanels
- Thermal management (louvers, fans, filters)
- Windows
- Standard accessories
- Drip shield

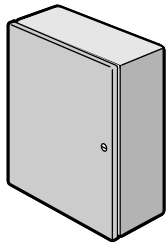
For details, see Modification Services at hoffmanonline.com.
To order, contact your local Hoffman sales representative.

Patents:

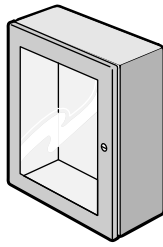
Combined Handle and Lock Unit
360,345 (U.S.)
DEM 9405854.7 (Germany)
Enclosure Latch 5,509,703 (U.S.)
Hinge System 5,666,695 (U.S.)

Other patents pending.

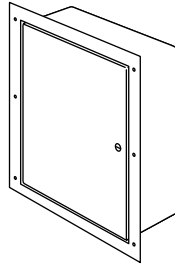
The **CONCEPT®** Enclosure Group **Accessory Selection Guide** See General Accessories: *CONCEPT®* Enclosure Accessories, pages 11.66-11.71



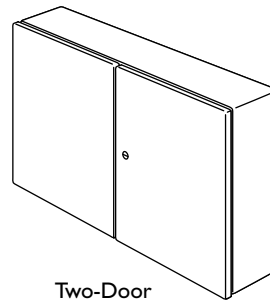
Steel or
Stainless Steel
Enclosures



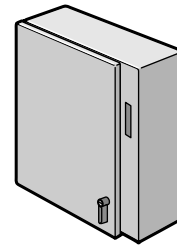
Steel or
Stainless Steel
Window-Door
Enclosures



Flush Mount
Enclosures

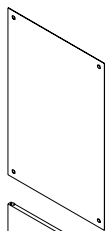


Two-Door
Enclosures

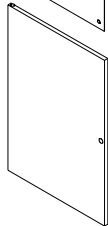


Steel or
Stainless Steel
Disconnect
Enclosures

Internal Accessories



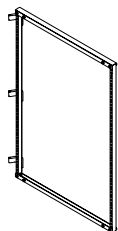
Steel Panel



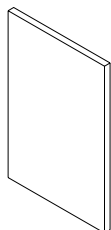
Swing-Out
Panel



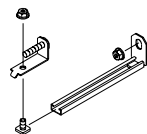
Panel
Conversion Kit



Swing-Out
Rack Frame



Dead Front
Kit



Adjustable
Mounting
Kit



Mounting
Channels



DIN
Rail Kit



Grid Straps

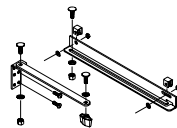


Rack
Mounting
Angles

Door Accessories



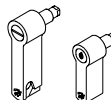
Door Stop Kit



Data Pocket

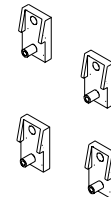


Handles and
Latches



Key Inserts

External Accessories



Mounting
Foot Kit

Mild steel construction.
Not recommended for
corrosive application.

