





# Welcome to Lectro Components!

*Lectro Components Inc., as you know us today, evolved from very humble beginnings. Lee Jackels, with a nose for opportunity and a midwestern farmer work ethic, founded the company back in 1974.*

*Lee began his career in the electronics industry working in sales and saw enough business potential to risk quitting his job and start his own company out of his home. Lee and his wife Bonnie operated the business performing every business task from sales, deliveries, production and accounting. The business grew steadily and soon they were hiring staff to keep up with production. The business was clearly a success and the need for more space was imperative. In 1977, the now firmly established Lectro Components, moved to its first commercial building on Kay Street in Addison, Illinois. In a very short time, they found themselves expanding to the building next door to accommodate their ever increasing need for employees, inventory and the growing value added services being performed.*



*By 1981, the business was still growing and required yet another move. This time, to a larger facility on Westwood Street in Addison, but that too was soon outgrown through increased sales and production. It was time for Lectro Components to stand out on its own.*

*On February 1, 1985 (the 11th anniversary of Lectro's incorporation), the company relocated to its present facility at 154 Easy Street, in Carol Stream, IL. Lee had the foresight to build a large enough facility to accommodate any foreseeable growth in the near future, which is why he purchased the adjacent lot as well!*

*Today, Lectro Components is a well-established and respected member of the electronics distribution industry. Lectro specializes in terminal blocks, relays, timers, connectors and controls. In addition, the company has developed its own line of products for the building automation industry, sold under the Core Components brand name. Lectro has a progressive team of employees, trained to assist you with your application needs for features, quality, price and delivery.*

*Lee Jackels, is directly involved in the daily operations of the company by channeling his drive and dedication through to his management and employee teams. Lectro continues to grow in strength and reputation, while looking forward to the challenges of the next 25 years in a fast changing industry.*





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## How To Order

Orders may be placed by telephone, fax, or email anytime. All orders are processed Monday through Friday 8am to 5pm Central Time.

## Same Day Shipments

Orders for stock items placed by 3:30pm Central Time will be shipped same day.














## Returned Goods

Any returned material must have a Return Material Authorization (RMA) number to be considered for acceptance. We will accept a return request through our Customer Service Department by phone, fax, mail, or email.

## Terms & Conditions

Our payment terms are net 30 days. We accept American Express, Visa, Mastercard, and Discover cards. Freight and handling charges will be added to the customer invoice. All sales are subject to our Terms & Conditions of sale as set forth. It should be read carefully as it deals with among other items, warranty, changes, cancellations and delivery.

*For the latest versions of our Terms & Conditions and Return Policy, please visit our website at:  
[www.lectrocomponents.com](http://www.lectrocomponents.com)  
or call 800-323-2282.*

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# Control Transformers



Core Components designs and manufactures a wide range of high quality control transformers to suit many applications in the building automation, HVAC and lighting industries. Features such as resettable circuit breakers and color coded wires along with threaded hub and panel mounts make these transformers installation friendly. Listed on these pages are the most popular configurations.

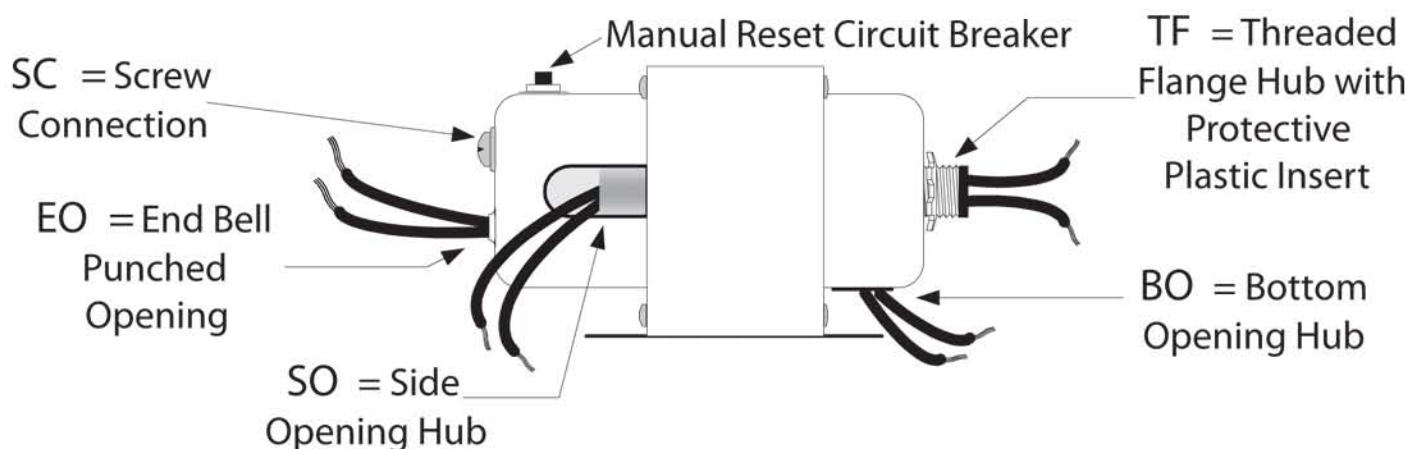
Core Components control transformers may have different combinations of the illustrated hub styles. The individual part styles are listed on the selection chart to the left. A part with a hub style "2TF" has a threaded flange on both the primary and secondary. A part with the hub style "1TF/1BO" has a threaded flange on the primary and a bottom opening on the secondary end bell. Single hub transformers have both the primary and secondary wires exiting the same side, and will only show one hub style.

An installation guide is supplied with all transformers.

## FEATURES

- Manual Reset Circuit Breakers (MRCB) \*
- Hub AND Foot Mounts \*
- Color Coded Lead Wires
- Stripped and Tinned Flying Leads
- Quick Connects
- Split Bobbin Design
- UL Recognized Class B Insulation system
- Class 2, Class 3, & General Purpose
- UL Listed or Recognized for USA / Canada

*\* on selected models*



## Open-Frame Transformers

Catalog #	VA	Core Part #	Primary	Secondary	MRCB	Hub Style	Approvals	Class
LE60025	40	OF-120-024-040-2BO	120	24	---	2BO	UL Listed	2
LE60050	40	OF-MUD-024-040-2BO	208/240	24	---	2BO	UL Recognized	2
LE60075	40	OF-MUB-024-040-2BO	120/208/240	24	---	2BO	UL Recognized	2
LE60100	50	OF-MUB-024-050-2BO	120/208/240	24	---	2BO	UL Recognized	2
LE60125	50	OF-MUA-024-050-2SO-CB	120/208/240/480	24	YES	2SO	UL Listed	2
LE60150	75	OF-MUD-024-075-2BO-CB	208/480	24	YES	2BO	UL Recognized	2
LE60175	75	OF-MUA-024-075-2SO-CB	120/208/240/480	24	YES	2SO	UL Recognized	2
LE60200	96	OF-MUA-024-100-2SO-CB	120/208/240/480	24	YES	2SO	UL Recognized	2





# Control Transformers



## Single Primary Transformers

Catalog #	VA	Core Part #	Primary	Secondary	MRCB	Hub Style	Approvals	Class
LE10473	20	024-024-020-TF	24	24	---	1TF	UL Listed	GP
LE11145	20	120-024-020-TF	120	24	---	1TF	UL Recognized	2
LE11177	20	120-024-020-2TF	120	24	---	2TF	UL Listed	2
LE03750	20	277-024-020-TF	277	24	---	1TF	UL Listed	2
LE10500	40	024-024-040-TF	24	24	---	1TF	UL Recognized	2
LE11200	40	120-024-040-2TF	120	24	---	2TF	UL Listed	2
LE11300	40	120-024-040-TF	120	24	---	1TF	UL Listed	2
LE11700	50	120-024-050-TF	120	24	---	1TF	UL Listed	2
LE11711	50	120-024-050-TF-CB	120	24	YES	1TF	UL Listed	2
LE11750	50	120-024-050-2TF	120	24	---	2TF	UL Listed	2
LE13050	50	277-024-050-2TF	277	24	---	2TF	UL Listed	2
LE13100	50	277-024-050-TF	277	24	---	1TF	UL Listed	2
LE11800	75	120-024-075-2TF-CB	120	24	YES	2TF	UL Listed	2
LE11900	75	120-024-075-TF-CB	120	24	YES	1TF	UL Listed	2
LE11957	85	120-024-075-TF-CB	120	24	YES	1TF	UL Listed	2
LE12000	96	120-024-100-2TF-CB	120	24	YES	2TF	UL Listed	2
LE12100	96	120-024-100-TF-CB	120	24	YES	1TF	UL Listed	2
LE12400	150	120-024-150-TF-CB	120	24	YES	1TF	UL Recognized	GP
LE12463	175	120-024-175-TFBO	120	24	---	1TF/1BO	UL Recognized	GP
LE12573	240	120-024-240-TFBO	120	24	---	1TF/1BO	UL Recognized	GP
LE12600	375	120-024-375-2BO	120	24	---	2BO	UL Recognized	GP

## Multiple Primary Transformers

Catalog #	VA	Core Part #	Primary	Secondary	MRCB	Hub Style	Approvals	Class
LE15337	40	MUB-024-040-2TF	120/208/240	24	---	2TF	UL Listed	2
LE16000	50	MUC-024-050-2TF-CB	120/240/277/480	24	YES	2TF	UL Listed	2
LE16550	50	MUC-024-050-TF-CB	120/240/277/480	24	YES	1TF	UL Listed	2
LE16927	50	MUC-024-050-TFSO-CB	120/240/277/480	24	YES	1TF/1SO	UL Listed	2
LE18100	50	MUC-120-050-2TF-CB	120/240/277/480	120	YES	2TF	UL Listed	2
LE47289	50	MUD-024-050-2TF	208/240	24	---	2TF	UL Listed	2
LE50000	50	MUE-024-050-TF-CB	120/208/240/277	24	YES	1TF	UL Listed	2
LE50400	50	MUF-024-050-TF-CB	208/240/277/480	24	YES	1TF	UL Listed	2
LE50441	50	MUF-120-050-TF-CB	208/240/277/480	120	YES	1TF	UL Listed	2
LE50427	50	MUF-120-050-2TF-CB	208/240/277/480	120	YES	2TF	UL Listed	2
LE15010	75	MUA-024-075-TFSO-CB	120/208/240/480	24	YES	1TF/1SO	UL Listed	2
LE15013	75	MUA-024-075-2TF-CB	120/208/240/480	24	YES	2TF	UL Listed	2
LE15550	75	MUA-024-075-TF-CB	120/208/240/480	24	YES	1TF	UL Listed	2
LE50207	75	MUG-024-075-TF-CB	120/208/277/480	24	YES	1TF	UL Listed	2
LE15022	96	MUA-024-100-TFSO-CB	120/208/240/480	24	YES	1TF/1SO	UL Listed	2
LE17000	96	MUC-024-100-2TF-CB	120/240/277/480	24	YES	2TF	UL Listed	2
LE17345	96	MUC-024-100-TFSO-CB	120/240/277/480	24	YES	1TF/1SO	UL Listed	2
LE17550	96	MUC-024-100-TF-CB	120/240/277/480	24	YES	1TF	UL Listed	2
LE50423	96	MUF-120-100-TF-CB	208/240/277/480	24	YES	1TF	UL Listed	2

# Multi-Tap Series

**CORE**  
COMPONENTS

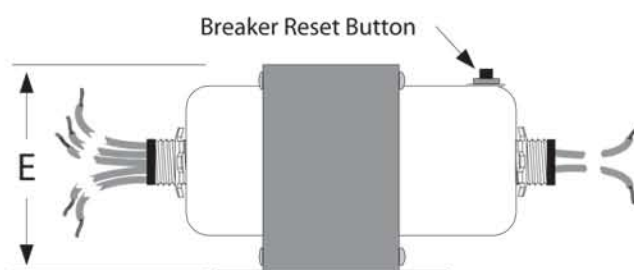
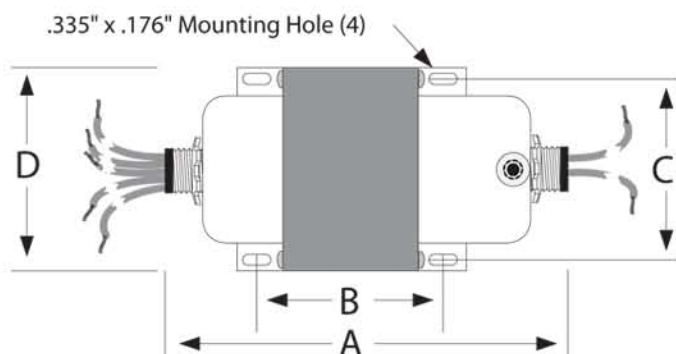
These voltage stepdown transformers are designed to provide a nominal control voltage from any one of the selected primaries. They are ideal for many BAS and HVAC industry applications. Parts should be installed in compliance with local and national codes.

## FEATURES

- Multi-Tap Primary Connections
- Manual Reset Circuit Breaker
- Color Coded Lead Wires
- Hub or Foot Mountable
- Stripped and Tinned Wire Ends
- Fully Enclosed with Metal End Bells



LE15013



Catalog #	A	B	C	D	E	Weight
LE16000	3.48	1.91	2.00	2.52	3.06	2.95
LE17000	4.25	2.59	2.00	2.52	3.06	4.54
LE15013	3.91	2.35	2.00	2.52	3.06	3.71
LE18100	3.46	1.86	2.00	2.52	3.04	2.95



Catalog #	LE16000	LE17000	LE15013	LE18100
MFG #	MUC-024-050-2TF-CB	MUC-024-100-2TF-CB	MUA-024-075-2TF-CB	MUC-120-050-2TF-CB
Primary	120/240/277/480V	120/240/277/480V	120/208/240/480V	208/240/277/480V
Secondary	24V	24V	24V	120V
VA Rating	50VA	96VA	75VA	50VA
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Breaker	Manual Reset	Manual Reset	Manual Reset	Manual Reset
Mounting	Foot & Hub	Foot & Hub	Foot & Hub	Foot & Hub
Lead Wires	9" Colored Leads	9" Colored Leads	9" Colored Leads	9" Colored Leads
Approvals	cULus Listed	cULus Listed, CSA	cULus Listed, CSA	cULus Listed
Class	Class 2, Class 3	Class 2, Class 3	Class 2, Class 3	General Purpose



# Multi-Tap Series

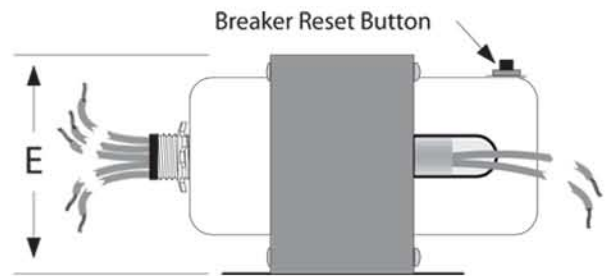
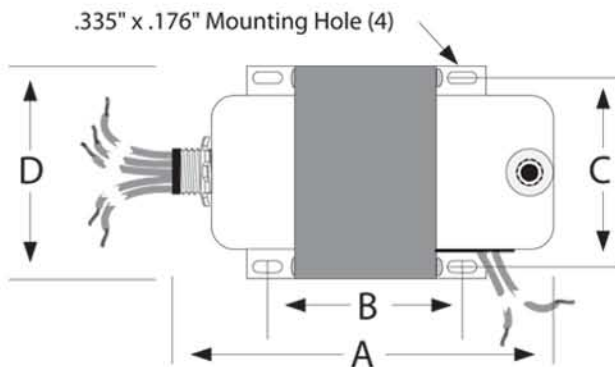
These voltage stepdown transformers are designed to provide a nominal 24 Vac control voltage from any one of the selected primaries. They are ideal for many BAS and HVAC industry applications. Parts should be installed in compliance with local and national codes.

## FEATURES

- Multi-Tap Primary Connections
- Manual Reset Circuit Breaker
- Color Coded Lead Wires
- Hub or Foot Mountable
- Stripped and Tinned Wire Ends
- Fully Enclosed with Metal End Bells



LE15010



Catalog #	A	B	C	D	E	Weight
LE16927	3.49	1.93	2.00	2.52	3.06	2.98
LE17345	4.25	2.70	2.00	2.52	3.07	4.54
LE15010	3.87	2.31	2.00	2.52	3.06	3.71



Catalog #	LE16927	LE17345	LE15010
MFG #	MUC-024-050-TFSO-CB	MUC-024-100-TFSO-CB	MUA-024-075-TFSO-CB
Primary	120/240/277/480V	120/240/277/480V	120/208/240/480V
Secondary	24V	24V	24V
VA Rating	50VA	96VA	75VA
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Breaker	Manual Reset	Manual Reset	Manual Reset
Mounting	Foot & Hub	Foot & Hub	Foot & Hub
Lead Wires	9\" Colored Leads	9\" Colored Leads	9\" Colored Leads
Approvals	cULus Listed	cULus Listed, CSA	cULus Listed, CSA
Class	Class 2, Class 3	Class 2, Class 3	Class 2, Class 3

**Need 4\" x 4\"  
Mounting Plates?**

**See Page 19  
towards the end  
of the  
Transformers  
Section!**



# Multi-Tap Series

**CORE**  
COMPONENTS

These voltage stepdown transformers are designed to provide a nominal 24 Vac control voltage from any one of the selected primaries. They are ideal for many BAS and HVAC industry applications. Parts should be installed in compliance with local and national codes.

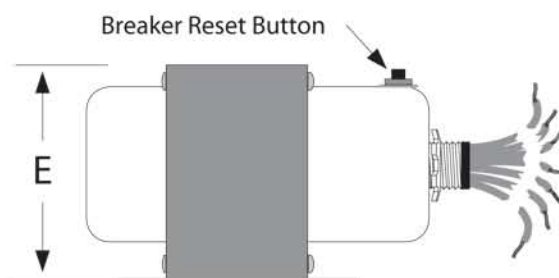
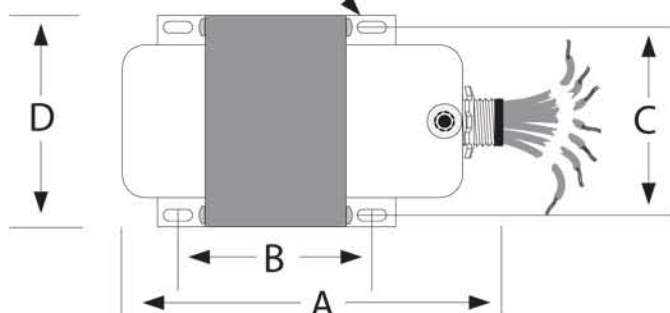
## FEATURES

- Single Hub Configuration
- Multi-Tap Primary Connections
- Manual Reset Circuit Breaker
- Color Coded Lead Wires
- Hub or Foot Mountable
- Stripped and Tinned Wire Ends
- Fully Enclosed with Metal End Bells



LE17550

.335" x .176" Mounting Hole (4)



Catalog #	A	B	C	D	E	Weight
LE15550	3.91	2.26	2.00	2.52	3.03	3.67
LE16550	3.45	1.85	2.00	2.52	3.07	2.97
LE17550	4.25	2.70	2.00	2.52	3.06	4.53



Catalog #	LE15550	LE16550	LE17550
MFG #	MUA-024-075-TF-CB	MUC-024-050-TF-CB	MUC-024-100-TF-CB
Primary	120/208/240/480V	120/240/277/480V	120/240/277/480V
Secondary	24V	24V	24V
VA Rating	75VA	50VA	96VA
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Breaker	Manual Reset	Manual Reset	Manual Reset
Mounting	Foot & Hub	Foot & Hub	Foot & Hub
Lead Wires	9" Colored Leads	9" Colored Leads	9" Colored Leads
Approvals	cULus Listed	cULus Listed	cULus Listed, CSA
Class	Class 2, Class 3	Class 2, Class 3	Class 2, Class 3

## How to Order

**Order by the  
7-Digit Catalog  
Number OR by the  
Manufacturers  
(Mfg) Number**





# Multi-Tap Series

These voltage stepdown transformers are designed to provide a nominal 24 Vac control voltage from any one of the selected primaries. They are ideal for many BAS and HVAC industry applications. Parts should be installed in compliance with local and national codes.

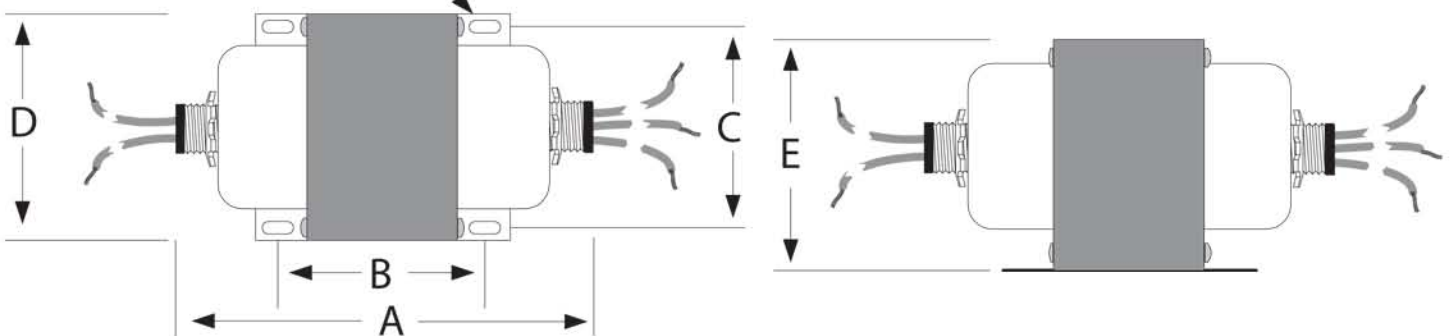
## FEATURES

- Dual Hub Configuration
- Multi-Tap Primary Connections
- Color Coded Lead Wires
- Hub or Foot Mountable
- Stripped and Tinned Wire Ends
- Fully Enclosed with Metal End Bells

LE15337



.325" x .176" Mounting Hole (4)



Catalog #	A	B	C	D	E	Weight
LE15337	2.72	1.97	1.76	2.19	2.88	2.08
LE47289	2.83	2.05	1.75	2.19	2.88	2.18



Catalog #	LE15337	LE47289
MFG #	MUB-024-040-2TF	MUD-024-050-2TF
Primary	120/208/240V	208/240V
Secondary	24V	24V
VA Rating	40VA	50VA
Frequency	50/60 Hz	50/60 Hz
Breaker	Internal Thermal	Internal Thermal
Mounting	Foot & Hub	Foot & Hub
Lead Wires	7" Colored Leads	8" Colored Leads
Approvals	cULus Listed, CSA	cULus Listed, CSA
Class	Class 2, Class 3	Class 2, Class 3

*Don't see the transformer style you need?*

*Call 800-323-2282 and we will be happy to assist you with all of your project requirements.*



# Single Primary Series

**LECTRO**  
COMPONENTS

These voltage stepdown transformers are designed to provide a nominal 24 Vac control voltage from their primaries. They are ideal for many BAS and HVAC industry applications. Parts should be installed in compliance with local and national codes.

