

#2

PRODUCT SUBMITTAL FOR ENGINEER'S REVIEW & APPROVAL

DWE Screw Products
6~~7~~5 Independence Dr.
Napoleon, Ohio 43545

Cornerstone Construction Co.
Box 431
Defiance, Ohio 43512

Elling Plbg. & Htg.
T-487 St. Rt. 108
Napoleon, Ohio 43545

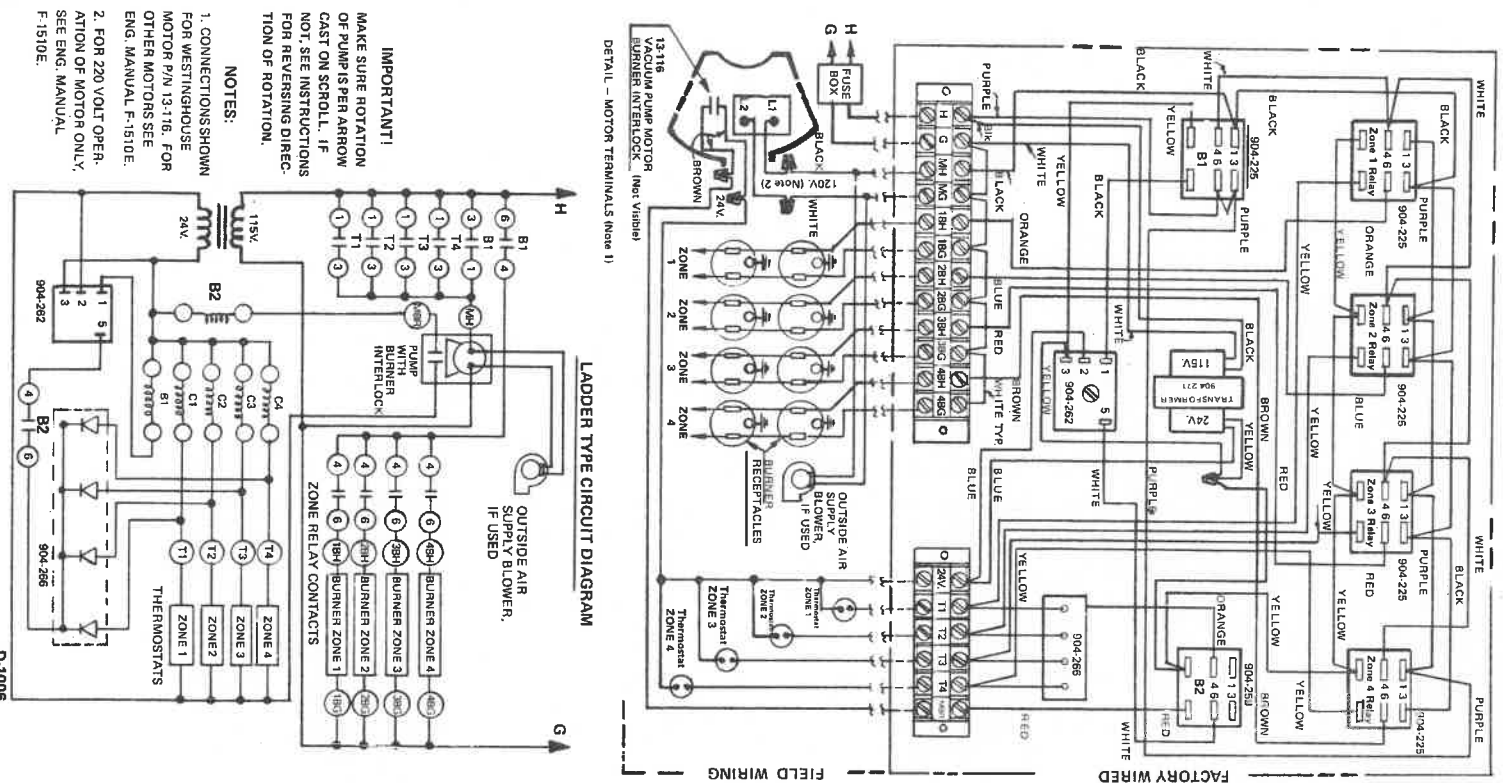
APPROVED AS NOTED
SUBJECT TO CONTRACT REQUIREMENTS

DATE: 1.29.87

BY: JAN

CORNERSTONE CONSTRUCTION, INC.

REE
12-22-86



013-123-01 (SINGLE FUEL)

WARNING — ELECTRICAL HAZARD

Procedures outlined should be performed only by electricians or other individuals qualified to safely perform electrical tests.

ELECTRICAL TROUBLE SHOOTING CO-RAY-VAC AT THE PANEL BOX (Voltmeter or neon test lamp required)

1. MOTOR DOES NOT RUN

Possible causes — No power, blown fuse, tripped overload switch, defective zone or pump overrun relay, transformer, thermostat, or a faulty connection.
 Check terminal H and MH on terminal strip. If "hot" at H and not at MH, the zone relay is defective.
 Check terminal MH. If "hot", motor is defective or the field wiring to the motor is open.

Check field wiring to the motor.
 Check terminal connections on the motor.
 Check for jammed impeller.
 If possible, test motor on a separate power line.

2. MOTOR RUNS, BURNERS DO NOT*

(Wait 3 minutes after thermostat makes before proceeding)
 Be sure burners and thermostats are on proper terminals. Check BH terminal(s) in use. If "hot", zone field wiring is open.

Check terminal MBR. If "hot"(24V), either pump motor end switch is defective and pump motor must be replaced, or wiring from motor end switch to MBR is open.

Check across terminals 4 and 6 on B2. If "hot" (24V), B2 relay is defective.

Check across terminals 4 and 6 on B1. If "hot" (115V), B1 relay is defective.

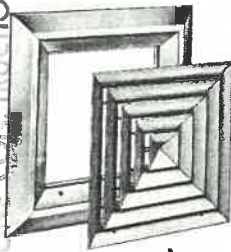
Check across terminals 1 and 2 on SSAC timer. If "hot" (24V) timer is defective.

3. IF THE PROBLEM IS NOT IDENTIFIED PER 1 and 2 ABOVE, SEE SERVICE MANUAL FORM NO. 1465 E.

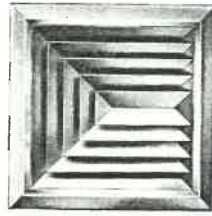
*It is suggested that these tests be conducted only after it is established that pilot gas valves are not being actuated in zones with thermostats calling for heat.