Pole
Mounting
Kit

11C59754



A Pentair Company

CONCEPT® Stainless Steel Wall-Mount Enclosures

Rev B February 2001

Standard Sizes CONCEPT Stainless Steel Single-Door Wall-Mount Enclosures

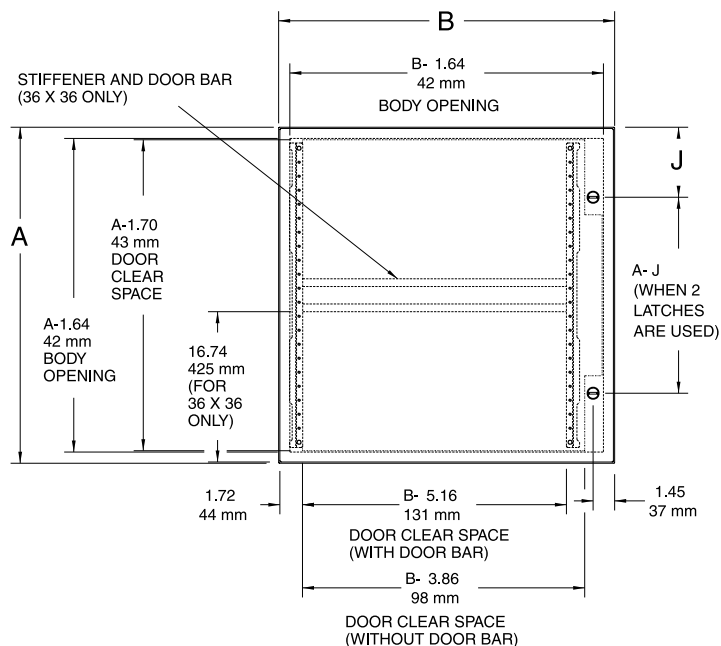
Type 304 Catalog Number	Type 316L Catalog Number	Door Gauge	Body Gauge	Enclosure Size A x B x C	* CONCEPT Panel Catalog Number	Panel Size D x E	Mounting G x H	Latches qty	style	J
C-SD12126SS	C-SD12126SS6	16	16	12.00 x 12.00 x 6.00 (305 x 305 x 152)	C-P1212	10.20 x 10.20 (259 x 259)	10.50 x 10.50 (267 x 267)	1	Quarterturn	6.00 (152)
C-SD16126SS	C-SD16126SS6	16	16	16.00 x 12.00 x 6.00 (406 x 305 x 152)	C-P1612	14.20 x 10.20 (361 x 259)	14.50 x 10.50 (368 x 267)	1	Quarterturn	8.00 (203)
C-SD16166SS	C-SD16166SS6	16	16	16.00 x 16.00 x 6.00 (406 x 406 x 152)	C-P1616	14.20 x 14.20 (361 x 361)	14.50 x 14.50 (368 x 368)	1	Quarterturn	8.00 (203)
C-SD20166SS	C-SD20166SS6	16	16	20.00 x 16.00 x 6.00 (508 x 406 x 152)	C-P2016	18.20 x 14.50 (462 x 361)	18.50 x 14.50 (470 x 368)	1	Quarterturn	10.00 (254)
C-SD20206SS	C-SD20206SS6	16	16	20.00 x 20.00 x 6.00 (508 x 508 x 152)	C-P2020	18.20 x 18.20 (462 x 462)	18.50 x 18.50 (470 x 470)	1	Quarterturn	10.00 (254)
C-SD16128SS	C-SD16128SS6	16	16	16.00 x 12.00 x 8.00 (406 x 305 x 203)	C-P1612	14.20 x 10.20 (361 x 259)	14.50 x 10.50 (368 x 267)	1	Quarterturn	8.00 (203)
C-SD16168SS	C-SD16168SS6	16	16	16.00 x 16.00 x 8.00 (406 x 406 x 203)	C-P1616	14.20 x 14.20 (361 x 361)	14.50 x 14.50 (368 x 368)	1	Quarterturn	8.00 (203)
C-SD16208SS	C-SD16208SS6	16	16	16.00 x 20.00 x 8.00 (406 x 508 x 203)	C-P2016	18.20 x 14.20 (462 x 361)	14.50 x 18.50 (368 x 470)	1	Quarterturn	8.00 (203)
C-SD20168SS	C-SD20168SS6	16	16	20.00 x 16.00 x 8.00 (508 x 406 x 203)	C-P2016	18.20 x 14.20 (462 x 361)	18.50 x 14.50 (470 x 368)	1	Quarterturn	10.00 (254)
C-SD20208SS	C-SD20208SS6	16	16	20.00 x 20.00 x 8.00 (508 x 508 x 203)	C-P2020	18.20 x 18.20 (462 x 462)	18.50 x 18.50 (470 x 470)	1	Quarterturn	10.00 (254)
C-SD24168SS	C-SD24168SS6	16	16	24.00 x 16.00 x 8.00 (610 x 406 x 203)	C-P2416	22.20 x 14.20 (564 x 361)	22.50 x 14.50 (572 x 368)	1	Quarterturn	12.00 (305)
C-SD24208SS	C-SD24208SS6	16	16	24.00 x 20.00 x 8.00 (610 x 508 x 203)	C-P2420	22.20 x 18.20 (564 x 462)	22.50 x 18.50 (572 x 470)	1	Quarterturn	12.00 (305)
† C-SD24248SS	† C-SD24248SS6	14	16	24.00 x 24.00 x 8.00 (610 x 610 x 203)	C-P2424	22.20 x 22.20 (564 x 564)	22.50 x 22.50 (572 x 572)	2	Quarterturn	5.00 (127)
† C-SD30248SS	† C-SD30248SS6	14	16	30.00 x 24.00 x 8.00 (762 x 610 x 8.00)	C-P3024	28.20 x 22.20 (716 x 564)	28.50 x 22.50 (724 x 572)	2	Quarterturn	5.00 (127)
† C-SD30308SS	† C-SD30308SS6	14	14	30.00 x 30.00 x 8.00 (762 x 762 x 203)	C-P3030	28.20 x 28.20 (716 x 716)	28.50 x 28.50 (724 x 724)	2	Quarterturn	5.00 (127)
† C-SD36248SS	† C-SD36248SS6	14	16	36.00 x 24.00 x 8.00 (914 x 610 x 203)	C-P3624	34.20 x 22.20 (869 x 564)	34.50 x 22.50 (876 x 572)	2	Quarterturn	5.00 (127)
† C-SD36308SS	† C-SD36308SS6	14	14	36.00 x 30.00 x 8.00 (914 x 762 x 203)	C-P3630	34.20 x 28.20 (869 x 716)	34.50 x 28.50 (876 x 724)	2	Quarterturn	5.00 (127)
C-SD202012SS	C-SD202012SS6	14	14	20.00 x 20.00 x 12.00 (508 x 508 x 305)	C-P2020	18.20 x 18.20 (462 x 462)	18.50 x 18.50 (470 x 470)	1	Quarterturn	10.00 (254)
† C-SD242412SS	† C-SD242412SS6	14	14	24.00 x 24.00 x 12.00 (610 x 610 x 305)	C-P2424	22.20 x 22.20 (564 x 564)	22.50 x 22.50 (572 x 572)	2	Quarterturn	5.00 (127)
† C-SD302412SS	† C-SD302412SS6	14	14	30.00 x 24.00 x 12.00 (762 x 610 x 305)	C-P3024	28.20 x 22.20 (716 x 564)	28.50 x 22.50 (724 x 572)	2	Quarterturn	5.00 (127)
† C-SD362412SS	† C-SD362412SS6	14	14	36.00 x 24.00 x 12.00 (914 x 610 x 305)	C-P3624	34.20 x 22.20 (869 x 564)	34.50 x 22.50 (876 x 572)	2	Quarterturn	5.00 (127)
† C-SD363012SS	† C-SD363012SS6	14	14	36.00 x 30.00 x 12.00 (914 x 762 x 305)	C-P3630	34.20 x 28.20 (869 x 716)	34.50 x 28.50 (876 x 724)	2	Quarterturn	5.00 (127)
† C-SD363612SS	† C-SD363612SS6	14	14	36.00 x 36.00 x 12.00 (914 x 914 x 305)	C-P3636	34.20 x 34.20 (869 x 869)	34.50 x 34.50 (876 x 876)	2	Quarterturn	5.00 (127)
† C-SD423612SS	† C-SD423612SS6	14	14	42.00 x 36.00 x 12.00 (1067 x 914 x 305)	C-P4236	40.20 x 34.20 (1021 x 869)	40.50 x 34.50 (1029 x 876)	1	3-point	21.00 (533)
† C-SD483612SS	† C-SD483612SS6	14	14	48.00 x 36.00 x 12.00 (1219 x 914 x 305)	C-P4836	46.20 x 34.20 (1173 x 869)	46.50 x 34.50 (1181 x 876)	1	3-point	24.00 (610)
† C-SD603612SS	† C-SD603612SS6	14	14	60.00 x 36.00 x 12.00 (1524 x 914 x 305)	C-P6036	58.20 x 34.20 (869 x 462)	58.50 x 34.50 (1486 x 876)	1	3-point	30.00 (762)

