

	<p style="text-align: right;">General Information (Section 1 of 1)</p> <p>Service Voltage: 600V 3Ph 3W Enclosure: Type 3R Bus Rating & Type: 400A Copper Neutral Rating: None Ground Bar: Std. Bolted Aluminum, Al or Cu cable S.C. Rating: 18k A.I.C. Fully Rated</p> <p>Main Device Type: Main Breaker - Top Cable Entry Main Terminals: Mechanical - (1) 2/0-500 kcmil (Cu/Al) Neutral Terminals: None Box Catalog No.: LW/PQ2060 Trim: Complete Enclosure (Includes Trim)</p> <p style="text-align: center;">Surface Mounted</p> <p>Box Dimensions: 60" [1524.0mm]H x 20" [508.0mm]W x 6.5" [165.1mm]D Min. Gutter Size: Top = 5.5" [139.7mm] Bottom = 5.5" [139.7mm] Left = 4" [101.6mm] Right = 4" [101.6mm]</p> <p>Panel ID Nameplate: (1) DISTRIBUTION PNL 1 Type: Plastic, adhesive-backed (2) 600V 3Ph 3W Color: White with Black Letters (3)</p> <p>UL</p> <p>Trim Lock:T-Handle Lock Assembly Circuit Directory:Plastic Sleeve with Card Painted Box:ANSI 61 -</p>																								
	<p>Branch Devices</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Qty</th> <th>Poles</th> <th>Trip</th> <th>Frame</th> <th>Amps</th> <th>KAIC</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>100</td> <td>FD</td> <td>100</td> <td>18</td> </tr> <tr> <td>1</td> <td>3</td> <td>60</td> <td>FD</td> <td>100</td> <td>18</td> </tr> <tr> <td>2</td> <td>3</td> <td>40</td> <td>FD</td> <td>100</td> <td>18</td> </tr> </tbody> </table>	Qty	Poles	Trip	Frame	Amps	KAIC	1	3	100	FD	100	18	1	3	60	FD	100	18	2	3	40	FD	100	18
Qty	Poles	Trip	Frame	Amps	KAIC																				
1	3	100	FD	100	18																				
1	3	60	FD	100	18																				
2	3	40	FD	100	18																				
<p>Notes</p>																									

<p>The information on this document is created by Eaton Corporation. It is disclosed in confidence and it is only to be used for the purpose in which it is supplied.</p>	<p>PREPARED BY H746</p>	<p>DATE 02/23/08</p>	<p>Eaton Corporation</p>			
	<p>APPROVED BY</p>	<p>DATE 02/23/08</p>	<p>JOB NAME IESI WASTE TRANSFER STATION</p>	<p>DESIGNATION DISTRIBUTION PNL 1</p>		
	<p>VERSION 6.3</p>	<p>TYPE PRL3a</p>	<p>DRAWING TYPE Customer Approval</p>			
<p>NEG-ALT NUMBER H7450220E801-0000</p>	<p>REVISION</p>	<p>DWG SIZE A</p>	<p>G.O.</p>	<p>ITEM</p>	<p>SHEET 1 OF 1</p>	

General Information (Section 1 of 1)

Service Voltage: 120/240V 1Ph 3W
 Bus Rating & Type: 200A Copper
 Ground Bar: 3/8" Bolted Aluminum, Al or Cu cable
 S.C. Rating: 10k A.I.C. Fully Rated

Enclosure: Type 3R
 Neutral Rating: 200A

Main Device Type: Main Breaker - Top Cable Entry
 Main Terminals: Mechanical - (1) #8-1/0 (Cu/Al)
 Neutral Terminals: Mechanical - (1) #14-1/0 (Cu/Al)
 Box Catalog No.: LWPQ2036
 Trim: Complete Enclosure (Includes Trim)

Surface Mounted

Box Dimensions: 36" [914.4mm]H x 20" [508.0mm]W x 6.5" [165.1mm]D
 Min. Gutter Size: Top = 5.5" [139.7mm] Bottom = 5.5" [139.7mm]
 Left = 6.0" [152.4mm] Right = 6.0" [152.4mm]

Panel ID Nameplate: (1) PP2
 Type: Plastic, adhesive-backed (2) 120/240V 1Ph 3W
 Color: White with Black Letters (3)

NEC Lighting & Appliance, UL CTL ***Non-Interchangeable Main Device***

Copper Neutral
 Trim Lock:T-Handle Lock Assembly
 Circuit Directory:Plastic Sleeve with Card
 Painted Box:ANSI 61 -

Branch Devices

Qty	Poles	Trip	Frame	Amps	KAIC
1	2	50	BAB	100A	10kAIC
1	2	40	BAB	100A	10kAIC
26	1	20A	BAB	100A	10Kaic
3	2	60A	BAB	100A	10Kaic
3	2	70A	BAB	100A	10kAIC

Notes

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	APPROVED BY	DATE 02/23/08	JOB NAME IESI WASTE TRANSFER STATION		
	VERSION 8.3	TYPE PRL1a	DESIGNATION PP2	DRAWING TYPE Customer Approval	
NEG-ALT NUMBER H7460220E801-0000	REVISION	DWG SIZE A	G.O.	ITEM	SHEET 1 OF 1

	<p align="center">General Information (Section 1 of 1)</p> <p>Service Voltage: 120/240V 1Ph 3W Enclosure: Type 3R Bus Rating & Type: 100A Copper Neutral Rating: 100A Ground Bar: Std. Bolted Aluminum, Al or Cu cable S.C. Rating: 10k A.I.C. Fully Rated</p> <p>Main Device Type: Main Breaker - Top Cable Entry Main Terminals: Mechanical - (1) #8-1/0 (Cu/Al) Neutral Terminals: Mechanical - (1) #14-1/0 (Cu/Al) Box Catalog No.: LWPC2038 Trim: Complete Enclosure (Includes Trim)</p> <p align="center">Surface Mounted</p> <p>Box Dimensions: 36" [914.4mm]H x 20" [508.0mm]W x 6.5" [165.1mm]D Min. Gutter Size: Top = 5.5" [139.7mm] Bottom = 5.5" [139.7mm] Left = 6.0" [152.4mm] Right = 6.0" [152.4mm]</p> <p>Panel ID Nameplate: (1) PP3 Type: Plastic, adhesive-backed (2) 120/240V 1Ph 3W Color: White with Black Letters (3)</p> <p>NEC Lighting & Appliance, UL CTL ***Non-Interchangeable Main Device***</p> <hr/> <p>Copper Neutral Trim Lock:T-Handle Lock Assembly Circuit Directory:Plastic Sleeve with Card Painted Box:ANSI 61 -</p>																		
	<p>Branch Devices</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Qty</th> <th>Poles</th> <th>Trip</th> <th>Frame</th> <th>Amps</th> <th>KAIC</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>1</td> <td>20</td> <td>BAB</td> <td>100A</td> <td>10KAIC</td> </tr> <tr> <td>1</td> <td>2</td> <td>60</td> <td>BAB</td> <td>100A</td> <td>10KAIC</td> </tr> </tbody> </table> <p>14 PROVISIONS</p>	Qty	Poles	Trip	Frame	Amps	KAIC	10	1	20	BAB	100A	10KAIC	1	2	60	BAB	100A	10KAIC
Qty	Poles	Trip	Frame	Amps	KAIC														
10	1	20	BAB	100A	10KAIC														
1	2	60	BAB	100A	10KAIC														
<p>Notes</p>																			

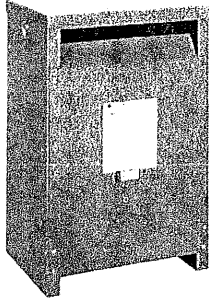
<p>The information on this document is created by Eaton Corporation. It is disclosed in confidence and it is only to be used for the purpose in which it is supplied.</p>	PREPARED BY	DATE	Eaton Corporation		
	H743	02/23/08			
	APPROVED BY	DATE	JOB NAME	PP3	
		02/23/08	DESIGNATION		
	VERSION	TYPE		DRAWING TYPE	
	6.3	PRL1a		Customer Approval	
NEG-ALT NUMBER	REVISION	DWG SIZE	G.O.	ITEM	SHEET
H7450220E801-0000		A			1 OF 1

	<p style="text-align: right;">General Information (Section 1 of 1)</p> <p>Service Voltage: 120/240V 1Ph 3W Enclosure: Type 12 Bus Rating & Type: 100A Copper Neutral Rating: 100A Ground Bar: Std. Bolted Aluminum, Al or Cu cable S.C. Rating: 10k A.I.C. Fully Rated</p> <p>Main Device Type: Main Breaker - Top Cable Entry Main Terminals: Mechanical - (1) #8-1/0 (Cu/Al) Neutral Terminals: Mechanical - (1) #14-1/0 (Cu/Al) Box Catalog No.: LWFPQ2036 Trim: Complete Enclosure (Includes Trim)</p> <p style="text-align: center;">Surface Mounted</p> <p>Box Dimensions: 36" [914.4mm]H x 20" [508.0mm]W x 6.5" [165.1mm]D Min. Gutter Size: Top = 5.5" [139.7mm] Bottom = 5.5" [139.7mm] Left = 6.0" [152.4mm] Right = 6.0" [152.4mm]</p> <p>Panel ID Nameplate: (1) PP4 Type: Plastic, adhesive-backed (2) 120/240V 1Ph 3W Color: White with Black Letters (3)</p> <p>NEC Lighting & Appliance, UL CTL ***Non-Interchangeable Main Device***</p>																		
	<p>Copper Neutral Trim Lock: T-Handle Lock Assembly Circuit Directory: Plastic Sleeve with Card Painted Box: ANSI 61 -</p>																		
	<p>Branch Devices</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Qty</th> <th>Poles</th> <th>Trip</th> <th>Frame</th> <th>Amps</th> <th>KAIC</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>1</td> <td>20</td> <td>BAB</td> <td>100A</td> <td>10KAIC</td> </tr> <tr> <td>1</td> <td>2</td> <td>60</td> <td>BAB</td> <td>100A</td> <td>10KAIC</td> </tr> </tbody> </table> <p>14 PROVISIONS</p>	Qty	Poles	Trip	Frame	Amps	KAIC	10	1	20	BAB	100A	10KAIC	1	2	60	BAB	100A	10KAIC
Qty	Poles	Trip	Frame	Amps	KAIC														
10	1	20	BAB	100A	10KAIC														
1	2	60	BAB	100A	10KAIC														
Notes																			

<p>The information on this document is created by Eaton Corporation. It is disclosed in confidence and it is only to be used for the purpose in which it is supplied.</p>	PREPARED BY	DATE	Eaton Corporation		
	H746	02/23/08			
	APPROVED BY	DATE	JOB NAME	IESI WASTE TRANSFER STATION	
	02/23/08	DESIGNATION	PP 4		
VERSION	TYPE		DRAWING TYPE		
6.3	PRL1a		Customer Approval		
NEQ-ALT NUMBER	REVISION	DWG SIZE	G.O.	ITEM	SHEET
H7450220E801-0000		A			1 OF 1

Single- and Three-Phase, Types DS-3 & DT-3, 60 Hz

Single- and Three-Phase, Types DS-3, DT-3, 60 Hz



Type DT-3

9

Product Description

Types DS-3, DT-3

- Ventilated, NEMA 2 enclosure standard.
- Suitable for indoor applications, outdoors when weathershields are also installed.
- Upright mounting only.
- 220°C insulation system.
- 150°C rise standard; 115°C or 80°C rise optional.
- Available in single-phase ratings 15 – 167 kVA, 600 volts primary (DS-3).
- Available in three-phase ratings 15 – 1500 kVA and up to 600 volts primary (DT-3).

Application Description

NEMA TP-1-2002, compliant Energy Efficient Transformers are specifically designed to meet the energy efficiency standards set forth in NEMA Standards publication, TP-1-2002, "Guide for Determining Energy Efficiency for Distribution Transformers." Surveys have shown that the average loading of low voltage dry-type distribution transformers, over a 24 hour period, is approximately 35%. NEMA TP-1 compliant transformers are optimized to offer maximum efficiency at 35% of nameplate rating.

The range of products covered by NEMA TP-1-2002 are:

Table 9-1. NEMA TP-1-2002 Product Range

Voltage Class	Primary Voltage	34.5 kV and below
	Secondary Voltage	600 V and below
Dry-Type Rating	Single-Phase	10 – 833 kVA
	Three-Phase	15 – 2500 kVA
Liquid Rating	Single-Phase	10 – 833 kVA
	Three-Phase	15 – 2500 kVA

Transformers that are currently specifically excluded from the scope of NEMA Standard TP-1-2002 include:

- Liquid-filled transformers below 10 kVA.
- Dry-type transformers below 15 kVA.
- ac and dc drives transformers.
- Rectifier transformers and transformers designed for high harmonics.*
- Autotransformers.
- Non-distribution transformers, such as UPS transformers.
- Special impedance, regulation, or harmonic transformers.*
- Regulating transformers.
- Sealed and non-ventilated transformers.
- Machine tool transformers.
- Welding transformers.
- Transformers with tap ranges greater than 15%.
- Transformers with a frequency other than 60 Hz.
- Grounding transformers.
- Testing transformers.

*Note: Pending changes to NEMA TP-1 will remove "transformers designed for high harmonics" and "harmonic transformers" from this list of excluded products. EPAct 2005 (Energy Policy Act of 2005) includes same exclusions.

Efficiency levels set forth in NEMA TP-1-2002.

Table 9-2. NEMA TP-1-2002 Efficiency Levels

Tables of Energy Efficiency NEMA Class 1 Efficiency Levels Dry-Type Distribution Transformers — Low Voltage (600 V and below)			
Single-Phase		Three-Phase	
kVA	Efficiency	kVA	Efficiency
15	97.7	15	97.0
25	98.0	30	97.5
37.5	98.2	45	97.7
50	98.3	75	98.0
75	98.5	112.5	98.2
100	98.6	150	98.3
167	98.7	225	98.5
250	98.8	300	98.6
333	98.9	500	98.7
—	—	750	98.8
—	—	1000	98.9

Features, Benefits and Functions

- UL listed.
- 60 Hz operation (except as noted).
- Short-term overload capability as required by ANSI.
- Meet NEMA ST-20 sound levels.
- Meet Federal Energy Efficiency requirements for low voltage dry-type distribution transformers that is effective January 1, 2007.

The following pages provide listings for most standard transformer ratings and styles.

For other ratings or styles not shown, or for special enclosure types (including stainless steel) refer to Eaton.

Single-Phase, Type DS-3

Product Selection ①

Additional Product Selection information begins on **Page 9-164**.

Table 9-5. Single-Phase Selection Information — Type DS-3 60 Hz NEMA TP-1 Compliant, Labeled

kVA	Full Cap. Taps		Type	°C Temp. Rise	Dimensions (Inches)			Wt. Lbs.	Dimensions (mm)			Wt. kg	Frame	Wiring Diagram Number	Weathershield		Style Number	Price U.S. \$
	FCAN	FCBN			H	W	D		H	W	D				Catalog Number	Price U.S. \$		

240 x 480 Volts to 120/240 Volts, Aluminum Windings

15	②	②	DS-3	150	31-1/4	22-5/8	17-1/2	212	793	574	445	96	FR816	3XA	WS11		T20P11S15EE	
25	②	②	DS-3	150	31-1/4	22-5/8	17-1/2	212	793	574	445	96	FR816	3XA	WS11		T20P11S25EE	
37.5	②	②	DS-3	150	37-5/8	22-5/8	19-1/2	306	953	574	495	139	FR817	3XA	WS11		T20P11S37EE	
50	②	②	DS-3	150	42-1/8	24	23-3/8	550	1070	610	594	250	FR819	3XA	WS16		T20P11S50EE	
75	②	②	DS-3	150	42-1/8	24	23-3/8	600	1070	610	594	272	FR819	3XA	WS16		T20P11S75EE	
100	②	②	DS-3	150	62-1/2	30	34	820	1597	762	863	372	FR821	3XA	WS13		T20P11S99EE	
167	2@+2.5%	4@-2.5%	DS-3	150	62-7/8	30	34	1600	1597	762	863	731	FR814	288A	WS13		T48M11S67EE ③	
15	②	②	DS-3	115	31-1/4	22-5/8	17-1/2	212	793	574	445	96	FR816	3XA	WS11		T20P11F15EE	
25	②	②	DS-3	115	31-1/4	22-5/8	17-1/2	212	793	574	445	96	FR816	3XA	WS11		T20P11F25EE	
37.5	②	②	DS-3	115	37-5/8	22-5/8	19-1/2	340	956	574	495	154	FR818	3XA	WS11		T20P11F37EE	
50	②	②	DS-3	115	42-1/8	24	23-3/8	510	1070	610	594	232	FR819	3XA	WS16		T20P11F50EE	
75	②	②	DS-3	115	42-1/8	24	23-3/8	600	1070	610	594	272	FR820	3XA	WS16		T20P11F75EE	
100	②	②	DS-3	115	62-7/8	30	34	1200	1597	762	863	545	FR814	3XA	WS13		T20P11F99EE	
15	②	②	DS-3	80	31-1/4	22-5/8	17-1/2	212	793	574	445	96	FR816	3XA	WS11		T20P11B15EE	
25	②	②	DS-3	80	37-5/8	22-5/8	19-1/2	306	953	574	495	139	FR817	3XA	WS11		T20P11B25EE	
37.5	②	②	DS-3	80	37-5/8	22-5/8	19-1/2	340	956	574	495	154	FR818	3XA	WS11		T20P11B37EE	
50	②	②	DS-3	80	42-1/8	24	23-3/8	510	1070	610	594	232	FR819	3XA	WS16		T20P11B50EE	
75	②	②	DS-3	80	42-1/8	24	23-3/8	600	1070	610	594	272	FR820	3XA	WS16		T20P11B75EE	
100	②	②	DS-3	80	62-7/8	30	34	1200	1597	762	863	545	FR814	3XA	WS13		T20P11B99EE	