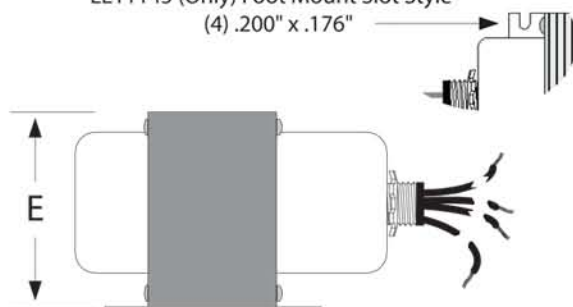
## FEATURES

- Single Hub Configuration
- Color Coded Lead Wires
- Hub or Foot Mountable
- Stripped and Tinned Wire Ends
- Fully Enclosed with Metal End Bells

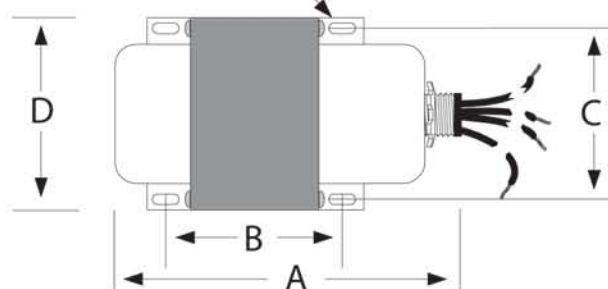


**LE11700**

LE11145 (Only) Foot Mount Slot Style  
(4) .200" x .176"



.335" x .176" Mounting Hole (4) (LE11300, LE11700, LE13100)



Catalog #	A	B	C	D	E	Weight
LE11145	2.32	1.52	1.70	1.90	2.60	1.35
LE11300	2.73	1.97	1.75	2.19	2.88	2.02
LE11700	2.82	2.00	1.75	2.19	2.90	2.13
LE13100	2.79	2.03	1.75	2.20	2.88	2.19



Catalog #	LE11145	LE11300	LE11700	LE13100
MFG #	120-024-020-TF	120-024-040-TF	120-024-050-TF	277-024-050-TF
Primary	120V	120V	120V	277V
Secondary	24V	24V	24V	24V
VA Rating	20VA	40VA	50VA	50VA
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Breaker	Internal Thermal	Internal Thermal	Internal Thermal	Internal Thermal
Mounting	Foot & Hub	Foot & Hub	Foot & Hub	Foot & Hub
Lead Wires	7" Colored Leads	7" Colored Leads	7" Colored Leads	7" Colored Leads
Approvals	cULus Listed	cULus Listed, CSA	cULus Listed, CSA	cULus Listed
Class	Class 2, Class 3	Class 2, Class 3	Class 2, Class 3	Class 2, Class 3





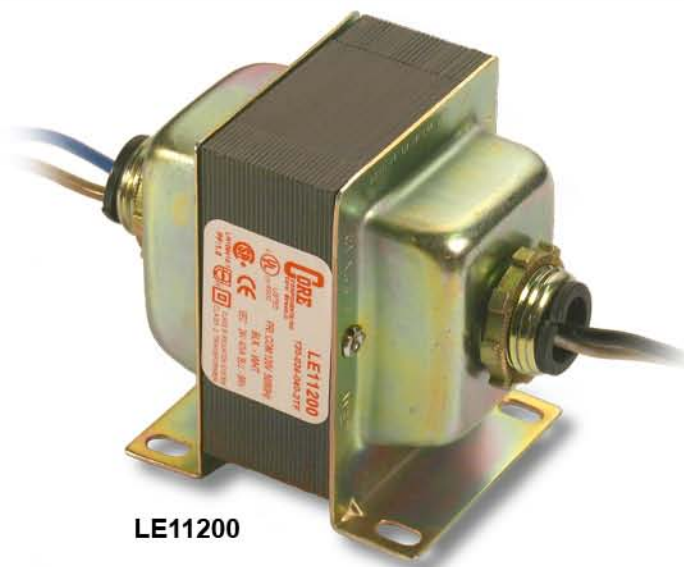
# Single Primary Series



These voltage stepdown transformers are designed to provide a nominal 24 Vac control voltage from their primaries. They are ideal for many BAS and HVAC industry applications. Parts should be installed in compliance with local and national codes.

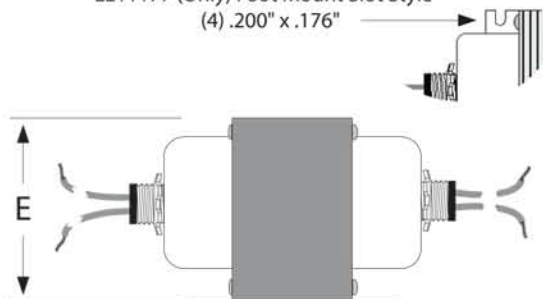
## FEATURES

- Dual Hub Configuration
- Color Coded Lead Wires
- Hub or Foot Mountable
- Stripped and Tinned Wire Ends
- Fully Enclosed with Metal End Bells

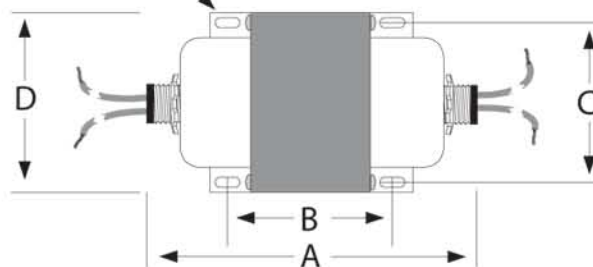


LE11200

LE11177 (Only) Foot Mount Slot Style  
(4) .200" x .176"



.335" x .176" Mounting Hole (4) (LE11200, LE11750, & LE13050)



Catalog #	A	B	C	D	E	Weight
LE11177	2.32	1.55	1.68	1.90	2.60	1.35
LE11200	2.75	1.97	1.75	2.19	2.88	2.06
LE11750	2.83	2.03	1.75	2.19	2.92	2.19
LE13050	2.79	2.03	1.75	2.19	2.88	2.20



Catalog #	LE11177	LE11200	LE11750	LE13050
MFG #	120-024-020-2TF	120-024-040-2TF	120-024-050-2TF	277-024-050-2TF
Primary	120V	120V	120V	277V
Secondary	24V	24V	24V	24V
VA Rating	20VA	40VA	50VA	50VA
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Breaker	Internal Thermal	Internal Thermal	Internal Thermal	Internal Thermal
Mounting	Foot & Hub	Foot & Hub	Foot & Hub	Foot & Hub
Lead Wires	7" Colored Leads	7" Colored Leads	7" Colored Leads	7" Colored Leads
Approvals	cULus Listed	cULus Listed, CSA	cULus Listed, CSA	cULus Listed
Class	Class 2, Class 3	Class 2, Class 3	Class 2, Class 3	Class 2, Class 3



# Single Primary Series



These voltage stepdown transformers are designed to provide a nominal 24 Vac control voltage from their primaries. They are ideal for many BAS and HVAC industry applications. Parts should be installed in compliance with local and national codes.

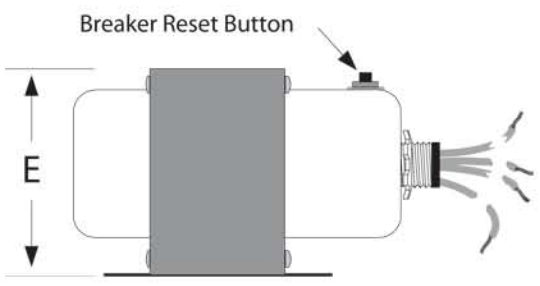
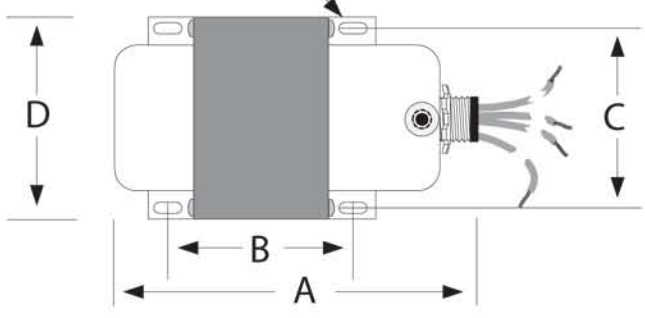
## FEATURES

- Single Hub Configuration
- Manual Reset Circuit Breaker
- Color Coded Lead Wires
- Hub or Foot Mountable
- Stripped and Tinned Wire Ends
- Fully Enclosed with Metal End Bells



LE12100

.335" x .176" Mounting Hole (4)



Catalog #	A	B	C	D	E	Weight
LE11900	3.87	2.31	2.00	2.52	3.06	3.48
LE12100	4.05	2.51	2.00	2.52	3.06	4.09



Catalog #	LE11900	LE12100
MFG #	120-024-075-TF-CB	120-024-100-TF-CB
Primary	120V	120V
Secondary	24V	24V
VA Rating	75VA	96VA
Frequency	50/60 Hz	50/60 Hz
Breaker	Manual Reset	Manual Reset
Mounting	Foot & Hub	Foot & Hub
Lead Wires	9" Colored Leads	9" Colored Leads
Approvals	cULus Listed, CSA	cULus Listed, CSA
Class	Class 2, Class 3	Class 2, Class 3

**Don't see the transformer style you need?**

**Call 800-323-2282 and we will be happy to assist you with all of your project requirements.**





# Single Primary Series

**CORE**  
COMPONENTS

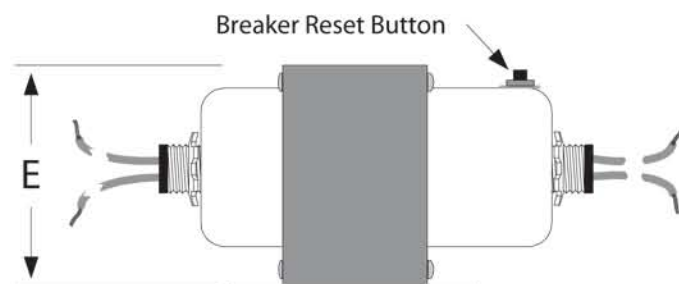
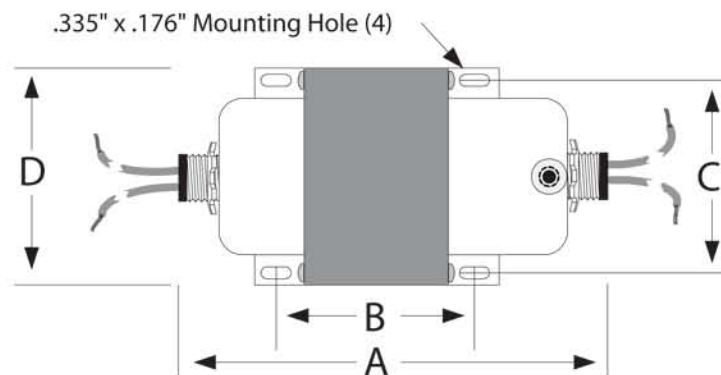
These voltage stepdown transformers are designed to provide a nominal 24 Vac control voltage from their primaries. They are ideal for many BAS and HVAC industry applications. Parts should be installed in compliance with local and national codes.

## FEATURES

- Dual Hub Configuration
- Manual Reset Circuit Breaker
- Color Coded Lead Wires
- Hub or Foot Mountable
- Stripped and Tinned Wire Ends
- Fully Enclosed with Metal End Bells



LE12000



**cUL** US LISTED

**CSA**

Catalog #	A	B	C	D	E	Weight
LE11800	3.90	2.31	2.00	2.52	3.06	3.66
LE12000	4.05	2.55	2.00	2.52	3.06	4.09



Catalog #	LE11800	LE12000
MFG #	120-024-075-2TF-CB	120-024-100-2TF-CB
Primary	120V	120V
Secondary	24V	24V
VA Rating	75VA	96VA
Frequency	50/60 Hz	50/60 Hz
Breaker	Manual Reset	Manual Reset
Mounting	Foot & Hub	Foot & Hub
Lead Wires	9" Colored Leads	9" Colored Leads
Approvals	cULus Listed, CSA	cULus Listed, CSA
Class	Class 2, Class 3	Class 2, Class 3

**Looking for Relay Modules?**

**Lectro stocks the  
full line of Core  
Components Relays,  
starting on Page 22.**





# Single Primary Series

These voltage stepdown transformers are designed to provide a nominal 24 Vac control voltage from their primaries. They are ideal for many BAS and HVAC industry applications. Parts should be installed in compliance with local and national codes.

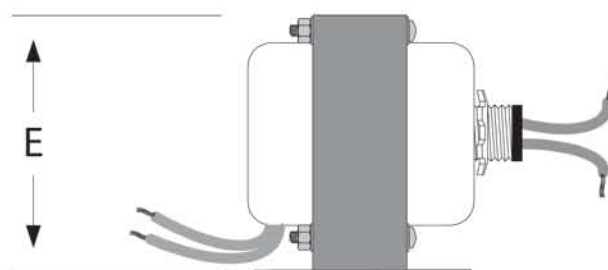
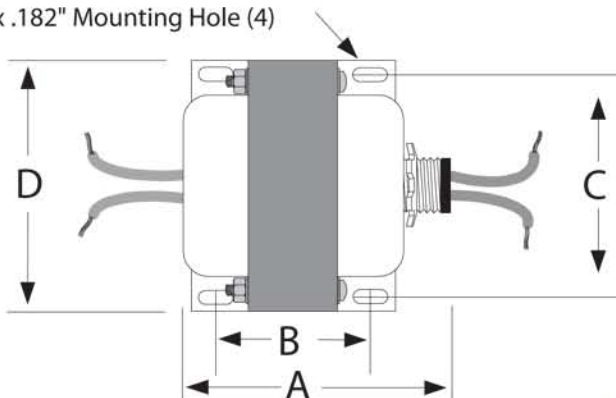
## FEATURES

- Dual Hub Configuration
- Color Coded Lead Wires
- Hub or Foot Mountable
- Stripped and Tinned Wire Ends
- Fully Enclosed with Metal End Bells



LE12573

.365" x .182" Mounting Hole (4)



Catalog #	A	B	C	D	E	Weight
LE12463	3.76	3.18	3.23	3.80	3.16	7.05
LE12573	3.75	3.24	3.15	3.76	4.52	9.11



Catalog #	LE12463	LE12573
MFG #	120-024-175-TF	120-024-240-TF
Primary	120V	120V
Secondary	24V	24V
VA Rating	175VA	240VA
Frequency	50/60 Hz	50/60 Hz
Breaker	Internal Thermal	Internal Thermal
Mounting	Foot & Hub	Foot & Hub
Lead Wires	12" Colored Leads	12" Colored Leads
Approvals	cULus Listed	cULus Listed
Class	General Purpose	General Purpose

**Lectro has been a broad line distributor of electromechanical components for more than 30 years!**

**Call us at 800-323-2282 for unbiased assistance.**





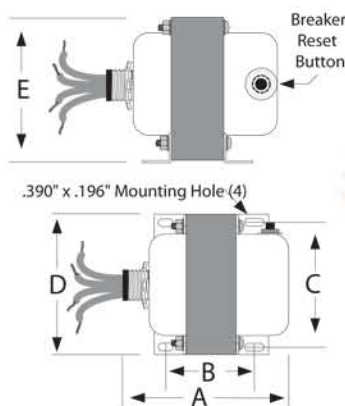
# Single Primary Series

**CORE**  
COMPONENTS

These voltage stepdown transformers are designed to provide a nominal 24 Vac control voltage from their primaries. They are ideal for many BAS and HVAC industry applications. Parts should be installed in compliance with local and national codes.

## FEATURES

- Single Hub Configuration
- Manual Reset Circuit Breaker
- Color Coded Lead Wires
- Hub or Foot Mountable
- Stripped and Tinned Wire Ends
- Fully Enclosed with Metal End Bells



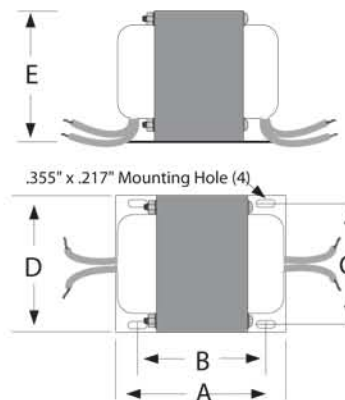
**LE12400**



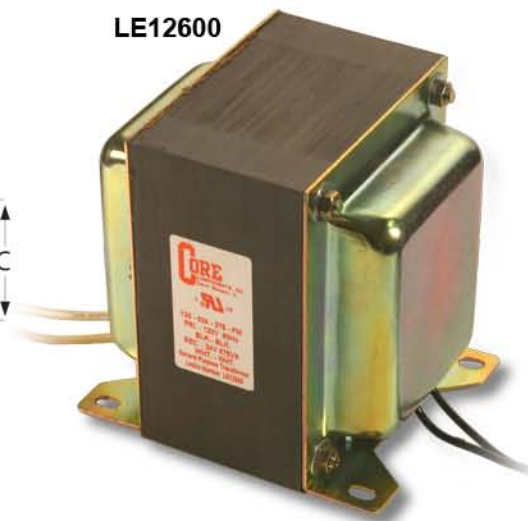
Catalog #	A	B	C	D	E	Weight
LE12400	3.47	2.47	3.23	3.80	3.30	5.08
LE12600	4.32	3.80	3.15	3.75	4.52	11.57

## FEATURES

- Dual Hub Configuration
- Color Coded Lead Wires
- Foot Mountable
- Stripped and Tinned Wire Ends
- Fully Enclosed with Metal End Bells



**LE12600**



Catalog #	LE12400	LE12600
MFG #	120-024-150-TF-CB	120-024-375-FM
Primary	120V	120V
Secondary	24V	24V
VA Rating	150VA	375VA
Frequency	50/60 Hz	50/60 Hz
Breaker	Manual Reset	Internal Thermal
Mounting	Foot & Hub	Foot & Hub
Lead Wires	9" Colored Leads	7" Colored Leads
Approvals	cULus Listed	cULus Recognized
Class	General Purpose	General Purpose

**Lectro stocks the full  
line of Core Components  
Power Supplies.**

**See the Power Supply  
Section on Page 48.**





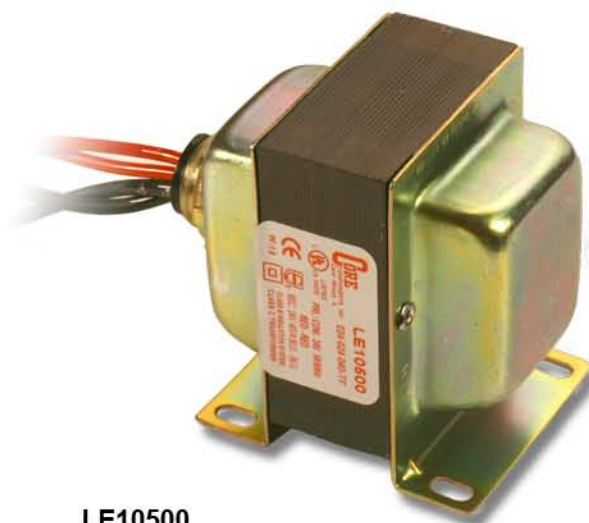
# Isolation Series



These voltage transformers are typically used to protect electronic devices from ground loop faults and to provide a high degree of secondary voltage stability. They are ideal for many BAS and HVAC industry applications. Parts should be installed in compliance with local and national codes.

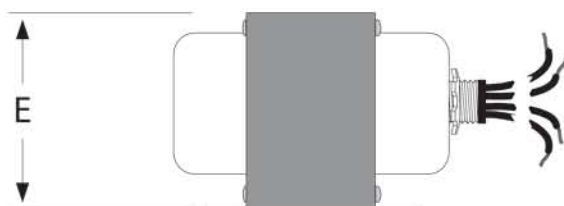
## FEATURES

- Single Hub Configuration
- Color Coded Lead Wires
- Hub or Foot Mountable
- Stripped and Tinned Wire Ends
- Fully Enclosed with Metal End Bells

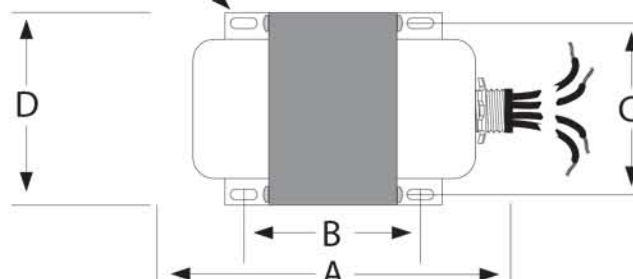


LE10500

LE10473 Foot Mount Slot Style  
(4) .200" x .176"



.335" x .176" Mounting Hole Style (4) (LE10500)



Catalog #	A	B	C	D	E	Weight
LE10473	2.32	1.59	1.70	1.91	2.60	1.38
LE10500	2.75	1.97	1.97	2.19	2.88	1.99



Catalog #	LE10473	LE10500
MFG #	024-024-020-TF	024-024-040-TF
Primary	24V	24V
Secondary	24V	24V
VA Rating	20VA	40VA
Frequency	50/60 Hz	50/60 Hz
Breaker	Internal Thermal	Internal Thermal
Mounting	Foot & Hub	Foot & Hub
Lead Wires	7" Colored Leads	7" Colored Leads
Approvals	cULus Listed	cULus Listed
Class	General Purpose	Class 2, Class 3

**Remember-**  
only very popular items  
are detailed in this catalog.

**Many more are available and  
in stock, ready to ship today!**

**Call 800-323-2282 if you  
don't see what you need.**





# Open Frame Series



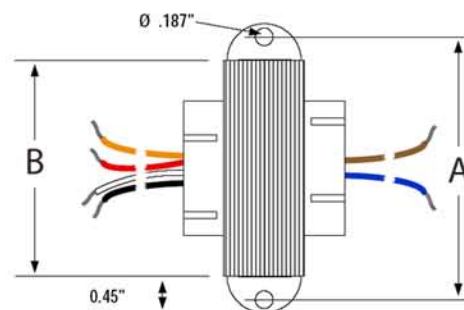
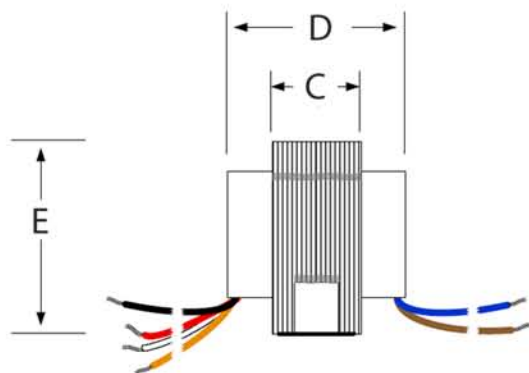
These voltage stepdown transformers are designed to provide a nominal 24 Vac control voltage from their primaries. They are ideal for many BAS and HVAC industry applications. Parts should be installed in compliance with local and national codes.

## FEATURES

- Bottom Opening Wire Configuration
- Color Coded Lead Wires
- Foot Mountable
- Stripped and Tinned Wire Ends
- Open Frame Design



LE60100



Catalog #	A	B	C	D	E	Weight
LE60025	3.16	2.60	0.90	2.09	2.26	1.50
LE60050	3.16	2.60	0.90	2.09	2.26	1.53
LE60075	3.16	2.60	0.90	2.09	2.26	1.57
LE60100	3.16	2.60	1.10	2.42	2.26	1.86



Catalog #	LE60025	LE60050	LE60075	LE60100
MFG #	OF-120-024-040-2BO	OF-MUD-024-040-2BO	OF-MUB-024-040-2BO	OF-MUB-024-050-2BO
Primary	120V	208/240V	120/208/240V	120/208/240V
Secondary	24V	24V	24V	24V
VA Rating	40VA	40VA	40VA	50VA
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Breaker	Inherently Limited	Inherently Limited	Inherently Limited	Internal Fuse
Mounting	Foot Mount	Foot Mount	Foot Mount	Foot Mount
Lead Wires	8" Colored Leads	8" Colored Leads	8" Colored Leads	8" Colored Leads
Approvals	cULus Listed	cULus Listed	cULus Listed	cULus Listed
Class	Class 2	Class 2	Class 2	Class 2



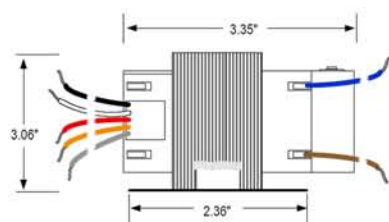
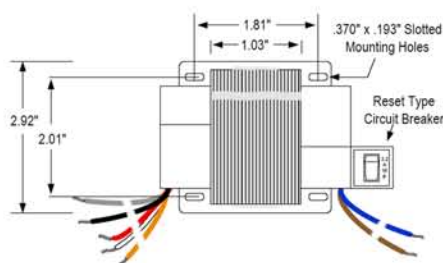
# Open Frame Series

These voltage stepdown transformers are designed to provide a nominal 24 Vac control voltage from their primaries. They are ideal for many BAS and HVAC industry applications. Parts should be installed in compliance with local and national codes.