Millimeter dimensions () are for reference only; do not convert metric dimensions to inch.

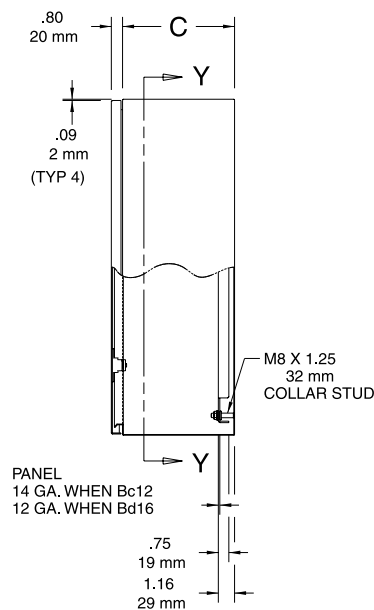
* Panels must be ordered separately. Optional zinc-plated CONCEPT panels available for most sizes. Optional NEMA size steel and stainless steel panels require conversion kit catalog number C-CPM4 (see section 11, General Accessories).

† Internal panel required to maintain UL/CSA ratings.

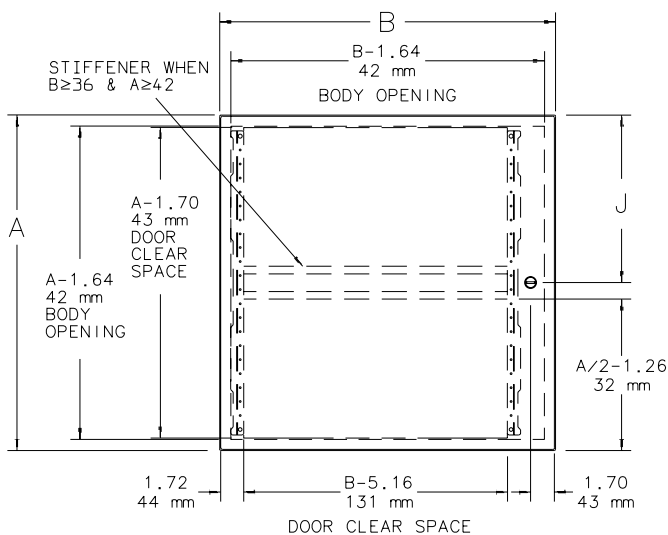
■ **CONCEPT® Stainless Steel Single-Door Wall-Mount Enclosures**



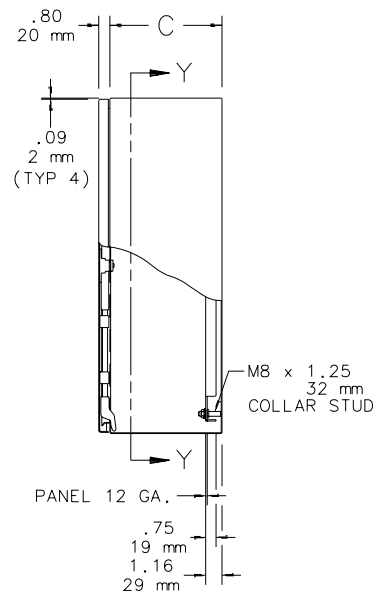
Single-Door Enclosure with Quarterturn Latching



- NOTE: 1. Door has provision for data pocket. Use large data pocket provision when A = 30.00 (762) or more and B = 20.00 (508) or more. No data pocket provision when B = 12.00 (305).
2. Panels more than 22.0 inches (564) long have flanges along sides, except C-P2420 and C-P2424 which have flanges on two sides.