Ceiling Diffusers — Directional — Series 95

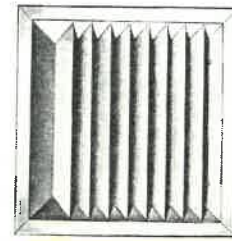
• Extruded Anodized Aluminum • Removable Cores



Series 95 SM
Surface Mount Frame
Pattern No. 411 Core



Series 95 SM
Surface Mount Frame
Pattern No. 311 Core



Series 95 FM
Standard Mount Frame
Pattern No. 111 Core

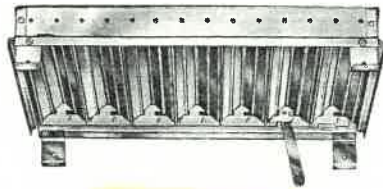
REE
12-22-86

ALUMINUM ACCESSORIES



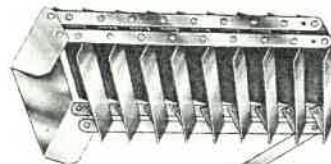
Series 95 DC
Directional Control

Two rows of individually adjustable vanes set into nylon bushings for tension.



Series 95 OB
Opposed Blade Damper

w/212° FUSIBLE LINK

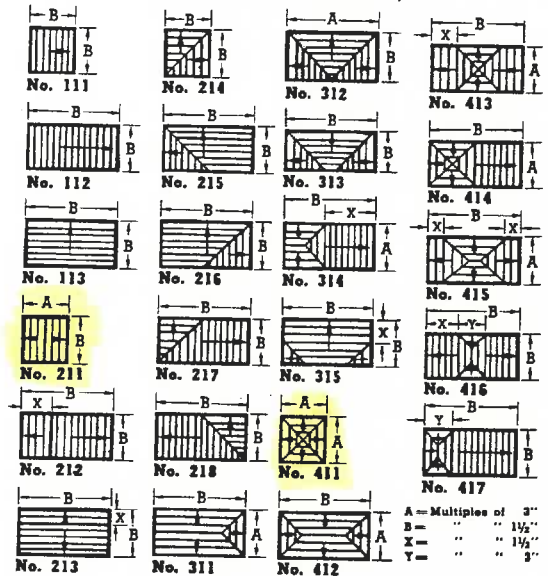


Series 95 EX
Extractor



CORE PATTERNS

PLAN VIEW NECK SIZE
(Viewed from Neck Side)

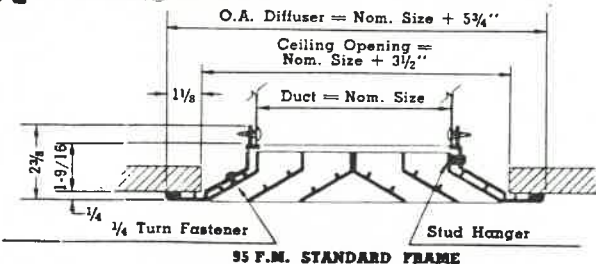


How To Order

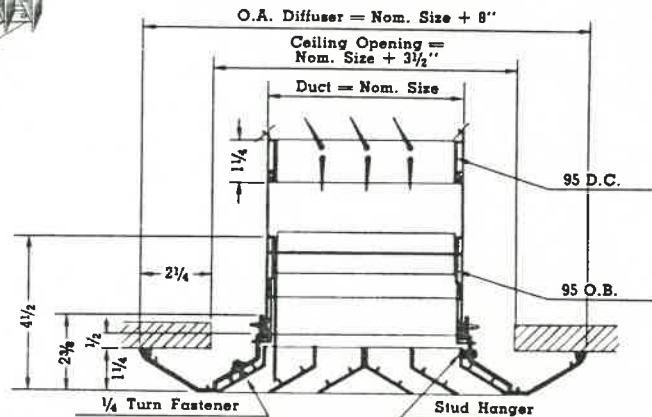
Quantity	Series Number	Mount Style	Opposed Blade Damper (Optional)	Core Pattern Number	Neck Size
2	95	SM	OB	411	12" x 12"

Follow this formula when ordering. The example shown is for two Series 95 Aluminum Directional Diffusers with: (1) Surface Mount Frame, (2) Opposed Blade Damper*, (3) No. 411 Core, (4) 12"x12" Neck Size.

*Opposed blade damper is optional for any style core. Specify OB (shaded area) if damper required. Damper is factory attached.

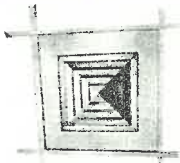


95 F.M. STANDARD FRAME



95 S.M. SURFACE MOUNT FRAME
95 O.B. OPPOSED BLADE DAMPER
95 D.C. DIRECTIONAL CONTROL

LAY-IN PANEL FOR T-BAR APPLICATION



The panel, diffuser, and damper, are factory assembled into a one piece unit—ready to install. Panels available factory attached to 95 FM, filter grilles, curved blade, and many other aluminum items. All aluminum items will be attached to matching anodized aluminum panel. To obtain total list price of items "factory attached" to panel, determine list price of each item and add list price of panel. No charge for "factory attaching."

LIST PRICE TO BE ADDED	
PANEL SIZE	ANODIZED ALUMINUM
24 x 24	\$49.70
48 x 24	78.80

NOTE: Aluminum Panel Available Off-White, Add 20%.

**UNH Series
Contained/Universal Exits**

Totally universal in design and application and self-contained to meet virtually any egress

lighting requirement without modification. Dual voltage input, complete mounting hardware.

FIXTURE TYPE "E"



Approval Does Not Relieve The Sub Contractor or Supplier Of Responsibility For Obtaining Contractors, Dimensions, or Errors Not Conforming to Intent of The Contract Documents

Application

Perfect unit for assuring trouble free, fast installation. All lamps, signage, hardware, electronics and battery are included in one package to avoid onsite shortages at the time of installation. Will accommodate exit/lighting requirements in commercial, residential, industrial or multi-housing applications. Ideal for distributor stock.

STANDARD/UNIT FEATURES

- Completely solid-state charging, current limited.
- Solid-state switching circuit.
- State line-latched low voltage disconnect protection against battery deep discharge.
- State overload and short circuit protection with automatic reset.
- Universal input transformer for 120/277 VAC operation.
- Emergency test switch.
- Long life/ready light combination.
- Inrush Protective Circuit

Battery, UNH Series

- Standard long-life maintenance-free sealed calcium (6V, 10 year prorated).
- Optional—sealed extended-life lead (XJ) or nickel-cadmium (NI) are available for these applications. Consult factory.

Battery, UNH Series

Standard—high capacity long-life lead calcium battery with capacity for powering two additional remote heads or exits. (6V, 10 year prorated). Provides additional 15 watts remote power for 1½ hours.

Housing

Fire resistant, all metal (20 gauge steel) housing with white baked-on finish. Positive lock, vibration proof exit face design allows ease of installation and eliminates light leakage. Universal mounting package and louvered downlight are also supplied.