LE60125

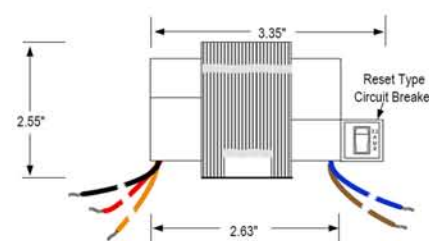
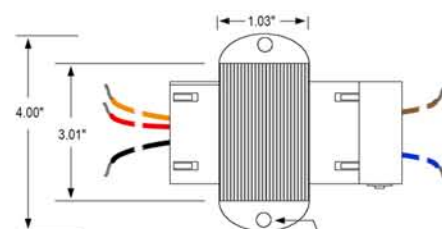


LE60150



## FEATURES

- Bottom Opening Wire Configuration
- Manual Reset Circuit Breaker
- Color Coded Lead Wires
- Foot Mountable
- Stripped and Tinned Wire Ends
- Open Frame Design



Catalog #	LE60125	LE60150
MFG #	OF-MUA-024-050-2SO-CB	OF-MUD-024-075-2BO-CB
Primary	120/208/240/480V	208/240V
Secondary	24V	24V
VA Rating	50VA	75VA
Frequency	50/60 Hz	50/60 Hz
Breaker	Manual Reset	Manual Reset
Mounting	Foot Mount	Foot Mount
Lead Wires	8" Colored Leads	8" Colored Leads
Approvals	cULus Listed	cULus Listed
Class	Class 2	Class 2

*Lectro Components has been providing terminal blocks to some of the industry's leading companies for over 30 years...*

*Call us today to see what we can do for you!*



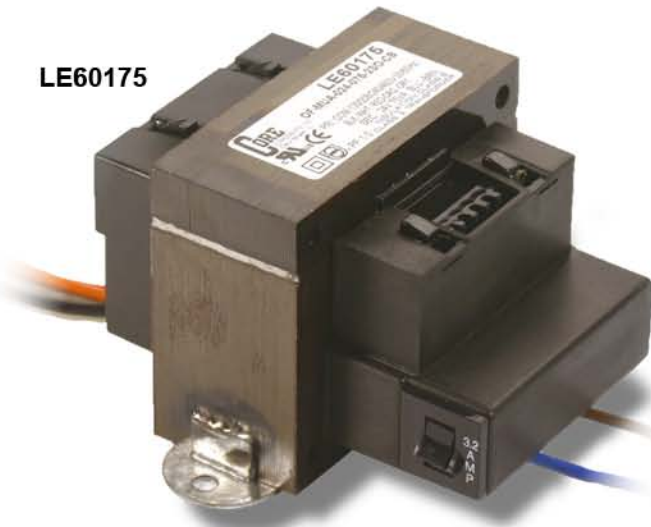


# Open Frame Series

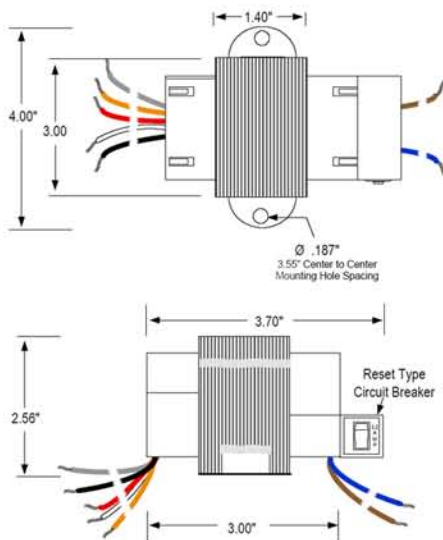
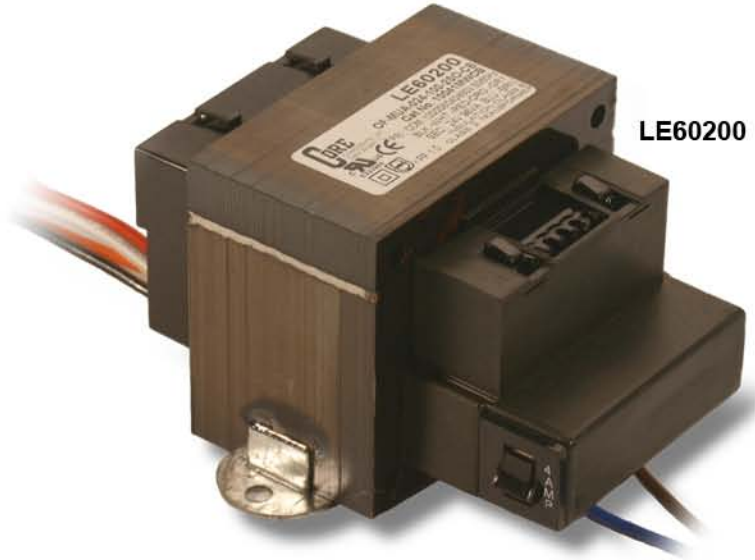
**LECTRO**  
COMPONENTS

These voltage stepdown transformers are designed to provide a nominal 24 Vac control voltage from their primaries. They are ideal for many BAS and HVAC industry applications. Parts should be installed in compliance with local and national codes.

**LE60175**

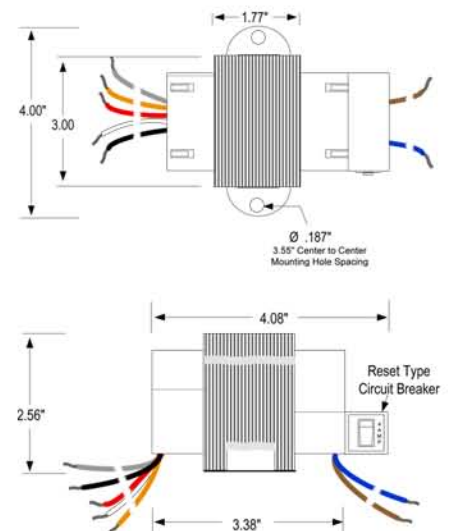


**LE60200**



## FEATURES

- Bottom Opening Wire Configuration
- Manual Reset Circuit Breaker
- Color Coded Lead Wires
- Foot Mountable
- Stripped and Tinned Wire Ends
- Open Frame Design



Catalog #	LE60175	LE60200
MFG #	OF-MUA-024-075-2SO-CB	OF-MUA-024-100-2SO-CB
Primary	120/208/240/480V	120/208/240/480V
Secondary	24V	24V
VA Rating	75VA	96VA
Frequency	50/60 Hz	50/60 Hz
Breaker	Manual Reset	Manual Reset
Mounting	Foot Mount	Foot Mount
Lead Wires	8" Colored Leads	8" Colored Leads
Approvals	cULus Listed	cULus Listed
Class	Class 2	Class 2

**Looking for  
Circuit Breakers  
or Fuses?**

**Check out the  
Circuit Protection  
Section on page 51.**

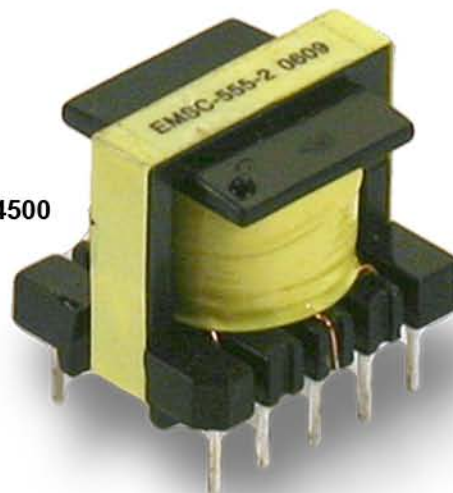


# Other Transformers

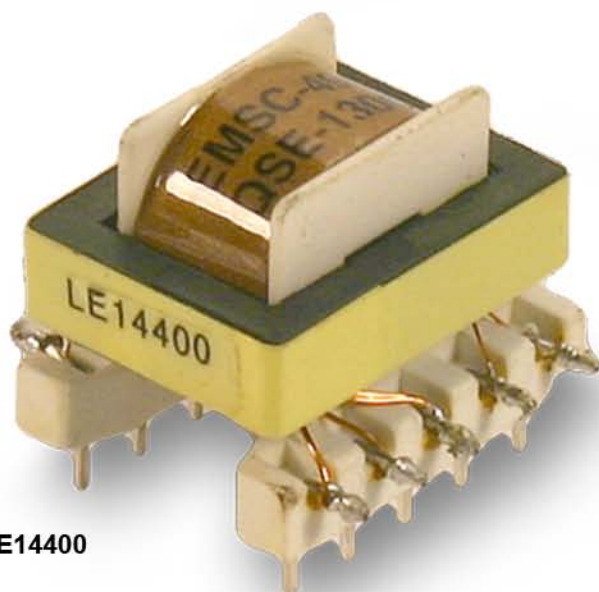
In addition to the other lines, Core Components also offers a handful of specialty transformers, including Flyback Transformers.

Please call us at 800-323-2282 for more details.

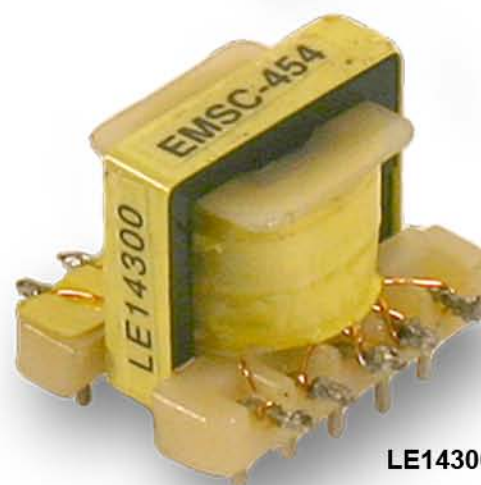
**LE14500**



**LE14400**

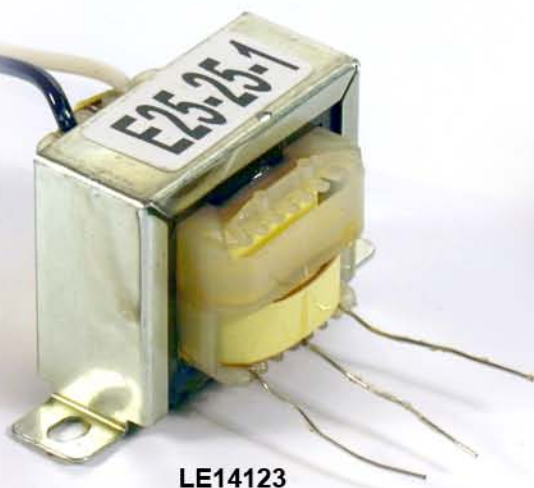


**LE14300**

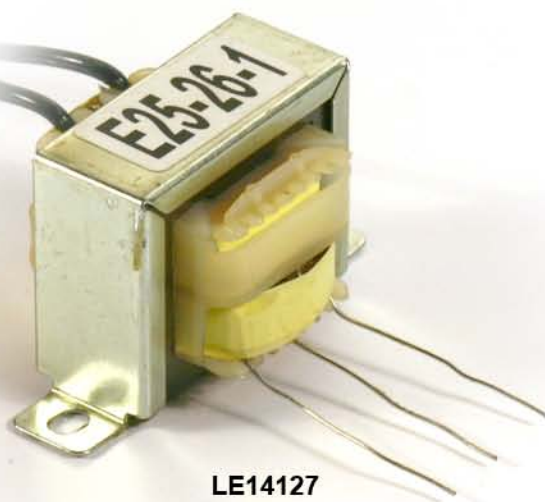


Lectro #	Manufacturer #	Description	Primary	Secondary
<b>LE14300</b>	EMSC-454	40 KHz Flyback Transformer	25-42 Vdc	#1 - 24V @ 210mA / 15V @ 100mA / 5V @ 100mA #2 - 7.5V @ 100mA #3 - 15V @ 40mA
<b>LE14400</b>	EMSC-491	40 KHz Flyback Transformer	25-42 Vdc	#1 - 5V @ 320mA #2 - 15V @ 420mA #3 - 8V @ 100mA #4 - 15V @ 40mA
<b>LE14500</b>	EMSC-555-2	40 KHz Flyback Transformer	25-42 Vdc	#1 - 5V @ 100mA #2 - 7.5V @ 100mA #3 - 16V @ 40mA #4 - 7.5V @ 100mA





**LE14123**



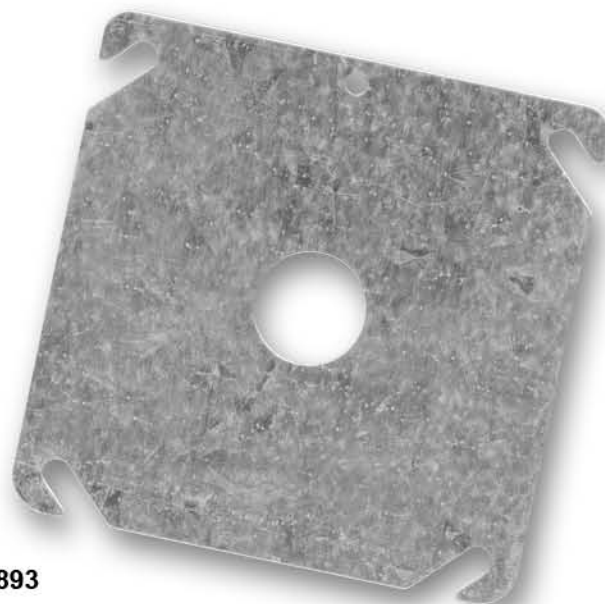
**LE14127**

Lectro #	Manufacturer #	Description	Primary	Secondary
<b>LE14123</b>	E25-25-1	104 VRMS 50Hz Power Transformer	120 Vac	27 Vdc
<b>LE14127</b>	E25-26-1	20.4 VRMS 50Hz Power Transformer	24 Vac	27 Vdc

Designed to aid in the installation of hub style transformers, these Zinc Coated Steel Mounting Plates are the perfect solution for mounting control transformers on junction boxes or other similar devices.

These 4" x 4" steel plates form a bond between the grounded conduit system and the hub of the transformer, which in turn grounds the transformer without any extra wiring or other precautions.

Since the transformer is itself enclosed, this plate allows the unit to be mounted outside of the box, saving valuable space inside.



**LE13893**



# Encapsulated Transformers

Catalog #	Manufacturer #	Va	Primary Voltage	Secondary Voltage
MI40011	B050BTZ13JK	50	220x440 / 230x460 / 240x480	110 / 115 / 120
MI51550	B050LP7JK	50	120x240	24
MI51575	B050MBT13XK	50	208 / 230 / 460	115
MI52065	B050MBT713XK	50	208 / 230 / 460	24 / 115
MI52110	B050MQ15XK	50	208 / 277	120
MI52114	B050WZ13XK	50	550 / 575 / 600	110 / 115 / 120
MI52117	B075MBT13XK	75	208 / 230 / 460	115
MI52119	B075BTZ13JK	75	220x440 / 230x460 / 240x480	110 / 115 / 120
MI52123	B075MQ15XK	75	208 / 277	120
MI54072	B075PU1519JJ	75	240x480	120x240
MI54175	B100LP7JK	100	120x240	24
MI54180	B100MBT13RK	100	208 / 230 / 460	115
MI54190	B100MBT713RK	100	208 / 230 / 460	24 / 115
MI54191	B100MBT713XK	100	208 / 230 / 460	24 / 115
MI54192	B100MQ15XK	100	208 / 277	120
MI54193	B100BTZ13JM	100	230x460	115
MI54195	B100BTZ13JK	100	220x440 / 230x460 / 240x480	110 / 115 / 120
MI54196	B100BTZ13RB	100	220x440 / 230x460 / 240x480	110 / 115 / 120
MI54203	B100PU1519JJ	100	240x480	120x240
MI54205	B100PU1519RR	100	240x480	120x240
MI54213	B100PU7JK	100	240x480	24
MI54215	B100PU7RB	100	240x480	24
MI54225	B100RFD34XJ	100	380 / 400 / 415	110x220
MI54250	B150BTZ13JK	150	220x440 / 230x460 / 240x480	110 / 115 / 120
MI54254	B150PU1519JJ	150	240x480	120x240
MI54257	B150PU7JK	150	240x480	24
MI54260	B150LP7JKF	150	120x240	24
MI54263	B150MBT713XK	150	208 / 230 / 460	24 / 115
MI54269	B150MQ15XK	150	208 / 277	120
MI54270	B200BTZ13JK	200	220x440 / 230x460 / 240x480	110 / 115 / 120
MI54272	B200BTZ13RB	200	220x440 / 230x460 / 240x480	110 / 115 / 120
MI54273	B200LP7JK	200	120x240	24
MI54274	B150MQ15XKF	150	208 / 277	120
MI54275	B200MQ15XK	200	208 / 277	120
MI54353	B200PU1519JJ	200	240x480	120x240
MI54359	B200PU1519RR	200	240x480	120x240
MI54360	B200LP7JKF	200	120x240	24
MI54975	B250BTZ13JK	250	220x440 / 230x460 / 240x480	110 / 115 / 120
MI54976	B200BTZ13JKF	200	220x440 / 230x460 / 240x480	110 / 115 / 120
MI54980	B250BTZ13JKF	250	220x440 / 230x460 / 240x480	110 / 115 / 120
MI55000	B250LP7JK	250	120x240	24
MI55011	B250MQ15XK	250	208 / 277	120
MI55019	B250PU7JK	250	240x480	24
MI55020	B250PU1519JJF	250	240x480	120x240
MI55086	B500MBT13XK	500	208 / 230 / 460	115
MI55111	B500MQ15XK	500	208 / 277	120
MI55130	B300LP7JK	300	120x240	24
MI55132	B300MQ15XK	300	208 / 277	120
MI55133	B300PU1519JJF	300	240x480	120x240
MI55134	B300PU7JK	300	240x480	24
MI55137	B350MBT713XK	350	208 / 230 / 460	24 / 115
MI55235	B350PU1519JJ	350	240x480	120x240
MI56942	B350LP7JKF	350	120x240	24
MI56943	B500LP7JKF	500	120x240	24
MI56971	B500PU1519JJ	500	240x480	120x240
MI56973	B500PU1519RR	500	240x480	120x240
MI56989	B500PU7JK	500	240x480	24
MI56990	B500PU7JKF	500	240x480	24
MI57011	B750MQ15XK	750	208 / 277	120
MI57019	B750LP7JKF	750	120x240	24

Micron's ImperviTRAN® is the ultra-reliable industrial control circuit transformer. Behind its clean design is a toughness that makes it measure up to any requirement placed upon it. Manufacturers of industrial and commercial equipment, control panels and centers have made ImperviTRAN® the most accepted transformer in the industry.

Only the most common transformers are listed here. For the full range of Micron transformers, please call us at 800-323-2282.



## FEATURES

*Features are part number specific. Please review individual product specs for more details.*

- Epoxy encapsulated coils
- 20-Year Warranty
- Secondary Fuse Clips
- Optional Primary Fusing
- Molded Terminal Barriers
- 10-32 Screw Terminals
- Molded-in Terminals
- Phil-slot Screws





# Plug-In Transformers



## SPECIFICATIONS

- UL Listed
- Primary ..... 120 Vac, 60 Hz
- Secondary ..... 24 Vac, 50Va
- LED Indicator
- Primary Termination ..... 2 Male Blades
- Secondary Termination .... 2 #6-32 Screw Terminals with washers for secure contact
- Size ..... 2 7/8" x 2 1/4" x 3 7/8"
- Weight ..... 1.5 lbs
- Color ..... Bright Decorator White

## Surge Protection Specs

- Single Mode Protection ..... Hot to Neutral
- Clamping Voltage ..... 340 V
- Max. Spike Current ..... 4500 Amps
- Energy Dissipation ..... 60 Joules
- Max. Spike Voltage ..... 6000 Volts
- Clamping Response Time ..... 25 Nanoseconds

The Revere Engineered RT-2450SL/M is a 24 Vac 50Va Class II UL Encased Plug-in Transformer with LED indicator for power supervision, built in cable strain relief, and basic surge protection. It's construction is a bright decorator white colored plastic. It comes with a mounting tab and mounting screw. The compact design, as well as its decorator color, makes it perfectly suitable for office or residential decors.



## Available Models

Lectro #	Manufacturer #	Va	Primary	Secondary	Color	Features
ZZ54901	RT-2420SL/M	20	120 Vac	24 Vac	White	
RV10001	RT-2440SL/M	40	120 Vac	24 Vac	White	
ZZ54915	RT-2450SL/M	50	120 Vac	24 Vac	White	LED
ZZ54922	RT-G2450SL/M	50	120 Vac	24 Vac	White	LED
ZZ54910	RT-R2440SL/M	40	120 Vac	24 Vac	White	Resettable



Transformers  
Relays & Timers  
Power Supplies  
Circuit Protection  
Terminal Blocks  
Switches  
Electronics  
Enclosures  
Additional Products

# Enclosed Relay Modules



Core CVR Series multi-voltage relays are ideal for controlling lighting, motors, and fans in building Automation and HVAC Controls applications. They can also be used to sense voltage being supplied to electrical loads.

The Core Components line of CVRs include a highly versatile and reliable range of Enclosed Multi-Voltage Control Relays. These devices are labor saving, installation ready modules. Our CVR Series Relays offer features such as color coded wires for easy installation, mounting by either a 1/2" threaded conduit hub or panel mountable with the supplied hardware. Other convenient features on some models include an L.E.D. on/off status indicator, a hand-off-auto manual override switch on the contact side, and horsepower rated modules.

**Remember, if it doesn't say "Core", it isn't a CVR.**



## FEATURES

- Wide Input Voltage Range
- LED Status Indicator
- Color Coded Wires
- Manual Override Switch \*
- High Reliability
- Multiple Applications
- Surface or Knockout mount (mounting hardware supplied)
- Convenient and Economical

*\* on selected models*

**UL508** Industrial Control Device

**UL2043** Fire Tested for Heat & Visible Smoke Release in Air Handling Spaces (Plenum)



## FEATURE CODES

- HOA** - Hand - Off - Auto Switch
- LED** - L.E.D. ON/OFF Status
- TH** - 1/2" Threaded Hub
- PM** - Panel Mount
- CCW** - Color Coded Wires



**Lectro has been a broad line distributor of electromechanical components for more than 30 years!**

**Call us at 800-323-2282 for unbiased assistance.**





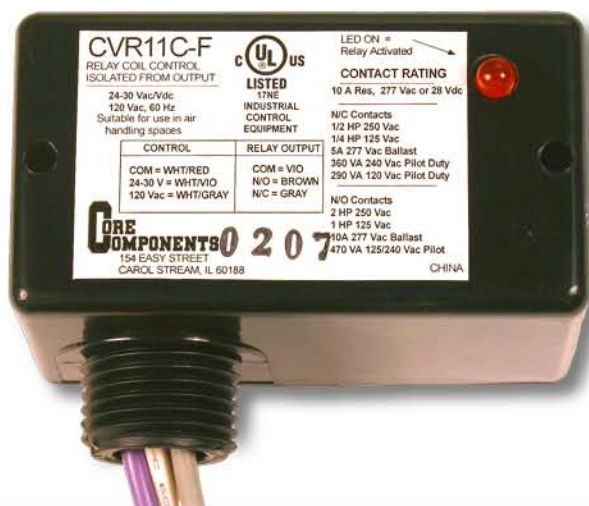
# Enclosed Relay Modules



Catalog #	Core Part #	Description	Input Voltage	Contact Ratings	HP Ratings	Approvals	Features
LD97431	CVR11PC-F	1 SPDT Relay	20-30 Vac/Vdc 120 Vac	30A	2 HP 240 Vac N/C 2 HP 277 Vac N/O 1 HP 120 Vac N/C 1 HP 120/208 Vac N/O	UL Listed US / Canada	LED TH PM CCW
LD95100	CVR12C-0	1 DPDT Relay	18-24 Vac 20-30 Vdc	20A	1-1/2 HP 208/240 Vac 1 HP 120/480/600 Vac	UL Listed US / Canada	LED TH PM CCW
LD41047	CVR11A-HF	1 SPST Relay w/ HOA	24-30 Vac/Vdc 120 Vac	20A	1 HP 125/250 Vac	UL Listed US / Canada	HOA LED TH PM CCW
LD96144	CVR11C-F	1 SPDT Relay	24-30 Vac/Vdc 120 Vac	10A	2 HP 250 Vac N/O 1 HP 125 Vac N/O 1/2 HP 250 Vac N/O 1/4 HP 125 Vac N/C	UL Listed US / Canada	LED TH PM CCW
LD96152	CVR11C-V	1 SPDT Relay	10-30 Vac/Vdc 208/277 Vac	10A	1/3 HP 120/240 Vac N/O 1/4 HP 277 Vac N/O 1/6 HP 120/240 Vac N/C 1/8 HP 277 Vac N/C	UL Listed US / Canada	LED TH PM CCW
LD96200	CVR11C-0	1 SPDT Relay	10-30 Vac/Vdc 120Vac	10A	1/3 HP 120/240 Vac N/O 1/4 HP 277 Vac N/O 1/6 HP 120/240 Vac N/C 1/8 HP 277 Vac N/C	UL Listed US / Canada	LED TH PM CCW
LD96510	CVR11A-H	1 SPST Relay w/ HOA	10-30 Vac/Vdc 120Vac	10A	1/3 HP 120/240 Vac N/O	UL Listed US / Canada	HOA LED TH PM CCW
LD97070	CVR21A1C-H	1 SPDT Relay 1 SPST N/O w/ HOA	10-30 Vac/Vdc 120Vac	10A	1/3 HP 120/240 Vac N/O 1/4 HP 277 Vac N/O 1/6 HP 120/240 Vac N/C 1/8 HP 277 Vac N/C	UL Listed US / Canada	HOA LED TH PM CCW
LD97200	CVR21C-0	2 SPDT Relays	10-30 Vac/Vdc 120Vac	10A	1/3 HP 120/240 Vac N/O 1/4 HP 277 Vac N/O 1/6 HP 120/240 Vac N/C 1/8 HP 277 Vac N/C	UL Listed US / Canada	LED TH PM CCW
LD97440	CVR12C-F	1 DPDT Relay	10-30 Vac 11-30 Vdc 120 Vac	10A	1/2 HP 120/240 Vac N/O 1/3 HP 120/240 Vac N/C	UL Listed US / Canada	LED TH PM CCW

**Always request a CVR Specification Sheet to confirm your application needs are met.  
Call Customer Service at 800-323-2282 or visit our website at [www.lectrocomponents.com](http://www.lectrocomponents.com)**