Single-Door Enclosure with 3-Point Latching



C2502

**Inch
Millimeter**

For Section Y-Y see following page.

QOU
Miniature Circuit Breakers and Switches

Cover Plates

Cover plates are available to fit one two-pole, one three-pole, two two-pole, or three two-pole circuit breakers. The cover plates fasten to the escutcheon and provide one inch per pole finish trim to cover the circuit breaker. See the table on page 22 for catalog numbers.

Rainproof Covers

Rainproof covers are available for vertical mounted two- and three-pole circuit breakers and horizontal mounted two-pole circuit breakers. See the table on page 22 for catalog numbers.

UL Listed Terminations

Reversible Lugs

For added wiring convenience, 10 - 70 ampere one- and two-pole, and 10 - 60 ampere three-pole QOU circuit breakers have reversible lugs. Removing the wire binding screw allows the captive lug body to be rotated and the wire binding screw reinstalled. This permits the circuit breaker to be flush mounted and then conveniently wired from the back.

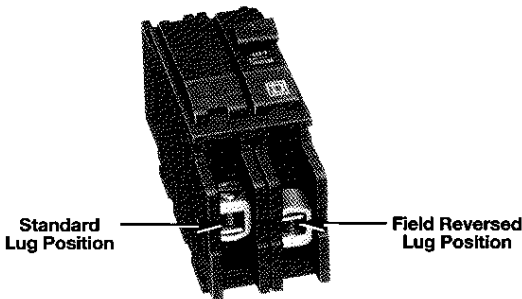


Figure 16

Optional Terminations

In addition to the reversible lugs previously described, 10 - 70 ampere one- and two-pole, and 10 - 60 ampere three-pole QOU circuit breakers have optional field installable quick connectors.

Quick Connectors

Quick connectors provide a convenient way to attach two wires using two standard, 250 insulated quick connectors per terminal (30 ampere maximum per connector). Quick connectors are not furnished with the circuit breakers, but are commercially available. Connectors suitable for wire sizes up to AWG #10 can be selected for use with these circuit breakers.

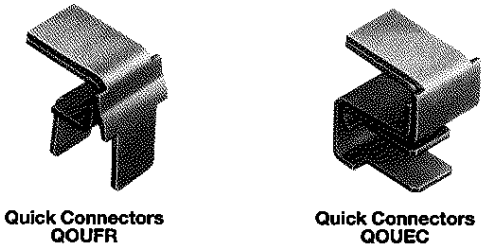


Figure 17

Optional Terminations			
Type	Wiring Method	Quantity	Catalog Number
Quick Connectors	Forward or Reverse	1	QOUFR
Quick Connectors	End Connection	1	QOUEC

NOTE: Available only on 10-70 ampere one- and two-pole, and 10-60 ampere three-pole circuit breakers. Not available on circuit breakers shown with a † below.

UL Listed Interrupting Rating - 10,000 RMS Symmetrical Amperes					
Ampere Rating	One-Pole	Two-Pole		Three-Pole	Terminal Lug Wire Size (AWG)
	120/240Vac Catalog Number	120/240Vac Catalog Number	240Vac Catalog Number	240Vac Catalog Number	
10	QOU110	QOU210	...	QOU310	1 - #14-2 Cu or Al
15	QOU115	QOU215	QOU215H	QUO315	
20	QOU120	QOU220	QOU220H	QOU320	
25	QOU125	QOU225	QOU225H	QOU325	
30	QOU130	QOU230	QOU230H	QOU330	
35	QOU135	QOU235	...	QOU335	
40	QOU140	QOU240	...	QOU340	
45	QOU145	QOU245	...	QOU345	
50	QOU150	QOU250	...	QOU350	
60	QOU160	QOU260	...	QOU360	
70	QOU170	QOU270	...	QOU370†	
80	QOU180†	QOU280†	...	QOU380†	1 - #4-2/0 Cu or Al
90	QOU190†	QOU290†	...	QOU390†	
100	QOU1100†	QOU2100†	...	QOU3100†	
125	...	QOU2125†	
Switch - 60 Ampere Maximum - 240Vac			QOU200	QOU300	1 - #14-2
Switch - 100 Ampere Maximum - 240Vac			QOU2000†	QOU3000†	1 - #4-2/0
Switch - 125 Ampere Maximum - 240Vac			QOU20001†	QOU30001†	

† Available as high ampere Series 2 with forward lugs only. (No optional terminations; DIN mounting available 1/95.)

MINIATURE SQUARE BASE RELAYS w/BLADE TERMINALS

- DPDT and 4PDT for control circuit application flexibility.
- 5A, DPDT and 5A, 4PDT.
- AC and DC coils.
- Blade terminals are interchangeable with other commonly available relays.
- Tape wound coils are marked with the coil voltage for easy identification.
- AgNi contacts, environmentally friendly - cadmium free.
- Small size requiring minimum panel space for lower installed cost.
- Optional indicating lights are color coded, red for AC and green for DC.
- cURus and CE for acceptance in global applications.
- Optional mechanical actuator and indicating light for checking the control circuit operation without energizing the relay and to easily determine the relay status.
- Terminal markings on the relay for easy reference during installation.
- Low coil consumption to minimize transformer and power supply requirements.
- Transparent housing to visually monitor switching operations and contact condition.
- 100% tested to ensure performance to specification.