240 x 480 Volts to 120/240 Volts, Copper Windings

15	②	②	DS-3	150	31-1/4	22-5/8	17-1/2	237	793	574	445	108	FR816	3XA	WS11		T20P11S15CUEE	
25	②	②	DS-3	150	37-5/8	22-5/8	19-1/2	306	953	574	495	139	FR817	3XA	WS11		T20P11S25CUEE	
37.5	②	②	DS-3	150	37-5/8	22-5/8	19-1/2	345	953	574	495	158	FR817	3XA	WS11		T20P11S37CUEE	
50	②	②	DS-3	150	37-5/8	22-5/8	19-1/2	460	956	574	495	209	FR818	3XA	WS11		T20P11S50CUEE	
75	②	②	DS-3	150	42-1/8	24	23-3/8	614	1070	610	594	279	FR819	3XA	WS16		T20P11S75CUEE	
100	②	②	DS-3	150	42-1/8	24	23-3/8	700	1070	610	594	318	FR820	3XA	WS13		T20P11S99CUEE	
167	2@+2.5%	4@-2.5%	DS-3	150	62-7/8	30	34	1632	1597	762	863	741	FR814	288A	WS13		T48M11S67CUEE ③	
15	②	②	DS-3	115	31-1/4	22-5/8	17-1/2	237	793	574	445	108	FR816	3XA	WS11		T20P11F15CUEE	
25	②	②	DS-3	115	37-5/8	22-5/8	19-1/2	345	953	574	495	158	FR817	3XA	WS11		T20P11F25CUEE	
37.5	②	②	DS-3	115	37-5/8	22-5/8	19-1/2	381	953	574	495	173	FR817	3XA	WS11		T20P11F37CUEE	
50	②	②	DS-3	115	42-1/8	24	23-3/8	614	1070	610	594	279	FR819	3XA	WS16		T20P11F50CUEE	
75	②	②	DS-3	115	42-1/8	24	23-3/8	730	1070	610	594	331	FR819	3XA	WS16		T20P11F75CUEE	
100	②	②	DS-3	115	62-7/8	30	34	1440	1597	762	863	655	FR814	3XA	WS13		T20P11F99CUEE	
15	②	②	DS-3	80	31-1/4	22-5/8	17-1/2	237	793	574	445	108	FR816	3XA	WS11		T20P11B15CUEE	
25	②	②	DS-3	80	37-5/8	22-5/8	19-1/2	345	953	574	495	158	FR817	3XA	WS11		T20P11B25CUEE	
37.5	②	②	DS-3	80	37-5/8	22-5/8	19-1/2	381	956	574	495	173	FR818	3XA	WS11		T20P11B37CUEE	
50	②	②	DS-3	80	42-1/8	24	23-3/8	730	1070	610	594	331	FR819	3XA	WS16		T20P11B50CUEE	
75	②	②	DS-3	80	42-1/8	24	23-3/8	700	1070	610	594	318	FR820	3XA	WS16		T20P11B75CUEE	
100	2@+2.5%	4@-2.5%	DS-3	80	62-7/8	30	34	1440	1597	762	863	655	FR814	288A	WS13		T48M11B99CUEE ③	

208 Volts to 120/240 Volts, Aluminum Windings

15	2@+2.5%	4@-2.5%	DS-3	150	31-1/4	22-5/8	17-1/2	212	793	574	445	96	FR816	260A	WS11		T29M11S15EE	
25	2@+2.5%	4@-2.5%	DS-3	150	31-1/4	22-5/8	17-1/2	212	793	574	445	96	FR816	260A	WS11		T29M11S25EE	
37.5	2@+2.5%	4@-2.5%	DS-3	150	37-5/8	22-5/8	19-1/2	306	953	574	495	139	FR817	260A	WS11		T29M11S37EE	
50	2@+2.5%	4@-2.5%	DS-3	150	42-1/8	24	23-3/8	510	1070	610	594	232	FR819	260A	WS16		T29M11S50EE	
75	1@+5%	2@-5%	DS-3	150	42-1/8	24	23-3/8	550	1070	610	594	250	FR819	551A	WS16		T29R11S75EE	
100	2@+2.5%	4@-2.5%	DS-3	150	62-7/8	30	34	1200	1597	762	863	545	FR814	449A	WS13		T29R11S99EE	

277 Volts to 120/240 Volts, Aluminum Windings

15	2@+2.5%	4@-2.5%	DS-3	150	31-1/4	22-5/8	17-1/2	212	793	574	445	96	FR816	262C	WS11		T27M11S15EE	
25	2@+2.5%	4@-2.5%	DS-3	150	31-1/4	22-5/8	17-1/2	212	793	574	445	96	FR816	262C	WS11		T27M11S25EE	
37.5	2@+2.5%	4@-2.5%	DS-3	150	37-5/8	22-5/8	19-1/2	306	953	574	495	139	FR817	262C	WS11		T27M11S37EE	
50	2@+2.5%	4@-2.5%	DS-3	150	42-1/8	24	23-3/8	510	1070	610	594	232	FR819	262C	WS16		T27M11S50EE	
75	2@+2.5%	4@-2.5%	DS-3	150	42-1/8	24	23-3/8	510	1070	610	594	232	FR819	262C	WS16		T27M11S75EE	
100	2@+2.5%	4@-2.5%	DS-3	150	62-7/8	30	34	1200	1597	762	863	545	FR814	262C	WS13		T27M11S99EE	

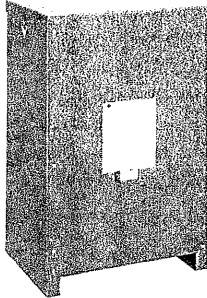
① Dimensions and weights subject to change.

② 1@+5%, 2@-5% at 240 volts primary; 2@+2.5%, 4@-2.5% at 480 volts primary.

③ 480 volt primary only.

For other ratings or styles not shown, or for special enclosure types (including stainless steel) refer to Eaton.

Discount Symbol DT-1

Single- and Three-Phase,
Types DS-3E, DT-3E, 60 Hz

Three-Phase Type DT-3E
Totally Enclosed Non-Ventilated

9

Product Description

- Suitable for indoor or outdoor applications.
- Totally enclosed, non-ventilated enclosures rated NEMA 3R.
- 220°C insulation system
- 150°C rise standard. 115°C or 80°C rise optional.

Application Description

Totally enclosed non-ventilated dry-type transformers are for special applications, where because of adverse atmospheric conditions it is desirable to use a dry-type non-ventilated transformer vs. the ventilated standard unit, which has openings in its enclosure to allow air to flow directly over the core and coil.

In applications where the atmosphere contains conductive, corrosive, or combustible materials, which might damage a transformer, or lint and dust flyings which might block the ventilation passages, the non-ventilated transformer is highly suited. It has no openings in the enclosure. Heat is dissipated by radiating from the surface area of the enclosure. Consequently, the enclosures are larger than those of the standard ventilated type. Non-ventilated transformers are suited for application in the textile, chemical, automotive, petrochemical, foundry, cement, food, paper and other industries where the transformer is subject to spray or washdown conditions.

Features, Benefits
and Functions

- 60 Hz operation (50/60 Hz operation available).
- Short-term overload capability as required by ANSI.
- Meet NEMA ST-20 sound levels.

Standards and Certifications

Industry Standards

All Cutler-Hammer dry-type distribution and control transformers by Eaton Corporation are built and tested in accordance with applicable NEMA, ANSI and IEEE Standards.

Seismically Qualified

Cutler-Hammer manufactured dry-type distribution transformers are seismically qualified, and exceed requirements of the Uniform Building Code (UBC), International Building Code (IBC) and California Code Title 24.

Options and Accessories

Please refer to **Page 9-146**.

Product Specifications

Frequency

Cutler-Hammer standard dry-type distribution transformers are designed for 60 Hz operation. Transformers required for other frequencies are available and must be specifically designed.

Overload Capability

Short-term overload is designed into transformers as required by ANSI. Dry-type distribution transformers will deliver 200% nameplate load for one-half hour; 150% load for one-hour; and 125% load for four-hours without being damaged provided that a constant 50% load precedes and follows the overload. See ANSI C57.96-01.250 for additional limitations.

Continuous overload capacity is not deliberately designed into a transformer because the design objective is to be within the allowed winding temperature rise with nameplate loading.

For other ratings or styles not shown, or for special enclosure types (including stainless steel) refer to Eaton.

Insulation System and Temperature Rise

Industry standards classify insulation systems and rise as shown below:

Table 9-94. Insulation System Classification

Ambient	+ Winding Rise	+ Hot Spot	= Temp. Class
40°C	55°C	10°C	105°C
40°C	80°C	30°C	150°C
40°C	115°C	30°C	185°C
40°C	150°C	30°C	220°C

The design life of transformers having different insulation systems is the same — the lower temperature systems are designed for the same life as the higher temperature systems.

Enclosures

Cutler-Hammer totally enclosed, non-ventilated transformers, Types DS-3E and DT-3E, utilize a NEMA 3R rated enclosure as standard.

Winding Terminations

Primary and secondary windings are terminated in the wiring compartment. Totally enclosed non-ventilated transformers have leads brought out to aluminum pads that are pre-drilled to accept Cu/Al lugs. Lugs are not supplied with these transformers. Eaton recommends external cables be rated 75°C for ventilated designs.

Series-Multiple Windings

Series-multiple windings consist of 2 similar coils in each winding which can be connected in series or parallel (multiple). Transformers with series-multiple windings are designated with an "X" or "/" between the voltage ratings, such as voltages of "120/240" or "240 X 480." If the series-multiple winding is designated by an "X," the winding can be connected only for a series or parallel. With the "/" designation, a mid-point also becomes available in addition to the series or parallel connection. As an example, a 120 X 240 winding can be connected for either 120 (parallel) or 240 (series), but a 120/240 winding can be connected for 120 (parallel), or 240 (series), or 240 with a 120 mid-point.

Technical Data
and Specifications

Please refer to **Page 9-149**.

Product Selection

Additional Product Selection information begins on Page 9-164.

Table 9-95. Single-Phase Selection Information — Type DS-3E, 60 Hz ①

kVA	Type	°C Temp. Rise	Dimensions (Inches)			Weight Lbs.	Dimensions (mm)			Weight kg	Frame	Wiring Diagram Number	Style Number	Price U.S. \$
			H	W	D		H	W	D					
240 x 480 Volts to 120/240 Volts +1 – 5%, -2 – 5% at 240 Volts Primary; +2 – 2.5%, -4 – 2.5% at 480 Volts primary.														
15	DS-3E	150	37-5/8	22-5/8	19-1/2	350	953	574	495	159	FR817N	3XA	T20P11S15NV	
25	DS-3E	150	37-5/8	22-5/8	19-1/2	350	953	574	495	159	FR818N	3XA	T20P11S25NV	
37.5	DS-3E	150	42-1/8	24	23-3/8	600	1070	610	594	274	FR820N	3XA	T20P11S37NV	
50	DS-3E	150	42-1/8	24	23-3/8	720	1070	610	594	329	FR820N	3XA	T20P11S50NV	

① Types DS-3 and DT-3 non-ventilated transformers are not UL listed.

Table 9-96. Three-Phase Selection Information — Type DT-3E, 60 Hz ②③

kVA	Type	°C Temp. Rise	Dimensions (Inches)			Weight Lbs.	Dimensions (mm)			Weight kg	Frame	Wiring Diagram Number	Style Number	Price U.S. \$
			H	W	D		H	W	D					
480 Δ Volts to 208Y/120 Volts +2 – 2.5% FCAN, 4 – 2.5% FCBN Taps														
15	DT-3E	150	39-1/4	26-1/8	19-1/8	480	995	663	486	217	FR914AN	280B	V48M28T15NV	
30	DT-3E	150	39-1/4	26-1/8	19-1/8	480	995	663	486	217	FR914AN	280B	V48M28T30NV	
45	DT-3E	150	39-1/4	26-1/8	19-1/8	600	995	663	486	272	FR915BN	280B	V48M28T45NV	
75	DT-3E	150	46-1/2	28	23	760	1171	712	585	344	FR916AN	280B	V48M28T75NV	
112.5	DT-3E	150	56	31-1/4	24-1/2	1100	1422	793	622	499	FR917N	280B	V48M28T12NV	
150	DT-3E	150	56	31-1/4	24-1/2	1300	1422	793	622	589	FR918AN	280B	V48M28T49NV	
225	DT-3E	150	75	44-1/2	36	2400	1905	1130	914	1088	FR919N	275A	V48M28T22NV	
300	DT-3E	150	75	44-1/2	36	2900	1905	1130	914	1315	FR920N	275A	V48M28T33NV	

② Types DS-3 and DT-3 non-ventilated transformers are not UL listed.

③ Transformers Type EPT 75 kVA and smaller three-phase, and Type EP 25 kVA and smaller single-phase, are furnished non-ventilated normally, as standard (and are UL listed). See General Purpose Transformers.

Note: Contact your local Eaton sales office for availability of additional Totally Enclosed Non-Ventilated Transformers.

Note: Contact your local Eaton sales office for CE Mark transformer requirements.

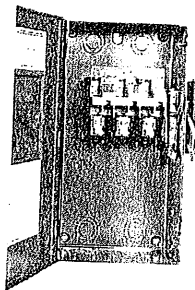
For other ratings or styles not shown, or for special enclosure types (including stainless steel) refer to Eaton.

Discount Symbol DT-1

600V AC Heavy Duty, Non-Fusible, Single Throw

Specifications


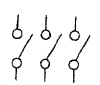
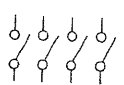
- 30 – 1200 amperes.
- Horsepower rated through 800 amperes.
- Suitable for service entrance use, except 1200 ampere on 480Y/277 or 600Y/347 grounded wye systems, per NEC 215-10 and 230-95, and 4-pole switches.
- UL listed File No. E5239.
- For factory modifications refer to Pages 8-6 through 8-9.



DH362UGK

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Table 8-43. Non-Fusible 277/480 – 600 Volts

System	Ampere Rating	Maximum Horsepower Ratings									NEMA 1 Enclosure Indoor		NEMA 3R Enclosure Rainproof	
		1-Phase AC			3-Phase AC			DC		Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	
		240V	480V	600V	240V	480V	600V	250V	600V					
2-Pole — 480V AC — 600V AC or DC ⁽¹⁾ (Suitable for Service Entrance Use with a Neutral or Ground Lug Kit Installed)														
	30	3	7-1/2	10	—	—	—	—	15	DH261UGK	201.	(2)	—	
	60	10	20	25	—	—	—	—	25	DH262UGK	354.	(2)	—	
	100	20	30	40	—	—	—	—	25	DH263UGK	585.	(2)	—	
	200	15	50	50	—	—	—	—	50	—	—	(2)	—	
	400	—	—	—	—	—	—	—	—	DH265UGK	1,950.	(2)	—	
	600	—	—	—	—	—	—	—	—	DH266UGK	3,525.	(2)	—	
	800	—	—	—	—	—	—	—	—	DH267UGK	7,070.	(2)	—	
	1200	—	—	—	—	—	—	—	—	—	—	(2)	—	
3-Pole — 480V AC — 600V AC, 250V DC (Suitable for Service Entrance Use with a Neutral or Ground Lug Kit Installed)														
	30	3	7-1/2	10	10	20	30	5	—	DH361UGK	213.		DH361URK 367.	
	60	10	20	25	20	50	60	10	—	DH362UGK	367.		DH362URK 670.	
	100	20	40	50	40	75	100	20	—	DH363UGK	615.		DH363URK 960.	
	200	15	50	50	60	125	150	40	—	DH364UGK	930.		DH364URK 1,125.	
	400	—	—	—	125	250	350	50	—	DH365UGK	2,160.		DH365URK 2,835.	
	600	—	—	—	200	400	500	—	—	DH366UGK	3,830.		DH366URK 5,860.	
	800	—	—	—	—	500	500	—	—	DH367UGK	7,580.		DH367URK 10,050.	
	1200	—	—	—	—	—	—	—	—	DH368UGK	9,750.		DH368URK 12,980.	
4-Pole — 480V AC — 600V AC, 250V DC														
	30	2-Phase AC			3-Phase AC			5	—	DH461UGK	615.	(4)	—	
	60	10	20	25	10	20	30	10	—	DH462UGK	655.	(4)	—	
	100	20	40	50	20	50	60	20	—	DH463UGK	1,205.	(4)	—	
	200	40	50	50	40	75	100	40	—	DH464UGK	1,745.	(4)	—	
	400	50	—	—	60	125	150	—	—	DH465UGK	3,695.	(3)	—	
	600	—	—	—	125	250	350	—	—	DH466UGK	6,450.	(3)	—	
	800	—	—	—	200	400	500	—	—	—	—	(3)	—	

⁽¹⁾ DC rating for 400 – 800 ampere switches is 250 volts.

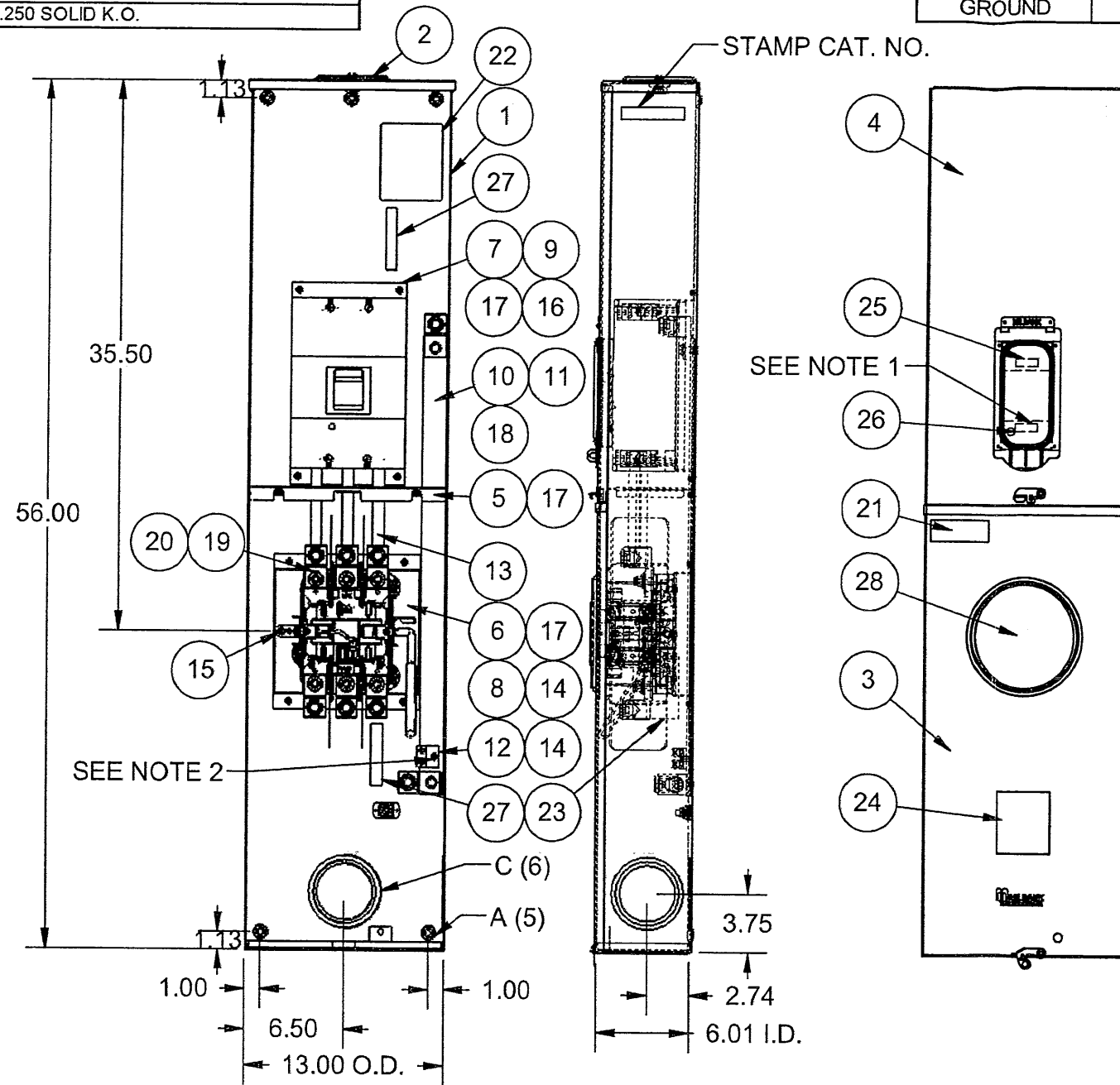
⁽²⁾ Use 3-pole catalog numbers below.