# Enclosed Relay Modules



## Specifications

Enclosed Relay 10A SPDT  
24Vac/Vdc, 120Vac, 50/60Hz

**Model #** CVR11C-F  
**Catalog #** LD96144

Coil Voltage/ Input	24-30 Vac/Vdc / 120 Vac 50/60 Hz
# of Relays & Contact Style	One (1) SPDT
Expected Relay Life (mechanical)	10 Million Operations Minimum
Operating Temperature	-40° to 150° F
Status Indication	LED = Activated
Dimensions	1.7" x 2.8" x 1.5"
Mounting Style	1/2-14 NPT Nipple Integral
Lead Wire Length	24" Nominal
Approvals	UL 508, C-UL Canada Industrial Control Device, UL2043 Fire Test
Housing	Cyclcoly C2950 UL94-5V, Plenum, NEMA1
Override Controls	None
Dry Circuit Operation	Optional

## Contact Rating

10 Amps Resistive	28 Vdc / 277 Vac
470 VA Pilot Duty (N/O)	240 / 125 Vac
10A Ballast (N/O)	277 Vac
5A Ballast (N/C)	277 Vac
1/2 HP (N/C)	250 Vac
1/4 HP (N/C)	125 Vac
2 HP (N/O)	250 Vac
1 HP (N/O)	125 Vac
360 VA Pilot Duty (N/C)	240 Vac
290 VA Pilot Duty (N/C)	125 Vac

## Coil Current

40 mA @ 24Vdc
65 mA @ 30 Vac
50 mA @ 30 Vac
35 mA @ 120 Vac

DROP OUT = 7.5 Vdc / 6.5 Vac / 35 Vac  
PULL IN = 19.5 Vdc / 18 Vac / 102 Vac

## Specifications

Enclosed Relay 10A SPDT  
10-30Vac/Vdc, 120Vac, 50/60Hz

**Model #** CVR11C-0  
**Catalog #** LD96200

Coil Voltage/ Input	10-30 Vac/Vdc / 120 Vac 50/60 Hz
# of Relays & Contact Style	One (1) SPDT
Expected Relay Life (mechanical)	10 Million Operations Minimum
Operating Temperature	-40° to 150° F
Status Indication	LED = Activated
Dimensions	1.7" x 2.8" x 1.5"
Mounting Style	1/2-14 NPT Nipple Integral
Lead Wire Length	24" Nominal
Approvals	UL 508, cULus Listed Industrial Control Device, UL2043 Fire Test
Housing	Cyclcoly C2950 UL94-5V, Plenum, NEMA1
Override Controls	None
Dry Circuit Operation	Optional

## Contact Rating

10 Amps Resistive	28 Vdc / 277 Vac
480 VA Pilot Duty	240 / 277 Vac
480 VA Ballast	277 Vac
TV-5 (N/O)	120 Vac
TV-2 (N/C)	120 Vac
Tungsten 240W (N/C)	120 Vac
Tungsten 600W (N/O)	120 Vac
1/3 HP (N/O)	120 Vac / 240 Vac
1/4 HP (N/O)	277 Vac
1/6 HP (N/C)	120 Vac / 240 Vac
1/8 HP (N/C)	277 Vac

## Coil Current

30 mA @ 10 Vac	12 mA @ 10 Vdc
32 mA @ 12 Vac	14 mA @ 12 Vdc
42 mA @ 24 Vac	16 mA @ 24 Vdc
50 mA @ 30 Vac	18 mA @ 30 Vdc
35 mA @ 120 Vac	

DROP OUT = 7.5 Vdc / 6.5 Vac / 35 Vac  
PULL IN = 19.5 Vdc / 18 Vac / 102 Vac



# Enclosed Relay Modules

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## Specifications

Enclosed Relay 10A SPDT  
24Vac/Vdc, 208-277Vac, 50/60Hz

**Model #** CVR11C-V  
**Catalog #** LD96152

<b>Coil Voltage/ Input</b>	10-30 Vac/Vdc / 208-277 Vac 50/60 Hz
<b># of Relays &amp; Contact Style</b>	One (1) SPDT
<b>Expected Relay Life (mechanical)</b>	10 Million Operations Minimum
<b>Operating Temperature</b>	-40° to 150° F
<b>Status Indication</b>	LED = Activated
<b>Dimensions</b>	1.7" x 2.8" x 1.5"
<b>Mounting Style</b>	1/2-14 NPT Nipple Integral
<b>Lead Wire Length</b>	24" Nominal
<b>Approvals</b>	UL 508, cULus Listed Industrial Control Device, UL2043 Fire Test
<b>Housing</b>	Cycloloy C2950 UL94-5V, Plenum, NEMA1
<b>Override Controls</b>	None
<b>Dry Circuit Operation</b>	Optional

## Contact Rating

<b>10 Amps Resistive</b>	28 Vdc / 277 Vac
<b>480 VA Pilot Duty</b>	240 / 277 Vac
<b>480 VA Ballast</b>	277 Vac
<b>TV-5 (N/O)</b>	120 Vac
<b>TV-2 (N/C)</b>	120 Vac
<b>Tungsten 240W N/C</b>	120 Vac
<b>Tungsten 600W N/O</b>	120 Vac
<b>1/3 HP (N/O)</b>	120 Vac / 240 Vac
<b>1/4 HP (N/O)</b>	277 Vac
<b>1/6 HP (N/C)</b>	120 Vac / 240 Vac
<b>1/8 HP (N/C)</b>	277 Vac

## Coil Current

<b>30 mA @ 10 Vac</b>	<b>12 mA @ 10 Vdc</b>
<b>32 mA @ 12 Vac</b>	<b>14 mA @ 12 Vdc</b>
<b>42 mA @ 24 Vac</b>	<b>16 mA @ 24 Vdc</b>
<b>50 mA @ 30 Vac</b>	<b>18 mA @ 30 Vdc</b>
<b>35 mA @ 120 Vac</b>	

DROP OUT = 2.0 Vdc / 2.8 Vac / 80 Vac  
PULL IN = 9 Vac / 10 Vdc / 200 Vac

## Specifications

Dual Enclosed Relay 10A SPDT  
10-30Vac/Vdc, 120Vac, 50/60Hz

**Model #** CVR21C-0  
**Catalog #** LD97200

<b>Coil Voltage/ Input</b>	10-30 Vac/Vdc / 120 Vac 50/60 Hz
<b># of Relays &amp; Contact Style</b>	Two (2) SPDT
<b>Expected Relay Life (mechanical)</b>	10 Million Operations Minimum
<b>Operating Temperature</b>	-40° to 150° F
<b>Status Indication</b>	LED = Activated
<b>Dimensions</b>	4" x 4" x 1.8"
<b>Mounting Style</b>	1/2-14 NPT Nipple Integral
<b>Lead Wire Length</b>	24" Nominal
<b>Approvals</b>	UL 508, cULus Listed Industrial Control Device, UL2043 Fire Test
<b>Housing</b>	Cycloloy C2950 UL94-5V, Plenum, NEMA1
<b>Override Controls</b>	None
<b>Dry Circuit Operation</b>	Optional

## Contact Rating (Each Relay)

<b>10 Amps Resistive</b>	28 Vdc / 277 Vac
<b>480 VA Pilot Duty</b>	240 / 277 Vac
<b>480 VA Ballast</b>	277 Vac
<b>TV-5 (N/O)</b>	120 Vac
<b>TV-2 (N/C)</b>	120 Vac
<b>Tungsten 240W N/C</b>	120 Vac
<b>Tungsten 600W N/O</b>	120 Vac
<b>1/3 HP (N/O)</b>	120 Vac / 240 Vac
<b>1/4 HP (N/O)</b>	277 Vac
<b>1/6 HP (N/C)</b>	120 Vac / 240 Vac
<b>1/8 HP (N/C)</b>	277 Vac

## Coil Current (Each Relay)

<b>30 mA @ 10 Vac</b>	<b>12 mA @ 10 Vdc</b>
<b>32 mA @ 12 Vac</b>	<b>14 mA @ 12 Vdc</b>
<b>42 mA @ 24 Vac</b>	<b>16 mA @ 24 Vdc</b>
<b>50 mA @ 30 Vac</b>	<b>18 mA @ 30 Vdc</b>
<b>35 mA @ 120 Vac</b>	

DROP OUT = 2.0 Vdc / 2.8 Vac / 35 Vac  
PULL IN = 9 Vac / 10 Vdc / 105 Vac

# Enclosed Relay Modules

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## Specifications

Enclosed Relay 10A SPST + Override  
10-30Vac/Vdc, 120Vac, 50/60Hz

**Model # CVR11A-H**  
**Catalog # LD96510**

Coil Voltage/ Input	10-30 Vac/Vdc / 120 Vac 50/60 Hz
# of Relays & Contact Style	One (1) SPST + Override
Expected Relay Life (mechanical)	10 Million Operations Minimum
Operating Temperature	-40° to 150° F
Status Indication	LED = Activated
Dimensions	4" x 4" x 1.8"
Mounting Style	1/2-14 NPT Nipple Integral
Lead Wire Length	24" Nominal
Approvals	UL 508, cULus Listed Industrial Control Device, UL2043 Fire Test, Cylcoloy C2950 UL94-5V, Plenum, NEMA1
Housing	Cylcoloy C2950 UL94-5V, Plenum, NEMA1
Override Controls	Mode Selection On-Off Automatic
Dry Circuit Operation	Optional

## Contact Rating

10 Amps Resistive	120 Vac / 240 Vac / 28 Vac
1/3 HP	120 Vac / 240 Vac

## Coil Current

30 mA @ 10 Vac	12 mA @ 10 Vdc
32 mA @ 12 Vac	14 mA @ 12 Vdc
42 mA @ 24 Vac	16 mA @ 24 Vdc
50 mA @ 30 Vac	18 mA @ 30 Vdc
25 mA @ 120 Vac	

DROP OUT = 2.0 Vdc / 2.8 Vac / 35 Vac  
PULL IN = 9 Vac / 10 Vdc / 105 Vac

## Specifications

Dual Enclosed Relay 10A SPDT  
Plus SPST N/O w/Override  
10-30Vac/Vdc, 120Vac, 50/60Hz

**Model # CVR21A1C-H**  
**Catalog # LD97070**

Coil Voltage/ Input	10-30 Vac/Vdc / 120 Vac 50/60 Hz
# of Relays & Contact Style	One (1) SPDT, One (1) SPST + Override
Expected Relay Life (mechanical)	10 Million Operations Minimum
Operating Temperature	-40° to 150° F
Status Indication	LED = Activated
Dimensions	4" x 4" x 1.8"
Mounting Style	1/2-14 NPT Nipple Integral
Lead Wire Length	24" Nominal
Approvals	UL 508, cULus Listed Industrial Control Device, UL2043 Fire Test, Cylcoloy C2950 UL94-5V, Plenum, NEMA1
Housing	Cylcoloy C2950 UL94-5V, Plenum, NEMA1
Override Controls	Mode Selection On-Off-Automatic (Available on SPST Relay only)
Dry Circuit Operation	Optional

## Contact Rating (Relay # 1 - SPDT)

10 Amps Resistive	28 Vdc / 277 Vac
480 VA Pilot Duty	240 / 277 Vac
480 VA Ballast	277 Vac
TV-5 (N/O)	120 Vac
TV-2 (N/C)	120 Vac
Tungsten 240W (N/C)	120 Vac
Tungsten 600W (N/O)	120 Vac
1/3 HP (N/O)	120 Vac / 240 Vac
1/4 HP (N/O)	277 Vac
1/6 HP (N/C)	120 Vac / 240 Vac
1/8 HP (N/C)	277 Vac

## Contact Rating (Relay # 2 - SPST)

10 Amps Resistive	125 Vac / 250 Vac / 28 Vdc
1/3 HP	120/240 Vac

## Coil Current (each circuit)

30 mA @ 10 Vac	12 mA @ 10 Vdc
32 mA @ 12 Vac	14 mA @ 12 Vdc
42 mA @ 24 Vac	16 mA @ 24 Vdc
50 mA @ 30 Vac	18 mA @ 30 Vdc
35 mA @ 120 Vac	

DROP OUT = 2.0 Vdc / 2.8 Vac / 35 Vac  
PULL IN = 9 Vac / 10 Vdc / 105 Vac



# Enclosed Relay Modules



## Specifications

Enclosed Relay 10A DPDT  
10-30Vac, 11-30Vdc, 120Vac, 50/60Hz

**Model #** CVR12C-F  
**Catalog #** LD97440

<b>Coil Voltage/ Input</b>	10-30 Vac / 11-30 Vdc / 120 Vac 50/60 Hz
<b># of Relays &amp; Contact Style</b>	One (1) DPDT
<b>Expected Relay Life (mechanical)</b>	10 Million Operations Minimum
<b>Operating Temperature</b>	-40° to 150° F
<b>Status Indication</b>	LED = Activated
<b>Dimensions</b>	1.7" x 2.8" x 1.5"
<b>Mounting Style</b>	1/2-14 NPT Nipple Integral
<b>Lead Wire Length</b>	24" Nominal
<b>Approvals</b>	UL 508, C-UL Canada Industrial Control Device, UL2043 Fire Test Cylcoloy C2950 UL94-5V, Plenum, NEMA1
<b>Housing</b>	
<b>Override Controls</b>	None
<b>Dry Circuit Operation</b>	Optional

## Contact Rating

<b>10 Amps Resistive</b>	28 Vdc / 277 Vac
<b>B300 Pilot Duty</b>	240 / 277 Vac
<b>1/2 HP (N/C)</b>	120 Vac / 240 Vac
<b>1/3 HP (N/C)</b>	120 Vac / 240 Vac

## Coil Current

<b>40 mA @ 24 Vdc</b>	<b>40 mA @ 10 Vdc</b>
<b>55 mA @ 30 Vac</b>	<b>45 mA @ 12 Vdc</b>
<b>70 mA @ 30 Vac</b>	<b>55 mA @ 24 Vdc</b>
<b>75 mA @ 30 Vac</b>	<b>60 mA @ 30 Vdc</b>
<b>40 mA @ 120 Vac</b>	

**DROP OUT** = 2.0 Vdc / 2.8 Vac / 35 Vac  
**PULL IN** = 9 Vac / 10 Vdc / 105 Vac

## Specifications

Enclosed Relay 20A DPDT 300V  
24Vac/Vdc, 50/60Hz

**Model #** CVR12C-0  
**Catalog #** LD95100

<b>Coil Voltage/ Input</b>	24 Vac/Vdc 50/60 Hz
<b># of Relays &amp; Contact Style</b>	One (1) DPDT
<b>Expected Relay Life (mechanical)</b>	10 Million Operations Minimum
<b>Operating Temperature</b>	-40° to 150° F
<b>Status Indication</b>	LED = Activated
<b>Dimensions</b>	4" x 4" x 1.8"
<b>Mounting Style</b>	1/2-14 NPT Nipple Integral
<b>Lead Wire Length</b>	24" Nominal
<b>Approvals</b>	UL 508, C-UL Canada Industrial Control Device, UL2043 Fire Test Cylcoloy C2950 UL94-5V, Plenum, NEMA1
<b>Housing</b>	
<b>Override Controls</b>	None
<b>Dry Circuit Operation</b>	Optional

## Contact Rating

<b>20 Amps Resistive</b>	15 Vdc / 300 Vac
<b>13A Resistive</b>	28 Vdc
<b>5A Resistive</b>	600 Vac
<b>660 VA Pilot Duty</b>	120 Vac
<b>915 VA Pilot Duty</b>	208 Vac
<b>960 VA Pilot Duty</b>	240 Vac
<b>765 VA Pilot Duty</b>	480 / 600 Vac
<b>B600 Pilot Duty</b>	
<b>1 HP</b>	120 Vac
<b>1-1/2 HP</b>	208 / 240 Vac
<b>1 HP</b>	480 / 600 Vac

## Coil Current

<b>125 mA @ 24Vac</b>	<b>50 mA @ 24Vdc</b>
<b>100 mA @ 18 Vac</b>	<b>70 mA @ 30 Vdc</b>
<b>Rated 20-30 Vdc</b>	<b>18-24 Vac, 60 Hz</b>

**DROP OUT** = 6.5 Vdc / 5.5 Vac  
**PULL IN** = 12 Vdc / 17 Vac



# Open Relay Modules

Core CVB Series multi-voltage relays are ideal for controlling lighting, motors, and fans in building Automation and HVAC Controls applications. They can also be used to sense voltage being supplied to electrical loads.

The Core Components line of CVBs include a highly versatile and reliable range of Open Board Multi-Voltage Control Relays. These devices are labor saving, installation ready modules. Our CVB Series Relays offer features such as simple snap in installation, L.E.D. on/off status indicator, a hand-off-auto manual override switch on the contact side, and horsepower ratings.

## FEATURES

- Wide Input Voltage Range
- LED Status Indicator
- Simple Snap-In Installation
- Manual Override Switch \*
- High Reliability
- Multiple Applications
- Snap-Trak® Mountable
- Convenient and Economical

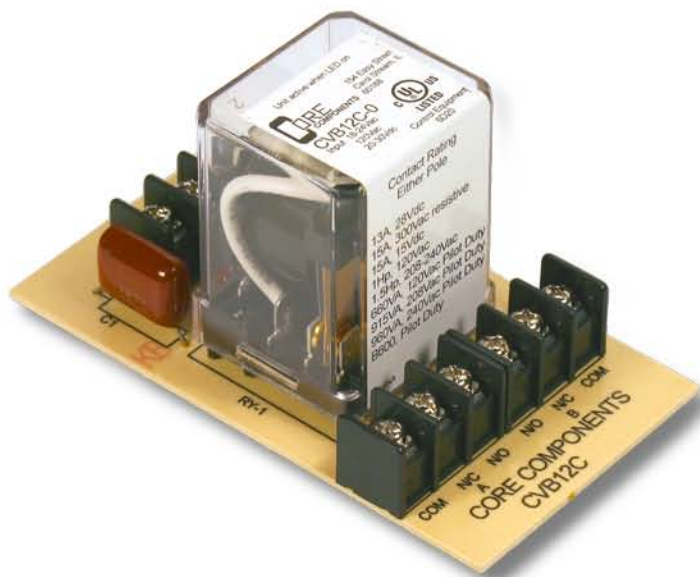
*\* on selected models*

UL508 Industrial Control Device



## FEATURE CODES

- HOA - Hand - Off - Auto Switch  
LED - L.E.D. ON/OFF Status  
TM - Snap-Trak® Mountable



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# Open Relay Modules



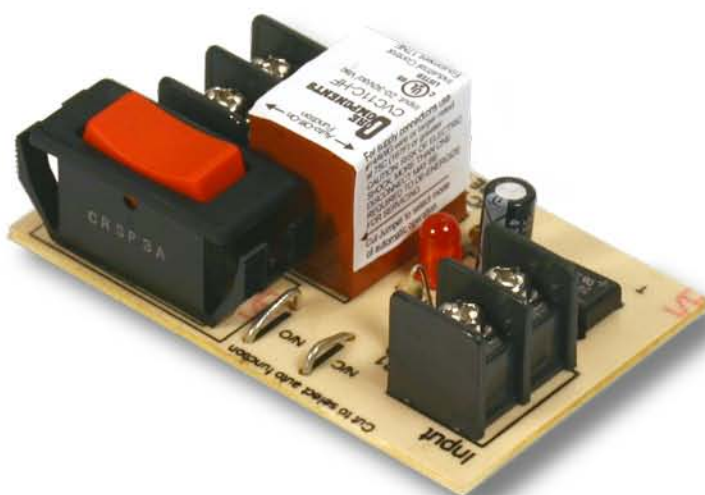
Catalog #	Core Part #	Description	Input Voltage	Contact Ratings	HP Ratings	Approvals	Features
LD50000	CVC11C-HF	1 SPST Relay w/ HOA	24 Vac/Vdc	20A	1 HP 125/250 Vac N/O 1/2 HP 125/250 Vac N/C User Selectable N/C- N/O	UL Listed US / Canada	LED TM HOA
LD50001	CVC11A-HF	1 SPST Relay w/ HOA	24 Vac/Vdc	20A	1 HP 125/250 Vac N/O Fixed N/O Mode Only	UL Listed US / Canada	LED TM HOA
LD41038	CVB12C-0	1 DPDT Relay	24 Vac/Vdc 120 Vac	15A	1 1/2 HP 208/240 Vac 1 HP 120 Vac	UL Listed US / Canada	LED TM
LD41017	CVB11C-0	1 SPDT Relay	10-30 Vac/Vdc 120 Vac	10A	1/3 HP 120/240 Vac N/O 1/4 HP 277 Vac N/O 1/6 HP 120/240 Vac N/C 1/8 HP 277 Vac N/C	UL Listed US / Canada	LED TM
LD41001	CVB11C-F	1 SPDT Relay	24-30 Vac/Vdc 120 Vac	10A	2 HP 250 Vac N/O 1 HP 125 Vac N/O 1/2 HP 250 Vac N/C 1/4 HP 125 Vac N/C	UL Listed US / Canada	LED TM
LD41024	CVB11C-V	1 SPDT Relay	10-30 Vac/Vdc 208/277 Vac	10A	1/3 HP 120/240 Vac N/O 1/4 HP 277 Vac N/O 1/6 HP 120/240 Vac N/C 1/8 HP 277 Vac N/C	UL Listed US / Canada	LED TM
LD41031	CVB12C-F	1 DPDT Relay	10-30 Vac 11-30 Vdc 120 Vac	10A	1/2 HP 120/208/240 Vac N/O 1/3 HP 120/208/240 Vac N/C	UL Listed US / Canada	LED TM





# Open Relay Modules

**LECTRO**  
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## Specifications

Track Mounted 20A Relay  
24Vac/Vdc Input

**Model #** CVC11C-HF  
**Catalog #** LD50000

Input	24 Vac / 24 Vdc 15 mA
Operating Temperature	-40° to 85° C
Storage Temperature	-40° to 105° C
Expected Relay Life	100,000 Operations @ Full Load
Status Indication	10,000,000 Operations @ No Load
Weight	1.25 oz (40 grams)

## Contact Rating

20A	125 Vac
16A	277 Vac
12A	30 Vdc
1 HP	125/250 Vac N/O
1/2 HP	125/250 Vac N/C

## Features

- 2.75" x 1.75" x 0.82" PC Board Module
- Snap-Trak® Mountable
- Standard barrier style terminal blocks with universal screws and wire retaining plates for I/O connections
- LED relay operation indicator
- Manual On-Off-Auto switch provides ability to override relay for setup and testing
- User selectable N/O or N/C mode by cutting onboard jumper
- Also available factory set in N/O or N/C mode

## Specifications

Track Mounted 20A Relay  
24Vac/Vdc Input

**Model #** CVC11A-HF  
**Catalog #** LD50001

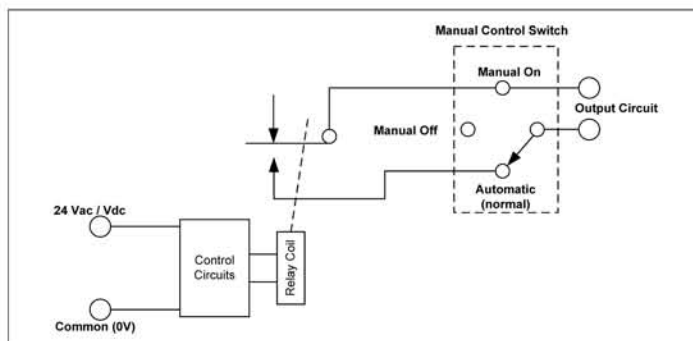
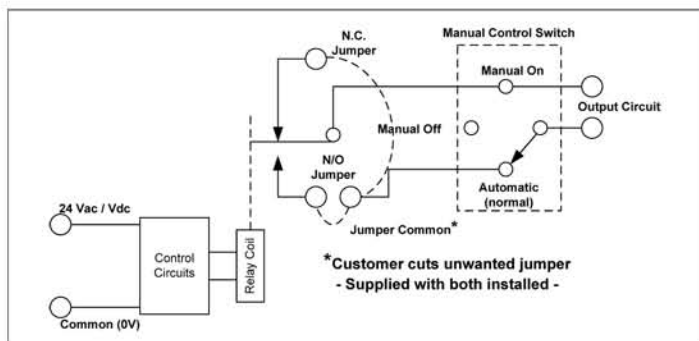
Input	24 Vac / 24 Vdc 15 mA
Operating Temperature	-40° to 85° C
Storage Temperature	-40° to 105° C
Expected Relay Life	100,000 Operations @ Full Load
Status Indication	10,000,000 Operations @ No Load
Weight	1.25 oz (40 grams)