Lamps *JIM SPEISER & SONS, INC.*

Standard—two 20T 6½ lamps and two 3.6W six volt DC Emergency lamps.
Optional—6 or 8 watt 120VAC Fluorescent Tubes

Options

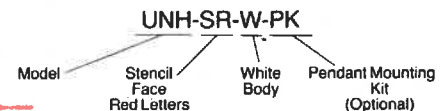
Order Suffix	Description
220V	220 Volt AC Operation
PK	Pendant Mounting kit with 16" stem
SH	Single Emergency Sealed Beam Head mounted to Exit side (6V, 7.2 watt standard)
DH	Double Emergency Sealed Beam Head mounted to Exit side (6V, 7.2 watt standard)
B	All black housing and stencil
B/S	Flat black housing with silver stencil
FL	Flash on emergency mode.
BZ	Intermittent buzz on emergency mode
OF	Open face construction—same letter and background colors as stencil face exit
OSL	Special lettering silkscreened on plastic panel (specify word and color)

- TP Tamper proof, supplied with tamper proof screws and installation tool
- BFE Barrier-free environment, combination of "Exit" and international symbol

How to Order

Model	Face Suffix	Description	Color Suffix	Description
UN	SR	Stencil face (Red)	W	white/white (body/stencil)
	SG	Stencil face (Green)		
UNH	ORW	Open face Red letters/white backgrd	B	black/black (body/stencil)
	ORG	Open face Green letters/white backgrd	B/S	black body aluminum finish stencil

EXAMPLE



Compliance

UL listed and meets NEC, OSHA and NFPA Life Safety Codes. Provides 1½ hours of light (exit & downlighting) to an end voltage of 87½%.

**CATALOG CUTS FOR APPROVAL
JIM SPEISER & SONS ELECTRIC
JOB - D.W.E. SCREW PRODUCTS**

BY: *12/18*
[Signature]
CORNERSTONE CONSTRUCTION, INC.

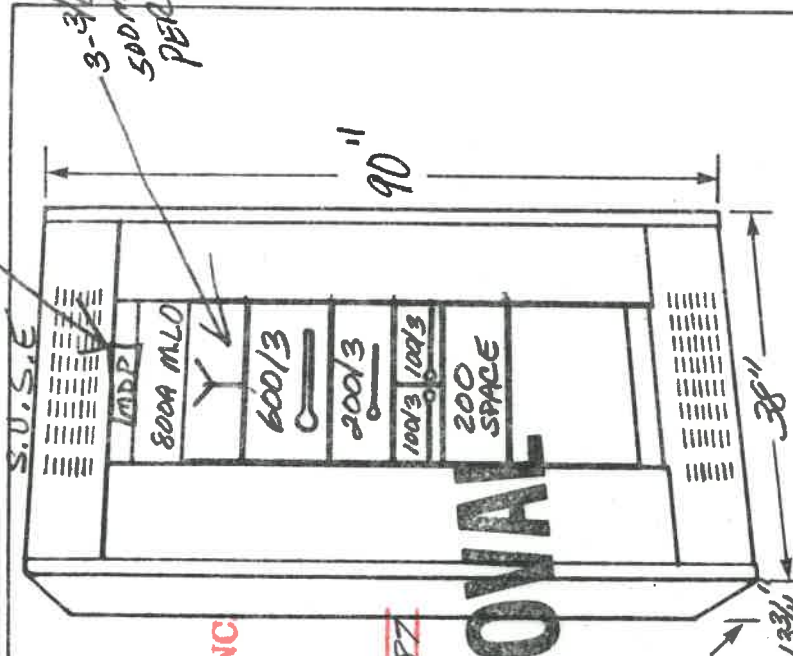
APPROVED AS NOTED SUBJECT TO CONTRACT REQUIREMENTS

APPROVED DATE *12-12-86*

JIM SPEISER & SONS, INC.
CORNERSHIP
P.O. BOX 545
NARC ECON CHD 43545
419-599-1846

1-NAMERATE

3-3/8" TO
500 MCM
PER



SERVICE: THREE & FOUR W/20/208 VOLTS

GENERAL SPECIFICATIONS

TYPICAL VB - SERIES 6 PANELBOARD
SURFACE MOUNTED ONLY

ENCLOSURE: CODE GAUGE STEEL REMOVABLE BLANK ENDS (NO KNOCKOUTS) REMOVABLE GUTTER COVERS ON FRONT.

FINISH: ANSI-61 Light Gray paint.
I-T-E VACU-BREAK FUSIBLE SWITCHES.
QUICK-MAKE: QUICK-BREAK AND HORSAPROVED POWER RATED. INDIVIDUAL DOORS WITH VOIDABLE INTERLOCKS. PROVISIONS FOR PADLOCKING IN ON & OFF POSITIONS.

DATE 2-6-87

Electrical Contractors
W. SPEISER & SONS, INC.
R.R. 2 P.O. BOX 545
NAPOLEON, OHIO 43545
1-19-598-1846

FOR APPROVAL

Switch Rating Amperes	Wire and Cable Rating
30	1 - #14- #8 AWG (Cu)
60	1 - #14- #4 AWG (Cu)
100	1 - #10- #1/0 AWG (Cu or Al)
200	1 - #6 AWG-250 MCM (Cu or Al)
400	2 - #4/0 AWG-500 MCM (Cu or Al)
600	2 - #4/0 AWG-500 MCM (Cu or Al)

Aluminum Bus
Panelboard to bear Underwriters' Laboratories, Inc. label.

PANEL SCHEDULE

ITEM NO.	PANEL DESIGN	BOX HEIGHT	UNIT SPACE	MAIN BUS CAPACITY	LUG SIZE	MAIN LUGS		MAIN SWITCH		TYPE	BRANCH SWITCH UNITS
						T	B	T	B		
M _{20p}	VB6	90"	59 1/2"	800A MLO	3-3/0 T ASD Rep X					VB	800A M.L.O. 1-200 - SPACE, 1-END BAR 1-600/3VB 1-200/3VB 2-100/3VB ALL SWITCHES HAVE CLASS R FUSE CLIPS BOTTOM FEED

I-T-E Electrical Products
A Division of Siemens-Allis, Inc.
Rolling Meadows, IL 60008

DIST. **CROSS ELECTRIC**
S.O. _____ P.O. _____
CONT. **SPEISER ELECTRIC**
JOB NAME **D.W.E. SCREW PRODUCTS**

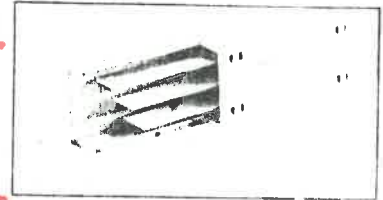
DWG. NO. **DWE-1**
BY **Rover**
CHK.
APD.

H-E Busway Systems EISER & SONS, INC.