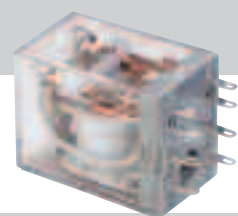
IT'S EASY TO BUILD YOUR OWN RELAY

Simply pick the code number from each of the sections below and combine them to build your part number. See page 4 for more detailed directions.

Miniature Square Base Relay w/Blade Terminals

GPRM-B II III - IV

Example: To build one of our most popular Relays, the part number would be **GPRM-B + II + III + IV** or **GPRM-B2C05D**



I. RELAY TYPE

CODE	DESCRIPTION	LIST
GPRM-B	General Purpose Relay w/Blade	\$3.30

II. POLES & CURRENT RATING

CODE	DESCRIPTION	LIST
2C05	DPDT, 5A	—
4C05	4PDT, 5A	\$0.40

III. COIL VOLTAGES

CODE	DESCRIPTION
C	24V AC
D	120V AC
E	220-240V AC
ZC	24V DC
ZJ	48V DC
ZD	110V DC

IV. OPTIONS

CODE	DESCRIPTION	LIST
3	Light & Mechanical Actuator	\$1.00

Relays available in convenient multi-packs, consult factory for details.

SPECIFICATIONS:

CONTACT RATING

	CONTACT CONFIG.	RESISTIVE LOAD P.F. = 1.0	INDUCTIVE LOAD P.F. = 0.4 (L/R = 7msec.)
Contact Capacity	DPDT	120V AC: 5A	120V AC: 2A
	DPDT	240V AC: 5A	240V AC: —
	DPDT	28V DC: 5A	28V DC: 2A
Contact Capacity	4PDT	120V AC: 5A	120V AC: 3A
	4PDT	240V AC: 5A	240V AC: —
	4PDT	28V DC: 5A	28V DC: 3A
	2 POLE		4 POLE
Rated Carrying Current	5A		5A
Max. Allowable Voltage	DC 110V, AC 240V		DC 110V, AC 240V
Min. Load	10mA, 10V DC		10mA, 10V DC
Contact Material	AgNi		AgNi

PERFORMANCE (AT INITIAL VALUE)

OPERATE TIME: 25 msec Max.
RELEASE TIME: 25 msec Max.
DIELECTRIC STRENGTH: Between Coil & Contact: 1,500V AC Between Poles: 1,000V AC
MAX. ON/OFF SWITCHING RATE: Mechanically: 240 operations/minute Electrically: 30 operations/minute
OPERATING AMBIENT TEMPERATURE: -25° C to +55° C (-13° F to 131° F) (no water condensation & no water drop)
VIBRATION: 10 to 55 Hz Dual Amplitude 1.0mm
SHOCK: 100 G Min.
MECHANICAL LIFE: 10,000,000 operations
MINIMUM ELECTRICAL LIFE: 100,000 operations at maximum rated resistive current at 120V AC

COMPATIBLE SOCKETS

RELAY TYPE	COMPATIBLE SOCKETS
GPRM-B2C05**	GPRM-SB14U1 with Open Style Terminals
GPRM-B4C05**	
	See page 244 for socket information

COIL SPECIFICATIONS AT 20° C (68° F)

TYPE	POWER CONSUMPTION	PICK-UP VOLTAGE	DROP-OUT VOLTAGE	MAX. ALLOWABLE VOLTAGE
AC Coil	1.0 to 1.3 VA (60 Hz)	85% Max.	30% Min.	110%
DC Coil	0.9 W	80% Max.	10% Min.	110%

DISCOUNT
SCHEDULE **C**

8, 11 & 14 BLADE GUARDED & UNGUARDED SOCKETS



MINIATURE 8 BLADE GUARDED, 15A

CODE	DESCRIPTION	LIST
GPRB-SB08G1	Mini 8 Blade Guarded	\$3.20

SPECIFICATIONS:

TYPE: Surface or DIN Rail Mount
CURRENT CARRYING MEMBERS:
Phosphor Bronze Nickel Plated Steel
TERMINALS: IP20, Screw w/captive wire clamps
ELECTRICAL RATING: 15A, 300V AC

FOR USE WITH:

GENERAL PURPOSE RELAY: GPRM-B1C15**
and GPRM-B2C10**
RETAINER CLIP: GPRB-RC2



11 BLADE GUARDED, 20/25A

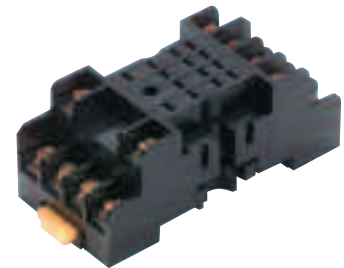
CODE	DESCRIPTION	LIST
GPRB-SB11G1	11 Blade Guarded	\$4.50

SPECIFICATIONS:

TYPE: Surface or DIN Rail Mount
CURRENT CARRYING MEMBERS:
Phosphor Bronze Nickel Plated Steel
TERMINALS: IP20, Screw w/captive wire clamps
ELECTRICAL RATING: DPDT: 25A, 600V AC and
3PDT: 20A, 600V AC

FOR USE WITH:

GENERAL PURPOSE RELAY: GPRS-B2C13**,
GPRS-B2C25**, GPRS-B3C13** and
GPRS-B3C20**
RETAINER CLIP: GPRB-RC1



MINIATURE 14 BLADE UNGUARDED, 7A

CODE	DESCRIPTION	LIST
GPRB-SB14U1	Mini 14 Blade Unguarded	\$4.30

SPECIFICATIONS:

TYPE: Surface or DIN Rail Mount
CURRENT CARRYING MEMBERS:
Phosphor Bronze Nickel Plated Steel
TERMINALS: Open style, Screw w/captive
wire clamps
ELECTRICAL RATING: 7A, 300V AC

FOR USE WITH:

GENERAL PURPOSE RELAY: GPRM-B2C05**,
GPRM-B4C05** and HGPRM-B4C05*
RETAINER CLIP: GPRB-RC4

DISCOUNT
SCHEDULE **C**



MINIATURE 8 BLADE UNGUARDED, 15A

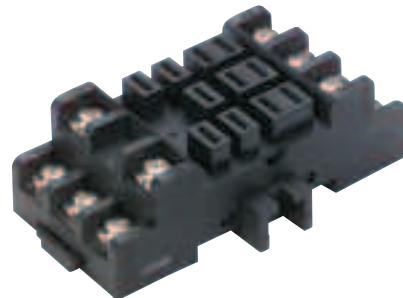
CODE	DESCRIPTION	LIST
GPRB-SB08U1	Mini 8 Blade Unguarded	\$3.20

SPECIFICATIONS:

TYPE: Surface or DIN Rail Mount
CURRENT CARRYING MEMBERS:
Phosphor Bronze Nickel Plated Steel
TERMINALS: Open style, Screw w/captive
wire clamps
ELECTRICAL RATING: 15A, 300V AC

FOR USE WITH:

GENERAL PURPOSE RELAY: GPRM-B1C15**
and GPRM-B2C10**
RETAINER CLIP: GPRB-RC2



11 BLADE UNGUARDED, 20/25A

CODE	DESCRIPTION	LIST
GPRB-SB11U1	11 Blade Unguarded	\$4.50

SPECIFICATIONS:

TYPE: Surface or DIN Rail Mount
CURRENT CARRYING MEMBERS:
Phosphor Bronze Nickel Plated Steel
TERMINALS: Open style, Screw w/captive
wire clamps
ELECTRICAL RATING: DPDT: 25A, 600V AC and
3PDT: 20A, 600V AC

FOR USE WITH:

GENERAL PURPOSE RELAY: GPRS-B2C13**,
GPRS-B2C25**, GPRS-B3C13** and
GPRS-B3C20**
RETAINER CLIP: GPRB-RC1



MINIATURE 14 BLADE UNGUARDED, 15A

CODE	DESCRIPTION	LIST
GPRB-SB14U2	Mini 14 Blade Unguarded	\$4.30

SPECIFICATIONS:

TYPE: Surface or DIN Rail Mount
CURRENT CARRYING MEMBERS:
Phosphor Bronze Nickel Plated Steel
TERMINALS: Open style, Screw w/captive
wire clamps
ELECTRICAL RATING: 15A, 300V AC

FOR USE WITH:

GENERAL PURPOSE RELAY: GPRM-B4C10**
RETAINER CLIP: GPRB-RC4

IT'S EASY TO BUILD YOUR OWN SELECTOR SWITCH

Simply pick the code number from each of the sections below and combine them to build your part number. See page 4 for more detailed directions.

Selector Switches (Non-Illuminated)

W22 - - - - - / - - - - -
I II III IV V* VI*

*NOTE: Contact block configurations are based on circuit designations (see page 141 for circuit designation charts).

Example: To build one of our most popular Selector Switches, the part number would be **W22 + II + III + IV + V + VI** or **W22S2R-HW-01**



I. OPERATOR TYPE	
CODE	DESCRIPTION
W22	Selector Switch

II. BASIC SELECTOR SWITCH OPERATOR FUNCTION	
CODE	POS./FUNCTION
S2	2/Maintained, L
S2R	2/Maintained, R
SRL	2/Spring Return, R to L
SLR	2/Spring Return, L to R
S3	3/Maintained
SLC	3/Spring Return, L to C
SRC	3/Spring Return, R to C
SAC	3/Spring Return, L & R to C

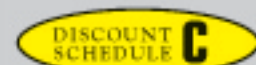
III. HANDLE TYPE	
CODE	DESCRIPTION
H	Standard Handle

IV. HANDLE INSERT COLOR	
CODE	DESCRIPTION
B	Blue
G	Green
E	Grey
R	Red
W	White
Y	Yellow

Each operating handle is black with a factory assembled color insert.