## Contact Rating

20A	125 Vac
16A	277 Vac
12A	30 Vdc
1 HP	125/250 Vac N/O
1/2 HP	125/250 Vac N/C

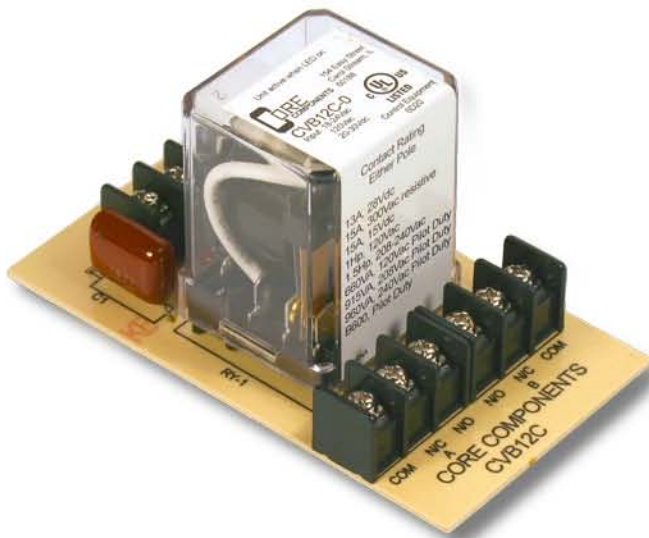
## Features

- 2.75" x 1.30" x 0.82" PC Board Module
- Snap-Trak® Mountable
- Standard barrier style terminal blocks with universal screws and wire retaining plates for I/O connections
- LED relay operation indicator
- Manual On-Off-Auto switch provides ability to override relay for setup and testing
- Factory set N/O mode
- Also available factory set in N/C mode





# Open Relay Modules



## Specifications

Track Mounted 15A / 300V Power Relay  
24Vac/Vdc, 120 Vac, 60Hz

**Model #** CVB12C-0  
**Catalog #** LD41038

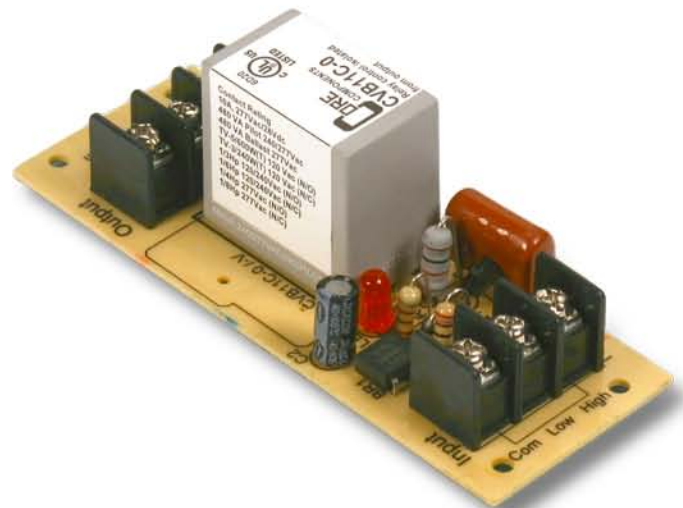
<b>Coil Voltage/ Input</b>	24 Vac/Vdc / 120 Vac 60 Hz
<b># of Relays &amp; Contact Style</b>	One (1) DPDT
<b>Expected Relay Life (mechanical)</b>	10 Million Operations Minimum
<b>Operating Temperature</b>	-40° to 150° F
<b>Status Indication</b>	LED = Activated
<b>Dimensions</b>	4" x 1.67" x 2.75"
<b>Mounting Style</b>	Snap-Trak®
<b>Connections</b>	8.5 mm centers terminal block with wire hold-downs and universal screws
<b>Approvals</b>	UL 508, C-UL Canada Industrial Control Device
<b>Override Controls</b>	None
<b>Dry Circuit Operation</b>	Optional

## Contact Rating

15 Amps Resistive	15 Vdc / 300 Vac
13A Resistive	28 Vdc
5A Resistive	600 Vac
660 VA Pilot Duty	120 Vac
915 VA Pilot Duty	208 Vac
960 VA Pilot Duty	240 Vac
B600 Pilot Duty	
1 HP	120 Vac
1-1/2 HP	208 / 240 Vac

## Coil Current

125 mA @ 24Vac	50 mA @ 24Vdc
100 mA @ 18 Vac	70 mA @ 30 Vdc
50 mA @ 125 Vac, 60 Hz	
DROP OUT = 6.5 Vac / 5.5 Vdc / 55 Vac	
PULL IN = 17 Vac / 12 Vdc / 108 Vac	



## Specifications

Track Mounted 10A Power Relay  
10-30Vac/Vdc, 120 Vac, 50-60Hz

**Model #** CVB11C-0  
**Catalog #** LD41017

<b>Coil Voltage/ Input</b>	10-30 Vac/Vdc / 120 Vac 50-60 Hz
<b># of Relays &amp; Contact Style</b>	One (1) SPDT
<b>Expected Relay Life (mechanical)</b>	10 Million Operations Minimum
<b>Operating Temperature</b>	-40° to 150° F
<b>Status Indication</b>	LED = Activated
<b>Dimensions</b>	4" x 1.25" x 2.5"
<b>Mounting Style</b>	Snap-Trak®
<b>Connections</b>	8.5 mm centers terminal block with wire hold-downs and universal screws
<b>Approvals</b>	UL 508, C-UL Canada Industrial Control Device
<b>Override Controls</b>	None
<b>Dry Circuit Operation</b>	Optional

## Contact Rating

10 Amps Resistive	28 Vdc / 277 Vac
480 VA Pilot Duty	240 / 277 Vac
480 VA Ballast	277 Vac
TV-5 (N/O)	120 Vac
TV-2 (N/C)	120 Vac
Tungsten 240W N/C	120 Vac
Tungsten 600W N/O	120 Vac
1/3 HP (N/O)	120 Vac / 240 Vac
1/4 HP (N/O)	277 Vac
1/6 HP (N/C)	120 Vac / 240 Vac
1/8 HP (N/C)	277 Vac

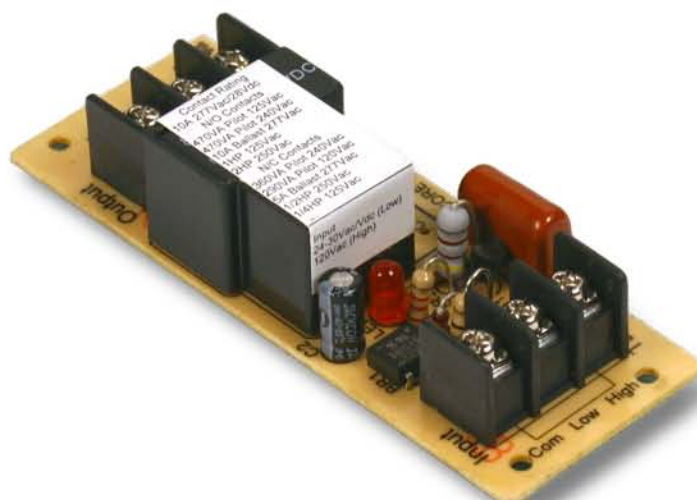
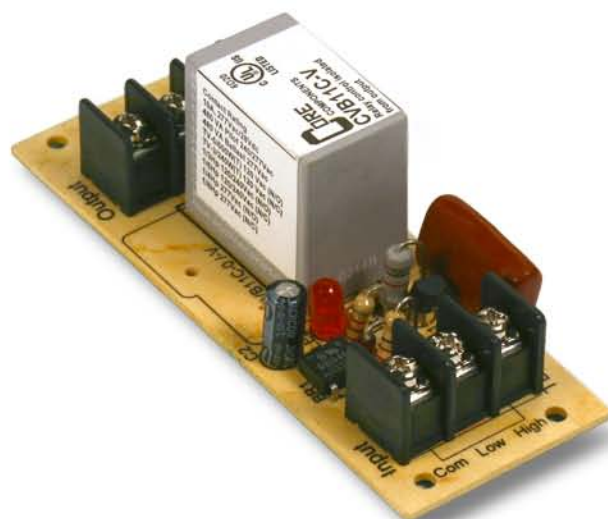
## Coil Current

30 mA @ 10 Vac	12 mA @ 10 Vdc
32 mA @ 12 Vac	14 mA @ 12 Vdc
42 mA @ 24 Vac	16 mA @ 24 Vdc
50 mA @ 30 Vac	18 mA @ 30 Vdc
35 mA @ 120 Vac	
DROP OUT = 2.0 Vac / 2.8 Vdc / 35 Vac	
PULL IN = 9 Vac / 10 Vdc / 105 Vac	



# Open Relay Modules

**LECTRO**  
COMPONENTS



## Specifications

Track Mounted 10A Power Relay  
10-30Vac/Vdc, 208/277 Vac, 50-60Hz

**Model #** CVB11C-V  
**Catalog #** LD41024

<b>Coil Voltage/ Input</b>	10-30 Vac/Vdc / 208/277 Vac 50-60 Hz
<b># of Relays &amp; Contact Style</b>	One (1) SPDT
<b>Expected Relay Life (mechanical)</b>	10 Million Operations Minimum
<b>Operating Temperature</b>	-40° to 150° F
<b>Status Indication</b>	LED = Activated
<b>Dimensions</b>	4" x 1.7" x 1.5"
<b>Mounting Style</b>	Snap-Trak®
<b>Connections</b>	8.5 mm centers terminal block with wire hold-downs and universal screws
<b>Approvals</b>	UL 508, C-UL Canada Industrial Control Device
<b>Override Controls</b>	None
<b>Dry Circuit Operation</b>	Optional

## Contact Rating

10 Amps Resistive	28 Vdc / 277 Vac
480 VA Pilot Duty	240 / 277 Vac
480 VA Ballast	277 Vac
TV-5 (N/O)	120 Vac
TV-2 (N/C)	120 Vac
Tungsten 240W N/C	120 Vac
Tungsten 600W N/O	120 Vac
1/3 HP (N/O)	120 Vac / 240 Vac
1/4 HP (N/O)	277 Vac
1/6 HP (N/C)	120 Vac / 240 Vac
1/8 HP (N/C)	277 Vac

## Coil Current

30 mA @ 10 Vac	12 mA @ 10 Vdc
32 mA @ 12 Vac	14 mA @ 12 Vdc
42 mA @ 24 Vac	16 mA @ 24 Vdc
50 mA @ 30 Vac	18 mA @ 30 Vdc
35 mA @ 120 Vac	

DROP OUT = 2.0 Vac / 2.8 Vdc / 35 Vac  
PULL IN = 9 Vac / 10 Vdc / 105 Vac

## Specifications

Track Mounted 10A Power Relay  
24-30Vac/Vdc, 120 Vac, 50-60Hz

**Model #** CVB11C-F  
**Catalog #** LD41001

<b>Coil Voltage/ Input</b>	24-30 Vac/Vdc / 120 Vac 50-60 Hz
<b># of Relays &amp; Contact Style</b>	One (1) SPDT
<b>Expected Relay Life (mechanical)</b>	10 Million Operations Minimum
<b>Operating Temperature</b>	-40° to 150° F
<b>Status Indication</b>	LED = Activated
<b>Dimensions</b>	4" x 1.5" x 1.5"
<b>Mounting Style</b>	Snap-Trak®
<b>Connections</b>	8.5 mm centers terminal block with wire hold-downs and universal screws
<b>Approvals</b>	UL 508, C-UL Canada Industrial Control Device
<b>Override Controls</b>	None
<b>Dry Circuit Operation</b>	Optional

## Contact Rating

10 Amps Resistive	28 Vdc / 277 Vac
470 VA Pilot Duty (N/O)	240 / 125 Vac
10A Ballast (N/O)	277 Vac
5A Ballast (N/C)	277 Vac
1/2 HP (N/C)	250 Vac
1/4 HP (N/C)	125 Vac
2 HP (N/O)	250 Vac
1 HP (N/O)	125 Vac
360 VA Pilot Duty (N/C)	240 Vac
290 VA Pilot Duty (N/C)	125 Vac

## Coil Current

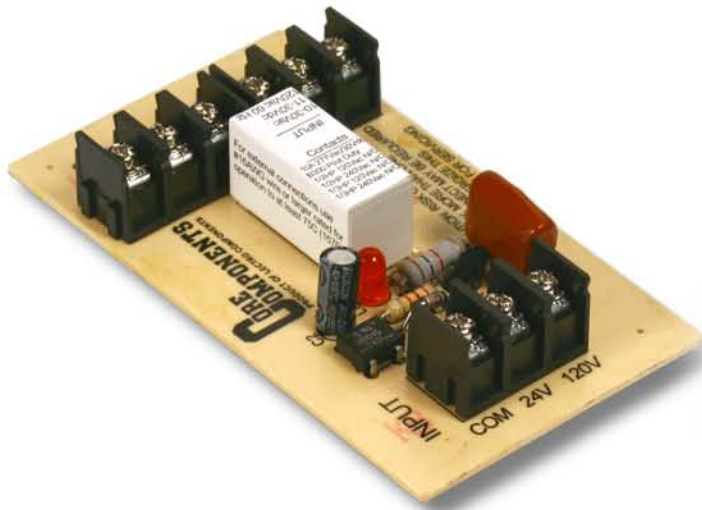
40 mA @ 24 Vdc
65 mA @ 30 Vac
50 mA @ 30 Vdc
35 mA @ 120 Vac

DROP OUT = 6.5 Vac / 7.5 Vdc / 35 Vac  
PULL IN = 18 Vac / 19.5 Vdc / 102 Vac





# Open Relay Modules



## Specifications

Track Mounted 10A Power Relay  
11-30 Vdc / 10-30 Vdc / 120 Vac 60Hz

**Model #** CVB12C-F  
**Catalog #** LD41031

Coil Voltage/ Input	11-30 Vac / 10-30 Vdc / 120 Vac 60 Hz
# of Relays & Contact Style	One (1) DPDT
Expected Relay Life (mechanical)	10 Million Operations Minimum
Operating Temperature	-40° to 150° F
Status Indication	LED = Activated
Dimensions	4" x 1.67" x 2.75"
Mounting Style	Snap-Trak®
Connections	8.5 mm centers terminal block with wire hold-downs and universal screws
Approvals	UL 508, C-UL Canada Industrial Control Device
Override Controls	None
Dry Circuit Operation	Optional

## Contact Rating

10 Amps General Use	277/250 Vac
10A General Use	28 Vdc
1/2 HP (N/O)	120/208/240 Vac
1/3 HP (N/C)	120/208/240 Vac
Pilot Duty	B300

## Coil Current

50 mA @ 10 Vac	40 mA @ 11 Vdc
60 mA @ 30 Vac	50 mA @ 24 Vdc
55 mA @ 125 Vac, 60 Hz	

DROP OUT = 6.5 Vac / 4.5 Vdc / 55 Vac  
PULL IN = 10 Vac / 10 Vdc / 108 Vac

**Don't forget to order  
the Snap-Trak®  
for easy mounting!**



# Encapsulated Relay Modules

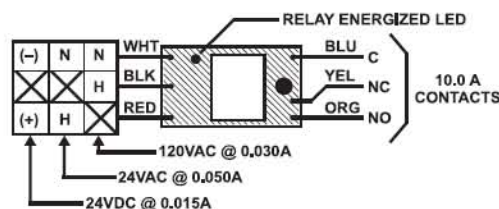
The PAM Series Relays are encapsulated multi-voltage devices with “flying” leads that offer versatile, reliable performance in a convenient package. Several of the versions contain a red LED which indicates when the relay coil is energized. The PAM Series Relays are packaged with a self-tapping screw and a piece of double sided tape for easy installation almost anywhere. The relays are also packaged with wire-nuts to aid installation.

PAM Relays are ideal for applications where remote relays are required for control or status feedback. They are suitable for use with HVAC, Temperature Control, Fire Alarm, Security, Energy Management, Lighting Control Systems and Building Automation Systems.

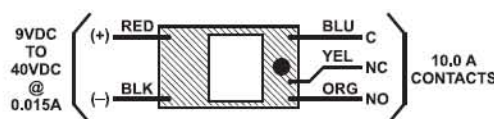


CSFM LISTED

MEA ACCEPTED



**PAM-1**



**PAM-4**



The **PAM-1** Relay provides 10.0 A form “C” contacts. The relay may be energized by one of three input voltages: 24 Vdc, 24 Vac, or 120 Vac. The input voltages are polarity-sensitive and diode-protected. PAM-1 Relays contain a red LED which indicates when the relay coil is energized.



The **PAM-4** Relay provides 10.0 A form “C” contacts. The relay may be energized across a wide voltage range from 9 Vdc to 40 Vdc, making it ideal for 12 Vdc and 24 Vdc EOL circuits. The 15mA operating current is constant across the operating range. The input voltages are polarity-sensitive and diode-protected.



# Electromechanical Relays



Hasco Component's electromechanical relays range from less than an amp to 80 amps. Hasco's relays are UL and CSA with some TUV ratings. All relays have DC coils and many have an AC coil. They come sealed for wave soldering and washing thereby allowing the relays to be put on any assembly line. There are surface mount low current relays available as well.



## HAT-900 SERIES HEAVY DUTY SPDT 40A NORMALLY OPEN & 30A NORMALLY CLOSED

### General Specifications

<b>Contact Material</b>	Silver Cadmium Oxide with Copper base
<b>Max. Continuous Rated Voltage</b>	110% of nominal voltage
<b>Pull-In Voltage</b>	75% of nominal voltage. Max @ 25° C
<b>Drop-Out Voltage</b>	10% of nominal voltage. Min @ 25° C
<b>Contact Resistance</b>	20m Ohms max. (Initial value)
<b>Operating Temperature</b>	<b>Class B</b> -20° C to 85° C
	<b>Class F</b> -20° C to 105° C
<b>Insulation Resistance</b>	DC 500V 10 M Ohms min.
<b>Dielectric Strength</b>	AC 2000V between contact and coil, frame and contact, coil and frame one minute. AC 1500V between contacts one minute.
<b>Operating Time</b>	approx. 15ms
<b>Release Time</b>	approx. 10 ms
<b>Electrical Life</b>	10x10 <sup>4</sup> operation min. for 30A Resistive Load (N.O.) 5 x 10 <sup>4</sup> operation min. for 40A Resistive Load (N.O.)
<b>Mechanical Life</b>	20 x 10 <sup>6</sup> operation min.

### DC Coil Specifications

Nominal Voltage (VDC)	Resistance ±10% @ 25°C (Ohms)	Coil Power @ 25°C (Watts)
5	27	.93
6	40	.90
9	97	.84
12	155	.93
15	256	.88
18	380	.85
22	640	.76
24	660	.87
48	2560	.88
110	13400	.90

### AC Coil Specifications

Nominal Voltage (at 25° C)	Resistance ±10% @ 25°C (Ohms)	Coil Power @ 25°C (VA)
12 Vac	27	
24 Vac	120	
110 Vac	2,360	Approx 2 VA
120 Vac	3,040	
220 Vac	13,490	
240 Vac	15,735	
277 Vac	20,300	

### Maximum Load Specifications

Voltage	Load Type	SPNC	SPNO
AC	Resistive	30A 277 Vac	40A 277 Vac
	Motor	1 HP 120 Vac	1 HP 120 Vac
		2 HP 277 Vac	2 HP 277 Vac
	General Purpose	30A 277 Vac	40A 277 Vac
	Ballast	10A 120 Vac 10A 277 Vac	30A 120Vac 20A 277 Vac
DC	Tungsten	2A 120 Vac	10A 120 Vac
	Resistive	30A 28 Vdc	30A 28 Vdc



### Ordering Information

HAT	901	C	S	DC	12	-1
Temp Class	Type	Form	Style	Coil	Coil Voltage	Option
NIL: Class B	901: PC Pins Only	A: SPST-NO	Nil: Open	AC	See charts	Pin 6 is omitted
F: Class F	902: PC Pins & Quick Connects	B: SPST-NC	C: Cover, not sealed	or	above	UL840
	903: Quick Connects Only	C: SPST	S: Cover, sealed	DC		



Transformers  
Relays & Timers  
Power Supplies  
Circuit Protection  
Terminal Blocks  
Switches  
Electronics  
Enclosures  
Additional Products

# Ice Cube Relays



UL Recognized  
Files No. E67770, E59804



CSA Certified  
File No. LR35144

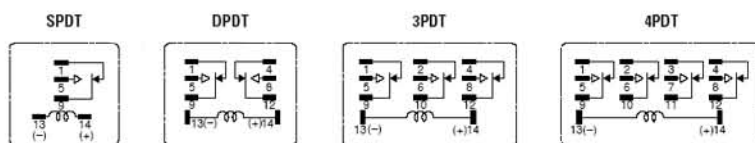
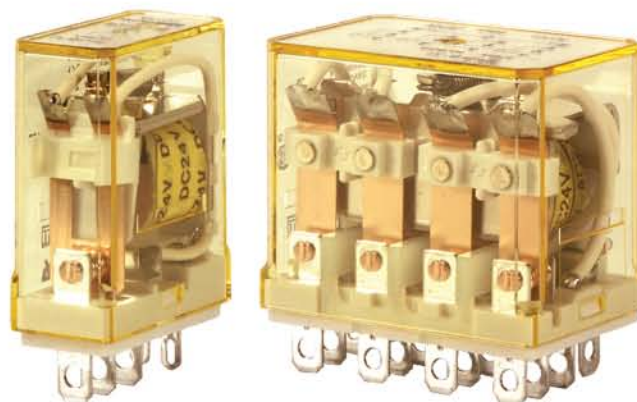


File No.  
BL951113332319



Featuring the same contact ratings as the larger RR series, the RH series uses silver cadmium oxide contacts to help reduce voltage arcing. Available in 1 to 4 poles, with either .187" solder/quick-connect or PCB terminals, the RH series is known for going the distance. Options include manual check buttons, LED indicators, and top flange covers for direct surface mounting. All models carry worldwide approvals including UL, CSA, TUV and CE. Using a standard terminal arrangement, the RH series will plug into many competitors' sockets. In fact, since Idec private labels sockets for so many companies, there is a good chance that the socket you are using was designed specifically for RH series relays.