⁽³⁾ Contact the Safety Switch Flex Center (1-888-329-9272) for availability of this product.

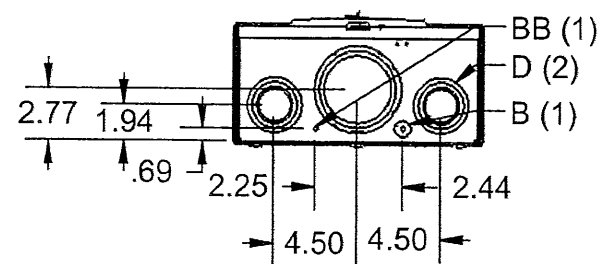
⁽⁴⁾ NEMA 12 enclosures (30 – 200 amperes) can be field modified to meet NEMA 3R rainproof requirements when a factory provided drain hole is opened.

KO CONFIGURATIONS	
A	U/L MNTG. EMBOSS
B	.250, .500 CONC. K.O.
C	3.000, 3.500, 4.000 CONC. K.O.
D	1.250, 1.500, 2.000, 2.500 CONC. K.O.
BB	.250 SOLID K.O.

WIRE RANGE	
LINE	(2) 3/0-500
LOAD, LINE & LOAD NEUTRAL	(1) 600kcmil- #4, (2) 250kcmil-1/0
GROUND	(2) #12-1/0



ITEM	QTY.	PART NUMBER	DESCRIPTION
1	1	1128031	SHELL WELDMENT
	1	1127909	TOP
	1	1127910	BACK
	1	1127911	BOTTOM
	1	1000104	ANGLE, BROOKS BARREL LOCK (A)
	1	1001180	WELD-IN GROUND STUD
	1	1000081	ANGLE
2	1	1001186	LARGE HUB CLOSING PLATE
3	1	1127921	LOWER FRONT ASS'Y
4	1	1127923	UPPER FRONT ASS'Y
5	1	1127913	BARRIER
6	1	1128019	BRIDGE
7	1	1127915	BRIDGE
8	1	1128070	200A BYPASS RINGLS BLK ASSY
9	1	1126733	C/B 3P 400A 3Ø 14ka @ 600V
10	1	1127916	BUS
11	8	1007327	SINGLE 600kcmil OR DUAL 250kcmil
12	1	1000387	CONNECTOR ASSY. #12-1/0 2 POS.
13	6	1127924	WIRE, 4/0 COPPER
14	4	1123646	SCREW 12-24 X 9/16 HX ST
15	1	1000183	SCREW 12-24 x 5/16
16	4	1091868	SCREW 1/4-20 X 2.625
17	10	1047096	SCREW, 10-32 x 1/4
18	2	1025045	SCREW 5/16-18 x 1
19	6	1001270	WASHER, 3/8 FLAT
20	6	1001273	NUT, 3/8-16 HEX W/BELL
21	1	1000064	LABEL, WARNING
22	1	1128007	LABEL, RATING
23	1	1001272	LABEL, BY-PASS INSTR. (LOC. B)
24	1	1124053	LABEL, WARNING
25	1	1047196	"MAIN" LABEL
26	1	1124054	LABEL, TRIP
27	2	1025076	LABEL, POWERLEG
28	1	1000158	WIREMAN PAD
29	1	1127925	CARTON (NOT SHOWN)



NOTES:
1. APPLY LABELS 1124054 & 1047196 TO DEADFRONT.
2. 7TH TERM WIRE ATTACHED.

REV	DATE	DESCRIPTION	BY
B	10-24-07	ADDED 1000081 TO SHELL WELD, ADDED 1001270 & 1001273 (ECO 16617)	JRS
B1	2/13/08	UPDATE PICTORIAL OF UPPER FRONT (ECO #16903)	D.F.

Material:	16 GA. STL.	<p>General Offices: Kansas City, MO</p>	
Shear/ Die#:			
Finish:	MILBANK LIGHT GRAY		
Part Wt.:	85		
<p>Tolerances: Unless Specified Otherwise X.X ±.1 X.XX ±.03 X.XXX ±.015 X° ±2°</p>		<p>Third Angle</p>	
Scale:	NTS		
Drawn By:	JRS	Checked By:	
Approved By:		Approved By:	
Date:	12-1-06	Sheet	1 of 1

Title: 400A 3Ø4W 7-TERM 600 VAC RINGLESS OH 10,000 AIC COLD SEQUENCE METER MAIN
Catalog No.: U5796-X-400-CB-BL
Customer:
Drawing No.: 5796-31



FEATURES & SPECIFICATIONS

INTENDED USE

Low-profile static luminaire provides general illumination for recessed applications; ideal for restricted plenum spaces.

ATTRIBUTES

Designed exclusively for use with T8 lamps, electronic ballasts and sockets.

CONSTRUCTION

Smooth hemmed sides and smooth, inward formed end flanges for safe handling. Lighter weight fixture allows for safe, easy installation.

Standard steel door frame has superior structural integrity with premium extruded appearance and precision flush mitered corners. Steel door allows easy lens replacement without frame disassembly (for lenses up to .156" thick). Powder painted, steel latches provide easy, secure door closure.

Superior mechanical light seal requires no foam gasketing. Integral T-bar clips secure fixture to T-bar system. Housing formed from cold-rolled steel. Acrylic shielding material 100% UV stabilized. No asbestos is used in this product.

FINISH

Five-stage iron-phosphate pretreatment ensures superior paint adhesion and rust resistance. Painted parts finished with high-gloss, baked white enamel.

ELECTRICAL SYSTEM

Standard ballast is electronic, thermally protected, resetting, Class P, HPF, non-PCB, UL Listed, CSA certified ballast, universal voltage and sound rated A.

Luminaire is suitable for damp locations. AWM, TFN or THHN wire used throughout, rated for required temperatures.

LISTING

Standard: UL. Optional: Canada — CSA or cUL; Mexico — NOM.

WARRANTY

Guaranteed for one year against mechanical defects in manufacture.

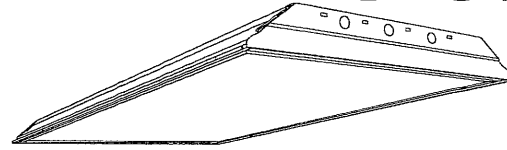
US patents: 6,210,025; 6,231,213; 2,288,471.

Specifications subject to change without notice.

Catalog Number	
Notes	Type

General Purpose T8 Troffer

GT8 2'x4'



2, 3 or 4 Lamps



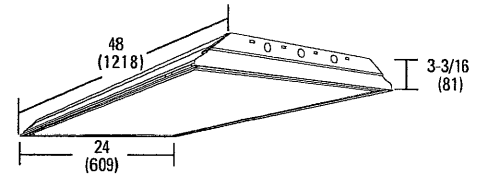
Specifications

Length: 48 (1218)

Width: 24 (609)

Depth: 3-3/16 (81)

Weight: 22 lbs (9.9 kg)



All dimensions are inches (millimeters).

ORDERING INFORMATION

For shortest lead times, configure product using **standard options (shown in bold)**.

Example: 2GT8 4 32 A12 MVOLT 1/4 GEB10IS

2GT8							
Series 2GT8 2' wide	Number of lamps <u>2</u> <u>3</u> <u>4</u> Not included.	Door frame (blank) Flush steel, white FN Flush aluminum, natural FM Flush aluminum, matte black FW Flush aluminum, white RN Regressed aluminum, natural RM Regressed aluminum, matte black RW Regressed aluminum, white	Voltage <u>120</u> <u>277</u> <u>347</u> MVOLT Others available.	Options ²			
Trim type (blank) Grid F Overlapping flanged	Lamp type 32 32W T8 (48")	Diffuser type A12 #12 pattern acrylic A12125 #12 pattern acrylic, .125" thick A19 #19 pattern acrylic, .156" thick A15 #15 pattern acrylic, .2" thick PC1S 1/2" x 1/2" x 1/2" plastic cube louver, silver PC2S 1-1/2" x 1-1/2" x 1" plastic cube louver, silver w/ flange ¹ PC3S 3/4" x 3/4" x 1/2" plastic cube louver, silver	1/4 One 4-lamp ballast 1/3 One 3-lamp ballast GEB10IS Electronic ballast, ≤10% THD, instant start GEB10RS Electronic ballast, ≤10% THD, rapid start EL Emergency battery pack (nominal 300 lumens) EL14 Emergency battery pack (nominal 1400 lumens) GLR Internal fast-blow fuse GMF Internal slow-blow fuse LST Tandem-wired fixture pairs (shared ballasts) PWS1836 6" prewire, 3/8" dia., 18-gauge, 1 circuit LP_ Lamped, specify lamp type and color LP735 Lamped; 700-series, 3500K LP741 Lamped; 700-series, 4100K JP Palletized and stretch-wrapped without individual cartons; grid trim CSA CSA Certified NOM NOM Certified				

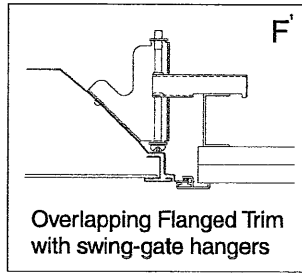
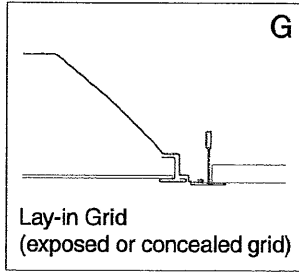
NOTES:

- Available with flush door frames only.
- MVOLT standard for 120-277V applications, 50-60 hz operation. Some options require voltage specified.

GT8 2'x4' Static T8 Troffer

MOUNTING DATA

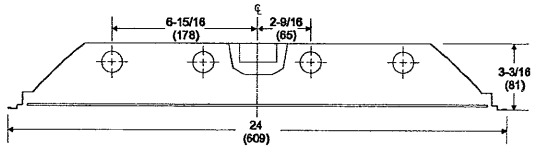
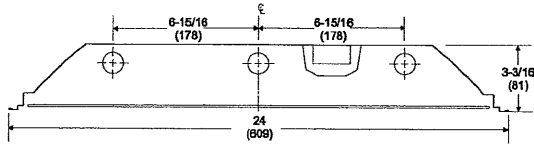
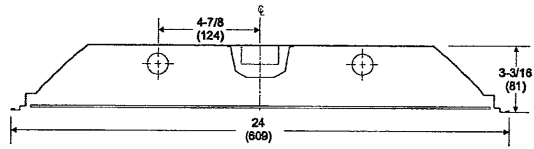
Continuous row mounting of flanged units requires CRE and CRM trim options (see Options).



NOTE:

1 Recommended rough-in dimensions for F-trim fixtures 24"x48" (Tolerance is +1/4"-0"). Swing-gate range 1-3/16" to 3-15/16". Swing-gate span 23-3/8" to 26-11/16". Fixture swing-gate points require additional 1-1/16" over nominal fixture height.

DIMENSIONS



PHOTOMETRICS

Calculated using the zonal cavity method in accordance with IESNA LM41 procedure. Floor reflectances are 20%. Lamp configurations shown are typical. Full photometric data on these and other configurations available upon request.

2GT8 2 32 A12

Report LTL 7424
Lumens per lamp - 2850 - Lum. eff. - 81.7%
S/MH (along) 1.2 (across) 1.4
Coefficient of Utilization

Ceiling	80%			70%			50%		
Wall	70%	50%	30%	70%	50%	30%	50%	30%	10%
0	97	97	97	95	95	95	91	91	91
1	89	86	82	87	84	81	80	78	76
2	82	75	70	80	74	69	71	67	63
3	75	67	60	73	65	59	63	58	54
4	69	59	52	67	58	52	56	51	46
5	63	53	46	62	52	46	51	45	40
6	59	48	41	47	47	40	46	40	35
7	54	44	37	53	43	36	42	36	31
8	51	40	33	49	39	33	38	32	28
9	47	37	30	46	36	30	35	29	25
10	44	34	27	43	33	27	32	27	23

2GT8 3 32 A12 1/3

Report LTL 7421
Lumens per lamp - 2850 - Lum. eff. - 80.1%
S/MH (along) 1.2 (across) 1.4
Coefficient of Utilization

Ceiling	80%			70%			50%		
Wall	70%	50%	30%	70%	50%	30%	50%	30%	10%
0	95	95	95	93	93	93	89	89	89
1	88	84	81	85	82	79	79	76	74
2	80	74	69	78	72	68	70	66	62
3	74	66	59	72	64	58	62	57	53
4	68	58	52	66	57	51	55	50	46
5	62	52	45	61	52	45	50	44	40
6	58	47	40	56	47	40	45	39	35
7	54	43	36	52	42	36	41	35	31
8	50	39	33	49	39	32	38	32	28
9	47	36	30	45	36	29	35	29	25
10	44	33	27	43	33	27	32	27	23

2GT8 4 32 A12 1/4

Report LTL 7425
Lumens per lamp - 2850 - Lum. eff. - 78.6%
S/MH (along) 1.2 (across) 1.4
Coefficient of Utilization

Ceiling	80%			70%			50%		
Wall	70%	50%	30%	70%	50%	30%	50%	30%	10%
0	94	94	94	91	91	91	87	87	87
1	86	82	79	84	81	78	77	75	73
2	79	73	68	77	71	67	68	64	61
3	72	64	58	70	63	57	61	56	52
4	66	57	51	65	56	50	54	49	45
5	61	51	45	60	51	44	49	43	39
6	57	47	40	55	46	39	44	39	34
7	53	42	36	51	42	35	40	35	31
8	49	39	32	48	38	32	37	31	27
9	46	35	29	45	35	29	34	29	25
10	43	33	27	42	32	27	32	26	22

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixture
0-30	1372	24.1	29.4
0-40	2277	39.9	48.9
0-60	3907	68.5	83.9
0-90	4658	81.7	100.0
90-180	0	0	0
0-180	4658	81.7	100.0

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixture
0-30	2066	24.2	30.2
0-40	3412	39.9	49.8
0-60	5768	67.5	84.2
0-90	6851	80.1	100.0
90-180	0	0	0
0-180	6851	80.1	100.0

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixture
0-30	2718	23.8	30.3
0-40	4481	39.3	50.0
0-60	7553	66.3	84.2
0-90	8965	78.6	100.0
90-180	0	0	0
0-180	8965	78.6	100.0

Energy (Calculated in accordance with NEMA standard LE-5)

LER,FL	ANNUAL ENERGY COST*	LAMP DESCRIPTION	LAMP LUMENS	BALLAST FACTOR	WATTS
73	\$3.29	(2) 32WT8	2850	.90	58
70	\$3.43	(3) 32WT8	2850	.87	85
73	\$3.29	(4) 32WT8	2850	.88	109

* Comparative yearly lighting energy cost per 1000 lumens





Catalog Number	
Notes	Type

FEATURES & SPECIFICATIONS

INTENDED USE

Surface or stem-mounted lensed fixture for general illumination in commercial offices and retail applications.

CONSTRUCTION

Metal parts are die-formed from code gauge steel. No asbestos is used in this product. Standard door is fully gasketed flush steel with sturdy tee hinges and opposing, rotary-action cam latches. Optional flush or regressed aluminum doors available. Smooth side panels and square corners for modular appearance.

FINISH

Five-stage iron-phosphate pretreatment ensures superior paint adhesion and rust resistance. Painted parts finished with high-gloss, baked white enamel.

OPTICAL SYSTEM

Diffuser is 100% virgin acrylic.

ELECTRICAL SYSTEM

Thermally protected, resetting, Class P, HPF, non-PCB, UL listed, CSA Certified ballast is standard. Sound rated A. Standard combinations are CBM approved and conform to UL 935.

Fixture is suitable for damp locations. AWM, TFN or THHN wire used throughout, rated for required temperatures.

Listed ballast disconnect with strain relief and leads provided standard for non-emergency fixtures.

INSTALLATION

For surface or stem mounting, unit or row installation. Minimum four stems required for unit mounting. For row mounting, minimum number of hangers required equal two times the number of fixtures plus two additional hangers.

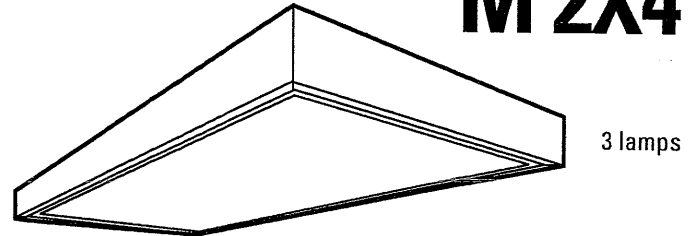
LISTING

120V, 277V and MVOLT are UL Listed and CSA Certified (standard). 347V is CSA Certified (see Options).

WARRANTY

Guaranteed for one year against mechanical defects in manufacture.

Modular Commercial M 2X4



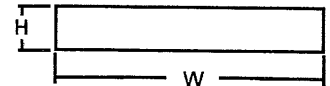
3 lamps

Specifications

Length: 48 (1220)

Width: 24 (610)

Height: 3-3/4 (95)



All dimensions are inches (millimeters). Specifications subject to change without notice.

ORDERING INFORMATION

For shortest lead times, configure product using **standard options (shown in bold)**.