Power Distribution

ED Plug-In

Electrical Contractors
R.R. 2 P.O. BOX 545
NAPOLEON, OHIO 43545
419-599-1846



225-1600 Amperes
600 Volts or Less

APPROVED BY *J.S.* DATE 9-6-87

Ampere Rating	Busway Catalog Number	Case Dimensions (inches)	Shipping Weight Lb./Ft.	List Price (per foot)	Ground Bus Ⓛ Adder Suffix G List Price (per foot)	90° Elbow Ⓜ		Tee		Cross		Switch-board Connection Ⓝ List Price
						Labor Only List Price	Complete Device Catalog Number	Labor Only List Price	Complete Device List Price	Labor Only List Price	Complete Device List Price	

ALUMINUM 3 PHASE, 3 WIRE

225	ABD302	4 1/16 x 8 7/8	9	\$ 45.50	\$15.50	\$358.00	ALD302	\$ 491.00	\$434.00	ATD302	\$ 640.00	\$500.00	ACD302	\$ 770.00	\$292.00
400	ABD304	4 1/16 x 8 7/8	10	56.00	15.50	356.00	ALD304	520.00	434.00	ATD304	710.00	500.00	ACD304	840.00	304.00
600	ABD306	6 1/16 x 8 7/8	13	70.00	18.50	356.00	ALD306	560.00	434.00	ATD306	780.00	500.00	ACD306	920.00	415.00
800	ABD308	6 1/16 x 8 7/8	14	98.00	20.00	356.00	ALD308	640.00	434.00	ATD308	910.00	500.00	ACD308	1080.00	463.00
1000	ABD310	12 1/8 x 8 7/8	22	108.00	20.00	356.00	ALD310	680.00	434.00	ATD310	870.00	500.00	ACD310	1150.00	520.00
1200	ABD312	12 1/8 x 8 7/8	28	146.00	20.00	476.00	ALD312	790.00	590.00	ATD312	1320.00	700.00	ACD312	1580.00	610.00

3 PHASE, 4 WIRE—HALF CAPACITY NEUTRAL

225	ABD4023	4 1/16 x 8 7/8	9 1/2	50.00	15.50	362.00	ALD4023	540.00	467.00	ATD4023	720.00	540.00	ACD4023	850.00	307.00
400	ABD4043	4 1/16 x 8 7/8	11	63.00	15.50	362.00	ALD4043	580.00	467.00	ATD4043	790.00	540.00	ACD4043	920.00	319.00
600	ABD4063	6 1/16 x 8 7/8	14 1/2	83.00	16.50	362.00	ALD4063	640.00	467.00	ATD4063	880.00	540.00	ACD4063	1040.00	431.00
800	ABD4083	6 1/16 x 8 7/8	16 1/2	105.00	20.00	362.00	ALD4083	710.00	467.00	ATD4083	980.00	540.00	ACD4083	1170.00	483.00
1000	ABD4103	12 1/8 x 8 7/8	24	124.00	20.00	362.00	ALD4103	780.00	467.00	ATD4103	1090.00	540.00	ACD4103	1280.00	580.00
1200	ABD4123	12 1/8 x 8 7/8	30	162.00	20.00	530.00	ALD4123	980.00	650.00	ATD4123	1450.00	760.00	ACD4123	1730.00	640.00

3 PHASE, 4 WIRE—FULL CAPACITY NEUTRAL

225	ABD4024	4 1/16 x 8 7/8	10 1/2	56.00	15.50	433.00	ALD4024	600.00	500.00	ATD4024	780.00	580.00	ACD4024	920.00	320.00
400	ABD4044	4 1/16 x 8 7/8	12	70.00	15.50	433.00	ALD4044	640.00	500.00	ATD4044	880.00	580.00	ACD4044	1010.00	334.00
600	ABD4064	6 1/16 x 8 7/8	15 1/2	95.00	16.50	433.00	ALD4064	720.00	500.00	ATD4064	980.00	580.00	ACD4064	1170.00	445.00
800	ABD4084	6 1/16 x 8 7/8	17 1/2	111.00	20.00	433.00	ALD4084	770.00	500.00	ATD4084	1060.00	580.00	ACD4084	1260.00	500.00
1000	ABD4104	12 1/8 x 8 7/8	24	140.00	20.00	433.00	ALD4104	850.00	500.00	ATD4104	1210.00	580.00	ACD4104	1420.00	600.00
1200	ABD4124	12 1/8 x 8 7/8	30	177.00	20.00	590.00	ALD4124	1130.00	700.00	ATD4124	1580.00	840.00	ACD4124	1890.00	670.00

COPPER 3 PHASE, 3 WIRE

225	BDP302	4 1/16 x 8 7/8	9	55.00	24.00	358.00	LDP302	520.00	434.00	TDP302	710.00	500.00	CDP302	830.00	303.00
400	BDP304	4 1/16 x 8 7/8	12 1/2	83.00	24.00	356.00	LDP304	500.00	434.00	TDP304	850.00	500.00	CDP304	1000.00	331.00
600	BDP306	4 1/16 x 8 7/8	13 1/2	106.00	25.00	356.00	LDP306	580.00	434.00	TDP306	970.00	500.00	CDP306	1150.00	452.00
800	BDP308	6 1/16 x 8 7/8	18 1/2	158.00	27.00	356.00	LDP308	680.00	434.00	TDP308	1220.00	500.00	CDP308	1440.00	520.00
1000	BDP310	6 1/16 x 8 7/8	22	165.00	27.00	356.00	LDP310	690.00	434.00	TDP310	1260.00	500.00	CDP310	1490.00	580.00
1350	BDP313	12 1/8 x 8 7/8	28	252.00	35.50	356.00	LDP313	1100.00	434.00	TDP313	1680.00	500.00	CDP313	2020.00	750.00
1600	BDP316	12 1/8 x 8 7/8	29	288.00	50.00	476.00	LDP316	1200.00	590.00	TDP316	2050.00	700.00	CDP316	2440.00	820.00

3 PHASE, 4 WIRE—HALF CAPACITY NEUTRAL

225	BDP4023	4 1/16 x 8 7/8	10 1/2	64.00	24.00	394.00	LDP4023	590.00	467.00	TDP4023	790.00	540.00	CDP4023	930.00	321.00
400	BDP4043	4 1/16 x 8 7/8	12 1/2	104.00	24.00	394.00	LDP4043	700.00	467.00	TDP4043	900.00	540.00	CDP4043	1170.00	358.00
600	BDP4063	4 1/16 x 8 7/8	14 1/2	124.00	25.00	394.00	LDP4063	760.00	467.00	TDP4063	1060.00	540.00	CDP4063	1280.00	471.00
800	BDP4083	6 1/16 x 8 7/8	21	180.00	27.00	394.00	LDP4083	930.00	467.00	TDP4083	1360.00	540.00	CDP4083	1620.00	550.00
1000	BDP4103	6 1/16 x 8 7/8	25	202.00	27.00	394.00	LDP4103	1000.00	467.00	TDP4103	1470.00	540.00	CDP4103	1750.00	640.00
1350	BDP4133	12 1/8 x 8 7/8	34	287.00	35.50	394.00	LDP4133	1260.00	467.00	TDP4133	1800.00	540.00	CDP4133	2260.00	790.00
1600	BDP4163	12 1/8 x 8 7/8	39 1/2	323.00	50.00	510.00	LDP4163	1480.00	630.00	TDP4163	2240.00	760.00	CDP4163	2690.00	870.00

3 PHASE, 4 WIRE—FULL CAPACITY NEUTRAL

225	BDP4024	4 1/16 x 8 7/8	12	74.00	24.00	433.00	LDP4024	650.00	500.00	TDP4024	870.00	580.00	CDP4024	1040.00	338.00
400	BDP4044	4 1/16 x 8 7/8	14 1/2	123.00	24.00	433.00	LDP4044	800.00	500.00	TDP4044	1120.00	580.00	CDP4044	1320.00	385.00
600	BDP4064	4 1/16 x 8 7/8	15 1/2	140.00	25.00	433.00	LDP4064	850.00	500.00	TDP4064	1210.00	580.00	CDP4064	1420.00	490.00
800	BDP4084	6 1/16 x 8 7/8	28	203.00	27.00	433.00	LDP4084	1040.00	500.00	TDP4084	1510.00	580.00	CDP4084	1800.00	590.00
1000	BDP4104	6 1/16 x 8 7/8	32	237.00	27.00	433.00	LDP4104	1040.00	500.00	TDP4104	1510.00	580.00	CDP4104	1800.00	590.00

Ⓛ Consult factory for ground bus construction.