Catalog #	Supplier Part Number	Description
ID42900	RH1B-UAC12V	SPDT relay 12 vac
ID43200	RH1B-UAC120V	SPDT relay 120 vac
ID43210	RH1B-UAC120V-KIT	SPDT relay & socket 120 vac KIT
ID43500	RH1B-UAC24V	SPDT relay 24 vac
ID43540	RH1B-UAC24V-KIT	SPDT relay & socket 24 vac KIT
ID43572	RH1B-LAC12V	SPDT relay w/ light 12 vac
ID43650	RH1B-LAC120V	SPDT relay w/ light 120 vac
ID43700	RH1B-LAC24V	SPDT relay w/ light 24 vac
ID43725	RH1B-LDC12V	SPDT relay w/ light 12 vdc
ID43730	RH1B-LDC24V	SPDT relay w/ light 24 vdc
ID43763	RH1B-LDC110V	SPDT relay w/ light 110 vdc
ID43800	RH1B-UDC12V	SPDT relay 12 vdc
ID44100	RH1B-UDC24V	SPDT relay 24 vdc
ID45000	RH2B-ULAC12V	DPDT relay w/ light 12 vac
ID45277	RH2B-UAC110-120V	DPDT relay 120 vac
ID45340	RH2B-UAC110-120V-KIT	DPDT relay & socket 120 vac KIT
ID45600	RH2B-ULAC110-120V	DPDT relay w/ light 120 vac
ID45722	RH2B-ULAC110-120V-KIT	DPDT relay w/ light & socket 120 vac KIT
ID46450	RH2B-UAC12V	DPDT relay 12vac
ID46500	RH2B-UAC24V	DPDT relay 24 vac
ID46510	RH2B-UAC24V-KIT	DPDT relay & socket 24 vac KIT
ID46800	RH2B-ULAC24V	DPDT relay w/ light 24 vac
ID46873	RH2B-ULAC24V-KIT	DPDT relay w/ light & socket 24 vac KIT
ID47700	RH2B-UDC12V	DPDT relay 12 vdc
ID48000	RH2B-ULDC12V	DPDT relay w/ light 12 vdc
ID48297	RH2B-ULDC100-110V	DPDT relay w/ light 110-110 vdc
ID48300	RH2B-UDC24V	DPDT relay 24 vdc
ID48600	RH2B-ULDC24V	DPDT relay w/ light 24 vdc
ID49779	RH3B-UAC12V	3PDT relay 12 vac
ID50400	RH3B-UAC120V	3PDT relay 120 vac
ID50551	RH3B-ULAC12V	3PDT relay w/ light 12 vac
ID50700	RH3B-ULAC120V	3PDT relay w/ light 120 vac
ID51000	RH3B-UAC24V	3PDT relay 24 vac
ID51300	RH3B-ULAC24V	3PDT relay w/ light 24 vac
ID52222	RH3B-UDC12V	3PDT relay 12 vdc
ID52800	RH3B-UDC24V	3PDT relay 24 vdc
ID52833	RH3B-ULDC12V	3PDT relay w/ light 12 vdc
ID54600	RH4B-UAC24V	4PDT relay 24 vac
ID54750	RH4B-ULAC24V	4PDT relay w/ light 24 vac
ID54890	RH4B-ULAC24V-KIT	4PDT relay w/ light & socket 24 vac KIT
ID54963	RH4B-UAC12V	4PDT relay 12 vac
ID55200	RH4B-UAC120V	4PDT relay 120 vac
ID55244	RH4B-UDC110V	4PDT relay 110 vac
ID55250	RH4B-UDC12V	4PDT relay 12 vdc
ID55279	RH4B-UDC24V	4PDT relay 24 vdc
ID55331	RH4B-ULAC12	4PDT relay w/ light 12 vac
ID55350	RH4B-ULAC120V	4PDT relay w/ light 120 vac
ID55366	RH4B-ULDC110V	4PDT relay w/ light 110 vdc
ID55382	RH4B-ULDC12V	4PDT relay w/ light 12 vdc
ID55400	RH4B-ULDC24V	4PDT relay w/ light 24 vdc





# Relay Sockets



Catalog #	Supplier Part #	Description
IF80300	SH1B-05	1 pole socket for RH1B relays
IF80955	SH2B-05	2 pole socket for RH2B relays
IF82100	SH3B-05	3 pole socket for RH3B relays
IF83000	SH4B-05	4 pole socket for RH4B relays

## Features of the SH Series

- Worldwide Approvals: UL, CSA, TUV, CE
- UL94-V0 flame resistant material
- Many models available in finger-safe versions (with IEC standard terminal numbering)
- Unbreakable nylon construction
- Rust-proof double nickel-plated steel screws (withstands 96 hour salt spray test)
- Hold down springs and clips available for most models
- Receptacles with four contact points per blade



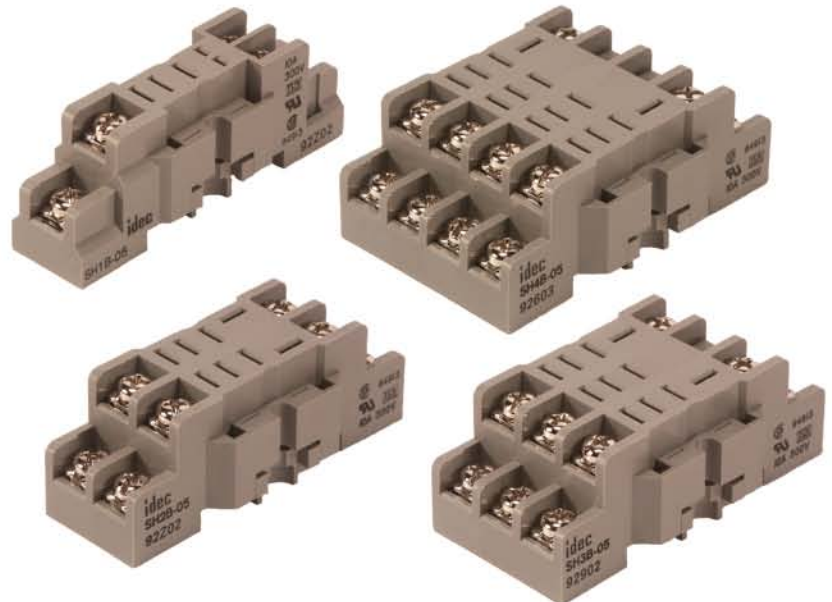
SHXB-62



SHXB-51



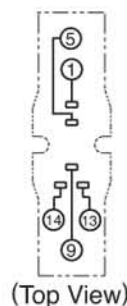
SHXB-05C



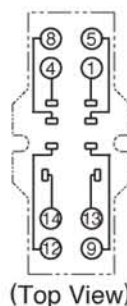
SHXB-05 Series

Part #	Use with
SY2S-02F1 SFA-101 SFA-202	SH1B-05, 05C
SY4S-51F1 SFA-301 SFA-302	SH1B-51, 62
SY4S-02F1 SFA-101 SFA-202	SH2B-05, 05C
SY4S-51F1 SFA-301 SFA-302	SH2B-51, 62
SH3B-05F1 SFA-101 SFA-202	SH3B-05, 05C
SY4S-51F1 SFA-301 SFA-302	SH3B-51, 62
SH4B-02F1 SFA-101 SFA-202	SH4B-05, 05C
SY4S-51F1 SFA-301 SFA-302	SH4B-51, 62

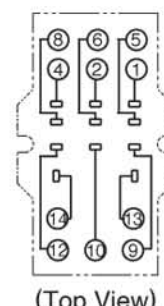
TERMINAL ARRANGEMENT



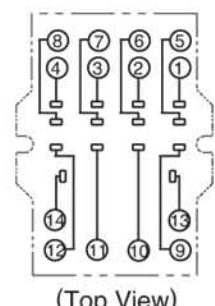
(Top View)



(Top View)



(Top View)



(Top View)

Relay	Standard DIN Rail Mount	Finger-Safe DIN Rail Mount	Surface Mount	Panel Mount	PCB Mount
RH1B	SH1B-05	SH1B-05C		SH1B-51	SH1B-62
RH2B	SH2B-05	SH2B-05C	SH2B-02	SH2B-51	SH2B-62
RH3B	SH3B-05	SH3B-05C		SH3B-51	SH3B-62
RH4B	SH4B-05	SH4B-05C		SH4B-51	SH4B-62



# Relays

## FEATURES

Features are part number specific. Please review individual product specs for more details.

- Color-coded push button
- Bi-Polar LED Status Lamp
- Removable Lock-Down Door
- I.D. Tag / Write-On Plastic Label
- Flag Indicator
- Gold Flashed Contacts
- Finger Grip Cover

Magnecraft General Purpose plug-in relays are available in many different package styles and most are compatible with multiple accessories and/or sockets.

These relays feature a full range of contact ratings and a variety of covers and mounting options to meet a wide variety of applications. Hermetically sealed relays are also available.

Only the most common relays are listed here. For the full range of Magnecraft relays, please call us at 800-323-2282.



MA10425



MA10200



MA10525



MA10870



MA10725



MA10575





# Relays



Catalog #	Manufacturer #	Type	Base	HP	Coil Voltage	Current Rating	Current Type	Contact Type
MA10075	388JBXC1M-120A	General Purpose	Square	3/4	120V	20A	AC	DPDT
MA10100	388JBXC1M-24D	General Purpose	Square	3/4	24V	20A	DC	DPDT
MA10025	388JXCXC1M-120A	General Purpose	Square	3/4	120V	16A	AC	3PDT
MA10050	388JXCXC1M-24D	General Purpose	Square	3/4	24V	16A	DC	3PDT
MA10123	750XBXC-24D	General Purpose	Octal	1/3	24V	16A	DC	DPDT
MA10351	750XBCL-24A	General Purpose	Octal	1/3	24V	16A	AC	DPDT
MA10200	750BXM4L-120A	General Purpose	Octal	1/3	120V	12A	AC	DPDT
MA10260	750BXM4L-220/240A	General Purpose	Octal	1/3	220/240V	12A	AC	DPDT
MA10250	750BXM4L-24A	General Purpose	Octal	1/3	24V	12A	AC	DPDT
MA10225	750BXM4L-24D	General Purpose	Octal	1/3	24V	12A	DC	DPDT
MA10348	750XCXC-24A	General Purpose	Octal	1/3	24V	16A	AC	3PDT
MA10275	750CXM4L-120A	General Purpose	Octal	1/3	120V	12A	AC	3PDT
MA10325	750CXM4L-24A	General Purpose	Octal	1/3	24V	12A	AC	3PDT
MA10300	750CXM4L-24D	General Purpose	Octal	1/3	24V	12A	DC	3PDT
MA10925	750BXH-120A	Hermetically Sealed	Octal	1/3	120V	12A	AC	DPDT
MA10125	750BXH-24D	Hermetically Sealed	Octal	1/3	24V	12A	DC	DPDT
MA10150	750CXH-120A	Hermetically Sealed	Octal	1/3	120V	10A	AC	3PDT
MA10175	750CXH-24D	Hermetically Sealed	Octal	1/3	24V	10A	DC	3PDT
MA10350	788BXM4L-120A	General Purpose	Square	1/3	120V	12A	AC	DPDT
MA10400	788BXM4L-24A	General Purpose	Square	1/3	24V	12A	AC	DPDT
MA10375	788BXM4L-24D	General Purpose	Square	1/3	24V	12A	DC	DPDT
MA10408	788CXC-220/240A	General Purpose	Square	1/3	220/240V	16A	AC	3PDT
MA10410	788CXC-24A	General Purpose	Square	1/3	24V	16A	AC	3PDT
MA10425	788CXM4L-120A	General Purpose	Square	1/3	120V	12A	AC	3PDT
MA10475	788CXM4L-24A	General Purpose	Square	1/3	24V	12A	AC	3PDT
MA10450	788CXM4L-24D	General Purpose	Square	1/3	24V	12A	DC	3PDT
MA10559	781AXC-24D	General Purpose	Square	1/2	24V	20A	DC	SPDT
MA10558	781AXM4L-120A	General Purpose	Square	1/2	120V	20A	AC	SPDT
MA10561	781AXM4L-24A	General Purpose	Square	1/2	24V	20A	AC	SPDT
MA10562	781AXM4L-24D	General Purpose	Square	1/2	24V	20A	DC	SPDT
MA10500	781AXML-120A	General Purpose	Square	1/2	120V	15A	AC	SPDT
MA10508	781AXML-12D	General Purpose	Square	1/2	12V	15A	DC	SPDT
MA10525	781AXML-24A	General Purpose	Square	1/2	24V	15A	AC	SPDT
MA10550	781AXML-24D	General Purpose	Square	1/2	24V	15A	DC	SPDT
MA10568	782BXC-24D	General Purpose	Square	1/2	24V	15A	DC	SPDT
MA10566	782BXCT-6D	General Purpose	Square	1/2	6V	15A	AC	SPDT
MA10573	782BXM4L-110D	General Purpose	Square	1/2	110V	20A	DC	SPDT
MA10575	782BXM4L-120A	General Purpose	Square	1/2	120V	15A	AC	SPDT
MA10600	782BXM4L-24A	General Purpose	Square	1/2	24V	15A	DC	SPDT
MA10625	782BXM4L-24D	General Purpose	Square	1/2	24V	15A	AC	SPDT
MA10570	782BXM4L-6D	General Purpose	Square	1/2	6V	15A	DC	SPDT
MA10626	782CX2M4L-24A	General Purpose	Square	1/2	24V	10A	AC	3PDT
MA10650	782DX2M4L-120A	General Purpose	Square	1/2	120V	10A	AC	4PDT
MA10675	782DX2M4L-24A	General Purpose	Square	1/2	24V	10A	AC	4PDT
MA10700	782DX2M4L-24D	General Purpose	Square	1/2	24V	10A	DC	4PDT
MA10569	782BXH21-12D	Hermetically Sealed	Square	1/2	12V	15A	DC	SPDT
MA10870	782DXH10-120A	Hermetically Sealed	Square	1/2	120V	3A	AC	4PDT
MA10875	782DXH21-120A	Hermetically Sealed	Square	1/2	120V	5A	AC	4PDT
MA10876	782DXH21-12A	Hermetically Sealed	Square	1/2	12V	5A	AC	4PDT
MA10877	782DXH21-12D	Hermetically Sealed	Square	1/2	12V	5A	DC	4PDT
MA10900	782DXH21-24D	Hermetically Sealed	Square	1/2	24V	5A	DC	4PDT
MA10725	783CXM4L-120A	General Purpose	Square	1/2	120V	15A	AC	3PDT
MA10750	783CXM4L-24A	General Purpose	Square	1/2	24V	15A	AC	3PDT
MA10775	783CXM4L-24D	General Purpose	Square	1/2	24V	15A	DC	3PDT
MA10800	784DXM4L-120A	General Purpose	Square	1/2	120V	15A	AC	4PDT
MA10825	784DXM4L-24A	General Purpose	Square	1/2	24V	15A	AC	4PDT
MA10850	784DXM4L-24D	General Purpose	Square	1/2	24V	15A	DC	4PDT



Transformers  
Relays & Timers  
Power Supplies  
Circuit Protection  
Terminal Blocks  
Switches  
Electronics  
Enclosures  
Additional Products

# Relay Sockets



## FEATURES

Features are part number specific. Please review individual product specs for more details.

- Finger-Safe Operation
- Hold-Down Clips
- Module Compatible
- Coil Bus Jumper system
- Write-on I.D. Tag
- Panel/DIN Rail Mounting System
- Isolated Input / Output Terminals

Magnecraft's sockets are ideal for most standard relay mounting requirements, while also offering unprecedented new features and complete solutions.

Magnecraft has numerous socket choices for your system (including square base or octal, PCB or chassis mount and screw, quick connect, solder or printed circuit terminals). Also available is a full line of accessories, including DIN Mount clips, Hold-Down clips, and many others.

Only the most common sockets are listed here. For the full range of Magnecraft sockets, please call us at 800.323.2282.



MA70004



MA80050



MA80275



MA80375



MA80400



MA80350



MA80225



MA80250





# Relay Sockets



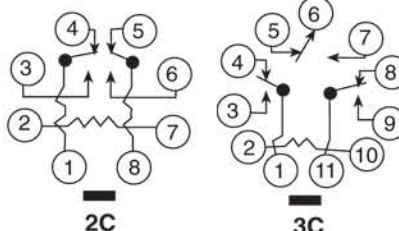
Relay Series	Current Rating	Lectro #	Manufacturer #	# of Pins	Mounting Style	Load Rating
788	12A	MA80225	70-463-1	11	DIN Rail or Panel	15A, 300V
			70-124-1		Chassis w/ Solder Terminals	
			70-124-2		Chassis w/ Quick Connects	
			70-178-1		Printed Circuit Terminals w/ Mounting Tabs	
784	15A	MA80425	70-784D-1	14	DIN Rail or 2 Way Panel	16A, 300V
783	15A	MA80400	70-783D-1	11	DIN Rail or 2 Way Panel	16A, 300V
782	15A	MA80185	70-459-1	8	DIN Rail or Panel	10A, 300V
		MA12010	70-401-1		Chassis	
			70-402-1		Printed Circuit	
		MA80375	70-782D-1		DIN Rail or 2 Way Panel	16A, 300V
782	10A	MA80200	70-461-1	14	DIN Rail or Panel	10A, 300V
			70-378-1		Chassis	5A, 300V
			70-379-1		Printed Circuit	
782H	5A	MA80200	70-461-1	14	DIN Rail or Panel	10A, 300V
			70-378-1		Chassis	5A, 300V
			70-379-1		Printed Circuit	
781	15A	MA80350	70-781D-1	5	DIN Rail or Panel	15A, 300V
			70-781F-1		Chassis	
			70-781T-1		Printed Circuit	
750	12A	MA80250	70-464-1	8	DIN Rail or Panel	10A, 600V / 15A, 300V
		MA80300	70-465-1	11		5A, 600V / 15A, 300V
		MA80275	70-750D8-1	8		5A, 300V / 16A, 300V
		MA80325	70-750D11-1	11		
			70-169-1	8	Panel	15A, 300V
			70-170-1	11		
750H	12A	MA80250	70-464-1	8	DIN Rail or Panel	10A, 600V / 15A, 300V
		MA80300	70-781F-1	11		5A, 600V / 16A, 300V
711	12A	MA80225	70-463-1	11	DIN Rail or Panel	15A, 300V
			70-124-1		Chassis w/ Solder Terminals	
			70-124-2		Chassis w/ Quick Connects	
			70-178-1		Printed Circuit Terminals w/ Mounting Tabs	
			70-178-2		Printed Circuit	
					Printed Circuit	
388V	15A	MA80225	70-463-1	11	DIN Rail or Panel	15A, 300V
			70-124-1		Chassis w/ Solder Terminals	
			70-124-2		Chassis w/ Quick Connects	
			70-178-1		Printed Circuit Terminals w/ Mounting Tabs	
			70-178-2		Printed Circuit	
388ML & 285	10A	MA80225	70-463-1	11	DIN Rail or Panel	15A, 300V
			70-124-1		Chassis w/ Solder Terminals	
			70-124-2		Chassis w/ Quick Connects	
			70-178-1		Printed Circuit Terminals w/ Mounting Tabs	
			70-178-2		Printed Circuit	
388J	16A / 20A	MA80225	70-463-1	11	DIN Rail or Panel	15A, 300V
			70-124-1		Chassis w/ Solder Terminals	
			70-124-2		Chassis w/ Quick Connects	
			70-178-1		Printed Circuit Terminals w/ Mounting Tabs	
			70-178-2		Printed Circuit	
314	10A	MA80250	70-464-1	8	DIN Rail or Panel	10A, 600V / 15A, 300V
		MA80300	70-465-1	11		5A, 600V / 15A, 300V
		MA80275	70-750D8-1	8		5A, 300V / 16A, 300V
		MA80325	70-750D-11	11		
			70-169-1	8	Panel	15A, 300V
			70-170-1	11		

# SKKP Series Relays

Sky Electronics manufactures many different lines of miniature relays. The SKKP line includes features such as a plug in octal base, dust cover, optional light and optional manual actuator.

It comes in contact configurations of SPDT, 2PDT and 3PDT, and both AC and DC Coils.

## CONTACT CONFIGURATIONS



SJ18479



SJ20007

## SPECIFICATIONS

<b>Contact Resistance</b>	50m $\Omega$ Max.
<b>Operate Time</b>	15 msec Max
<b>Release Time</b>	15 msec Max
<b>Dielectric Strength</b>	Between Coil and Contact Between Contacts
	AC 1500 V - 50/60 Hz (1 minute) AC 500 V - 50/60 Hz (1 minute)
<b>Surge Resistance</b>	1000 V (between coil and contact 1x40 $\mu$ sec)
<b>Insulation Resistance</b>	100 m $\Omega$ Min (500 Vdc)
<b>Max. ON/OFF Switching</b>	<b>Mechanically</b> 300operations / min <b>Electrically</b> 30 operations / min
<b>Operating Ambient Temperature</b>	-45° C to +70° C (no water condensation / no water drop)
<b>Operating Humidity</b>	85% @ +40° C
<b>Coil Temperature Rise</b>	35° Max (at rated coil voltage)
<b>Pull In Voltage</b>	AC - 85% of nominal voltage DC - 80% of nominal voltage
<b>Shock</b>	<b>Endurance</b> 100 G Min <b>Error Operation</b> 10 G Min
<b>Life Expectancy</b>	<b>Mechanically</b> 10,000,000 operations / min (no load) <b>Electrically</b> 100,000 operations / min (at rated load)
<b>Weight</b>	About 85 grams

Catalog #	Manufacturer #	Base	Coil Voltage	Current Rating	Current Type	Contact Config	Features
SJ18479	SKKP-2C-12AC	Octal	12	10A	AC	2C	
SJ18500	SKKP-2C-120AC	Octal	120	10A	AC	2C	
SJ20000	SKKP-2C-24DC	Octal	24	10A	DC	2C	
SJ20007	SKKP-2C-24VAC	Octal	24	10A	AC	2C	
SJ20011	SKKP-2C-240AC	Octal	240	10A	AC	2C	
SJ20023	SKKP-3C-120AC	Octal	120	10A	AC	3C	
SJ22150	SKKPL-2C-12AC	Octal	12	10A	AC	2C	Lamp
SJ22169	SKKPL-2C-24VAC	Octal	24	10A	AC	2C	Lamp
SJ22200	SKKPL-2C-24DC	Octal	24	10A	DC	2C	Lamp
SJ22235	SKKPL-2C-120VAC	Octal	120	10A	AC	2C	Lamp
SJ22247	SKKPLM-3C-120VAC	Octal	120	10A	AC	3C	Lamp, Pushbutton
SJ22252	SKKPLM-3C-24VAC	Octal	24	10A	AC	3C	Lamp, Pushbutton



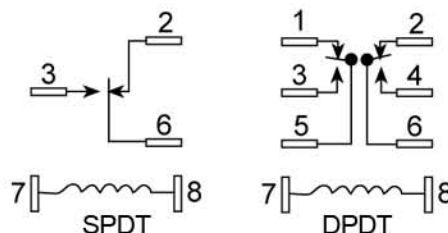
# SKNB/P/T Series Relays



Sky Electronics manufactures many different lines of miniature relays. The SKN line includes features such as a plug in square base, dust cover, optional light, flame, bracket mount, or manual actuator.

It comes in contact configurations of SPDT or DPDT, and both AC and DC Coils.

## CONTACT CONFIGURATIONS



SJ26400



SJ26011

## SPECIFICATIONS

<b>Contact Resistance</b>		100m $\Omega$ Max.
<b>Operate Time</b>		25 msec Max
<b>Release Time</b>		25 msec Max
<b>Dielectric Strength</b>	<b>Between Coil and Contact</b>	AC 1500 V - 50/60 Hz (1 minute)
	<b>Between Contacts</b>	AC 1000 V - 50/60 Hz (1 minute)
<b>Surge Resistance</b>		3000 V (between coil and contact 1x40 $\mu$ sec)
<b>Insulation Resistance</b>		100 m $\Omega$ Min (500 Vdc)
<b>Max. ON/OFF Switching</b>	<b>Mechanically</b>	240 operations / min
	<b>Electrically</b>	30 operations / min
<b>Operating Ambient Temperature</b>		-25° C to +55° C (no water condensation / no water drop)
<b>Operating Humidity</b>		45% to 85% RH
<b>Coil Temperature Rise</b>		60° Max (at rated coil voltage)
<b>Vibration</b>	<b>Endurance</b>	10 to 55 Hz Double Amplitude 1.0mm
	<b>Error Operation</b>	10 to 55 Hz Double Amplitude 1.0mm
<b>Shock</b>	<b>Endurance</b>	100 G Min
	<b>Error Operation</b>	10 G Min
<b>Life Expectancy</b>	<b>Mechanically</b>	10,000,000 operations / min (no load)
	<b>Electrically</b>	100,000 operations / min (at rated load)
<b>Weight</b>		About 35 grams

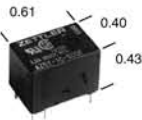




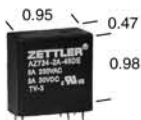
Catalog #	Manufacturer #	Base	Coil Voltage	Current Rating	Current Type	Contact Config	Features
SJ25731	SKNB-2C-12VDC	PC Board	12	15A	DC	DPDT	
SJ25900	SKNP-1C-24AC	Plug-In	24	10A	AC	SPDT	
SJ26011	SKNP-2C-12VDC	Plug-In	12	15A	DC	DPDT	
SJ26021	SKNP-2C-24VDC	Plug-In	24	15A	DC	DPDT	
SJ26031	SKNP-2C-240VAC	Plug-In	240	15A	AC	DPDT	
SJ26400	SKNPL-2C-120VAC	Plug-In	120	15A	AC	DPDT	Neon Lamp
SJ26480	SKNPL-2C-24VAC	Plug-In	24	15A	AC	DPDT	Neon Lamp
SJ26500	SKNPL-2C-24VDC	Plug-In	24	15A	DC	DPDT	Neon Lamp
SJ30000	SKNT-2C-24VAC	Tab Mount	24	15A	AC	DPDT	

# Enclosed Relays



American Zettler manufactures a wide selection of Miniature Power Relays. The chart below represents some of the most popular models. Please call us at 800-323-2282 for more information.