Example: 2M 3 32 A12125 MVOLT 1/3 GEB10IS

2M	3	Lamp type		Diffuser	Voltage	Options
Series 2M	Lamps 3 Not included.	32	32W T8 (48")	A12 #12 pattern acrylic	120	Shipped installed in fixture
			Frame type	A12125 #12 pattern acrylic, .125" thick	277	1/3 One 3-lamp ballast
			(blank) White (flush steel)	A19 #19 pattern acrylic, .156" thick	347	GEB10IS T8 electronic ballast, <10% THD, instant start
			FN Natural (flush aluminum)	K20 #20 pattern acrylic, .140" thick	MVOLT¹	GEB10RS T8 electronic ballast, <10% THD, rapid start
			FM Matte black (flush aluminum)	IM Injection-molded acrylic, .150" thick	Others available.	EL Emergency battery pack (nominal 300 lumens)
			FW White (flush aluminum)	PC1S Parabolic plastic cube louver, specular silver		EL14 Emergency battery pack (nominal 1400 lumens)
			RN Natural (regressed aluminum)			GLR Internal fast-blow fusing ²
			RM Matte black (regressed aluminum)			GMF Internal slow-blow fusing ²
			RW White (regressed aluminum)			RIF1 Radio interference filter (1 per fixture) ²
						LP__ Lamped; specify lamp type and color
						LP735 Lamped; 700 Series; 3500K
						SLL Spring-loaded latch
						CSA Listed and labeled to comply with Canadian Standards (347V only)
						NOM NOM Certified

NOTES:

- MVOLT standard for 120V and 277V applications. Some options require voltage specified.
- Must specify voltage.

Accessories:

Order as separate catalog number.

- 1B** Ceiling spacer (1-1/2" to 2-1/2" from ceiling).

Contemporary Thermoplastic Emergency Lighting Units

Intended Use

Provides a minimum of 90 minutes of illumination for the rated wattage upon loss of AC power. Ideal for applications requiring attractive unit equipment with quick installation.

Features

White, compact, low-profile contemporary design with high-impact thermoplastic housing that is impact-resistant, corrosion-proof, UV-stable to resist discoloration from artificial light sources or sunlight.

Maintenance-free lead-calcium battery (standard).

Two 9W wedge-based krypton lamps offer 48 percent more light output than standard incandescent lamps.

Patented MR24, multi-faceted reflector significantly improves photometric performance; 60 to 100 percent more light delivered to the path of

egress. Universal voltage input capability (120 through 277V, 50 or 60 Hz).

Unique track-and-swivel design permits full range of lamp head adjustment. Universal J-box mounting pattern. Tool-less access for maintenance. Flexible conduit entry provision on top of the unit.

Patent pending Quick-Mount® features simplify installation.

Vandal-resistant ELA VS2 polycarbonate shield available.

Wall or ceiling bracket included as a standard feature. Quantum® Series ELM6-12 will power a variety of remote devices up to rated wattage of fixture.

Listings

UL Listed, NOM Certified (see Options).

Quantum®

ELM 6-12
Quick-Mount®



Example: ELM654 H2006 SD

Ordering Information

Family	Lamp type	Options	Accessories (Order separately)
ELM618 6V,18W	6-volt MR24 composite	SD Self-diagnostics ⁵	ELA LRT Remote tester (laser)
ELM627 6V,27W	(blank) 9W/6V krypton ¹	B Black housing ⁶	ELA VS2 Polycarbonate vandal shield (1/8" thick)
ELM654 6V,54W	H1206 12W/6V halogen ²	N Maintenance-free ni-cad battery ⁷	ELA WG2M Wireguard
ELM1254 12V,54W	H2006 20W/6V halogen ³	TD Time delay ⁵	ELA MR24 Compact MR24 remote lamp head
ELM1272 12V,72W	12-volt MR24 composite ⁴ (blank) 9W/12V krypton H1212 12W/12V halogen H2012 20W/12V halogen	RT Remote test ⁸ RO Less heads ⁹ DL Damp Locations ¹⁰ -10° to 40°C (50° to 140°F) NOM NOM Certified ¹¹	ELA MR24 Remote lamp head ELA MR24 K0606 (5.4W, 6V krypton) ELA MR24 K0906 (9W, 6V krypton) ELA MR24 H1206 (12W, 6V halogen) ELA MR24 K0912 (9W, 12V krypton) ELA MR24 H1212 (12W, 12V halogen) ELA MR24 H2006 (20W, 6V halogen) ELA MR24 H2012 (20W, 12V halogen)

NOTES:

- Available on ELM618, ELM627 and ELM654 only.
- Available on ELM627 and ELM654 only.
- Available on ELM654 only.
- Available on ELM1254 and ELM1272 only.
- When ordering ELM618 and ELM1254, SD and TD must be ordered with the No option.
- Available on ELM627 and ELM1272 only.
- Available on ELM618, ELM627 and ELM1254 only.
- RT not available with SD. When ordering RT, an ELA LRT needs to be ordered.
- Not available with any other options.
- Damp location listed from 10°C to 40°C (50° to 104°F) except ELM618N, ELM627N and ELM1254N listed from 15°C to 32°C (60° to 90°F).
- NOM available with ELM618 and ELM1254 only (not available with any other option).

For additional lamp heads, remote fixtures, options and accessories, see pages 449-451.

For application guidelines and fixture performance data, see pages 455 and 458.

Type	Hsg. Size	SD ⁵	B ⁶	N ⁷	TD ⁵	RT ⁸	RO ⁹	DL ¹⁰	NOM ¹¹	Lamp Number	Watt/Lamp
ELM618	S	■	■	■	■	■	■	■	■	MR24 K0906	9
ELM627	S	■	■	■	■	■	■	■	■	MR24 K0906	9
ELM654	L	■	■	■	■	■	■	■	■	MR24 K0906	9
ELM1254	L	■	■	■	■	■	■	■	■	MR24 K0912	9
ELM1272	L	■	■	■	■	■	■	■	■	MR24 K0912	9

■ Option available
(blank) Option not available

Type	AC Input			Output: Watts				
	Volts	Amps	Watts	Volts	1 1/2 hrs	2 hrs	3 hrs	4 hrs
ELM618	120 277	.167 .072	5.2 5.6	6	18	13.5	9	3
ELM627	120 277	.10 .04	5.6 7.4	6	27	20	13.5	10
ELM654	120 277	.250 .108	7.4 7.4	6	54	40.5	27	20
ELM1254	120 277	.250 .108	11.0 11.1	12	54	40.5	27	20
ELM1272	120 277	.250 .108	11.0 11.1	12	72	54	36	27

lightquick^{XD}

Express delivery products.

See page 11 for details about LightQuick XD.

Description

ELM618
ELM627
ELM1254

ELM6-12 Quick-Mount® Installation:

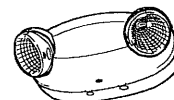
- Feed leads through mounting plate and make connections to AC power supply.
- Align mounting plate on J-box and secure with screws.
- Snap housing onto mounting plate.

Drawings are for dimensional detail only and may not represent actual mechanical configuration. Dimensions are shown in inches (millimeters) unless otherwise noted.

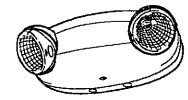
ELM618
Width: 12.79" (324)
Depth: 4.73" (120)
Height: 7.01" (178)
Weight: 6.8 lbs. (3.1 kgs.)

ELM627
Width: 12.79" (324)
Depth: 4.73" (120)
Height: 7.01" (178)
Weight: 8.0 lbs. (3.6 kgs.)

ELM654, ELM1254 & ELM1272
Width: 12.79" (324)
Depth: 5.82" (148)
Height: 7.01" (178)
Weight: 13.0 lbs. (5.9 kgs.)



ELM654, ELM1254 and ELM1272

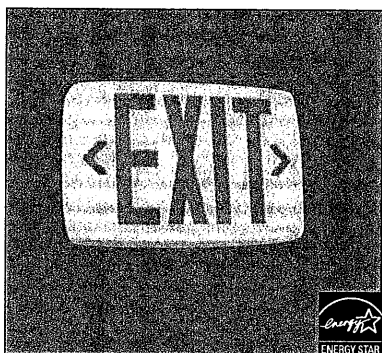


ELM618 and ELM627

Contemporary Thermoplastic Exits

Quantum®

LED Quick-Mount®



Intended Use

Ideal for applications requiring attractive, quick installation exit signs and low energy consumption.

Features

Precision-molded thermoplastic housing is impact and scratch resistant, corrosion proof and UV-stabilized to resist discoloration.

Innovative snap-together design allows installation in less than three minutes.

Long-life LEDs feature very low energy consumption and rated life up to 25 years. Consumes less than one watt of energy.

Fully assembled single-face exit with optional extra faceplate for easy field conversion to double face.

Replaceable chevron directional indicator knockouts for choice of direction.

Universal mounting capability – top, back or end (canopy provided).

Automatic recharge after discharge.

Conveniently located test switch and status indicator provide visual and manual means of monitoring system operation.

The self diagnostic emergency signs comply with NFPA Life Safety Code and automatically test the battery once a month for five minutes and once every six months for 30 minutes.

U.S. Patent No. 5,526,251, 5,611,163, 5,739,639 and 5,954,423. Other patents pending.

Listings

UL Listed (standard). CSA or NOM Certified (see Options).

Ordering Information

Example: LQM S W 3 R 120/277 EL N

Family LQM LED	Housing color (blank) Black ¹ W White	Number of faces 1 Single ^{2,3} 3 Single with extra faceplate and color panel for field conversion to double-face	Panel color R Red G Green ¹	Input voltage⁴ 120/277 Dual voltage ⁵ 120/347 Dual voltage ⁵	Operation (blank) Standard non-emergency EL N Nickel-cadmium battery ³ EL N SD Nickel-cadmium battery with self-diagnostics ^{2,6} LDC6 6V DC input for LED lamp ⁵ LDC12/48 12-48V DC input for LED lamps ⁵	Options For options and fixture compatibility, see page 431.	Certification (blank) UL Listed CSA CSA Certified NOM NOM Certified
Face type S Stencil P Panel ^{1,2,3}							

lightquick^{XD}
Express delivery products.
See page 11 for details about LightQuick XD.

Description
LQM S W 3 G 120/277 EL N
LQM S W 3 R 120/277 EL N
LQM S W 3 R 120/277

- Quick-Mount® Installation:**
- 1) Connect jumper leads (provided) to AC input leads in J-box. Fasten bracket and canopy to J-box.
 - 2) Remove faceplate from housing and snap housing onto canopy.
 - 3) Connect input leads to leads at corner of housing wire channel. Connect battery.
 - 4) Snap out directional chevron indicators (if necessary) and snap faceplate onto canopy.

Electrical Application Data			
Type	Volts	Amps	Watts
Primary Circuit			
Standard	120	.04	57
LED Red	277	.05	68
Standard	120	.05	62
LED Green	277	.05	72
Emergency	120	.04	72
LED Red	277	.02	92
Emergency	120	.04	72
LED Green	277	.05	92
Emergency Circuit			
LDC6	6	.16	96
LDC12/48	12	.10	120
LDC12/48	24	.05	124
LDC12/48	32	.04	128
LDC12/48	48	.03	136

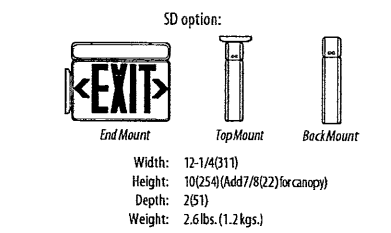
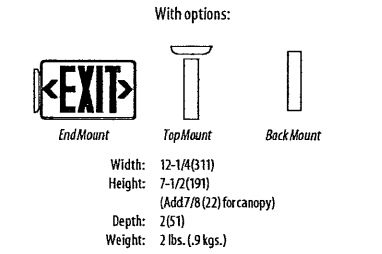
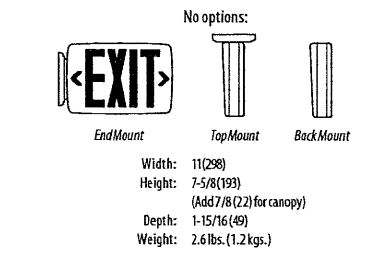
Exit Signage
(blank) Exit
SALIDA Salida^{2,7}

Accessories⁸ (Order separately)

ELA W US12	12" stem kit with white canopy ⁹
ELAWGEX	Back-mount wireguard
ELAWGEXT	Top-mount wireguard
ELAWGEKE	End-mount wireguard

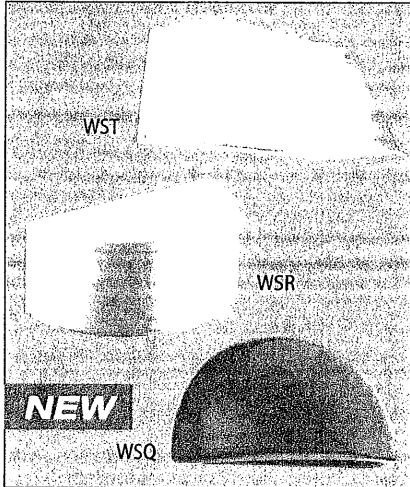
- NOTES:**
- 1 For custom signage only. Special wording available on panel face, white housing only, see page 430.
 - 2 See "With options" below for special housing dimensions.
 - 3 Not available with CSA.
 - 4 Some special voltages available. Consult factory.
 - 5 Only available with CSA.
 - 6 See "SD option" below for special housing dimensions.
 - 7 Letters 6" high with 7/16" stroke.
 - 8 For additional options, accessories and fixture compatibility, see page 431.
 - 9 Replace W with B for black canopy.

Dimensions are shown in inches (millimeters) unless otherwise noted.



Architectural

WST/WSR/ WSQ



Intended Use

For building- and wall-mounted applications.

Features

Housing – Rugged, die-cast, single-piece housing. Die-cast door frame has 1/8" thick tempered glass lens. Door frame is fully gasketed with one-piece solid silicone. Standard finish is textured dark bronze (DDBT) corrosion-resistant polyester powder with other architectural colors available.

Optics – Interchangeable, segmented reflectors for superior uniformity and control. Three full cutoff distributions available: FT (forward throw), MD (medium throw) and WT (wide throw). Four upright distributions available in WSR only: FTU (forward throw, 10% up), MDU (medium throw, 10% up), WTU (wide throw, 10% up) and MDU5 (up/down, medium throw, 50% up, 50% down). Compact fluorescent MD (medium throw) only.

Electrical – HID: 50W MH-150W utilizes a high reactance, high-power factor ballast. 35S and 50S utilizes a reactor normal-power factor ballast. 175W utilizes a constant-wattage auto

transformer ballast. Quick-disconnect plug easily disconnects reflector from ballast. Ballasts are copper wound and 100% factory tested. CFL: compact fluorescent ballast is Class P, electronic, high-power factor, <10% THD with starting temp. of 0° F (-18°C).

Socket - HID is porcelain, medium-base copper alloy, nickel-plated screw shell and center contact. (UL Listed 660W, 600V 4KV pulse rated). Fluorescent socket is high-temperature thermoplastic with integral lamp retention clip.

Installation – Universal mounting mechanism with integral mounting support allows fixture to hinge down. Bubble level provides correct alignment with each installation.

Listings

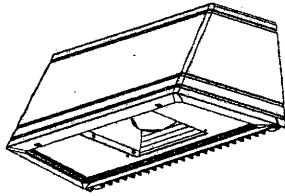
UL Listed suitable for wet locations (damp location listed in lens-up orientation). CSA Certified (see Options). IP65 rated.

Ordering Information

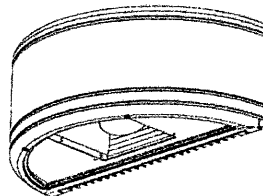
Example: **WST 175M FT 120 SF LPI**

Series	Wattage	Distribution	Voltage	Options/accessories
<u>WST</u> Trapezoid	<u>High pressure sodium</u>	<u>Downlight distribution</u>	<u>120</u>	<u>Installed</u>
<u>WSR</u> Half round	35S ¹	FT Forward throw	208 ⁴	SF Single fuse, 120V, 277V, 347V (n/a TB or TBV)
<u>WSQ</u> Quarter sphere	50S	MD Medium throw (coated lamp standard)	240 ⁴	DF Double fuse, 208V, 240V (n/a TB or TBV)
	70S	WT Wide throw	277	GMF Internal slow-blow fusing ^{8,9}
	100S	<u>Uplight distribution</u> ³	347	EC Emergency circuit (25W max., lamp included)
	150S	FTU Forward throw with 10% uplight	TB ⁵	DC12 Emergency circuit 12 volt (35W lamp included standard) ¹⁰
	<u>Metal halide</u>	MDU Medium throw with 10% uplight (coated lamp standard)	TB ⁶	2DC12 Emergency circuit 12 volt ((2) 35W lamps included standard) ¹⁰
	50M	WTU Wide throw with 10% uplight	MVOLT ⁷	DC2012 Emergency circuit 12 volt (20W lamp included standard) ¹⁰
	70M	MDU5 Up/down medium throw with 50% uplight & 50% downlight (coated lamp standard)		2DC2012 Emergency circuit 12 volt ((2) 20W lamps included standard) ¹⁰
	100M			ELDW Emergency battery pack (120V or 277V only) ^{8,11}
	150M			ELDWR Remote battery pack ready (by others) for compact fluorescent lamps ¹²
	175M			ELDWC Cold weather emergency battery pack (120V and 277V only) ^{8,20}
	<u>Compact fluorescent</u> ²			QRS Quartz restrike system (100W max., lamp not included) ¹³
	26DTT			CR Enhanced corrosion resistance
	2/26DTRT			
	32TRT			
	2/32TRT			
	42TRT			
	2/42TRT			
				<u>Architectural colors</u> ¹⁸
				<u>Standard textured colors</u>
				DDBT Dark bronze (std.)
				DSST Sandstone
				DNAT Natural aluminum
				DWHG White
				DBLB Black
				<u>Shipped separately</u>
				WSBBW Surface-mounted back box ¹⁹
				UT5 Uptilt 5 degrees ¹⁹
				WSTWG Wire guard (WST) ¹⁵
				WSTVG Vandal guard (WST) ¹⁵
				WSRWG Wire guard (WSR and WSQ) ¹⁵
				WSRVG Vandal guard (WSR and WSQ) ¹⁵
				CRT Non-stick protective coating ¹⁴
				PE Photoelectric cell-button type (n/a TB or TBV) ¹⁶
				WLU Wet location door for up orientation
				IBS Internal backlight shield ¹⁶
				DFL Diffusing lens
				LPI Lamp included
				L/LP Less lamp
				UCS Uplight component shield ¹⁷
				CSA CSA Certified

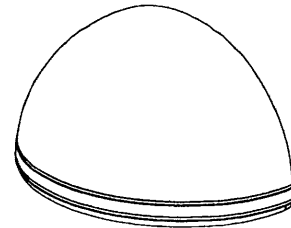
WST



WSR



WSQ



Dimensions are shown in inches (centimeters) unless otherwise noted.