V. CONTACT BLOCK CONFIGURATION (LEFT SIDE)	
CODE	DESCRIPTION
(Blank)	Operator without Contact Blocks
10	1 Normally Open Contact Block
01	1 Normally Closed Contact Block
E	1 "Early Make" Contact Block
0	1 "Delayed Break" Contact Block
20	2 Normally Open Contact Blocks
02	2 Normally Closed Contact Blocks
11	1 Normally Open and 1 Normally Closed Contact Blocks

VI. CONTACT BLOCK CONFIGURATION (RIGHT SIDE)	
(USE CHART V FROM ABOVE)	



SOME OF OUR POPULAR CONFIGURATIONS:

2-POSITION NON-ILLUMINATED SELECTOR SWITCHES							
CONTACT SYMBOL	CONTACT BLOCK MOUNTING POS. <small>Viewed from front of operator</small>	HANDLE POSITION O=OPEN X=CLOSED		TYPE OF OPERATOR	MAINTAINED POSITION		SPRING RETURN- RIGHT TO LEFT
		LEFT	RIGHT		CATALOG #	CATALOG #	
1 NO 	EITHER	O	X	Standard	W22S2-HW-10	W22SRL-HW-10	W22SLR-HW-10
1 NC 	EITHER	X	O	Standard	W22S2-HW-01	W22SRL-HW-01	W22SLR-HW-01

3-POSITION NON-ILLUMINATED SELECTOR SWITCHES							
CONTACT SYMBOL	CONTACT BLOCK MOUNTING POS. <small>Viewed from front of operator</small>	HANDLE POSITION O=OPEN X=CLOSED			TYPE OF OPERATOR	MAINTAINED POSITION	
		LEFT	CENTER	RIGHT		CATALOG #	CATALOG #
NO/NO 	LEFT	X	O	O	Standard	W22S3-HW-10/10	W22SLC-HW-10/10
	RIGHT	O	O	X			W22SRC-HW-10/10
							W22SAC-HW-10/10

AVAILABLE HANDLE INSERT COLORS FOR NON-ILLUMINATED SELECTOR SWITCHES



22MM IEC UNIBODY PILOT LIGHTS

Our 22mm IEC Unibody Pilot Lights were designed with simplicity in function to save you valuable time and money. Wiring is made easy by utilizing rear self captive mounting screws with side wire entry that accommodates 0.5 - 4mm² (#22 to #12 AWG) wires (one or two wires per terminal). In addition, this full voltage light unit is available in 6, 12, 24 and 120 volts using either Incandescent or our new and improved LED lamps with leakage protection. We offer six different lens color options to add to your flexibility. All c3controls 22mm IEC operators are UL Listed and are rated Type 4/4X as standard for watertight and corrosion resistance. In addition, operators are also listed for Type 1, 2, 3, 3R, 12, 13 and IP65 applications, and meet global standards requirements.

Product features include:

- Polyester construction for superior corrosion resistance, moisture rejection and electrical insulation.
- Operators conveniently mount in a round 22.5mm (7/8") hole that is directly interchangeable with competitors units and eliminate the labor required for notching.
- All lights use miniature bayonet base lamps to provide reliable lamp secureness.
- c3controls LED lamp design life is 100,000 hours – that's 11.4 years!



UNIQUE PRODUCT FEATURES



1. Vibration resistant compact design.
2. Our seal is infused with a coating to eliminate cracking when exposed to harsh conditions such as heat, dryness and sunlight. This seal also acts as a light reflector because it is white which increases light output and improves visibility from all angles.
3. Our rugged Lexan[®] lenses provide better visibility and can resist high impact for reliable performance in most environments, even in high temperature ambients.
4. Wiring is made easy by utilizing rear access captive mounting screws with side wire entry.

SOME OF OUR POPULAR CONFIGURATIONS:

UNIBODY PILOT LIGHTS	
CATALOG NUMBER	DESCRIPTION
W22U-120LA-WLA	120V Full Voltage Light w/Amber LED & Lens
W22U-120LG-WLG	120V Full Voltage Light w/Green LED & Lens
W22U-120LR-WLR	120V Full Voltage Light w/Red LED & Lens
W22U-120I-WLR	120V Full Voltage Light w/Incand. Lamp & Red Lens

**General ordering data**

Material No.	1010100000
Short text for material	WPE 4
Description of part	PE terminals
EAN	4008190039820

Approvals

Approvals

**CSA rating data**

Max. rated cross-section (CSA)	AWG 10
Min. rated cross-section (CSA)	AWG 26

Dimensions

Width	6.1 mm
TS 35 offset	11 mm
Height of lowest version	47 mm
Length	60 mm

PE rating data

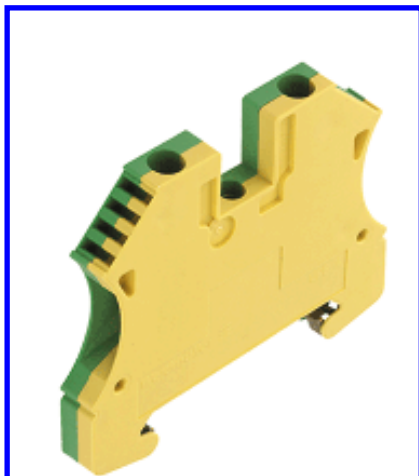
Torque rating with electric screwdriver type DMS 2	
Rated short-time current	480 A (4 mm ²)
Centre screw on PE terminals	M 3
Pollution severity	3
Rated impulse voltage for adjacent terminal	8 kV
PEN-Function	no
Tightening torque range fixing screw	0.5...0.8 Nm
Rated cross-section	4 mm ²
Rated voltage for adjacent terminal	800 V
Norm	IEC 60947-7-2