																			
SERIES		AZ5			AZ673			AZ697			AZ733			AZ733W			AZ734		
FEATURES		<ul style="list-style-type: none"><li>• High sensitivity</li><li>• Subminiature size</li><li>• Low cost</li><li>• Meets FCC Part 68.302 and 68.304</li></ul>			<ul style="list-style-type: none"><li>• High dielectric strength, 4000 Vrms</li><li>• Withstands surges up to 10,000 volts</li><li>• High switching capacity in slim package</li></ul>			<ul style="list-style-type: none"><li>• High dielectric strength, 5000 Vrms</li><li>• High switching capacity</li><li>• Class B (130°C) insulation standard</li><li>• Isolation spacing greater than 8 mm</li></ul>			<ul style="list-style-type: none"><li>• High switching capacity</li><li>• High dielectric strength, 5000 Vrms</li><li>• Isolation spacing greater than 8 mm</li><li>• Class B (130°C) insulation standard</li></ul>			<ul style="list-style-type: none"><li>• 1.5 mm contact gap</li><li>• High switching capacity</li><li>• High dielectric strength, 5000 Vrms</li><li>• Isolation spacing greater than 8 mm</li><li>• Class B (130°C) insulation standard</li></ul>			<ul style="list-style-type: none"><li>• Dielectric strength, 4000 Vrms</li><li>• 5 Amp switching, double pole contacts</li><li>• Class B (130°C) insulation standard</li></ul>		
EPOXY SEALED		Yes			Yes			Yes			Yes			Yes			Yes		
CONTACTS	Form	1 Form C			1 Form A, C			1 Form A, C			2 Form A, C			2 Form A			2 Form A		
	Ratings (Resistive)	Light duty: 1 A at 30 VDC 0.5 A at 120 VAC Heavy duty: 2 A at 30 VDC 1 A at 120 VAC			10 A at 250 VAC 10 A at 30 VDC 1/8 HP at 125 VAC 1/4 HP at 250 VAC TV-5 at 125 VAC			TV-5 at 120 VAC 10A at 277 VAC or 30 VDC resistive 1/3 HP at 250 VAC 1/4 HP at 125 VAC NO			10 A at 30 VDC or 250 VAC TV-3 at 125 VAC 1/4 HP at 240 VAC 1/8 HP at 120 VAC			10 A at 250 VAC 10 A at 30 VDC TV-3 at 125 VAC			5 A at 250 VAC 5 A at 30 VDC TV-3 at 125 VAC		
COIL VOLTAGES		5 thru 24 VDC			5 thru 48 VDC			3 thru 110 VDC			3 thru 110 VDC			3 thru 60 VDC			5 thru 48 VDC		
COIL POWER AT PICKUP VOLTAGE (typical)		Standard coils: 220 mW Sensitive coils: 100 mW			Standard coils: 300 mW Sensitive coils: 140 mW			257 mW			257 mW			450 mW			300 mW		
DIELECTRIC STRENGTH (at sea level for 1 min.)		Contact to coil: 1250 Vrms Between open contacts: 500 Vrms			Contact to coil: 4000 Vrms Between open contacts: 1000 Vrms Surge contact to coil: 10,000 V			Contact to coil: 5000 Vrms Between open contacts: 1000 Vrms			Contact to coil: 5000 Vrms Between open contacts: 1000 Vrms Contact set to contact set: 3000 Vrms			Contact to coil: 5000 Vrms Between open contacts: 3000 Vrms Contact set to contact set: 3000 Vrms			Contact to coil: 4000 Vrms Between open contacts: 1000 Vrms Contact set to contact set: 1000 Vrms		
TYPICAL LIFE	Electrical <small>At rated load unless otherwise specified</small>	Standard duty: 5 x 10 <sup>5</sup> at 1 A at 30 VDC or 4 x 10 <sup>5</sup> at 0.5 A at 120 VAC Heavy duty: 2 x 10 <sup>5</sup> at 2 A at 30 VDC or 2 x 10 <sup>5</sup> at 1 A at 120 VAC			1 x 10 <sup>5</sup> at 10 A at 240 VAC			1 x 10 <sup>5</sup> at 10 A at 240 VAC			1 x 10 <sup>5</sup> at 10 A at 240 VAC			1 x 10 <sup>5</sup> at 10 A at 240 VAC			1 x 10 <sup>5</sup> at 5 A at 240 VAC		
	Mechanical	1 x 10 <sup>7</sup> operations			1 x 10 <sup>7</sup> operations			1 x 10 <sup>7</sup> operations			1 x 10 <sup>7</sup> operations			5 x 10 <sup>5</sup> operations			1 x 10 <sup>7</sup> operations		
APPROXIMATE SIZE IN INCHES L x W x H		0.61 x 0.40 x 0.43			0.97 x 0.41 x 0.99			1.14 x 0.51 x 1.0			1.14 x 0.51 x 1.02			1.14 x 0.51 x 1.02			0.95 x 0.47 x 0.98		
TERMINALS	PC	THT			THT			THT			THT			THT			THT		
	Solder/Plug-in	—			—			—			—			—			—		
	Bracket Mount	—			—			—			—			—			—		
	Socket	—			—			X			X			X			—		
APPROVAL		UL/CSA			UL/CUR/TÜV			UL/CUR/TÜV			UL/CUR/TÜV			UL/CUR/TÜV			UL/CUR		



# 841 Series Relays



## FEATURES

- Heavy Duty 30A 240Vac, 25A 240Vac power type
- AC & DC coils are both available
- PCB Terminals and quick terminal types
- Option for special large contact gap 3.0mm version - SPNO-ST & DPNO-ST contact configuration
- Comply with RoHS Directive 2002/95/EC
- Perfect for UPS, air conditioners, and heater controllers



Load Type	1A (SPDM)	2A (DPDM)
Rated Load (Resistive)	30A / 220 Vac	25A / 220 Vac
Max. Switching Current	30A	25A
Max. Switching Voltage	277 Vac	277 Vac
Max. Switching Capacity	6600 VA	5500 VA

Terminal Style	Contact Form	Enlarge Spacing Type	Dust Cover	Designation		
				Flux Tight	Flanged Cover	Sealed Type Washable
S (Quick Terminal)	1A (SPDM)	-----	841-S-1A-D	841-S-1A-C	841-S-1A-C1	841-S-1A-S
		H	841-S-1A-D-H	841-S-1A-C-H	841-S-1A-C1-H	841-S-1A-S-H
	2A (DPDM)	-----	841-S-2A-D	841-S-2A-C	841-S-2A-C1	841-S-2A-S
		H	841-S-2A-D-H	841-S-2A-C-H	841-S-2A-C1-H	841-S-2A-S-H
P (PCB Terminal)	1A (SPDM)	-----	841-P-1A-D	841-P-1A-C	-----	841-P-1A-S
		H	841-P-1A-D-H	841-P-1A-C-H	-----	841-P-1A-S-H
	2A (DPDM)	-----	841-P-2A-D	841-P-2A-C	-----	841-P-2A-S
		H	841-P-2A-D-H	841-P-2A-C-H	-----	841-P-2A-S-H



# RTE Series Timers



Lectro Components stocks IDEC timers popular in the Building Automation Industry. The multifunction RTE timers offers ranges up to 10 hours. All timers have corresponding IDEC sockets to make the most efficient connection; for more information about which products will work best with the timer you choose, contact Our Customer Service Department or IDEC Technical Support.

RTE series timers offer the most popular timing functions (On Delay, Interval, Off Delay, and Single Shot) together with high power 10A contacts. In fact, they use our famous RH2 relay, so you can be sure of the reliability. Both models offer two timing functions and eight timing ranges. Terminated either via 8 or 11 tubular pin base or .187" quick connect terminals, all models mount into industry standard sockets, or standard 45mm square panel cutouts using an optional adaptor.



## Specifications

Mode of Operation	ON-Delay Interval, OFF-Delay Single-Shot
Time Range	0.1 Second to 10 Hours
Contact Configuration	2 Form C, DPDT (Delay Outputs)
Input Voltage	120Vac, 50/60Hz, 12 Vac/dc, 24Vac/dc
Contact Load Rating	10A Resistive @ 240Vac, 30Vdc 7A Inductive @ 240Vac, 30Vdc 1/6 HP @ 120Vac, 1/3 HP @ 240Vac
Power Consumption	ON - Delay / Interval AC: 1.6VA to 2.2VA DC: 0.9W to 1.2W OFF - Delay / Single Shot AC: 1.6VA to 2.2VA DC: 0.9W to 1.2W
Repeat Accuracy	± 0.25% Maximum, 10ms
Voltage Accuracy	± 1% Maximum, ± 30ms
Temperature Error	± 2% Maximum, ± 30ms
Setting Error	± 10% Maximum
Reset Time	0.1s Maximum
Insulation Resistance	100MQ Minimum
Dielectric Strength	1500Vac, 1 Minute (except between contacts of same pole)
Vibration Resistance	6N (approximate 6G)
Shock Resistance	500N (approximate 50G)
Operating Temperature	-20°C to +65°C
Operating Humidity	45 to 85% RH

## Features of the RTE Series

- 16 Time Ranges and 4 Timing Functions
- ON-Delay, Interval, OFF-Delay, One-Shot
- Time Delays up to 10 hours
- Space-Saving Package (1.63" x 1.42" x 3.03")
- High Repeat Accuracy of ±0.25%
- Power Saving 2.2VA Consumption
- ON and Timing OUT LED Indicators
- Standard 8- or 11- Pin and 11- Blade Termination
- 2 Form C Delayed Output Contacts
- 10A Contact Rating

### IEEC Timers

Catalog #	Manufacturer #	Description
IM71500	RTE-P21-AC120	Analog Timer Off Delay / Single Shot DPDT 11-Pin 0.1S to 10Min 120Vac
IM71900	RTE-P11-AC120	Analog Timer On Delay / Interval DPDT 8-Pin 0.1S to 10Min 120Vac
IM71910	RTE-P11-24V	Analog Timer On Delay / Interval DPDT 8-Pin 0.1S to 10Min 24Vac/dc
IM71920	RTE-P12-24V	Analog Timer On Delay / Interval DPDT 8-Pin 0.1M to 10Hr 24Vac/dc

### IEEC Timer Accessories

Catalog #	Manufacturer #	Description
IF86600	SR2P-06	Socket DIN Rail / Surface 8-Pin for RTE-P11/P12
IF89000	SR3P-06	Socket DIN Rail / Surface 11-Pin for RTE-P21/P22
IF80063	SFA-202	Hold Down Spring for SR2P-06 and SR3P-06





# Time Delay Relays



MA40099



MA40349



Magnecraft Time Delay and Sensor relays are an affordable way to control circuits by offering several unique timing functions.

The **TDR782** miniature time delay is a single-function, single-voltage, socket-compatible relay ideal for tight spaces.

The **TDRPRO-5100** Series relays are programmable, multi-function, multi-voltage, socket-compatible time delay relays that offer the user the ultimate in design flexibility. The thumb wheel adjustment dials result in no mechanical deviation for supreme accuracy.

The **TDRSOX/SRX** Series relays are dual-functional, dual-voltage, socket-compatible time delay relays. The integrated DIP switching allows the user to easily adjust a wide timing range. It is available in octal or square base.

Only the most popular time delay relays are shown here. For the full line of Magnecraft relays, please call us at 800-323-2282.



Catalog #	Manufacturer #	Base	Coil Voltage	Current Rating	Current Type	Time Delay
MA40104	TDR782XBXA-110A	DPDT	110	5A	AC	0.1s to 100h
MA40101	TDR782XBXA-12D	DPDT	12	5A	DC	0.1s to 100h
MA40105	TDR782XBXA-230A	DPDT	230	5A	AC	0.1s to 100h
MA40103	TDR782XBXA-24A	DPDT	24	5A	AC	0.1s to 100h
MA40102	TDR782XBXA-24D	DPDT	24	5A	DC	0.1s to 100h
MA40109	TDR782XDXA-110A	4PDT	110	3A	AC	0.1s to 100h
MA40106	TDR782XDXA-12D	4PDT	12	3A	DC	0.1s to 100h
MA40110	TDR782XDXA-230A	4PDT	230	3A	AC	0.1s to 100h
MA40108	TDR782XDXA-24A	4PDT	24	3A	AC	0.1s to 100h
MA40107	TDR782XDXA-24D	4PDT	24	3A	DC	0.1s to 100h
MA40125	TDRPRO-5102	Octal	240 / 30	12A	AC / DC	7 Time Ranges
MA40099	TDRPRO-5100	Octal	240 / 30	12A	AC / DC	7 Time Ranges
MA40349	TDRSOXP-24	Octal	24 / 24	12A	AC / DC	8 Time Ranges



Transformers  
Relays & Timers  
Power Supplies  
Circuit Protection  
Terminal Blocks  
Switches  
Electronics  
Enclosures  
Additional Products

# Power Supplies



## Catalog # LD02100

The UL Listed CPS120-024-100 Power Supply is a sturdy self-contained power source rated @ 96VA. It provides simple power connections and has an illuminated control switch on the 24V output, which is fitted with a protective circuit breaker. The unit also provides a convenient unswitched 120V power point and is installation ready.



## Catalog # LD05763

The UL Listed CPS120-024-100U Power Supply is a sturdy compact and complete 24 Vac power source designed for inclusion in a complete control panel unit. The 96VA unit provides simple power connections and has an illuminated control switch on the 24V output, which is fitted with a protective circuit breaker. The unit also provides a convenient unswitched 120V power point and is installation ready.

## FEATURES

- UL Listed to Meet Code Requirements
- UL Redognized for Panel Component
- 96VA Load Capacity
- Output On/Off Control Switch
- Breaker Protected 24Vac Output
- Simple Power Connections
- Useful 120Vac Convenience Outlet
- Installation Ready



## SPECIFICATIONS

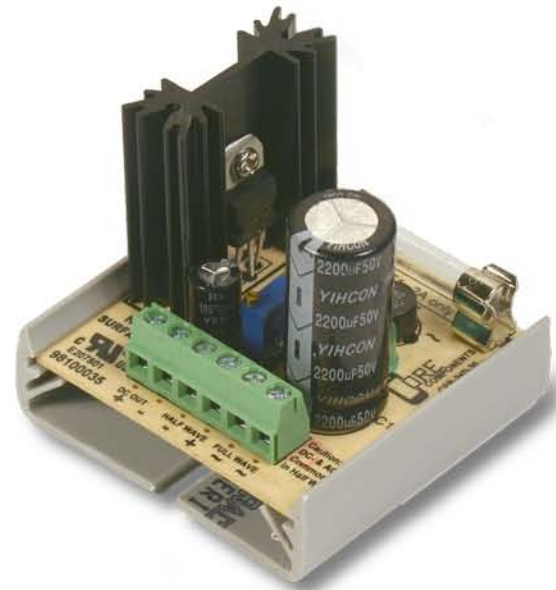
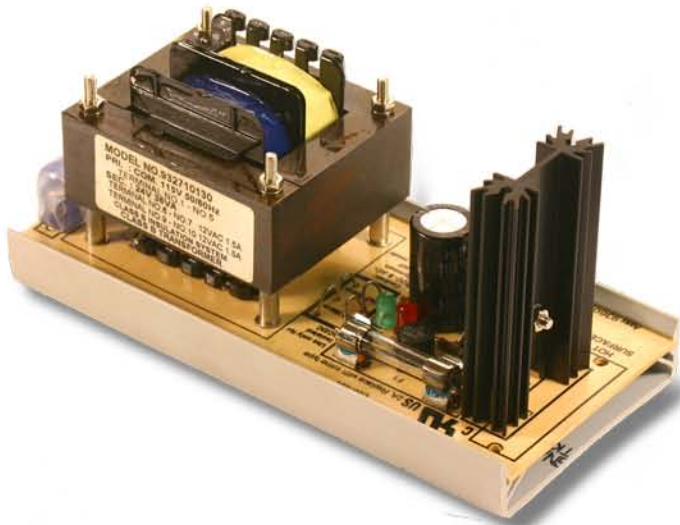
<b>Input:</b>	120 Vac, 60 Hz, 6 Amp max (1 Amp max used by 24V supply)
<b>Output:</b>	96 VA Supply, 4 Amp @ 24 Vac max, 60 Hz, 120 Vac, 60 Hz, 5 Amp max at convenience outlet (unswitched)
<b>Protective Device:</b>	24 Vac supply with 4 Amp resettable thermal circuit breaker 120 Vac supply, none
<b>Controls:</b>	Double pole switch with power indicating lamp, fitted on the primary of the 24V transformer. 120V convenience outlet power uncontrolled
<b>Connections:</b>	One 5 position terminal block with combination head screws and wire clamps. Provided connection for 120 Vac input, 24 Vac output and safety ground
<b>Enclosure:</b> (enclosed model only)	Three piece steel enclosure, with four 1/4" mounting holes, and standard 7/8" top and bottom knockouts. Removable outer cover fitted with an indicator lamp 'peephole', and a removable control switch access plate.
<b>Dimensions:</b>	<b>Enclosed Model:</b> 6-1/8" H x 5-1/4" W x 4-1/4" D <b>Unenclosed Model:</b> 4-3/4" H x 5" W x 3-3/8" D (includes mounting feet)
<b>Operating Temp:</b>	-15°F to 140°F (-25°C to 60°C)
<b>Weight:</b>	<b>Enclosed Model:</b> 6.34 lbs. (2.9 Kg) <b>Unenclosed Model:</b> 3.92 lbs. (1.8 kg)
<b>Standard Accessories:</b>	Instruction / Installation sheet, Warranty Card
<b>Safety Approvals:</b>	<b>Enclosed Model:</b> UL Listed for the US and Canada, UL File # E207801 <b>Unenclosed Model:</b> UL Recognized for the US and Canada, UL File # E207801





# Power Supplies

**CORE**  
COMPONENTS



## Catalog # LD01101



### Input:

120 Vac 60Hz, 45VA, Input Fuse 1A

### Output:

Rated 24 Vdc @ 1.5A Max. 36W / 24 Vac @ 1.5A

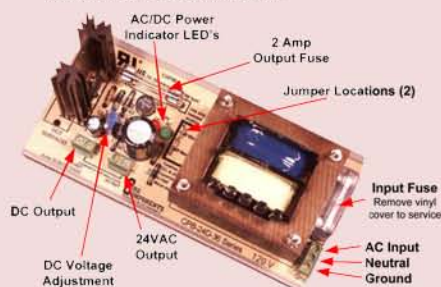
DC output is adjustable 1.2 Vdc to 28 Vdc Max by use of an on-board potentiometer

Max output current is limited to  $I_{out} = 1.5 \cdot V_{out} / 24$   
Attempts to draw excess output current may result in overheating and unintended shutdown of the unit

### Features:

Max combined AC & DC output current 1.5A;  
DC internally limited  
Provides a single power source for the entire system  
Output DC Short Circuit protection fully automatic  
Allows use of AC and DC simultaneously  
Output fuse protects unit from accidental ground faults  
Fused input protects transformer primary  
Internal Thermal overload protection  
DC Mode Selection. Full or Half Wave  
Fits Standard 2.75" Snap-Trak® for easy mounting

Installation and Operation Instructions



## Catalog # LD01105



### Input:

5-35 Volts Peak (5-35 Vdc or 28 Vac)

### Output:

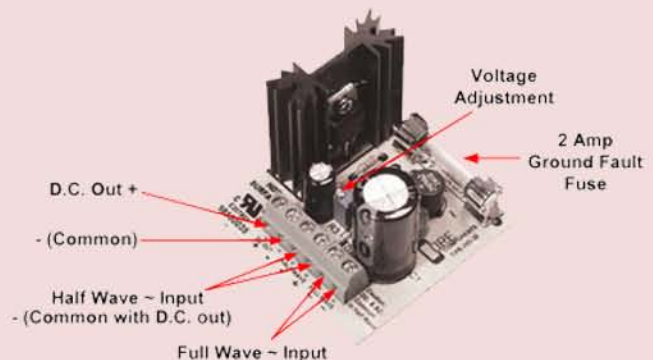
Rated 24 Vdc @ 1.25A Max. 30W

Unit is adjustable 1.2 Vdc to Input Peak - 2 Vdc; 28 Vdc Max  
30W dissipation by use of the on-board potentiometer

Max output current is limited to  $V_{out} = 1.25 \cdot V_{in} / V_{in}$   
Excess current may result in overheating and unintended shutdown of the unit

### Features:

- Max output current 1.5A; internally limited
- Output DC Short Circuit protection fully automatic
- Internal Thermal overload protection
- Input Power Selection, Full or Half Wave  
AC DC of either polarity
- Supplied with Standard 2.75" Snap-Trak® for easy mounting
- Compact 2.18"W x 2.18" L x 1.94"H size



# PS5R Series Power Supplies



Think Automation and beyond...



IDEC's PS5R series is the new standard in switching power supply technology. Output power ranges from 7.5W to 240W allow your power supply to grow with your needs. With UL508 Listing, you may even be able to use a smaller power supply than you do currently. The outputs are available in either 5VDC, 12VDC or 24VDC, are adjustable +/- 10%, short circuit protected, and regulated to a 2% maximum ripple. Unique spring up terminals allow easy installation of ring lugs, and built in DIN rail clips require no additional brackets (all units are also direct surface mountable).

IDEC's NEW PS5R-S SLIM Line Power Supplies have all the power of the traditional power supplies. Save your DIN rail space with these incredibly slim units. The 30W and 60W models are Class 2 rated.

Series	PS5R	PS5R-S (Slim)
Housing	Plastic	
Mounting	DIN Rail or Surface Mount	
Wattage Range	7.5W to 240W	30W to 90W
Input Voltage	85 to 264 Vac 47 to 63 Hz 100 to 370 Vdc	
Output Current Ratings	5Vdc	1.5A, 2.5A
	12Vdc	0.6A, 1.2A, 2.5A
	24Vdc	0.30A, 0.60A, 1.3A, 2.1A, 4.2A
Typical Efficiency	12Vdc	73% to 75%
	24Vdc	75% to 85%
Voltage Adjustments	±10% (V.ADJ control on front)	
Ripple Voltage	2% peak to peak max (including noise)	
Overvoltage Protection (Input)	105% typical 120% min	NONE 105% or more
Overcurrent Protection (Output)	103% to 110% (auto resets)	
Inrush Current (cold start)	50A maximum at 200Vac	
Leakage Current	0.75mA max	
Operating Temperature	-10 to +60°C (14 to 140°F)	
Weight (approximate)	150g to 600g (depending on model)	
Termination	M3.5 phillip/slotted	

## Features of the PS5R Series

- Universal Input Voltages
- DC Compatible Input
- Unique IP20 finger-safe terminals
- DIN Rail or Panel Mount
- UL508 Listing
- UL1604 for Hazardous Locations
- Class 2 Rated Models
- Incredibly Slim Footprints
- No performance sacrifice for size
- Connectable in parallel
- EN61000-3-2 Compliant Models

Catalog #	Supplier Part #	Description
IM52300	PS5R-A12	Power Supply DIN Rail Mount 7.5W 12Vdc 0.60A
IM52307	PS5R-A24	Power Supply DIN Rail Mount 7.5W 24Vdc 0.30A
IM52400	PS5R-B24	Power Supply DIN Rail Mount 15W 24Vdc 0.30A
IM52405	PS5R-C24	Power Supply DIN Rail Mount 30W 24Vdc 1.3A
IM52415	PS5R-SC24	SLIM Power Supply DIN Rail Mount 30W 24Vdc 1.3A
IM52418	PS5R-SD24	SLIM Power Supply DIN Rail Mount 60W 24Vdc 2.5A
IM52421	PS5R-SE24	SLIM Power Supply DIN Rail Mount 90W 24Vdc 3.75A



UL508 Listed  
File # F17168



File No.  
BL980213332392





# Circuit Breakers



## FEATURES

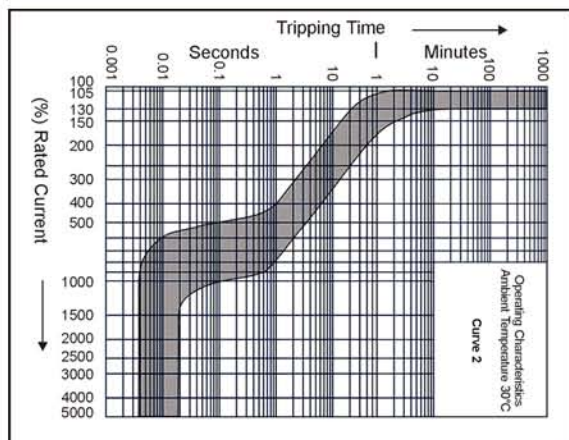
- Hydraulic-magnetic technology
- Always hold 100% rated current
- Wide range of time delays & operating currents
- Current limiting capabilities
- Ultra Compact - 13mm wide module
- DIN, Mini-rail, or Dual mountable

## Applications

- Branch Circuit Protection
- Tele-com Power Distribution
- Power Conditioning
- Automatic Control Systems
- Power Supplies
- Power Conversion Systems
- UPS Equipment
- Control Machines
- Generator Sets

## Technical Data

- Maximum Voltage: 277/480 50/60 Hz
- Interrupting Capability: 5000A @ 120V  
2000A @ 277V  
1000A @ 480V
- Dielectric Strength: 1960V 50/60 Hz
- Insulation Resistance: 100 Megaohm
- Operating Temperature: -40°C to +60°C



CD00024



CD00153



CD00111



CD00015

Catalog #	Manufacturer #	# of Poles	Rated Current
CD00111	QZ-1-13-D-2-01	1	1A
CD00117	QZ-1-13-D-2-02	1	2A
CD00123	QZ-1-13-D-2-03	1	3A
CD00015	QZ-1-13-D-2-05	1	5A
CD00019	QZ-1-13-D-2-10	1	10A
CD00153	QZ-1-13-D-2-20	1	20A
CD00021	QZ-1-13-D-2-7.5	1	7.5A
CD00139	QZ-1-13-D-2-15	2	15A
CD00023	QZ-2-13-D-2-01	2	1A
CD00024	QZ-2-13-D-2-02	2	2A
CD00025	QZ-2-13-D-2-03	2	3A
CD00027	QZ-2-13-D-2-05	2	5A
CD00031	QZ-2-13-D-2-10	2	10A
CD00033	QZ-2-13-D-2-20	2	20A
CD00029	QZ-2-13-D-2-7.5	2	7.5A
CD00030	QZ-2-13-D-2-8.0	2	8A
CD00163	QZ-3-13-D-2-01	3	1A
CD00167	QZ-3-13-D-2-02	3	2A
CD00175	QZ-3-13-D-2-10	3	10A

# Circuit Breakers

**Altech Corp.**

## B-Trip Characteristic



UL508 Listed  
E137938



One Pole

Standard Pack: 12

Weight:  
0.3A - 32A  
1.8kg (3.97 lb.)  
40A - 63A  
1.98kg (4.37 lb.)

### Application Examples:

Business equipment, wiring protection, lighting, appliances, control circuits, some motors and some electronic applications. Relatively long thermal trip delay but low magnetic trip point.