	WST	WSR	WSQ
Width:	16-1/4(41.2)	18(45.7)	18(45.7)
Depth:	9-1/8(23.2)	9(22.8)	9(22.8)
Height:	7-1/4(18.4)	7-1/4(18.4)	9-3/8(23.8)
Max. weight:	30 lbs(13.6 kg)	30 lbs(13.6 kg)	30 lbs(13.6 kg)

BUILDING MOUNTED

NOTES:

- 1 120V only, NP/only
- 2 Only available with MD, MDU and MDU5 distributions.
- 3 Available on WSR fixture only.
- 4 Not available in Canada.
- 5 Optional multi-tap ballast (120V, 208V, 240V, 277V). In Canada 120V, 277V, 347V; ships as 120V/347V.
- 6 Optional 5-tap ballast (120V, 208V, 240V, 277V, 480V; n/a in Canada). 175M only.
- 7 Optional multi-volt electronic ballast (for compact fluorescent lamps only) capable of operating on any line voltage from 120V-277V.
- 8 Available for compact fluorescent units only.
- 9 Must specify voltage, n/a MVOLT or TB.
- 10 Not available with SF, DF or QRS.
- 11 Not available with 2/32TRT or 2/42TRT.
- 12 Battery pack by others and mounted external to luminaire. Pilot light/test switch mounting plate included. Consult factory for availability.
- 13 Not available with compact fluorescent.
- 14 Black finish only.
- 15 Must be ordered with fixture; no field modifications.
- 16 IBS not available with MD, MDU and MDU5 distributions.
- 17 For WSR, inverted orientation, with FTU and WTU distributions only.
- 18 Additional architectural colors available; see www.lithonia.com.
- 19 Must specify finish.
- 20 -20°C to 55°C operation. N/A 2/26DTT, 2/32TRT, 2/42TRT, WSQ or WSR with uplight distribution.

Lamp/Fixture Data			
Wattage	Ballast	Lamp type	Base type
High pressure sodium (med/clear)			
35	RHPF	E17	medium
50	RHPF	E17	medium
70	HX-HPF	E17	medium
100	HX-HPF	E17	medium
150	HX-HPF	E17	medium
Metal halide (med/clear)			
50	HX-HPF	E17	medium
70	HX-HPF	E17	medium
100	HX-HPF	E17	medium
150	HX-HPF	E17	medium
175	CWA	E17	medium
Compact fluorescent (double twin-tube/triple-tube)			
26DTT	electronic, HPF	T4	G24Q-3
32TRT	electronic, HPF	T4	GX24Q-3
42TRT	electronic, HPF	T4	GX24Q-4



Consistent with LEED® goals & Green Globes™ criteria for light pollution reduction

Does not meet with uplight distribution options.

LITHONIA OUTDOOR

KACM

Intended Use

For parking garages, convenience stores, hotels and walkways.

Features

Housing – Rugged, die-cast, soft-corner aluminum housing with 0.12" nominal wall thickness. Die-cast aluminum door frame has prismatic, impact-resistant, tempered glass; drop dish acrylic lens or drop dish polycarbonate lens. Door frame is fully gasketed with one-piece tubular silicone. Surface mounted utilizing four 0.5" mounting holes and one 0.875 wire-entry hole (mounting hardware not included). Dark bronze (DDB) corrosion-resistant polyester powder finish is standard. Other architectural colors available.

Optics – Reflector is optical-quality aluminum that works in tandem with a light-diffusing prismatic lens.

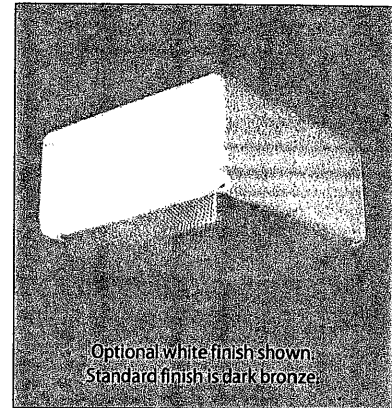
Electrical – HID: Ballast is high-reactance, high-power factor (150W) or high-power factor, constant-wattage autotransformer (175-400W MH & HPS). Induction: High Frequency Generator -

Supplies high frequency power to the discharge vessel (lamp) to initiate and maintain a gas discharge for a rate 100,000 hour of life (Optimized for ambient temperatures ranging from -40° to 25°C, higher ambient temperatures may reduce lamp life).

Socket – Mogul-base porcelain socket, 4KV pulse rated. Position-oriented socket standard on all metal halide units.

Listings

UL Listed (standard). CSA Certified or NOM Certified (see Options). UL Listed for wet locations. UL Listed for 25°C ambient temperature. **For covered ceiling, mount on concrete, steel or aluminum. Not for use in dwellings.**



Optional white finish shown. Standard finish is dark bronze.

Ordering Information

Example: **KACM 400M FP 120 LPI**

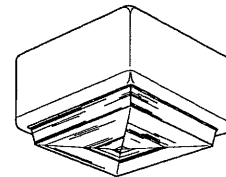
Designation	Distribution	Voltage	Options/accessories
<u>High pressure sodium</u>	FP Flat prismatic lens (C73T) ⁴	120⁴	<u>Installed</u>
KACM 150S	DPA Drop prismatic lens (acrylic)	208^{4,5}	LPI Lamp included ⁴
KACM 250S	DPP Drop prismatic lens (polycarbonate)	240^{4,5}	L/LP Less lamp ⁴
KACM 400S		277⁴	LP Lamp included ⁷
<u>Metal halide</u>		347⁴	SF Single fuse, 120V, 277V, 347V (n/a TB) ⁴
KACM 150M¹		480^{4,5}	DF Double fuse, 208V, 240V, 480V (n/a TB) ⁴
KACM 175M		TB^{4,6}	QRS Quartz restrrike system (250W max., 120V lamp not included) ⁴
KACM 200M²		TVOLT⁷	EC Emergency circuit (lamp not included, 250W max.) ⁴
KACM 250M¹			YK Yoke mount
KACM 320M²			TC Thru-wire conduit tee capability ⁴
KACM 350M²			SCWA Super CWA pulse start ballast (n/a HPS or 175M) ⁴
KACM 400M¹			CSA CSA Certified ⁴
<u>Induction</u>			NOM NOM Certified (consult factory) ⁴
KACM 165IL³			Shipped separately⁸
			KACVG Vandal guard ^{4,9}
			KACWG Wire guard

NOTES:

- 1 May be ordered with SCWA.
- 2 Must be ordered with SCWA.
- 3 Must be ordered with LP option.
- 4 Not available with 165IL.
- 5 Consult factory for availability in Canada.
- 6 Optional multi-tap ballast (120V, 208V, 240V, 277V). In Canada 120V, 277V, 347V; ships as 120V/347V.
- 7 165IL only.
- 8 May be ordered as an accessory.
- 9 FP lens only.

Dimensions are shown in inches (centimeters) unless otherwise noted.

Length: 17-1/2(44.5)
 Width: 17-1/2(44.5)
 Depth: FP option 7-1/8(18.1)
 DP option 11-1/8(28.3)
 Max. weight: 40 lbs (18.1kg)



Commercial Wall Brackets

WP

Intended Use

For applications that require a contemporary, low-profile appearance. Ideal for stairwells, restrooms, patient care lobbies or corridors.

Features

Available in 2', 3' or 4' length with one or two lamps in cross-section.

All fabricated components of 20-gauge CRS. All metal parts finished with electrostatically deposited, thermally set polyester powder paint after fabrication.

Proprietary, snap-in diffuser of tinted 50% DR acrylic with prismatic pattern.

Direct or direct/indirect distribution available.

Detachable, hinged electrical service tray for easy installation and maintenance. No tools required for relamping.

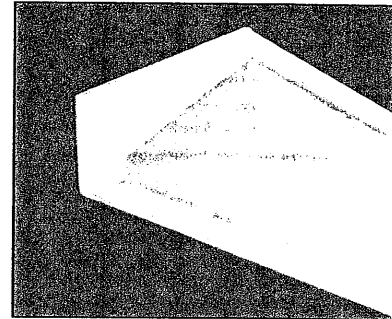
Fluorescent and incandescent night-light capabilities.

Through-wire/row-mount capabilities.

Standard finish post-paint, gloss-white enamel on all metal parts. Architectural black, 40% gloss post-paint available as an option.

Listings

UL Listed (standard). CSA Certified (see Options).



Example: WP 2 32 MVOLT GEB10IS

Ordering Information

Series	Number of lamps	Lamp type	Shielding type ¹	Voltage	Options
WP	1 2 Not included.	17 17W T8 (24") 20 20W T12 (24") 25 25W T8 (36") 30 30W T12 (36") 32 32W T8 (48")	(blank) ACF125 PCL12125V	MVOLT 347	S1 Left-mounted on/off pull-switch (all lamps) ^{3,4} S2 Left-mounted on/off pull-switch for downlight, remote uplight switching ^{3,5,6} S4 Left-mounted 4-position pull-switch (front only, rear only, all on, all off) ^{3,4,5,6} BF Internal baffle to divide uplight and downlight ² SWR Rocker switch, bottom right ^{3,4} CO Grounded convenience outlet, right-mounted ⁴ MB Architectural matte black finish RIF1 Radio interference filter (one per fixture) GEB10IS T8 electronic ballast, ≤10% THD, instant start GEB10PS T8 electronic ballast, ≤10% THD, rapid start 2/1 Two 1-lamp ballasts TPS Tamperproof screw DO Downlight only; solid-top metal housing CSA CSA Certified

NOTES:

- Supplied with standard high-impact acrylic lower diffuser.
- Not available with DO option.
- 120V.
- Specify 120/277 voltage.
- Requires BF option.
- Requires 2/1 option for 2-lamp fixtures.

Accessories

(Order separately)

- U4220 Hex-base driver bit, Torx TX20, for tamper-resistant screws with center pin

Availability and Dimensions

Series	Number of lamps	Lamp type	Width in. (cm)	Depth in. (cm)	Length in. (cm)
WP	1, 2	17, 20	7 3/8 (18.7)	3 1/4 (8.26)	24 7/16 (62.1)
		25, 30	7 3/8 (18.7)	3 1/4 (8.26)	36 7/16 (92.6)
		32	7 3/8 (18.7)	3 1/4 (8.26)	48 7/16 (123.0)

Cast Wall Packs, Polycarbonate Refractor

TWP

Intended Use

For entrances, loading docks, walkways and vehicle ramps. Use in car washes will result in discoloration of the polycarbonate lens over time. This will become a maintenance requirement.

Features

Housing – Rear housing is rugged, die-cast aluminum. Corrosion-resistant, captive external hardware includes slotted hex-head and tamperproof fasteners. Finish is dark bronze (DDB) corrosion-resistant polyester powder.

Optics – Reflector is aluminum, finished in white enamel. Front housing and refractor are one-piece, injection-molded, UV-stabilized polycarbonate. Standard finish: front cover has an opaque lower portion and dark bronze painted upper portion; back housing is dark bronze polyester. Refractor is sealed and gasketed to inhibit the entrance of outside contaminants.

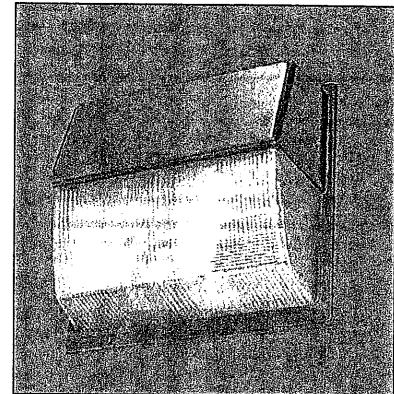
Electrical – HPS, 70-150M: High-reactance, high-power factor (XHP). 175MH and MV: Constant-wattage autotransformer. Ballast is copper wound and 100% factory tested. UL Listed. Electrical components mounted on back housing.

Socket – Glazed porcelain (mogul-based; 175W; medium based: 150W and below), horizontally oriented with copper alloy, nickel-plated screw shell and center contact. UL Listed 660W, 600V for medium base; 1500W, 600V for mogul base. 4KV pulse rated.

Installation – Top 3/4" threaded wiring access. Back access through 3/4" opening. For feed-thru wiring, use conduit tee (not included). Mount on any flat, non-combustible vertical surface.

Listings

UL Listed (standard). CSA or NOM Certified (see Options). UL Listed for wet locations. IP65 rated.



Example: TWP 175M TB LPI

Ordering Information

Designation	Voltage	Options
High pressure sodium	120	Installed
TWP 355 ¹	208 ²	SF Single fuse, 120V, 277V, 347V (n/a TB)
TWP 505 ²	240 ²	DF Double fuse, 208V, 240V, 480V (n/a TB)
TWP 705	277	EC Emergency circuit ^{4,7}
TWP 1005	347	QBS Quartz restrike system ^{4,7}
TWP 1505	480 ²	CR Enhanced corrosion resistance (rear housing only)
Metal halide	TB⁶	CRT Non-stick protective coating ⁸
TWP 70M		PE Photoelectric cell, button type (n/a TB or 480)
TWP 100M		LPI Lamp included
TWP 150M		L/LP Less lamp
TWP 175M		FS Full shield
Mercury vapor		WG Wireguard
TWP 100H		SCWA Super CWA pulse start ballast (150M only)
TWP 175H		RHP Reactor high-power factor ballast (HPS only)
Low pressure sodium		RNP Reactor normal-power factor ballast (HPS only)
TWP 35L ²		CSA CSA Certified
Incandescent		NOM NOM Certified (consult factory)
TWP 200I ^{3,4}		Architectural colors (optional)
		DNA Natural aluminum
		DBL Black
		DMB Medium bronze
		DWH White
		DSS Sandstone

NOTES:

- 120V only.
- Not available with 480V or TB.
- 120V only. A21 lamp for 200I.
- Lamp not included.
- Consult factory for availability in Canada; n/a 355, 505 and 150M.
- Optional multi-tap ballast (120V, 208V, 240V, 277V). In Canada 120V, 277V, 347V; ships as 120V/347V.
- Quartz lamp wattage not to exceed ballast wattage rating.
- Black finish on rear housing only.
- Other ballast types available.

lightquick XD
Express delivery products.

See page 11 for details about LightQuick XD.

Description
TWP 175M TB LPI

Dimensions are shown in inches (centimeters) unless otherwise noted.

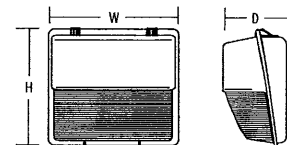
Height	15-7/16 (39.2)
Width	16-1/8 (41)
Depth	7-3/4 (19.7)
Weight	16 lbs (7 kg)

www.lithonia.com, keyword: TWP

Accessories (Order separately)

RK1 PEB1	Photoelectric control kit, 120V
RK1 PEB2	Photoelectric control kit, 208V, 240V and 277V.
RK1 PEB1 CSA	Photoelectric control kit, 120V
RK1 PEB3 CSA	Photoelectric control kit, 347V
RK1 TWPFA FS	Field installable shield for cutoff

Lamp/Fixture Data			
Wattage	Ballast	Lamp Type	Base Type
High pressure sodium (med/clear)			
35	RHP	E17	medium
50	RHP	E17	medium
70	XHP	E17	medium
100	XHP	E17	medium
150	XHP	E17	medium
Metal halide (med/70/100/150)/mogul (175)/clear			
50	HX-HPF	E17	medium
70	HX-HPF	E17	medium
100	HX-HPF	E17	medium
150	HX-HPF	E17	medium
175	CWA	BT28	mogul
Mercury vapor (mog/coated)			
100	CWA	E17	medium
175	CWA	BT/ED28	mogul
Low pressure sodium (D.C. bay/clear)			
35	HPF-LAG	T17	medium



LITHONIA LIGHTING

KVS

Intended Use

or lighting shopping center or stadium parking lots.

Features

ousing – Rugged, heavy-gauge, aluminum housing. Square shape, continuously welded seams for weather-tight integrity. EPDM closed-cell housing gasket.

nish – Dark bronze corrosion-resistant polyester powder finish (DDB) standard; other arch colors available.

ns – Impact-resistant flat glass is standard for R5, R2, R3 and R4. Convex glass lens is standard with all KVS3 and KVS1 R5.

or Frame – Extruded aluminum hinged door frame. All exposed hardware is stainless steel.

ounting – Extruded 9" (KVS1) and 12" (KVS3) arms with integral splice compartment for wall pole mounting. Optional mounting available.

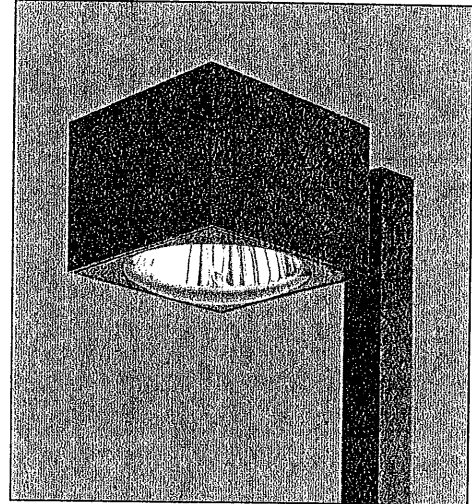
Optics – One-piece, anodized, hydroformed aluminum reflector. Four cutoff distributions available: R2 (roadway), R3 (asymmetric), R4 (forward throw) and R5 (symmetric). Reflectors hinge out for easy removal during installation/maintenance. R5 is vertically lamped; R2, R3, and R4 are horizontally lamped.

Electrical – 150W and below high reactance high power factor ballast. Constant-wattage autotransformer ballasts are copper wound and 100% factory tested. Removable, unitized power module and positive-locking disconnect plugs.

Socket – Mogul-base porcelain socket (100M and 150M are medium-base) with copper alloy, nickel-plated screw shell and center contact. UL Listed 1500W-600V. 4KV pulse rated. (1000S is 5KV pulse rated.)

Listings

UL Listed (standard). CSA Certified or NOM Certified (see Options). UL Listed for wet locations.