Ⓜ For Elbows other than 90°, price for labor only is doubled.

Ⓝ Switchboard stub includes flange to cover cutout in top of indoor switchboard and 6" of bus inside switchboard. Connecting hardware supplied by switchboard manufacturer.

FUSIBLE FEED IN SWITCH

Rating		3 PHASE, 3 WIRE		3 PHASE, 4 WIRE	
Volts	Amperes	Catalog Number Ⓛ	List Price	Catalog Number Ⓛ	List Price
240 AC or 250 DC	400	FTS3042	\$1670.00	FTS4042	\$1900.00
	600	FTS3062	2610.00	FTS4062	2920.00
600AC	400	FTS3046	1690.00	FTS4046	2050.00
	600	FTS3066	2750.00	FTS4066	2930.00

Ⓛ When ordering the Fusible Feed in Switch add to the catalog number -C for use with Copper and -A for use with Aluminum busway.

JIM SPEISER & SONS THE Busway Systems
 Electrical Contractors
 R.R. 2 P.O. BOX 545
 NAPOLEON, OHIO 43545
 419-599-1848

**Power Distribution
 BD Plug-In**

APPROVED BY *[Signature]* DATE 2-6-87

225-1600 Amperes

End Closer		Hangers ①		Center Tap Box ①			End Tap Box ②		Expansion Section			Non-Fusible Reducer	Fusible Reducer	Wall Flange
Complete Device		Catalog Number	List Price	Box Only List Price	Complete Device		Complete Device		Labor Only List Price	Complete Device		Labor Only List Price	Labor Only List Price	Complete Device List Price
Catalog Number	List Price				Catalog Number	List Price	Catalog Number	List Price		Catalog Number	List Price			

**ALUMINUM
 3 PHASE, 3 WIRE**

ECP6 ECP6	54.	BDH10	22.	420.	CBA302	870.	EBA302	398.	650.	EPA302	770.	—	—	\$121.
ECP10 ECP10				420.	CBA304	990.	EBA304	640.	680.	EPA304	900.	\$ 215.	\$ 970.	
ECP10 ECP10	54.	BDH10	22.	550.	CBA306	1240.	EBA306	930.	730.	EPA306	1010.	248.	1110.	\$121.
ECP10 ECP10				550.	CBA308	1510.	EBA308	940.	960.	EPA308	1340.	323.	1320.	
ECA10 ECA10	54.	BDH12	23.	550.	CBA310	1630.	EBA310	960.	1030.	EPA310	1450.	366.	1400.	\$121.
ECA10 ECA10				680.	CBA312	2130.	EBA312	980.	1050.	EPA312	1630.	600.	1580.	

3 PHASE, 4 WIRE—HALF CAPACITY NEUTRAL

ECP6 ECP6	54.	BDH10	22.	420.	CBA4023	930.	EBA4023	442.	650.	EPA4023	850.	—	—	121.
ECP10 ECP10				420.	CBA4043	1050.	EBA4043	690.	720.	EPA4043	980.	259.	1080.	
ECP10 ECP10	54.	BDH10	22.	550.	CBA4063	1380.	EBA4063	1000.	810.	EPA4063	1140.	294.	1240.	121.
ECP10 ECP10				550.	CBA4083	1590.	EBA4083	1010.	1010.	EPA4083	1420.	369.	1450.	
ECA10 ECA10	54.	BDH12	23.	550.	CBA4103	1790.	EBA4103	1030.	1120.	EPA4103	1610.	425.	1590.	121.
ECA10 ECA10				700.	CBA4123	2310.	EBA4123	1050.	1240.	EPA4123	1890.	720.	1820.	

3 PHASE, 4 WIRE—FULL CAPACITY NEUTRAL

ECP6 ECP6	54.	BDH10	22.	420.	CBA4024	990.	EBA4024	485.	710.	EPA4024	930.	—	—	121.
ECP10 ECP10				420.	CBA4044	1100.	EBA4044	740.	770.	EPA4044	1050.	302.	1190.	
ECP10 ECP10	54.	BDH10	22.	550.	CBA4064	1510.	EBA4064	1070.	880.	EPA4064	1260.	339.	1350.	121.
ECP10 ECP10				550.	CBA4084	1970.	EBA4084	1080.	1060.	EPA4084	1500.	415.	1580.	
ECA10 ECA10	54.	BDH12	23.	550.	CBA4104	2150.	EBA4104	1090.	1210.	EPA4104	1760.	485.	1790.	121.
ECA10 ECA10				720.	CBA4124	2890.	EBA4124	1110.	1430.	EPA4124	2130.	840.	2050.	

**COPPER
 3 PHASE, 3 WIRE**

ECP6 ECP6 ECP6	54.	BDH10	22.	420.	CTB302	970.	ETB302	398.	590.	EJP302	810.	—	—	121.
ECP10 ECP10				420.	CTB304	1240.	ETB304	640.	580.	EJP304	1010.	237.	970.	
ECP10 ECP10	54.	BDH10	22.	550.	CTB306	1830.	ETB306	930.	730.	EJP306	1110.	248.	1110.	121.
ECP10 ECP10				550.	CTB308	2110.	ETB308	940.	960.	EJP308	1270.	323.	1320.	
ECA10 ECA10	54.	BDH12	23.	680.	CTB310	2190.	ETB310	960.	1030.	EJP310	1400.	366.	1400.	121.
ECA10 ECA10				680.	CTB313	3200.	ETB313	980.	1070.	EJP313	2070.	790.	1730.	
ECA10 ECA10	54.	BDH12	23.	680.	CTB316	3570.	ETB316	1000.	1440.	EJP316	2590.	870.	2290.	121.
ECA10 ECA10				680.	CTB318	4650.	ETB318	1020.	1440.	EJP318	2590.	870.	2290.	