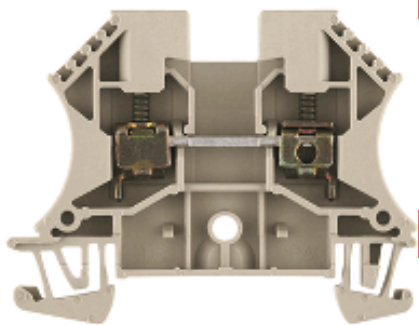
Rating data EN 60079-7

Marking Ex-RL 94/9 EEC	Ex II 2 G D
Marking Ex-RL 94/9 EEC	II 2 G D
Marking EN 60079-7	Ex e II
EC conformity verification certificate	KEMA 98ATEX1683 U

UL rating data

Max. conductor cross-section (UL)	AWG 10
Min. conductor cross-section (UL)	AWG 22





General ordering data

Material No.	1020100000
Short text for material	WDU 4
Description of part	Feed-through terminal 4 mm ²
EAN	4008190150617

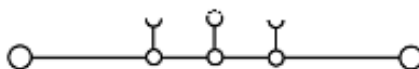
Approvals

Approvals



CSA rating data

CSA current	35 A
Max. rated cross-section (CSA)	AWG 10
Min. rated cross-section (CSA)	AWG 26
Voltage CSA	600 V



Conductors for clamping (2) with equal cross-section (rated connection)

Flexible, min.	0.5 mm ²
Flexible with ferrule, min. (DIN 46228 pt 1)	0.5 mm ²
Solid, min.	0.5 mm ²
Solid, max.	2.5 mm ²
Flexible, max.	1.5 mm ²
Flexible with ferrule, max. (DIN 46228 pt 1)	1.5 mm ²

Dimensions

TS 35 offset	15 mm
Width	6.1 mm
Height of lowest version	47 mm
Length	60 mm
Weight	10.40 g

Rating data EN 60079-7

Marking EN 60079-7	Ex e II
Current EEx e	28 A
Voltage at cross-connection DU+QV/PE	420 V
EC conformity verification certificate	KEMA 98ATEX1683 U
Voltage EEx e	690 V
Voltage at cross-connection DU+QV/PE with AP	750 V
Voltage EEx i EN 50020	60 V
Voltage at cross-connection DU+QV/DU	750 V
Marking Ex-RL 94/9 EEC	Ex II 2 G D
Marking Ex-RL 94/9 EEC	II 2 G D
Voltage at cross-connection DU+QV skipping	110 V

UL rating data

Current (UL)	35 A
Max. conductor cross-section (UL)	AWG 10
Min. conductor cross-section (UL)	AWG 22
Voltage UL	600 V

additional technical data

Type of connection	screwed
No. of identical terminals	1
Version	Feed-through terminal
End plate required	yes
Explosion-tested version "EEx e"	yes
Number of terminal strips per level	2
Levels, internally cross connected	no
Type of mouting	clipped
Flammability class of insulation material acc. to UL 94	V-0
Installation advice	TS 35
Colour of insulating material	dark beige
Insulation material	Wemid
Open sides	right
Range of operating temperature	- 50 °C, + 120 °C
Connection direction	sideways
Product family	W-Series
Number of levels	1



General ordering data

Material No.	1061200000
Short text for material	WEW-35/2
Description of part	End bracket for TS 35
EAN	4008190030230

Approvals

Approvals



Related products

Material No.	Short text for material
0383560000	EW 35
1805610000	MEW 35/1
1059000000	WEW 35/1
9540000000	ZEW 35
8630740000	ZEW 35/2

HSP121BT-1RU (Internal Mount 120 VAC Protection)



The **HSP121BT-1RU** is an advanced 3 stage hybrid, solid state power line protector. Features such as noise filtering, common mode and normal mode suppression, nanosecond reaction time, power line tracking, and compression screw terminations, make the **HSP121BT-1RU** an excellent choice in commercial and industrial applications.

The **HSP121BT-1RU** offers a replaceable fuse designed to remove the load (protected equipment) from the line if the unit is either overloaded or the internal protection fails. This feature prevents surges from entering equipment through a failed protector, not noticed by the user. Unlike models with only an indicator, which may take weeks to notice, the **HSP121BT-1RU** demands immediate attention upon the unlikely occurrence of internal failure.



FEATURES

- Automatic Recovery
- Fast Response Time
- Failure Indicator
- Power Line Tracking
- Filtering
- 3 Stage Hybrid Design
- Replaceable Fuse
- UL 1449 Recognized

SPECIFICATIONS

Clamping Cat.:	330V L-N, 400V L-G
ANSI/IEEE C62.41 1991-Cat. C1/B3	
Peak Clamp Voltage:	315V L-N, 350V L-G
Max Single Pulse:	10kA
Response Time:	<5 nanoseconds
Operational Temperature:	-20°C to +85°C
Failure Indication:	LED
Operational Voltage:	120VAC, 60Hz
Operational Current:	15 AMPS Service
Dimensions:	2.87" x 5.25" x 1.75"

INSTALLATION

1. Mount **HSP121BT-1RU** in a UL Approved housing.
2. Make sure wiring from power sources properly connects to line side of **HSP**.
Wiring from protected equipment must properly connect to EQUIP side of **HSP**.
3. Indication of internal failure:
 - a. Indicator will extinguish
 - b. Fuse blown will disconnect load from power source.

WARNING: For continued protection against risk of fire, replace only with same type rating of fuse.

4. Connect only to 120 VAC, 15 Amp max., single phase, three wire circuit.

DIMENSIONS

HOLES 3/16" DIA.