Example: KVS1 150S R2 120 SP09 PER LPI

Ordering Information

Designation	Distribution	Voltage	Mounting	Options/accessories
High pressure sodium				
KVS1 70S	R2 R3 R4 R5	120	<u>KVS1, shipped separately</u>	<u>Installed</u>
KVS1 100S	R2 R3 R4 R5	208 ⁴	SP09 Square pole arm	LPI Lamp included
KVS1 150S	R2 R3 R4 R5	240 ⁴	RP09 Round pole arm	L/LP Less lamp
KVS1 250S	R2 R3 R4 R5	277	WB09 Wall bracket	SF Single fuse, 120V, 277V, 347V
KVS1 400S	R2 R3 — R5	347	KTMB Twin mounting bar (Directly mounts to 2-7/8" OD tenon)	DF Double fuse, 208V, 240V, 480V
KVS3 1000S	— — — R5	480 ⁴	<u>KVS3, shipped separately</u>	PER <u>NEMA twist-lock receptacle only (no photocontrol)</u>
Metal halide				
KVS1 100M	R2 R3 R4 R5	TB ⁵	SP12 Square pole arm	QRS Quartz restrike system (100W max. on KVS1, 250W max. on KVS3; lamp not included)
KVS1 150M ¹	R2 R3 R4 R5		RP12 Round pole arm	CR Enhanced corrosion resistance
KVS1 175M	R2 R3 R4 R5		WB12 Wall bracket	EC Emergency circuit
KVS1 200M ²	R2 R3 R4 R5		MA Mast arm internal fitter ⁶	MED Medium-base socket (size 1 only)
KVS1 250M ¹	R2 R3 R4 R5		<u>Optional Mounting</u>	HS House-side shield (R3, R4, R5 only)
KVS3 320M ²	R2 R3 — R5		<u>KVS1 & KVS3, shipped separately</u>	SCWA Super CWA pulse start ballast (n/a HPS or 100M) (175M with R5 only).
KVS3 350M ²	R2 R3 — R5		KMA Mast arm adapter (KVS1 only) ⁷	
KVS3 400M ¹	R2 R3 — R5		DA12P Degree arm (pole) ⁶	CSA CSA Certified
KVS3 1000M ^{1,3}	R2 R3 — R5		DA12WB Degree arm (wall) ⁶	NOM NOM Certified (consult factory)

For optional architectural colors, see page 543.

Shipped separately

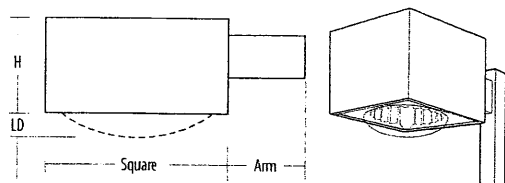
- PE1 NEMA twist-lock PE (120-240V)
- PE3 NEMA twist-lock PE (347V)
- PE4 NEMA twist-lock PE (480V)
- PE7 NEMA twist-lock PE (277V)
- SC Shorting cap for PER option
- VG Vandal guard (n/a KVS3)

For tenon slipfitters, see page 540.

ES:
 May be ordered with SCWA
 Must be ordered with SCWA.
 Must use BT37 reduced jacket lamp for 1000M, R2 and R3, R5 takes BT56 standard lamp.
 Consult factory for availability in Canada.
 Optional multi-tap ballast (120V, 208V, 240V, 277V). In Canada 120V, 277V, 347V; ships as 120V/347V.
 Single/twin, 180° configuration.
 For use with 6" minimum 2-3/8" OD pipe.
 Includes mounting arm.

Dimensions are shown in inches (centimeters) unless otherwise noted.

	KVS1	KVS3
EPA: ⁸	1.8 ft ² (.17 m ²)	3.9 ft ² (.36 m ²)
Square:	16-3/4 (42.0)	24 (61.0)
Height:	10-1/2 (26.0)	16-1/2 (42.0)
Max. weight:	33 lbs (15.0 kg)	74 lbs (34.0 kg)



RSS

Features

Shaft – Weldable grade A500 or A513 carbon steel tubing with minimum yield of 46,000 or 42,000 psi. Uniform wall thickness of .120". Shafts are one-piece construction with a full longitudinal weld. The round, straight tube is uniform in cross-section down length of shaft.

Anchor Base – Fabricated from carbon steel plate (ASTM A-36) 3/4" thickness. Base plate and shaft are circumferentially welded at both top and bottom to provide maximum strength at area of critical stress.

Anchor Bolts – Top 12" is galvanized per ASTM

A-153. Made of carbon steel bar with minimum-yield strength of 55,000 psi.

Grounding – Nut holder located immediately inside hand hole is tapped for 1/2"-13 UNC ground bolt and nut (provided by others).

Hand hole – Nominal 3"x5" hand hole is located 18" above base. Cover and attachment hardware provided.

Hardware – Fasteners are high-strength galvanized zinc-plated or stainless steel.

Top Cap – Top cap is provided for drill-mount poles.

Finish – Must specify finish.

Base Cover – Full-base cover finished to match pole.

Technical Information

EPA (ft²) with 1.3 gust

Catalog number	Nom. mount. ht. (ft.)	Pole shaft size (in. x in. x ft.)	Wall thick. (in.)	80 mph	Max. wt.	90 mph	Max. wt.	100 mph	Max. wt.	Bolt circle (in.)	Bolt size (in. x in. x in.)	Approx. ship wt. (lbs.)
RSS 8 4-5B	8	4.5 x 8.0	0.120	24.5	615	19.5	490	15.8	395	8	3/4 x 18 x 3	55
RSS 10 3B	10	3.0 x 10.0	0.120	10	250	7.7	190	6.0	175	8	3/4 x 18 x 3	55
RSS 10 4B	10	4.0 x 10.0	0.120	19.1	480	15.0	375	12.2	305	8	3/4 x 18 x 3	70
RSS 10 4-5B	10	4.5 x 10.0	0.120	24.5	615	19.5	490	15.8	395	8	3/4 x 18 x 3	75
RSS 12 3B	12	3.0 x 12.0	0.120	7.7	195	5.8	145	4.4	130	8	3/4 x 18 x 3	60
RSS 12 4B	12	4.0 x 12.0	0.120	15.0	390	11.8	300	9.5	240	8	3/4 x 18 x 3	80
RSS 12 4-5B	12	4.5 x 12.0	0.120	19.8	495	15.7	395	12.7	320	8	3/4 x 18 x 3	85
RSS 14 3B	14	3.0 x 14.0	0.120	6.0	175	4.4	130	3.3	90	8	3/4 x 18 x 3	70
RSS 14 4B	14	4.0 x 14.0	0.120	12.2	305	9.4	250	7.6	195	8	3/4 x 18 x 3	90
RSS 14 4-5B	14	4.5 x 14.0	0.120	16.2	405	12.8	320	10.3	260	8	3/4 x 18 x 3	95
RSS 15 4-5B	15	4.5 x 15.0	0.120	13.1	330	10.2	265	8.2	205	8	3/4 x 18 x 3	96
RSS 16 3B	16	3.0 x 16.0	0.120	4.6	125	3.2	100	2.3	60	8	3/4 x 18 x 3	80
RSS 16 4B	16	4.0 x 16.0	0.120	9.6	250	7.4	185	5.9	150	8	3/4 x 18 x 3	100
RSS 16 4-5B	16	4.5 x 16.0	0.120	13.1	330	10.2	265	8.2	205	8	3/4 x 18 x 3	105
RSS 18 3B	18	3.0 x 18.0	0.120	3.4	90	2.3	60	1.4	70	8	3/4 x 18 x 3	90
RSS 18 4B	18	4.0 x 18.0	0.120	7.6	190	5.7	180	4.5	130	8	3/4 x 18 x 3	110
RSS 18 4-5B	18	4.5 x 18.0	0.120	10.5	265	8.2	210	6.5	165	8	3/4 x 18 x 3	115
RSS 20 3B	20	3.0 x 20.0	0.120	2.4	100	1.4	75	—	—	8	3/4 x 18 x 3	100
RSS 20 4B	20	4.0 x 20.0	0.120	6.0	150	4.45	150	3.45	125	8	3/4 x 18 x 3	120
RSS 20 4-5B	20	4.5 x 20.0	0.120	8.5	215	6.6	165	5.2	130	8	3/4 x 18 x 3	130
RSS 20 5B	20	5.0 x 20.0	0.120	11.75	300	9.1	230	7.25	180	8	3/4 x 18 x 3	145
RSS 22 4-5B	22	4.5 x 22.0	0.120	4.8	130	3.6	90	2.7	90	8	3/4 x 18 x 3	134
RSS 25 4B	25	4.0 x 25.0	0.120	2.85	100	1.95	75	1.35	75	8	3/4 x 18 x 3	145
RSS 25 4-5B	25	4.0 x 25.0	0.120	4.8	130	3.6	90	2.7	90	8	3/4 x 18 x 3	145
RSS 25 5B	25	5.0 x 25.0	0.120	7.25	180	5.5	150	4.25	150	8	3/4 x 18 x 3	180
RSS 30 4-5B	30	4.5 x 30.0	0.120	2.3	80	1.5	75	1.0	60	8	3/4 x 18 x 3	185
RSS 30 5B	30	5.0 x 30.0	0.120	4.2	150	3	125	2.25	100	8	3/4 x 18 x 3	210

Ordering Information: See page 552

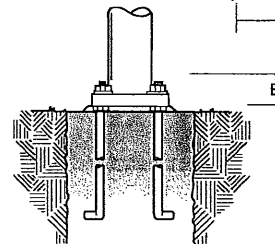
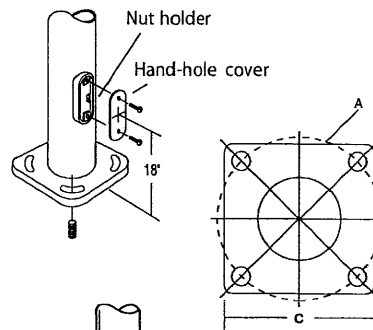
NOTE: Poles are available only in U.S.

INSTALLATION NOTES:

Installation requires grout to be packed under base to ensure full contact with foundation. Factory-supplied templates must be used when setting anchor bolts. Lithonia Lighting will not accept claim for incorrect anchorage placement due to failure to use Lithonia Lighting factory templates. Do not erect poles without having fixtures installed. If poles are stored outside, all protective wrapping must be removed immediately to prevent finish damage.

NOTES:

- Mounting arrangement: (PT) open top accepts KK(R); (T20) 2-3/8" OD (2" NPS).
- Drill mounting: (DM19) 1 fixture at 90°; (DM28) 2 fixtures at 180°.
- Options, see page 576.
- Brackets, see page 578.
- Bolt lengths described are nominal. Actual bolt lengths may vary.
- Direct burial option available, consult factory.
- 3-bolt bases available.
- Galvanized anchor bolts available, consult factory.
- Consult factory if product must meet "Buy America" specifications.



Pole Data

Shaft base size	Bolt circle A	Bolt projection B	Base square C	Anchor bolt description	Template number
3"	8"	3-1/4" x 3-1/2"	8"	AB18-0	PJ50041
4"	8"	3-1/4" x 3-1/2"	8"	AB18-0	PJ50041
4-1/2"	8"	3-1/4" x 3-1/2"	8"	AB18-0	PJ50041
5"	8"	3-1/4" x 3-1/2"	8"	AB18-0	PJ50041

Enclosed Fiberglass Housing

Intended Use

For low to medium mounting heights and harsh environments where dust, dirt, humidity or moisture is present. Ideal for canopies, shipping docks, refrigerated areas, food processing and other non-hazardous environments.

Features

Impact-resistant, UV-stabilized, reinforced polyester fiberglass housing. Shatter-resistant 15% DR acrylic diffuser standard, high impact 50% DR available. Poured-in gasketing provides a continuous seal between housing and diffuser. Captive, corrosion-resistant, cam-action latches secure the diffuser. Stainless steel (STSL) latches also are available.

Ballast – Thermally protected, resetting, Class P, HPF, non-PCB, UL Listed, CSA Certified ballast is standard. Sound rating depends on lamp/ballast combination.

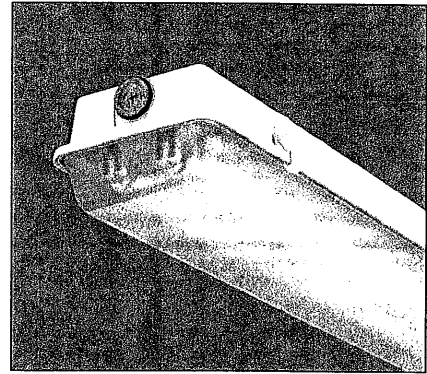
Wiring and Electrical – AWM, TFN or THHN wire used throughout, rated for required temperatures.

Mounting – For unit or row installations, surface (ceiling or wall) or suspended mounting.

Listings

120V, 277V and MVOLT are UL Listed and CSA Certified (standard). See Options for 347V and NOM Certified. DM is damp location, DMW is wet location listed for covered ceiling applications. Compliance to FDA/USDA requirements and/or NSF splash-zone certification (DMW only). For more NSF information, see page 733.

DM DMW



Example: DM 2 32 MVOLT GEB10IS

Ordering Information

Series	Number of lamps	Lamp type	Diffuser type
DM Damp location	1	32 32W T8 (48")	(blank) Acrylic, 15% DR
DMW Wet location		96T8 59W T8 slimline (96")	AR High-impact acrylic, 50% DR
Fortandem double-length unit, add prefix T. Example: TDM		96T8HO 86W T8 380mA (96")	DP Deep acrylic, 15% DR ³
	2	54T5 54W T5 (48") ²	ARDP Deep high-impact acrylic, 50% DR ³
	3 ¹		

Not included.

Voltage	Options/Accessories ^{1,2}
MVOLT	1/3 One 3-lamp ballast
120	1/4 One 4-lamp ballast
277	GEB10IS T8 electronic ballast, instant start
347	GEB10RS T8 electronic ballast, rapid start
	BCD Mounting bracket to chainhang DM/DMW (2 per package, excludes chain) ⁴
	HC Wire hook and 36" chain set (2 per package) ⁴
	WLF Field-installable wet location fittings to stem-hang DMW on ½" rigid conduit (2 per package). For factory-installed fittings on top, order WLF as an option.
	CSA CSA Certified (347V only)
	NOM NOM Certified

See page 113 for others.

Availability and Dimensions						
Series	Lamps per cross section	Lamps per fixture	Lamp type	Width in. (cm)	Depth in. (cm)	Length in. (cm)
DM, DMW	1, 2, 3 ¹	1, 2, 3	32	7 ⁵ / ₈ (18.4)	4 ³ / ₈ (9.5)	50 (127.0)
DM, DMW (DP or ARDP)	1, 2, 3 ¹	1, 2, 3	32	7 ⁵ / ₈ (18.4)	5 ⁵ / ₈ (13.3)	50 (127.0)
TDM, TDMW	1, 2	2, 4	32	7 ⁵ / ₈ (18.4)	5 ⁵ / ₈ (13.3)	98 (248.9)
DM, DMW	1, 2	1, 2	96T8HO	7 ⁵ / ₈ (18.4)	5 ⁵ / ₈ (13.3)	98 (248.9)
DM, DMW	1, 2	1, 2	54T5	7 ⁵ / ₈ (18.4)	5 ⁵ / ₈ (13.3)	98 (248.9)
TDM, TDMW	1, 2	1, 2	54T5	7 ⁵ / ₈ (18.4)	5 ⁵ / ₈ (13.3)	98 (248.9)

NOTES:

- 3-lamp models only available with T8 lamp source.
- Must use ACNS90 ballast.
- Deep lens is standard on 4" slimline, HO (800mA) and 8" fixtures. To match deep appearance on 4" rapid start, order DP or ARDP option.
- Order accessories as separate catalog number.

lightquick^{XD}
Express delivery products.
See page 11 for details about LightQuick XD.

Description
DMW 2 32 MVOLT GEB10IS



Catalog Number	
Notes	Type

FEATURES & SPECIFICATIONS

INTENDED USE

Motion activated security lighting for residential or commercial building perimeters.

CONSTRUCTION

Flood kit has decorative die cast aluminum lamp shields and mounting plate. Sensor head is die cast aluminum with color matched lens and protective metal grill. Lamp holders and sensor can be aimed in the field without the use of tools. Dark bronze (DDB) finish is standard. Optional white (DWH) finish is available.

SENSOR OPERATION

Coverage zone is 270° with a detection range up to 100 feet. Sensor has dual LED indicators to confirm proper operation and deter intruders. Sensor features include dusk-to-dawn operation, power on test mode, manual override, sensitivity/time adjustment, internal lens blinder system, solar tracking, dimmer, and adjustable photo control which sets the amount of darkness it takes for the motion sensor to activate. All sensor adjustments can be done without tools and are protected by a covered, recessed control compartment under the sensor.

ELECTRICAL

Up to 300 watt, PAR38 maximum incandescent (150 watt max per socket). 110-120 volt operation. Surge protection is built into sensor operation and withstands up to 6000 volts. Sensor has capability of switching alternate sources up to 1000 watt max (including 2x PAR lamps).

SOCKET

Lamp holders contain porcelain, medium base sockets.

INSTALLATION

Flood kits are for wall or eave mounting. Round mounting plate fits standard 4" round or square outlet boxes. Plate has one additional 1/2" NPT threaded knockout. Center mounted backplate with adjustable crossbar for easy installation. Gasket seals backplate to mounting surface. All mounting hardware included.

LISTING

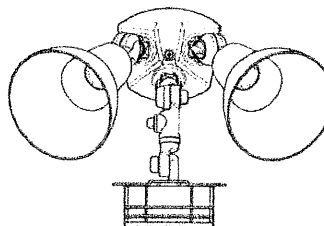
UL listed for wet locations. Listed and labeled to comply with U.S. and Canadian standards.

Motion Activated Security Lighting MSP270 FK

Eave or Wall Mounting

300W

8' to 12' Mounting



Specifications

Measurements vary with orientation

Height: 9 (22.9)

Width: 15 (38.1)

Depth: 9-1/2 (24.1)

Weight: 3.1 lbs.(1.4 kgs)

All dimensions are inches (centimeters) unless otherwise specified.