3 PHASE, 4 WIRE—HALF CAPACITY NEUTRAL

ECP6 ECP6 ECP6	54.	BDH10	22.	420.	CTB4023	1070.	ETB4023	442.	650.	EJP4023	910.	—	—	121.
ECP10 ECP10				420.	CTB4043	1450.	ETB4043	690.	720.	EJP4043	1140.	259.	1080.	
ECP10 ECP10	54.	BDH10	22.	550.	CTB4063	1790.	ETB4063	1000.	810.	EJP4063	1300.	294.	1240.	121.
ECP10 ECP10				550.	CTB4083	2340.	ETB4083	1010.	1010.	EJP4083	1730.	369.	1450.	
ECA10 ECA10	54.	BDH12	23.	680.	CTB4103	2560.	ETB4103	1030.	1120.	EJP4103	1920.	425.	1590.	121.
ECA10 ECA10				680.	CTB4133	3550.	ETB4133	1050.	1320.	EJP4133	2470.	930.	2020.	
ECA10 ECA10	54.	BDH12	23.	680.	CTB4163	3910.	ETB4163	1070.	1690.	EJP4163	2710.	1010.	2580.	121.
ECA10 ECA10				680.	CTB4193	4900.	ETB4193	1090.	1690.	EJP4193	2710.	1010.	2580.	

3 PHASE, 4 WIRE—FULL CAPACITY NEUTRAL

ECP6 ECP6	54.	BDH10	22.	420.	CTB4024	1170.	ETB4024	485.	710.	EJP4024	1010.	—	—	121.
ECP10 ECP10				420.	CTB4044	1650.	ETB4044	740.	770.	EJP4044	1260.	302.	1190.	
ECA8	54.	BDH12	23.	550.	CTB4064	1950.	ETB4064	1070.	880.	EJP4064	1440.	339.	1350.	121.
ECA8				550.	CTB4084	2590.	ETB4084	1080.	1060.	EJP4084	1870.	415.	1580.	
ECA8	54.	BDH12	23.	550.	CTB4104	2910.	ETB4104	1090.	1250.	EJP4104	2150.	485.	1270.	121.
ECA8				550.	CTB4134	3900.	ETB4134	1110.	1430.	EJP4134	2150.	485.	1270.	

- ① Must be factory-assembled to busway. Complete device includes 10' busway.
- ② Includes busway stub. Total length added to run is 2' for 225A and 400A Aluminum or 225A-600A Copper; 3' for all others. Box is designed to connect to offset bus-bar ends. When it is to be connected to straight bus-bar ends, an adaptor will be furnished upon request.
- ③ Two hangers included free of charge with each busway section, elbow, tee and cross.

TRANSPOSITIONS AND ROD-HANGERS

Description	Catalog Number	List Price
Transpositions (Add price for busway footage through transposition)		
3 Phase, 3 Wire	—	\$660.00
3 Phase, 4 Wire—Half Capacity Neutral	—	770.00
Rod-Hanger Adaptor (each) Page 213	UJ100	2.70

I-T-E Molded Case Circuit Breakers

Pressure and Compression Wire Connectors

OPTIONAL PRESSURE CONNECTORS

For Use With Types	Circuit Breaker Ampere Rating	Cables Per Connector	Connector Wire Range	Catalog Number	List Price Each
QJ2, QJH2, QJ2-H	60-225	1	# 6 AWG-250 MCM (Cu)	TC1Q250 ②	No Charge when ordered with breaker
FJ6, F6, HF6, CLF	70-250	1	# 6 AWG-350 MCM (Cu)	TC1F350 ②	\$13.50
JD2, JJ6, JL6, HJ6, SJL	300-400	1	500-600 MCM (Cu) 500-750 MCM (Al)	TA1L6750 ② ③	29.00
JD, JJ, JL, HJ, CJ	125-225	1	# 6 AWG-350 MCM (Cu)	TC1J350 ②	17.50
	250-400	1	250-600 MCM (Cu)	TC1J600 ②	17.50
	400	2	# 3/0 AWG-250 MCM (Cu)	TC2J250 ②	17.50
	400	1	600-750 MCM (Cu) 600-750 MCM (Al)	TA1J750 ②	35.00
LJ6, LL6, HL6, SLL	250-600	1	500-750 MCM (Al) 500-600 MCM (Cu)	TA1L6750 ② ③	29.00
KM, SKM, HN, CN, SHN	400-600	2	# 1 AWG-500 MCM (Cu)	TC2K500 ②	48.50
	700-800	3	400 MCM (Cu) 400 MCM (Al)	TA3K400 ②	40.00
	700-800	2	# 1 AWG-350 MCM (Cu)	TC3K350 ②	59.00
KP, HK, SKP, SHK	200-1200	3	600-750 MCM (Al) 500-750 MCM (Cu)	TA2K750 ②	59.00
			250-400 MCM (Al) 250-400 MCM (Cu) 500-750 MCM (Al)	TA2K750 ③	100.00
HP, CP, SHP, IIR, SHR	400-2000	4	750 MCM (Cu)	TC4P750 ② ③	113.00

① This connector is of aluminum construction, but is rated for copper cable only.
 ② Optional pressure wire connectors should only be used in cases where allowed by local codes.
 ③ Same pressure wire connector used on new 400A and 600A J and L frames.

DISCOUNT SCHEDULE F

OPTIONAL COMPRESSION CONNECTORS

Catalog Number ①	Circuit Breaker	Ampere Rating	Connector W're Range	List Price
CCE125	E2(-A), E4(-A), E6(-A), HE4(-A), HE6(-A), CLE(-A), HE4(-A) ETI	15-125	(1 pc.) # 14-# 2/0 (Cu or Al)	\$ 10.00
CCQ225	QJ2, QJH2, QJ2-H	125-225	(1 pc.) # 6-350 MCM (Cu or Al)	20.00
CCF250	FJ6, F6, HF6, CLF	125-250	(1 pc.) # 6-350 MCM (Cu or Al)	20.00
CCL600	JD2, JJ6, JL6, HJ6, SL6, LL6, HL6, LJ6	200-600	(2 pc.) # 2/0-500 MCM (Cu or Al)	58.00
CCM800	KM, HN, CN, SKM	400-800	(3 pc.) # 2/0-500 MCM (Cu or Al)	125.00

① Each kit consists of compression terminal(s), rubber boot(s), necessary mounting hardware and installation instructions. For 1-pole, either line side or load side, a 3 pole circuit breaker would require 3 kits for load side and 3 kits for line side.

NOTE: Use only hydraulic tools manufactured by the following companies:

- Burndy
- Homac
- Kearny
- Square D (Type VC6)
- Thomas and Betts

JIM SPEISER & SONS, INC.

Electrical Contractors
 R.R. 2 P.O. BOX 545
 NAPOLEON, OHIO 43545
 419-599-1846

APPROVED BY: *[Signature]* DATE: 2-6-87

FOR APPROVAL

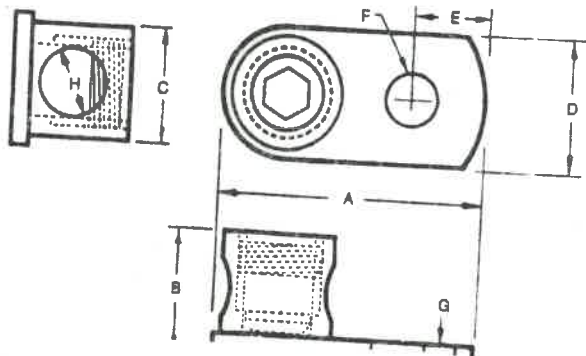
Full Pressure Connectors (Copper Only)

(Not listed for application with circuit breakers)

I-T-E Wire Grips are designed and manufactured to assure high electrical and mechanical efficiency. They are cold-forged from electrolytically pure copper for maximum conductivity and mechanical strength. Silvered surfaces and high clamping pressures insure good electrical contact and resulting cool operation.