ORDERING INFORMATION

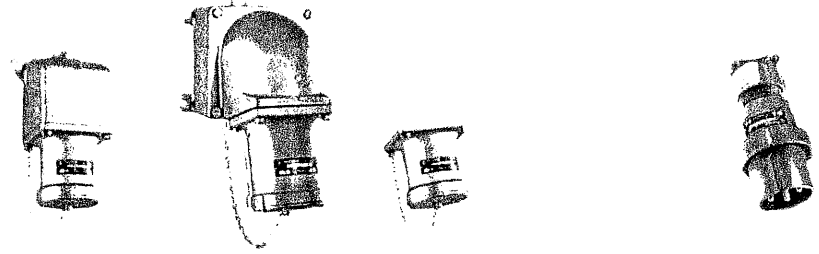
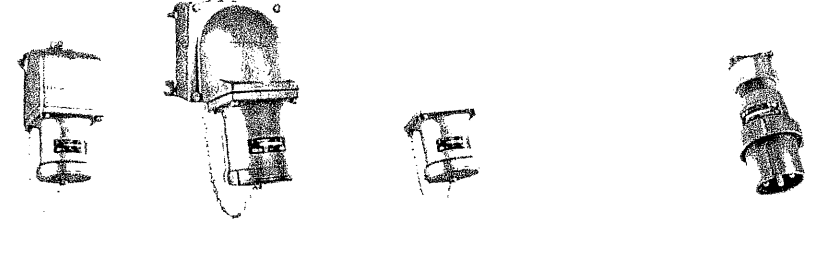
Choose the boldface catalog nomenclature that best suits your needs and write it on the appropriate line. Order accessories as separate catalog numbers (shipped separately).

Example: **MSP270 FK I DWH L/LP**

MSP	FK	I		L/LP
Series	PAR holder	Wattage	Options	Lamps
MSP270	FK Twin lamp shields	I 300W/PAR 38 max	DDB Dark bronze (standard) DWH White	L/LP Lamps not included

AE Series 60 Amp Pin and Sleeve Receptacles and Plugs: Weatherproof or Raintight

250 Volt D.C., 600 Volt A.C. Pressure Wire Terminals.
Wire Size Range: #8—#4

Description			Catalog Number				
Spring Door Receptacles—Weatherproof							
Grounding Style	Wire/Pole	Hub Size, Inches	Receptacle with AEE Mounting Box	Receptacle with AJA Mounting Box	Receptacle Only	Plug Cable Dia., Inches	Clamping Ring Plug
Style 1	2W,2P	1	AEE6213	AEEA6213	AE621	1.000 & 1.312	AEP6252
		1-1/4	AEE6214	AEEA6214			
	3W,3P	1	AEE6313	AEEA6313	AE631	1.000 & 1.312	AEP6352
		1-1/4	AEE6314	AEEA6314			
	4W,4P	1-1/4	AEE6414	AEEA6414	AE641	1.000 & 1.312	AEP6452
		1-1/2	AEE6415	AEEA6415			
Style 2	2W,3P	1	AEE6323	AEEA6323	AE632	1.000 & 1.312	AEP6362
		1-1/4	AEE6324	AEEA6324			
	3W,4P	1-1/4	AEE6424	AEEA6424	AE642	1.000 & 1.312	AEP6462
		1-1/2	AEE6425	AEEA6425			
Screw Cap Receptacles—Raintight							
Grounding Style	Wire/Pole	Hub Size, Inches	Receptacle with AEE Mounting Box	Receptacle with AJA Mounting Box	Receptacle Only	Plug Cable Dia., Inches	Clamping Ring Plug
Style 1	2W,2P	1	AEE6273	AEEA6273	AE627	1.000 & 1.312	AEP6252
		1-1/4	AEE6274	AEEA6274			
	3W,3P	1	AEE6373	AEEA6373	AE637	1.000 & 1.312	AEP6352
		1-1/4	AEE6374	AEEA6374			
	4W,4P	1-1/4	AEE6474	AEEA6474	AE647		AEP6452
		1-1/2	AEE6475	AEEA6475			
Style 2	2W,3P	1	AEE6383	AEEA6383	AE638	1.000 & 1.312	AEP6362
		1-1/4	AEE6384	AEEA6384			
	3W,4P	1-1/4	AEE6484	AEEA6484	AE648	1.000 & 1.312	AEP6462
		1-1/2	AEE6485	AEEA6485			

Technical Data and Specifications

Table 7-1. Dimensions and Shipping Carton Information

Description	Dimensions in Inches (mm)			Carton Quantity	Weight Lbs. (kg)	Catalog Number	Price U.S. \$
	Height	Width	Depth				
Metallic/Galvanized Steel Enclosure							
30 A Fused	8.70 (220.9)	5.40 (137.2)	3.15 (80.0)	10	27 (12)	DPF221R	
60 A Fused	8.70 (220.9)	5.40 (137.2)	3.15 (80.0)	10	27 (12)	DPF222R	
60 A Non-Fused	8.70 (220.9)	5.40 (137.2)	3.15 (80.0)	10	27 (12)	DPU222R	
60 A Molded Case Switch	8.60 (218.4)	5.30 (134.6)	3.74 (95.0)	10	34 (15)	DPB222R	
60 A Non-Fused with 1/2-inch wire harness	14.75 (374.6)	12.50 (317.5)	4.00 (101.6)	1	6 (3)	DPU222R12W ①	
60 A Non-Fused with 3/4-inch wire harness	14.75 (374.6)	12.50 (317.5)	4.00 (101.7)	1	6 (3)	DPU222R34W ①	
60 A Non-Fused with 20 A ground fault receptacle	13.00 (330.2)	7.50 (190.5)	4.75 (120.7)	1	8 (4)	DPU222RGF20 ①	
30 A Fused with 20 A ground fault receptacle	13.00 (330.2)	7.50 (190.5)	4.75 (120.7)	1	8 (4)	DPF221RGF20 ①	
60 A Fused with 20 A ground fault receptacle	13.00 (330.2)	7.50 (190.5)	4.75 (120.7)	1	8 (4)	DPF222RGF20 ①	
60 A Molded Case Switch 3-Phase 240 V	8.60 (218.4)	5.30 (134.6)	3.74 (94.9)	1	4 (2)	DPU362R	
60 A Non-Fused with 15 A ground fault receptacle	13.00 (330.2)	7.50 (190.5)	4.75 (120.7)	1	8 (4)	DPU222RGF15	
30 A Fused with 15 A ground fault receptacle	13.00 (330.2)	7.50 (190.5)	4.75 (120.7)	1	8 (4)	DPF221RGF15	
60 A Fused with 15 A ground fault receptacle	13.00 (330.2)	7.50 (190.5)	4.75 (120.7)	1	8 (4)	DPF222RGF15	
Non-Metallic/Polycarbonate Enclosure							
30 A Fused	8.63 (219.0)	5.00 (127.0)	3.50 (88.9)	10	15 (7)	ACD221RNM-A2	
60 A Fused	8.63 (219.0)	5.00 (127.0)	3.50 (88.9)	10	15 (7)	ACD222RNM-A2	
60 A Non-Fused	8.63 (219.0)	5.00 (127.0)	3.50 (88.9)	10	15 (7)	ACD222URNM-A2	
60 A Molded Case Switch	8.63 (219.0)	5.00 (127.0)	3.50 (88.9)	10	18 (8)	B60NARNM-A2	

① Cutler-Hammer Quick-Pro designated item.

Note: Refer to Page 7-7 for prices.

7

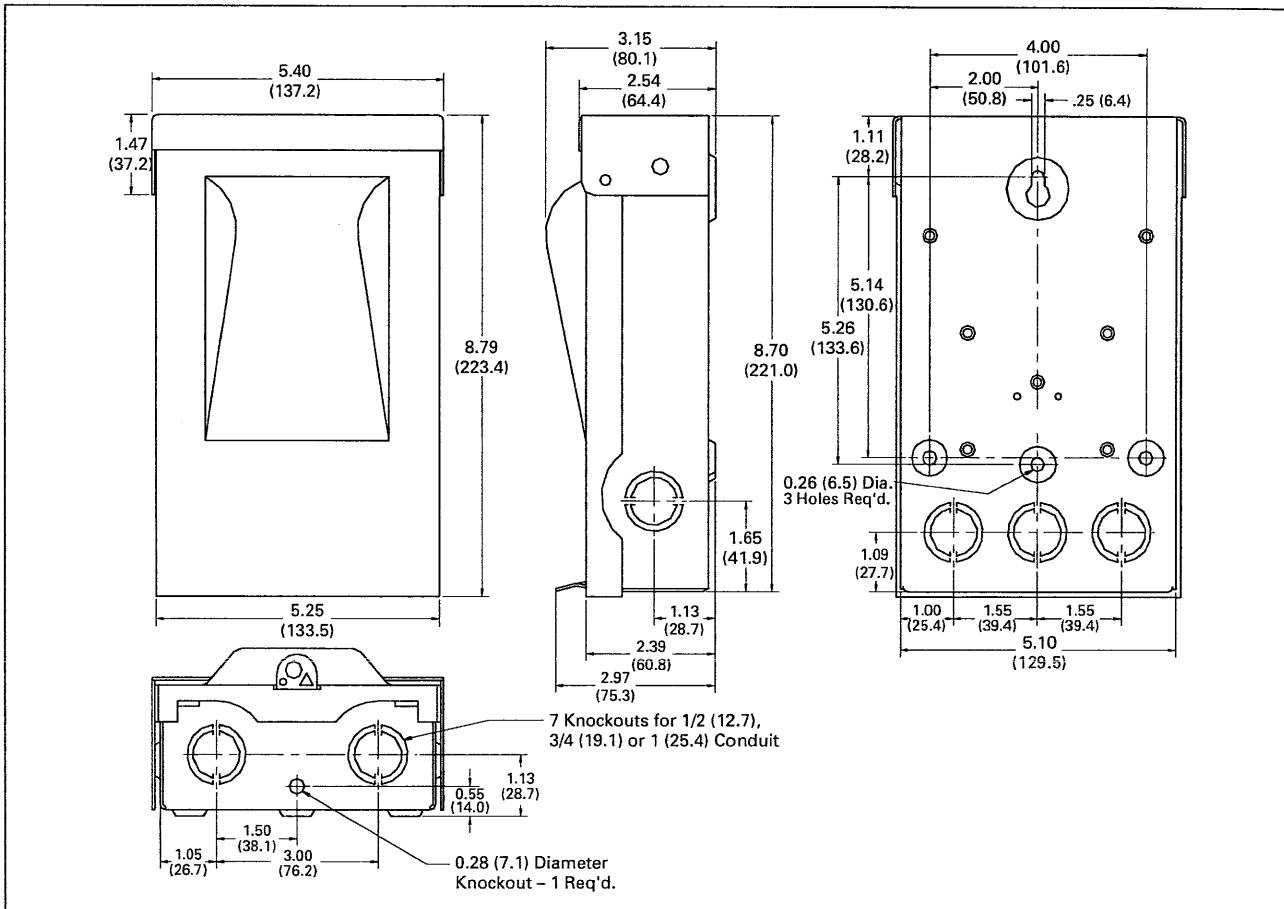
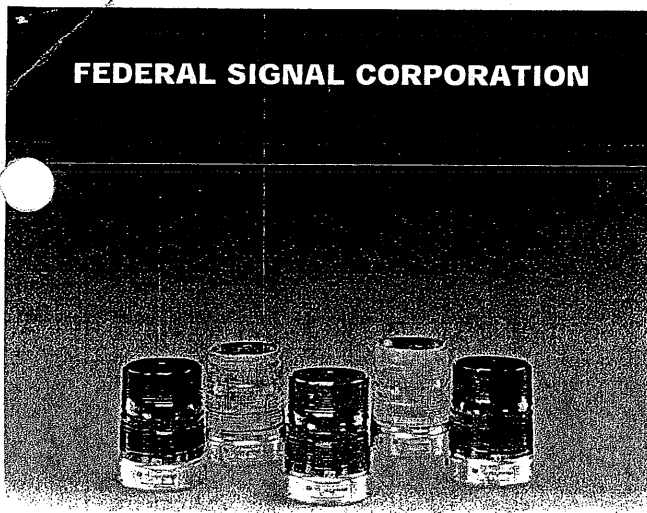


Figure 7-1. DPF221R, DPF222R, DPU222R, DPU222R12W and DPU222R34W



Starfire® Strobe Warning Lights

Models 131ST and 131DST

OUR BRIGHTEST MEDIUM DUTY STROBE LIGHT

- Available in 12-24VDC, 120VAC and 240VAC
- Five dome colors
- 10,000 hour strobe tube
- Single or double flash strobe
- 1/2-inch pipe mount
- UL and cUL Listed, CSA Certified for indoor/outdoor use
- Type 3R, IP45 enclosure

Federal Signal's Starfire® strobe warning lights are available in single-flash (131ST) and double-flash (131DST) models. Through precise timing of the strobe flash, the double flash unit produces 1,200 effective candlepower; the single flash unit produces 1,000 effective candlepower.

Starfire models are available in 12-24VDC, 120VAC (50/60Hz) and 240VAC (50/60Hz). All units are less than nine inches high and six inches in diameter, but powerfully effective.

Starfire strobe warning lights contain their own strobe power supply in the base of the light. The strobe flash tube is mounted in an eight-pin octal socket base. The fresnel dome stands up to impact and abuse and is available in amber, blue, clear, green and red. The base of the light is made of corrosion-resistant anodized aluminum. Each Starfire model comes with a standard 1/2-inch pipe mount. An optional surface mount can be ordered.

Because of its convenient size and intense light output, the Starfire strobes can be used for multiple applications. Excellent for in-plant use, the Models 131ST/DST warn of hazardous conditions, mark dangerous areas (either permanently or temporarily) and mounts on lift trucks, cranes and other moving devices. These powerful strobes can be used on emergency, utility, maintenance or any other vehicle requiring emergency warning.

Model	Voltage	Operating Current	Flash Rate/Minute	Candlepower		Mount ⁴
				Peak ¹	ECP ²	
131DST	12-24VDC	3.0-1.9 amps	80 ³	1,000,000	1,200	1/2" Pipe
131DST	120VAC	0.60 amps	80 ³	1,000,000	1,200	1/2" Pipe
131DST	240VAC	0.30 amps	80 ³	1,000,000	1,200	1/2" Pipe
131ST	12-24VDC	2.75-1.25 amps	80	2,000,000	1,000	1/2" Pipe
131ST	120VAC 50/60Hz	0.60 amps	80	2,000,000	1,000	1/2" Pipe
131ST	240VAC 50/60Hz	0.30 amps	80	2,000,000	1,000	1/2" Pipe



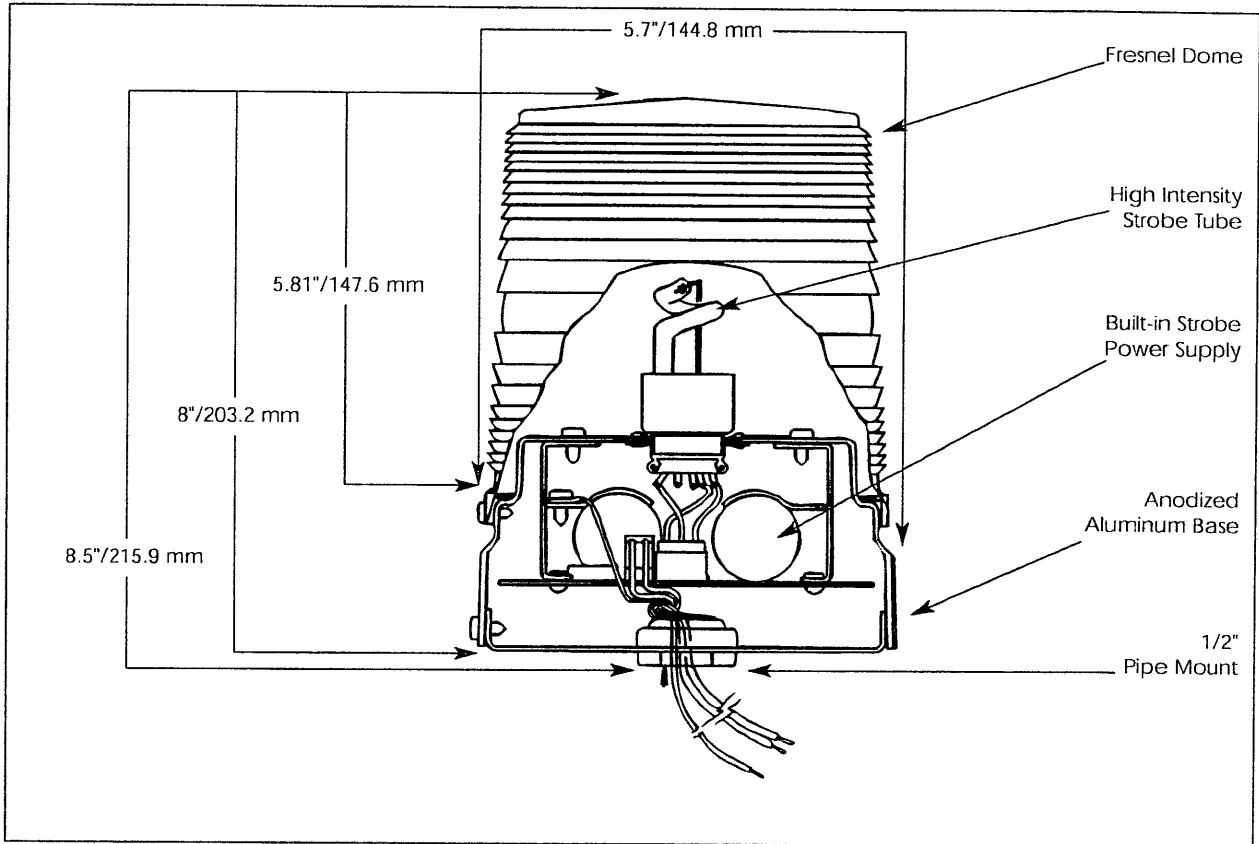
¹ Peak candlepower is the maximum light intensity generated by a flashing light during its light pulse

² ECP (Effective Candlepower) is the intensity that would appear to an observer if the light were burning steadily

³ Double Flash

⁴ Magnet and surface mount kits available

STARFIRE® STROBE WARNING LIGHT (131ST/131DST)



SPECIFICATIONS

Lamp Life*:	10,000 Hours	10,000 Hours
Lamp Style:	Strobe	Strobe
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	2.0 lbs.	1.0 kg
Shipping Weight:	3.4 lbs.	1.5 kg
Height:	8.50"	215.9 mm
Width:	5.70"	144.8 mm

* Optimal hours under ideal conditions.