Stocking is simplified by the use of only five Wire Grips to handle all solid or stranded copper conductors, No. 14 AWG to 1,000 MCM. For special drillings for special wire grips, refer to nearest I-T-E sales office.

I-T-E Wire Grips are listed by Underwriters' Laboratories, Inc., under Pressure Connectors File #E1747.



Wire and Cable Sizes AWG or MCM	Dimensions—(Inches)								Catalog Number	List Price	Standard Carton	Ship. Wgt. Lb./Std. Carton	List Price Standard Carton
	A	B	C	D	E	F	G	H					
14 to 4	1 3/16	3 7/64	7/16	9/16	1/4	1 7/64	1 5/64	1 7/64	3021	\$ 1.90	100	3	\$190.00
10 to 1	1 7/16	4 3/64	9/16	5/8	1 13/32	1 7/64	3 7/32	3 3/8	3031	2.50	50	3	125.00
6 to 4/0	1 11/16	5 1/12	7 1/2	2 1/2	1 7/8	2 5/64	1 1/2	1 9/16	3041	5.00	25	3	125.00
4/0 to 500	3	1 1/4	1 3/8	1 1/4	5/8	3 3/64	1 1/4	1 7/8	3052	16.50	10	6	165.00
500 to 1000	3 1/16	2 3/16	1 7/8	2	3/4	3 3/64	1 1/4	1 3/16	3062	41.50	6	9	249.00

GROUND Lug FOR Bus Plugs
 SCREEN NOT PROVIDED

Busway Systems

Power Distribution

3 Phase, 4 Wire, Plug-In Bus Plugs



FLOOR-OPERABLE CIRCUIT BREAKER PLUGS—Floor-Operable ③

Breaker Type	AC Volts	Ampere Rating	3 PHASE, 3 WIRE ①			3 PHASE, 4 WIRE ②		
			Enclosure Only ①			Enclosure Only ①		
			List Price With Breaker	Catalog Number BD, LO-X Plug-In ③	List Price	List Price With Breaker	Catalog Number BD, LO-X Plug-In ③	List Price
E2-A	240	15-60 70-100	\$ 408.00 472.00	BEC3100	\$ 227.00	\$ 452.00 530.00	BEC4100	\$ 278.00
E4-A	480	15-60 70-100	498.00 550.00			550.00 600.00		
E6-A	600	15-60 70-100	540.00 610.00			590.00 670.00		
F6		70-250	1530.00	BFC3250	491.00	1607.00	BFC4250	590.00
JJ6	240	200-400	2819.00	BJC3400	1290.00	2978.00	BJC4400	1440.00
JD2		200-400	2557.00			2720.00		
JL6		200-400	3140.00			3297.00		
LJ6	600	450-600 ④	3570.00	BLC3600	1350.00	3733.00	BLC4600	1520.00
LL6		250-600 ⑤	3864.00			4042.00		
KM	600	400-600 ⑤	4640.00	BDKM3800	1610.00	4820.00	BDKM4800	1830.00
		700-800 ⑤	4700.00			4890.00		

JIM SPIDER & SONS, INC.
 Electrical Contractors
 R. F. P. O. BOX 655
 NAPOLEON, OHIO 43545
 419-599-1848

FUSIBLE VACU-BREAK SWITCH PLUGS—Floor-Operable with Line Terminal Protection ③

APPROVED BY: *[Signature]* DATE: 2-6-87

Volts	Ampere Rating	3 PHASE, 3 WIRE				3 PHASE, 4 WIRE ②			
		Horsepower Ratings, AC		Catalog Number BD, LO-X Plug-In ③	List Price	Horsepower Ratings, AC		Catalog Number BD, LO-X Plug-In ③	List Price
		Standard (NEC)	Maximum (Time Delay)			Standard (NEC)	Maximum (Time Delay)		
240 AC	30	3	7 1/2	BOS14321	\$ 238.00	3	7 1/2	BOS16421	300.00
	60	7 1/2	15	BOS14322	283.00	7 1/2	15	BOS16422	308.00
	100	15	30	BOS14323	398.00	15	30	BOS16423	450.00
or 250 DC	200	25	60	BOS14324	660.00	25	60	BOS16424	770.00
	400	50	125	BOS14325	1100.00	50	125	BOS16425	1980.00
	600	75	200	BOS14326	1700.00	75	200	BOS16426	2960.00
600 AC	30	7 1/2	20	BOS14351	255.00	15 ④	30 ④	BOS16451	310.00
	60	15	50	BOS14352	280.00	30 ④	60 ④	BOS16452	322.00
	100	30	75	BOS14353	410.00	25 ④	60 ④	BOS16453	470.00
	200	60	150	BOS14354	730.00	50 ④	125 ④	BOS16454	800.00
	400	125	350	BOS14355	1890.00	100 ④	250 ④	BOS16455	2050.00
	600 ⑤	200	500	BOS14356	2750.00	150 ④	400 ④	BOS16456	2990.00

- ① Enclosures available from stock. When ordering circuit breaker bus plugs complete with breaker, factory-installed, allow time for assembly and SPECIFY Enclosure Frame Size, Phases and Ampere Rating. Example: One BEC3100-E4-3P-70A-factory-assembled.
- ② When BD busway capacity exceeds 400A for aluminum or 800A for copper, capacity must be specified to obtain proper number and arrangement of neutral fingers.
- ③ Channel Spacers—Must be used with Bus plugs or Plug-In Branch-Run Adapters mounted on 600, 800, or 1000 ampere ABD Busway or on 800 or 1000 ampere BDP Busway. Catalog Number W37940 list \$2.30.
- ④ 480 ratings.
- ⑤ Plugs, 400 amperes and smaller, require one plug-in opening; 800 amperes and larger require two openings. Fuse Clip Adaptor kits available. See accessories table on page 255 for prices. For shipping weights—see page 255.

Field Addable Ground Kits for BD Bus Plugs

Ampere Rating	Catalog Number	List Price
30-80	W63231	\$34.50
100	W63232	34.50
200	W63233	34.50
400	W63234	34.50
600	W63234	34.50

Circuit Breaker

Frame Size	Catalog Number	List Price
BEC	W63553	\$34.50
BFC	W63554	34.50
BJC	W63238	34.50
BLC	W63238	34.50
BDKM	W63552	34.50

NOTE: These are for use on busway with internal ground bus manufactured after March, 1986. For ground kits prior to this date, consult local I-T-E sales office.

CONTRACTOR TO INSTALL
 GROUND LUG IF REQUIRED
 SCREW NOT PROVIDED

I-T-E EQ® Load Centers

Main Lugs with Aluminum Bus

(Rated For 65,000A IC Maximum Systems) ⑥

JIM SPEISER & SONS, INC.
Electrical Contractors

R.R. 2 P.O. BOX 545
NAPOLEON, OHIO 43545
419-599-1846

APPROVED BY *[Signature]*

DATE *2-6-87*

I-T-E EQ® III LOAD CENTERS with main lugs feature a combination trim boxed in one package. Features:

- The trim fits both surface and flush mounting applications saving money and space.
- Interiors offer removal in seconds.
- Single phase or three phase.
- One piece bus bar construction. Designed for use only with I-T-E circuit breakers. UL listed.
- Exclusive split neutral.
- Main lugs and neutral on same plane, same drive.
- Simple upper pan adjustment after trim is installed.
- UL listed for 60/75°C conductors. See equipment markings for applications.



EQIII Main Lug Load Center without Trim

2-16 CIRCUITS, 40-125 AMPERES

BRANCH CIRCUITS				INDOOR ENCLOSURE—TYPE 1					OUTDOOR ENCLOSURE—TYPE 3R								
Ampere Rating	Max.—1-Pole Spaces	QP Max. Circuits	2-Poles	Cat. No. Add Suffix S-Surf. F-Flush	List Price	Std. Pkg.	Shp. Wt. Lb./Std. Pkg.	Dimensions—Inches Height Width Depth			Cat. No.	List Price	Std. Pkg.	Shp. Wt. Lb./Std. Pkg.	Dimensions—Inches Height Width Depth		
1 PHASE, 3 WIRE SN																	
40	2	4	1	E0204ML1040	\$21.00	5	16	7	5	3 1/8	—	—	—	—	120/240 VOLTS AC		
60	2	4	1	E0204ML1060	23.00	5	16	7	5	3 1/8	W0204ML1060	\$42.50	5	18	8	5	4 1/4
125	4	8	2	E0408ML1125	25.00	5	30	12 1/2	6 1/2	3 1/2	W0408ML1125	46.00	5	34	12 1/4	6	4 1/4
125	6	12	3	E0612ML1125	27.00	1	12	14 1/4	12 1/2	3 1/2	W0612ML1125	48.00	1	13	14 1/4	12 1/2	4 1/4
125	8	16	4	E0816ML1125	43.50	1	12	14 1/4	12 1/2	3 1/2	W0816ML1125	78.00	1	13	14 1/4	12 1/2	4 1/4

Suitable for use as service entrance equipment when not more than six main disconnecting means are provided. Check local codes and restrictions.

Circuit Breakers—Not included in above prices. See pages 110-111 for data and prices.

Hubs—Not furnished with Outdoor Enclosures. See page 113 for data and prices.

Accessories—page 112.

Wiring Diagrams—page 103.

Knockout Diagrams—pages 114-115.

12-42 CIRCUITS, 125-225 AMPERES

BRANCH CIRCUITS				INDOOR ENCLOSURE—TYPE 1				OUTDOOR ENCLOSURE—TYPE 3R			
Max.—1-Pole				Complete Assembly				Complete Assembly			
Ampere Rating	Spaces	Circuits	2-Poles	Cat. No. ①	List Price	Shp. Wt. Lb./Std. Pkg. of 1	Enclosure Height ② (Inches)	Cat. No.	List Price	Shp. Wt. Lb./Std. Pkg. of 1	Enclosure Height ② (Inches)
1 PHASE, 3 WIRE SN											
125	12	24	6	G1224ML1150	107.00	22	18	W1224ML1125	\$118.00	25	19
125	16	24	8	G1624ML1150	124.00	20	21	W1624ML1125	144.00	30	22
150	12	24	6	G1224ML1150	107.00	22	21	W1224ML1150	140.00	27	22
150	20	30	10	G2030ML1150	123.00	20	24	W2030ML1150	183.00	28	25
200	12	24	6	G1224ML1200	117.00	19	24	W1224ML1200	161.00	27	25
200	20	40	10	G2040ML1200	163.00	22	24	W2040ML1200	218.00	32	28
200	24	40	12	G2440ML1200	171.00	26	30	W2440ML1200	243.00	34	31
200	30	40	15	G3040ML1200	183.00	30	33	W3040ML1200	241.00	38	34

1 PHASE, 3 WIRE SN—FULL SIZE BREAKERS ONLY

125	12	12	6	G1212ML1125	60.00	22	18	W1212ML1125	94.00	25	19
125	16	16	8	G1616ML1125	82.00	20	21	W1616ML1125	114.00	30	22
125	20	20	10	G2020ML1125	110.00	23	24	W2020ML1125	175.00	28	25
200	30	30	14	G3030ML1200	167.00	30	33	W3030ML1200	222.00	38	34
200	40	40	20	G4040ML1200	274.00	34	36	W4040ML1200	337.00	42	37
225	42	42	21	G4242ML1225	280.00	35	39	W4242ML1225	437.00	43	40

3 PHASE, 3 WIRE, 240 VOLT AC—OR—3 PHASE, 4 WIRE SN

120/208 VOLTS AC											
125	12	24	6	G1224ML3125	118.00	21	21	W1224ML3125	161.00	24	22
150	18	36	9	G1836ML3150	163.00	22	24	W1836ML3150	207.00	27	25
150	24	42	12	G2442ML3150	196.00	26	27	W2442ML3150	261.00	35	28
200	12	24	6	G1224ML3200	159.00	23	24	W1224ML3200	203.00	27	25
200	24	42	12	G2442ML3200	219.00	28	30	W2442ML3200	261.00	36	31
200	30	42	15	G3042ML3200	232.00	31	33	W3042ML3200	275.00	39	34
200	42	42	20	G4242ML3200	296.00	37	39	W4242ML3200	500.00	46	40

① Indoor Enclosures are 14 1/2" wide by 3 1/8" deep.

② Outdoor Enclosures are 14 1/2" wide by 4 1/2" deep.

③ Suitable for use as service entrance equipment when not more than six main disconnecting means are provided.

④ For no additional charge complete assembly can also be ordered with surface trim by adding suffix "S" to catalog number. You will receive complete assembly and trim with turn down flange on sides only. Top and bottom are open. Consult local Siemens-Allis I-T-E sales office for delivery.

⑤ Suitable for use as service entrance equipment when a Main Breaker is back-fed in branch position and used with Main Breaker retainer clip Cat. No. MBR1.

⑥ Refer to chart on page 132 or 136. ⑦ Available in surface only.

Hubs—Not furnished with outdoor enclosures. See page 113 for data and prices on removable hubs.

Wiring Diagrams—page 103.

Knockout Diagrams—Indoor; page 114, diagram Q7. Outdoor; page 115, diagram Q16.

Circuit Breakers—Not included in above prices. See pages 110-111 for data and prices.

WIRE BENDING SPACE REQUIREMENTS
Meets 1984 NEC wire bending requirement, Section 373-6.