HOW TO ORDER

- Specify model, voltage and color
- Specify options:
 Corner Bracket (LCMB2)
 Wall Bracket (LWMB2)
 Surface Mount (K8444A211B)
- Please refer to Model Number Index 131ST/131DST beginning on page 376

REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Dome, Amber	K8422B428A-01	PC Assembly, 12-24VDC (131ST)	K2001260C
Dome, Blue	K8422B428A-02	PC Assembly, 120VAC (131ST)	K2001188C
Dome, Clear	K8422B428A	PC Assembly, 240VAC (131ST)	K2001188C-01
Dome, Green	K8422B428A-03	PC Assembly, 12-24VDC (131DST)	K2001265D
Dome, Red	K8422B428A-04	PC Assembly, 120VAC (131DST)	K200865G
Strobe Tube	K8107178A	PC Assembly, 240VAC (131DST)	K200865G-01
Surface Mount Kit	K8444A211B	Dome Gasket	K8444A193A

NEMA Full Voltage Power Devices

NEMA Rated Full Voltage Starters - Magnetic

Section 1

CR306, CR386 Magnetic Starters

Non-reversing, Non-combination, Open, NEMA Type 1, 3R, 12² 4/4X.

NEMA Sizes 00-9 with Thermal Overload Relay

600 Volts Maximum 50/60 Hertz

Single-Phase

List price includes a holding interlock. One heater (per starter) for sizes 00-2 and two heaters (per starter) for size 3 should be ordered as separate items. See pages 1-155 to 1-161 for selection. List price \$9.00 each, GO-10H.

CR306, Single-Phase Magnetic Starters

NEMA Size	Continuous Ampere Rating ¹	Voltage	Horsepower	Open Type		NEMA Type 1		NEMA Type 3R		NEMA Type 12 ²		NEMA Type 4/4X ²	
				Product Number	List Price	Product Number	List Price	Product Number	List Price	Product Number	List Price	Product Number	List Price
00	9	115-120	1/3	H002	\$162.00	H102	\$174.00	Use NEMA Size 0		Use NEMA Size 0		Use NEMA Size 0	
00	9	230-240	1	H003	\$162.00	H103	\$174.00	Use NEMA Size 0		Use NEMA Size 0		Use NEMA Size 0	
0	18	115-120	1	J002	\$183.00	J102	\$195.00	J602	\$267.00	J202	\$267.00	J402	\$405.00
0	18	230-240	2	J003	\$183.00	J103	\$195.00	J603	\$267.00	J203	\$267.00	J403	\$405.00
1	27	115-120	2	K002	\$213.00	K102	\$225.00	K602	\$297.00	K202	\$297.00	K402	\$441.00
1	27	230-240	3	K003	\$213.00	K103	\$225.00	K603	\$297.00	K203	\$297.00	K403	\$441.00
1P	36	115-120	3	K002BMA	\$279.00	K102BKA	\$291.00	K602BKA	\$363.00	K202BKA	\$363.00	K402BKA	\$507.00
1P	36	230-240	5	K003BMA	\$279.00	K103BKA	\$291.00	K603BKA	\$363.00	K203BKA	\$363.00	K403BKA	\$507.00
2	45	115-120	3	L002	\$387.00	L102	\$447.00	L602	\$579.00	L202	\$579.00	L402	\$879.00
2	45	230-240	7 1/2	L003	\$387.00	L103	\$447.00	L603	\$579.00	L203	\$579.00	L403	\$879.00
3	90	115-120	7 1/2	M002	\$642.00	M102	\$762.00	M602	\$918.00	M202	\$918.00	M402	\$1374.00
3	90	230-240	15	M003	\$642.00	M103	\$762.00	M603	\$918.00	M203	\$918.00	M403	\$1374.00
3	90	460-480	25	M004	\$642.00	M104	\$762.00	M604	\$918.00	M204	\$918.00	M404	\$1374.00
3	90	575-600	25	M005	\$642.00	M105	\$762.00	M605	\$918.00	M205	\$918.00	M405	\$1374.00

¹Motor full load current should not exceed continuous ampere rating of the starter.

²NEMA Type 4/4X and 12 starters are UL listed to include Class 11, Groups F and G, Division 2 only and Class III hazardous locations.



NEMA Full Voltage Power Devices

Section 1

NEMA Rated Full Voltage Starters - Magnetic

CR306, CR307, CR308, CR309, CR310, CR311, CR387, CR390, CR407, CR408, CR410, CR411, CR487, CR490 Magnetic Starters

Factory-installed Modifications

NEMA Sizes 00-6

Starter Modifications—Factory installed

Factory-installed modifications are available for those starters as indicated in the tables. Shown here are the **List Price Additions** to standard catalog listed forms and are subject to **GO-10G** discount. Prices shown are not to be used as separate selling prices. For field modification kits see pages 1-126 to 1-133. Supplying combinations of these items may affect standard enclosure dimensions and type of construction. In extreme instances, it may not be possible to furnish all of them within the limitations of a starter design.

Type of Installation/ Starters	Item No.	Modifications	Enclosure Type	Starter NEMA Size									
				00	0	1	2	3	4	5	6		
				List Price Addition, GO-10G									
Pilot Devices Mounted in Cover or Flange of CR306 CR307 CR308 CR387 CR407 CR408 CR487	1	Push Buttons											
	1a	START-STOP ¹	1	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$132.00	
	1b	OFF-ON ¹	1	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$132.00	
	1c	START-STOP (HEAVY-DUTY, CR104P)	Any	²	\$132.00	\$132.00	\$132.00	\$132.00	\$132.00	\$132.00	\$132.00	\$132.00	
	1d	START Push Button and H-O-A Selector Switch (HEAVY-DUTY, CR104P)	Any	²	\$264.00	\$264.00	\$264.00	\$264.00	\$264.00	\$264.00	\$264.00	\$264.00	
	1e	Single Push Button, Unwired (Specify Marking) (HEAVY-DUTY, CR104P)	1	²	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	
		Single Push Button, Unwired (Specify Marking) (HEAVY-DUTY, CR104P)	Any	²	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00	\$90.00	
	1f	Single Illuminated Push Button, Unwired (Specify Marking) (HEAVY-DUTY, CR104P)	Any	²	\$180.00	\$180.00	\$180.00	\$180.00	\$180.00	\$180.00	\$180.00	\$180.00	
	2	Selector Switches											
	2a	HAND-OFF-AUTO ^{1,3}	1		\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$132.00
		HAND-OFF-AUTO ^{1,3} (HEAVY-DUTY, CR104P)	Any	²	\$132.00	\$132.00	\$132.00	\$132.00	\$132.00	\$132.00	\$132.00	\$132.00	
	2b	OFF-ON ¹	1		\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$48.00	\$132.00
		OFF-ON (HEAVY-DUTY, CR104P)	Any	²	\$132.00	\$132.00	\$132.00	\$132.00	\$132.00	\$132.00	\$132.00	\$132.00	
	2c	Single Selector Switch Maintained (Specify Marking)											
		Two- or Three-Position (Specify Position) ⁴ (HEAVY-DUTY, CR104P)	Any	²	\$132.00	\$132.00	\$132.00	\$132.00	\$132.00	\$132.00	\$132.00	\$132.00	
		Four-Position ⁴ (HEAVY-DUTY, CR104P)	Any	²	\$150.00	\$150.00	\$150.00	\$150.00	\$150.00	\$150.00	\$150.00	\$150.00	
	2d	Key Operated Maintained (Specify Marking and Key-Removal Position)											
		Two- or Three-Position ⁴ (HEAVY-DUTY, CR104P)	Any	²	\$168.00	\$168.00	\$168.00	\$168.00	\$168.00	\$168.00	\$168.00	\$168.00	
3	Nonstandard Markings (Specify)	Any	²	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00	\$9.00		

¹ Factory-installed modification kit for sizes 00-5.

² Not available in NEMA Size 00. Use Size 0 starter and modification.

³ This modification not available with items 1a, 1b or 1c because STOP push button would not work in AUTO position; instead order modification 1d.

⁴ Specify CR104 operator and contact block by product number.

Control Circuit Fusing

Per the NEC and UL508 Section 18.2 - Control Circuit Fuses must be used when the branch circuit protective device rating is too large to serve as protection for the control circuit. This depends on the control wire size and whether all control circuit wires are within the enclosure. See table below:

Provide supplemental control circuit protection if control circuits with wires longer than 12 inches are connected to branch circuit protection exceeding the ratings below

Control Circuit Wire Size (AWG)	Maximum Branch Circuit Protection Rating (Amperes)		Maximum Supplemental Control Circuit Protection Rating (Amperes)
	Conductors within Enclosure	Conductors outside Enclosure	
22	12	3	3
20	20	5	5
18	25	7	7
16	40	10	10
14	100	45	20
12	120	60	25

The factory must provide this protection, if the circuit provided by the factory requires the fuses. The factory will provide control circuit fuses in enclosed starters and contactors with pilot devices, control relays or other control components that are factory wired; when used with line voltage control; when the size listed below is being supplied.

Non-combination starters (CR305, CR306, CR309, CR385, CR386)

Size 4 and above

Combination starters

Size 0-3 with Mag-Break Protector

Size 3 with:

-Circuit Breaker greater than 100 amps, or

-Fuse Clips greater than 100 amps, or

Size 4 and above with any circuit breakers, circuit protector or fuse clips.

Control Circuit fuses (Modification 9) must be added to the enclosed starter or contactor pricing.

All CPTs will be supplied with primary fuses. CPTs without primary fuses are no longer available.

When control circuit fuses are not factory supplied, customer provided wiring or branch circuit protection sizing to these contactors and starters may still require that the customer/installer add the fusing in the field. It will be the customer/installer's responsibility to ensure code compliance under these conditions.


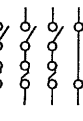
Heater Selection Tables: See pages 1-155 to 1-161



Product Selection

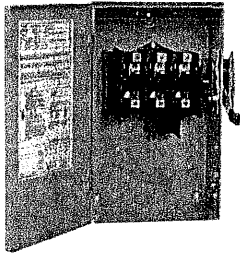
120/240 Vac General-Duty, Fusible, Single Throw

Table 8-41. 120/240 Vac General-Duty, Fusible, Single Throw

System	Ampere Rating	Fuse Type Provision	Maximum Horsepower Ratings ①			NEMA 1 Enclosure Indoor		NEMA 3R Enclosure Rainproof		
			Single-Phase ac		3-Phase ac	dc	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
			120 Volt	240 Volt	240 Volt	250 Volt				
3-Pole 3-Wire (Three Blades, Three Fuses) — 240 Vac										
	30	—	—	—	—	—	②	—	②	—
	60	—	—	—	—	—	②	—	②	—
	100	—	—	—	—	—	②	—	②	—
	200	—	—	—	—	—	②	—	②	—
	400	H	—	—	50 – 125	—	DG325FGK ③④	—	DG325FRK ③④	—
	600	H	—	—	75 – 200	—	DG326FGK ③④	—	DG326FRK ③④	—
4-Wire (Three Blades, Three Fuses, S/N) — 120/240 Vac										
	30	H	—	1-1/2 – 3	3 – 7-1/2	—	DG321NGB	—	DG321NRB	—
	60	H	—	3 – 10	7-1/2 – 15	—	DG322NGB	—	DG322NRB	—
	100	H	—	7-1/2 – 15	15 – 30	—	DG323NGB	—	DG323NRB	—
	200	H	—	15	25 – 60	—	DG324NGK	—	DG324NRK	—
	400	H	—	—	50 – 125	—	DG325NGK	—	DG325NRK	—
	600	H	—	—	75 – 200	—	DG326NGK	—	DG326NRK	—



- ① Maximum hp ratings apply only when dual element time delay fuses are used.
- ② Use 4-wire catalog numbers below.
- ③ Solid neutral bars are not included. Order separately from Table 8-1 on Page 8-5.
- ④ **WARNING!** Switch is not approved for service entrance unless a neutral kit is installed.

120/240 Vac General-Duty, Non-Fusible, Single Throw



DG322URB

Table 8-42. 120/240 Vac General-Duty, Non-Fusible, Single Throw

System	Ampere Rating	Maximum Horsepower Ratings			NEMA 1 Enclosure Indoor		NEMA 3R Enclosure Rainproof			
		Single-Phase ac		3-Phase ac	dc	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	
		120 Volt	240 Volt	240 Volt	250 Volt					
Non-Fusible — 2-Pole 2-Wire (Two Blades) — 240 Vac										
	30	2	3	—	—	—	DG221UGB ⑤	—	DG221URB ⑤	—
	60	3	10	—	—	—	DG222UGB ⑤	—	DG222URB ⑤	—
	100	—	15	—	—	—	DG223UGB ⑤	—	DG223URB ⑤	—
	200	—	—	—	—	—	⑥⑦	—	⑥⑧	—
3-Pole 3-Wire (Three Blades) — 240 Vac										
	30	2	3	7-1/2	—	—	DG321UGB ⑤	—	DG321URB ⑤	—
	60	3	10	15	—	—	DG322UGB ⑤	—	DG322URB ⑤	—
	100	—	15	30	—	—	DG323UGB ⑤	—	DG323URB ⑤	—
	200	—	15	60	—	—	DG324UGK ⑤	—	DG324URK ⑤	—
	400	—	—	125	—	—	DG325UGK ⑦	—	DG325URK ⑦	—
	600	—	—	200	—	—	DG326UGK ⑦	—	DG326URK ⑦	—

- ⑤ **WARNING!** Switch is not approved for service entrance unless a neutral kit is installed.
- ⑥ Use 3-wire catalog numbers below.
- ⑦ Drilled to accept field installed neutral kits.

Note: All general-duty safety switches are individually packaged.

Note: Accessories are limited in scope on general-duty safety switches. See Page 8-5 for availability. In addition, clear line shields are available as an accessory on 200 – 600 ampere general-duty switches. Catalog Numbers: 200 A = 70-7759-11, 400 A = 70-8063-8, 600 A = 70-8064-8.

Discount Symbol **22CD**

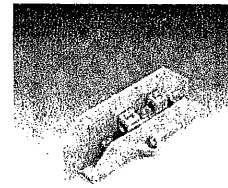
Options and Accessories

Table 8-1. Safety Switches — Accessories

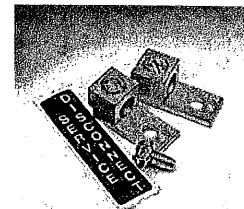
Description	Catalog Number	Price U.S. \$
Neutral Kits/Ground Kits 30 A DG 60 – 100 A DG 200 A DG, DH (NEMA 1, 3R Enclosures) 30 – 60 A DH 100 A DH 200 A DH (NEMA 4X, 12 Enclosures) 400 A DG, DH 600 A DG, DH 400 – 600 A Fusible DT, 800 – 1200 A DH 30 – 100 A DT 200 A DT 400 A Non-Fusible DT 600 A Non-Fusible DT	DG030NB DG100NB DG200NK DH030NK DH100NK DH200NK DS400NK DS600NK DS800NK DT100NK DT200NK DT400NK DT600NK	
Ground Lug Kits 30 – 100 A DG 30 – 100 A DH, DT ① 200 A DG, DH, DT 400 – 600 A DG, 400 – 1200 A DH, 400 – 800 A DT	DG030GB DS100GK DS200GK DS468GK	
Switching Neutral Bonding Kits ④ 30 – 100 A DT, 3P, 4P Non-Fusible 200 A DT, 3P, 4P Non-Fusible 400 A DT, 3P, 4P Non-Fusible 600 A DT, 3P, 4P Non-Fusible 800 A DT, 3P, 4P Non-Fusible	DT100BK DT200BK DT400BK DT600BK DT800BK	
Control Pole Kit (for 2P, 3P Switches) 400 – 600 A DG, 30 – 1200 A DH, 30 – 800 A DT	DS16CP	
Auxiliary Contact Kits All Switches (except 30 – 100 A DG) 1NO/1NC All Switches (except 30 – 100 A DG) 2NO/2NC NEMA 7/9 Switches (30 – 100 A) 1NO/1NC NEMA 7/9 Switches (30 – 100 A) 2NO/2NC NEMA 7/9 Switches (200 A) 1NO/1NC NEMA 7/9 Switches (200 A) 2NO/2NC	DS200EK1 DS200EK2 178C265G05 178C265G06 178C619G01 178C619G02	
Copper Lug Kits 30 A DH, DT ② 60 A DH, DT ② 100 A DH, DT ② 200 A DH ② 400 A DH (NEMA 4, 4X, 12 Enclosures) ③ 600 – 800 A DH (NEMA 4, 4X, 12 Enclosures) ③	DS16CL DS16CL DS36CL DS46CL DS56CL DS66CL	
Crimp Lug Pad Kit (NEMA 4, 4X, 12 Enclosures) 400 – 600 A DH ② 800 A DH ③ 400 – 800 A Neutral DH ④	DS56CK DS76CK DS800CNK	
Fuse Puller Kits 30 – 60 A DH ② 30 – 60 A DH ⑥ 100 A DH ② 200 A DH ②	DS30FP DS60FP DS100FP DS200FP	
"J" Fuse Adapter Kits 60 A 240 Volt DH ② 60 A DT and Receptacle Switches ② 400 A 600 Volt DT ⑥ 600 A 240 – 600 Volt DH, 600 A DG ③	DS22JK DS26JK DT400JK DS600JK	

- ① Ground bar kit is not listed on device publications.
- ② Order one kit for 3 poles.
- ③ Order one kit for each pole.
- ④ Order one kit per switch.
- ⑤ Receptacle switches.
- ⑥ Order one kit for 6 poles.

Note: Accessories are not applicable to NEMA 7/9 switches unless indicated otherwise.



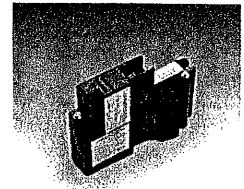
DH030NK



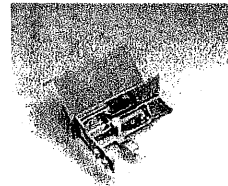
DS200GK



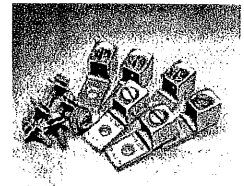
DT100BK



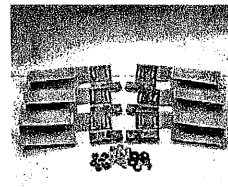
DS16CP



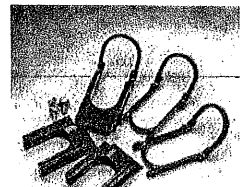
DS200EK1



DS36CL



DS56CK



DS60FP



DS22JK

Note: A factory installed ground lug is supplied on all NEMA 4, 4X and 12 safety switches, as well as all 400 ampere and higher NEMA 1 and 3R safety switches. A factory installed ground lug is also supplied on all Heavy-Duty NEMA 1 and 3R 30 – 200 ampere switches that do NOT have a factory installed neutral.

Discount Symbol **22CD**