Rated Current	Type/ Cat. No.	Approvals
1.0A	1B1UM	UL SP
1.6A	1B1.6UM	UL SP
2.0A	1B2UM	UL SP
2.5A	1B2.5UM	UL SP
3.0A	1B3UM	UL SP
3.5A	1B3.5UM	UL SP
4.0A	1B4UM	UL SP
5.0A	1B5UM	UL SP
6.0A	1B6UM	UL SP
8.0A	NA	
10A	1B10UM	UL SP
12A	NA	
12.5A	NA	
13A	1B13UM	UL SP
15A	1B15UM	UL SP
16A	1B16UM	UL SP
20A	1B20UM	UL SP
25A	1B25UM	UL SP
30A	1B30UM	UL SP
32A	1B32UM	UL SP
40A	1B40UM	UL SP
50A	1B50UM	UL SP
60A	1B60UM	UL SP
63A	1B63UM	UL SP

## C-Trip Characteristic



UL508 Listed  
E137938



One Pole

Standard Pack: 12

Weight:  
0.3A - 32A  
1.8kg (3.97 lb.)  
40A - 63A  
1.98kg (4.37 lb.)

### Application Examples:

Low inrush motors, lighting, wiring protection, appliances, business equipment, and control circuit applications. Relatively long thermal trip delay and medium magnetic trip point.

Rated Current	Type/ Cat. No.	Approvals
0.3A	1C03UM	UL SP
0.5A	1C05UM	UL SP
0.75A	1C075UM	UL SP
0.8A	NA	
1.0A	1C1UM	UL SP
1.6A	1C1.6UM	UL SP
2.0A	1C2UM	UL SP
2.5A	1C2.5UM	UL SP
3.0A	1C3UM	UL SP
3.5A	1C3.5UM	UL SP
4.0A	1C4UM	UL SP
5.0A	1C5UM	UL SP
6.0A	1C6UM	UL SP
8.0A	1C8UM	UL SP
10A	1C10UM	UL SP
12A	NA	
12.5A	NA	
13A	1C13UM	UL SP
15A	1C15UM	UL SP
16A	1C16UM	UL SP
20A	1C20UM	UL SP
25A	1C25UM	UL SP
30A	1C30UM	UL SP
32A	1C32UM	UL SP
40A	1C40UM	UL SP
50A	1C50UM	UL SP
60A	1C60UM	UL SP
63A	1C63UM	UL SP

## D-Trip Characteristic



UL508 Listed  
E137938



One Pole

Standard Pack: 12

Weight:  
0.3A - 32A  
1.8kg (3.97 lb.)  
40A - 63A  
1.98kg (4.37 lb.)

### Application Examples:

High inrush motors, transformers, power supplies, heaters and reactive loads. Relatively long thermal trip delay and very high magnetic trip point.

Rated Current	Type/ Cat. No.	Approvals
0.3A	1D03UM	UL SP
0.5A	1D05UM	UL SP
0.75A	1D075UM	UL SP
0.8A	NA	
1.0A	1D1UM	UL SP
1.6A	1D1.6UM	UL SP
2.0A	1D2UM	UL SP
2.5A	1D2.5UM	UL SP
3.0A	1D3UM	UL SP
3.5A	1D3.5UM	UL SP
4.0A	1D4UM	UL SP
5.0A	1D5UM	UL SP
6.0A	1D6UM	UL SP
8.0A	1D8UM	UL SP
10A	1D10UM	UL SP
12A	NA	
12.5A	NA	
13A	1D13UM	UL SP
15A	1D15UM	UL SP
16A	1D16UM	UL SP
20A	1D20UM	UL SP
25A	1D25UM	UL SP
30A	1D30UM	UL SP
32A	1D32UM	UL SP
40A	1D40UM	UL SP
50A	1D50UM	UL SP
60A	1D60UM	UL SP
63A	1D63UM	UL SP

## E-Trip Characteristic



UL508 Listed  
E137938



One Pole

Standard Pack: 12

Weight:  
0.3A - 32A  
1.8kg (3.97 lb.)  
40A - 63A  
1.98kg (4.37 lb.)

### Application Examples:

High efficiency motors, which have exceedingly high inrush currents. Relatively short thermal trip delays and very high magnetic trip points.

Rated Current	Type/ Cat. No.	Approvals
0.3A	1E03UM	UL SP
0.5A	1E05UM	UL SP
0.75A	1E075UM	UL SP
0.8A	NA	
1.0A	1E1UM	UL SP
1.6A	1E1.6UM	UL SP
2.0A	1E2UM	UL SP
2.5A	1E2.5UM	UL SP
3.0A	1E3UM	UL SP
3.5A	1E3.5UM	UL SP
4.0A	1E4UM	UL SP
5.0A	1E5UM	UL SP
6.0A	1E6UM	UL SP
8.0A	1E8UM	UL SP
10A	1E10UM	UL SP
12A	1E12UM	UL SP
12.5A	1E125UM	UL SP
13A	1E13UM	UL SP
15A	1E15UM	UL SP
16A	1E16UM	UL SP
20A	1E20UM	UL SP
25A	1E25UM	UL SP
30A	1E30UM	UL SP
32A	1E32UM	UL SP
40A	1E40UM	UL SP
50A	1E50UM	UL SP
60A	1E60UM	UL SP
63A	1E63UM	UL SP



## G-Trip Characteristic



UL508 Listed  
E137938



One Pole

Standard Pack: 12

Weight:  
0.3A - 32A  
1.8kg (3.97 lb.)  
40A - 63A  
1.98kg (4.37 lb.)

### Application Examples:

General industrial, including motors, some transformers, solenoids, control circuits, lighting and wiring. Meets the US trip norms with relatively short thermal trip delay and high magnetic trip point.

Rated Current	Type/Cat. No.	Approvals
0.3A	1G03UM	UL SP
0.5A	1G05UM	UL SP
0.75A	NA	
0.8A	1G08UM	UL SP
1.0A	1G1UM	UL SP
1.6A	1G1.6UM	UL SP
2.0A	1G2UM	UL SP
2.5A	1G2.5UM	UL SP
3.0A	1G3UM	UL SP
3.5A	1G3.5UM	UL SP
4.0A	1G4UM	UL SP
5.0A	1G5UM	UL SP
6.0A	1G6UM	UL SP
8.0A	1G8UM	UL SP
10A	1G10UM	UL SP
12A	1G12UM	UL SP
12.5A	1G12.5UM	UL SP
13A	1G13UM	UL SP
15A	1G15UM	UL SP
16A	1G16UM	UL SP
20A	1G20UM	UL SP
25A	1G25UM	UL SP
30A	1G30UM	UL SP
32A	1G32UM	UL SP
40A	1G40UM	UL SP
50A	1G50UM	UL SP
60A	1G60UM	UL SP
63A	1G63UM	UL SP

## Z-Trip Characteristic



UL508 Listed  
E137938



One Pole

Standard Pack: 12

Weight:  
0.3A - 32A  
1.8kg (3.97 lb.)  
40A - 63A  
1.98kg (4.37 lb.)

### Application Examples:

Semiconductors, components which fail-short (vs. fail-open), and components/devices with low surge-current and short circuit withstand capabilities. Relatively short thermal delay and very low magnetic trip point.

Rated Current	Type/Cat. No.	Approvals
0.3A	1Z03UM	UL SP
0.5A	1Z05UM	UL SP
0.75A	1Z07.5UM	UL SP
0.8A	NA	
1.0A	1Z1UM	UL SP
1.6A	1Z1.6UM	UL SP
2.0A	1Z2UM	UL SP
2.5A	1Z2.5UM	UL SP
3.0A	1Z3UM	UL SP
3.5A	1Z3.5UM	UL SP
4.0A	1Z4UM	UL SP
5.0A	1Z5UM	UL SP
6.0A	1Z6UM	UL SP
8.0A	1Z8UM	UL SP
10A	1Z10UM	UL SP
12A	1Z12UM	UL SP
12.5A	1Z12.5UM	UL SP
13A	1Z13UM	UL SP
15A	1Z15UM	UL SP
16A	1Z16UM	UL SP
20A	1Z20UM	UL SP
25A	1Z25UM	UL SP
30A	1Z30UM	UL SP
32A	1Z32UM	UL SP
40A	1Z40UM	UL SP
50A	1Z50UM	UL SP

Altech has just released a new and improved design for their UL508 Manual Motor Controllers, which still maintains the same UL/CSA approved reliability. Some of the new features include:

### - Standard Dual Connection Terminal

Each unit contains both standard box clamp and ring tongue terminal connections.

### - Reinforced Housing

Added ridges and new housing design improves overall product strength

### - Marking Window

Large marking area with clear swivel window screen.

Each of these Series  
is also available in:



Add On  
Neutral Pole



Two Pole



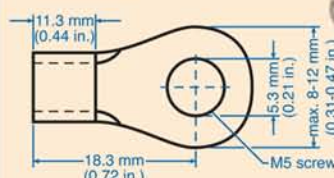
Three Pole

### Standard Dual Connection Terminal

- Box clamp terminals  
Top: 18-3 AWG;  
Bottom: 18-2 AWG  
(Line/Load reversible)

- Ring tongue terminals

Dimensions\*:



\* May differ by manufacturer.  
Top terminal ring tongue  
maximum thickness 1.6 mm.

# Circuit Breakers

**MAGNUM**

## SPECIFICATIONS

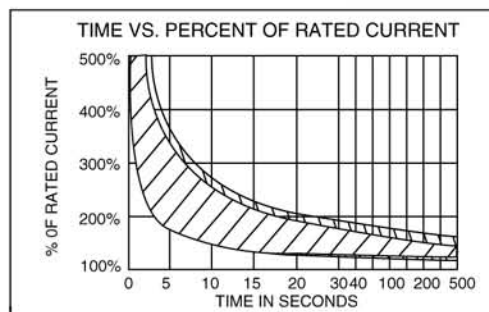
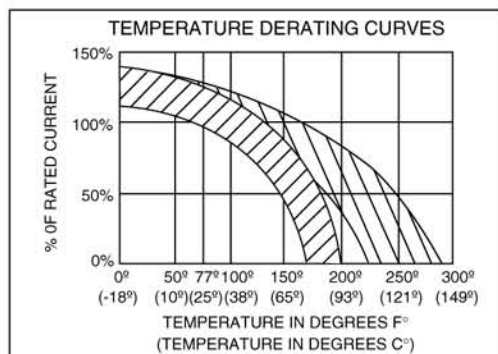
<b>Applications</b>	Battery Chargers, trucks, buses, RV's, trolling motors, etc
<b>Rating</b>	5-50A, 14 Vdc
<b>Interrupt Rating</b>	Branch Circuit Protection / 2.5kA @ 12 Vdc
<b>Operating Temperature Rating</b>	-40° F (-40° C) to 185° F (85° C)
<b>Storage Temperature Rating</b>	-40° F (-40° C) to 260° F (125° C)
<b>Materials</b>	Black UL-Rated thermoplastic body Cover is grey thermoplastic or gold-colored steel
<b>Marking</b>	Custom marking available. Consult factory for options.
<b>Termination</b>	#10-32 thread and quick-connect options available
<b>Torque Rating</b>	24in-lb (2.7Nm) max
<b>Mounting Torque Rating</b>	15in-lb (1.7Nm) - Plastic Cover 30in-lb (3.4Nm) - Metal Cover
<b>Ingress Protection Rating</b>	IP66 on plastic cover version only (except for terminals)
<b>Compliances</b>	SAE J553; SAE J1171 (consult factory for Ignition Protection ratings)



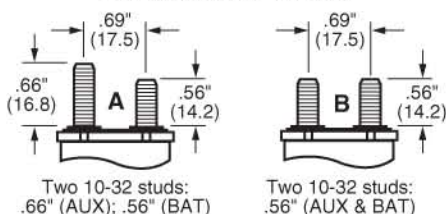
UA13421



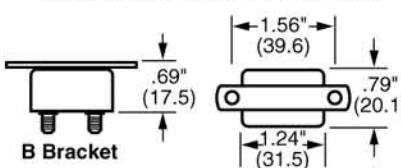
UA13511



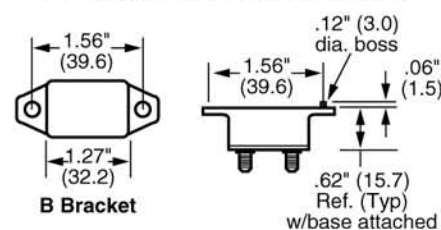
### TERMINAL OPTIONS



### METAL COVER & BRACKET



### PLASTIC COVER & BRACKET



Catalog #	Manufacturer #	Voltage	Terminal	Rating	Mounting Holes	Cover	Hardware
UA13421	121-A25-B3M	Type 1, 14 Vdc with Auto Reset	Two 10-32 studs 0.66 (Aux), 0.56 (Bat)	25A	0.237 dia.	Metal	--
UA13450	121-A50-B6M	Type 1, 14 Vdc with Auto Reset	Two 10-32 studs 0.66 (Aux), 0.56 (Bat)	50A	0.221 dia.	Metal	--
UA13500	121-B10-B2MHB	Type 1, 14 Vdc with Auto Reset	Two 10-32 studs 0.56 (Aux & Bat)	10A	0.196 dia.	Metal	Nut & Lock Washer (unassembled)
UA13511	121-B40-B2P	Type 1, 14 Vdc with Auto Reset	Two 10-32 studs 0.56 (Aux & Bat)	40A	0.196 dia.	Plastic	--



# Circuit Breakers

The NRA series of circuit breakers offer the ultimate in flexibility. Different actuator styles allow for differentiation of look and feel. Various delay characteristics and current ratings satisfy applications from logic level protection of PLCs, sensors, or other low current devices up to medium size motors and heaters. Most units can be through-panel mounted or plugged into DIN rail sockets. Standard termination is via .250" quick-connect terminals, sockets use M3.5 screw terminals.

The NRC series of circuit breakers feature a built-in DIN rail mounting "foot" for the most convenient mounting. Terminated with M4 screw terminals (30A, M5) at the base of the circuit breaker, these models fit right in with relays, timers and other devices you may have mounted on your DIN rail. Various delay characteristics and current ratings satisfy applications from logic level protection of PLCs, sensors, or other low current devices up to medium size motors, transformers and heaters.



## Features of the NRA Series

- Available in 4 different styles
- Excellent overload and short circuit protection
- Small size and high-efficiency
- Life expectancy of over 10,000 operations
- UL1077 recognized "Supplementary Protectors"
- VDE certified to EN60934



## Features of the NRC Series

- Mounting options include DIN Rail, direct surface, or panel cut-out
- Rated interrupting capacity of 2,500A (1-pole) and 1,500A (2-pole)
- Choice of slide or lever actuators
- All models equipped with reset trip indicators
- Four curves available for standard or very short delay
- Available in 11 rated currents from 300mA to 30A
- UL107 recognized "Supplementary Protectors"



Catalog #	Manufacturer #	Model Type	Poles	Inertia Delay	Current Rating	Current Type	Interrupt Capacity
IM49050	NRAR-1100-10A-AA	Rocker Switch	1	N	10A	AC / DC	250 Vac / 65 Vdc @ 1000A (50/60 Hz)
IM49075	NRAS-1100-F1AAA	Lever	1	Y	1A	AC / DC	250 Vac / 65 Vdc @ 1000A (50/60 Hz)
IM49078	NRAS-1100-F10AAA	Lever	1	Y	10A	AC / DC	250 Vac / 65 Vdc @ 1000A (50/60 Hz)
IM49081	NRAS-1100-F3AAA	Lever	1	Y	3A	AC / DC	250 Vac / 65 Vdc @ 1000A (50/60 Hz)
IM49087	NRAS-1100-F5AAA	Lever	1	Y	5A	AC / DC	250 Vac / 65 Vdc @ 1000A (50/60 Hz)
IM50000	NRC110-10A-AA	Slide	1	n/a	10A	AC	250 Vac @ 2500A (50/60 Hz)
IM50007	NRC-110-10A-EA	Slide	1	n/a	10A	AC	250 Vac @ 2500A (50/60 Hz)



# Fuses

Lectro Components stocks a wide variety of fuses from some of the industry's leading manufacturers. They include some of the most popular sizes and amperage ratings.

These pages only detail the most popular items stocked by Lectro Components. For more details, or if you don't see what you need, call us at 800-323-2282.



**entrelec**<sup>®</sup>  
Member of ABB Group



Catalog #	Manufacturer	Part Number	Current Rating	Size	Standard Pack	Description
CQ34957	Bussman Fuses	AGC-1/2	1/2A	1/4 x 1 1/4	100	Fast Acting Glass Tube Fuse
CQ66762	Bussman Fuses	AGC-1/2-R	1/2A	1/4 x 1 1/4	5	Fast Acting Glass Tube Fuse
CQ35002	Bussman Fuses	AGC-1	1A	1/4 x 1 1/4	100	Fast Acting Glass Tube Fuse
CQ66760	Bussman Fuses	AGC-1R	1A	1/4 x 1 1/4	5	Fast Acting Glass Tube Fuse
CQ35055	Bussman Fuses	AGC-1-1/2	1 1/2A	1/4 x 1 1/4	100	Fast Acting Glass Tube Fuse
CQ35101	Bussman Fuses	AGC-2	2A	1/4 x 1 1/4	100	Fast Acting Glass Tube Fuse
CQ35152	Bussman Fuses	AGC-2-1/2	2 1/2A	1/4 x 1 1/4	100	Fast Acting Glass Tube Fuse
CQ35202	Bussman Fuses	AGC-3	3A	1/4 x 1 1/4	100	Fast Acting Glass Tube Fuse
CQ35226	Bussman Fuses	AGC-4	4A	1/4 x 1 1/4	100	Fast Acting Glass Tube Fuse
CQ35251	Bussman Fuses	AGC-5	5A	1/4 x 1 1/4	100	Fast Acting Glass Tube Fuse
CQ35270	Bussman Fuses	AGC-6	6A	1/4 x 1 1/4	5	Fast Acting Glass Tube Fuse
CQ35300	Bussman Fuses	AGC-7	7A	1/4 x 1 1/4	100	Fast Acting Glass Tube Fuse
CQ35321	Bussman Fuses	AGC-8R	8A	1/4 x 1 1/4	5	Fast Acting Glass Tube Fuse
CQ35350	Bussman Fuses	AGC-10R	10A	1/4 x 1 1/4	100	Fast Acting Glass Tube Fuse
CQ35403	Bussman Fuses	AGC-15	15A	1/4 x 1 1/4	100	Fast Acting Glass Tube Fuse
CQ54875	Bussman Fuses	FNM-2	2A	13/32 x 1 1/2	10	Time Delay Fuse
CQ54878	Bussman Fuses	FNM-4	4A	13/32 x 1 1/2	10	Time Delay Fuse
CQ54885	Bussman Fuses	FNM-7	7A	13/32 x 1 1/2	10	Time Delay Fuse
CQ54860	Bussman Fuses	FNM-10	10A	13/32 x 1 1/2	10	Time Delay Fuse
CQ54870	Bussman Fuses	FNM-15	15A	13/32 x 1 1/2	10	Time Delay Fuse
CQ54872	Bussman Fuses	FNM-20	20A	13/32 x 1 1/2	10	Time Delay Fuse
CQ85310	Bussman Fuses	GLR-2	2A	---	100	Fast Acting Glass Tube Fuse (used with HLR Series fuseholder)
CQ66743	Bussman Fuses	GMA-10A	10A	5mm x 20mm	5	Fast Acting Glass Tube Fuse
CQ66751	Bussman Fuses	GMA-3A	3A	5mm x 20mm	5	Fast Acting Glass Tube Fuse
CQ66756	Bussman Fuses	GMA-4A	4A	5mm x 20mm	5	Fast Acting Glass Tube Fuse
CQ66759	Bussman Fuses	GMA-5A	5A	5mm x 20mm	5	Fast Acting Glass Tube Fuse
CQ87191	Bussman Fuses	JJN-60	60A	0.56 x 0.88	10	Very Fast Acting Fuse
CQ87223	Bussman Fuses	KTK-R-15	15A	13/32 x 1 1/2	100	Fast-Acting Branch Circuit Fuse
CQ95000	Bussman Fuses	SC-40	40A	0.225" x 0.41"	2	Time Delay Fuse
CQ95010	Bussman Fuses	SC-50	60A	0.225" x 0.41"	2	Time Delay Fuse







Catalog #	Manufacturer	Part Number	Current Rating	Size	Standard Pack	Description
CQ87319	Bussman Fuses	MDL-1/2	1/2A	1/4 x 1 1/4	100	Time Delay Glass Tube Fuse
CQ87363	Bussman Fuses	MDL-1	1A	1/4 x 1 1/4	100	Time Delay Glass Tube Fuse
CQ87415	Bussman Fuses	MDL-1-1/2	1 1/2A	1/4 x 1 1/4	100	Time Delay Glass Tube Fuse
CQ87466	Bussman Fuses	MDL-2	2A	1/4 x 1 1/4	100	Time Delay Glass Tube Fuse
CQ87513	Bussman Fuses	MDL-2-1/2	2 1/2A	1/4 x 1 1/4	100	Time Delay Glass Tube Fuse
CQ87562	Bussman Fuses	MDL-3	3A	1/4 x 1 1/4	100	Time Delay Glass Tube Fuse
CQ87579	Bussman Fuses	MDL-3R	3A	1/4 x 1 1/4	5	Time Delay Glass Tube Fuse
CQ87611	Bussman Fuses	MDL-5	5A	1/4 x 1 1/4	100	Time Delay Glass Tube Fuse
CQ87661	Bussman Fuses	MDL-7	7A	1/4 x 1 1/4	100	Time Delay Glass Tube Fuse
CQ87683	Bussman Fuses	MDL-8	8A	1/4 x 1 1/4	100	Time Delay Glass Tube Fuse
CQ87711	Bussman Fuses	MDL-10	10A	1/4 x 1 1/4	100	Time Delay Glass Tube Fuse
CQ87760	Bussman Fuses	MDL-15	15A	1/4 x 1 1/4	100	Time Delay Glass Tube Fuse
AB50010	ABB	P0600-11	2A	0.41" x 1.5"	50	Midget Fuse - Fast Acting
EN00009	Entelec	000828815	0.5A	5mm x 20mm	50	FU520 Series - Used In M4/8 Fuse Blocks - Glass Body
EN00011	Entelec	000828916	3.15A	5mm x 20mm	50	FU520 Series - Used In M4/8 Fuse Blocks - Glass Body
EN00015	Entelec	000829013	1A	5mm x 20mm	50	FU520 Series - Used In M4/8 Fuse Blocks - Glass Body
EN00021	Entelec	000829100	2A	5mm x 20mm	50	FU520 Series - Used In M4/8 Fuse Blocks - Glass Body
EN00031	Entelec	000829201	3A	5mm x 20mm	50	FU520 Series - Used In M4/8 Fuse Blocks - Glass Body
EN00176	Entelec	016708027	10A	10.3mm x 38mm	50	FU103 Series - Used in M10/22 Fuse Blocks - Slow Blow
EN00178	Entelec	016708215	16A	10.3mm x 38mm	50	FU103 Series - Used in M10/22 Fuse Blocks - Slow Blow
EN00180	Entelec	016708417	25A	10.3mm x 38mm	50	FU103 Series - Used in M10/22 Fuse Blocks - Slow Blow
EN01200	Entelec	016754905	4A	5mm x 25mm	50	FU525 Series - Used in M4/8 Fuse Blocks
EN01239	Entelec	016855403	0.25A	6.35mm x 32mm	50	FU633 Series - Used In M10/13 Fuse Blocks - Quick Blow Fuse
EN01241	Entelec	016855504	0.63A	6.35mm x 32mm	50	FU633 Series - Used In M10/13 Fuse Blocks - Quick Blow Fuse
EN01242	Entelec	016855605	1A	6.35mm x 32mm	50	FU633 Series - Used In M10/13 Fuse Blocks - Quick Blow Fuse
EN01243	Entelec	016855706	1.6A	6.35mm x 32mm	50	FU633 Series - Used In M10/13 Fuse Blocks - Quick Blow Fuse
EN01334	Entelec	016855817	2A	6.35mm x 32mm	50	FU633 Series - Used In M10/13 Fuse Blocks - Quick Blow Fuse
EN01337	Entelec	016855910	4A	6.35mm x 32mm	50	FU633 Series - Used In M10/13 Fuse Blocks - Quick Blow Fuse
EN01240	Entelec	016856015	6.3A	6.35mm x 32mm	50	FU633 Series - Used In M10/13 Fuse Blocks - Quick Blow Fuse
EN01250	Entelec	016856102	10A	6.35mm x 32mm	50	FU633 Series - Used In M10/13 Fuse Blocks - Quick Blow Fuse
EN01252	Entelec	016856203	16A	6.35mm x 32mm	50	FU633 Series - Used In M10/13 Fuse Blocks - Quick Blow Fuse



## DIN Rail Terminal Blocks

Altech Corporation manufactures a large selection of DIN Rail mountable Spring Clamp and Screw Clamp terminal blocks, along with the Eurostrip® series and a wide variety of accessories.

The following pages displays a small sampling of the full Altech terminal block product line. For more details, please call us at 800-323-2282.



**COLOR BLOCKS**  
(other than grey standard)

When ordering please add color suffix to Cat. No.

Example: CTS2.5U-N/R

Color	Ordering Suffix
Red	R
Blue	BU
Black	BL
Orange	O
Green	G
Yellow	Y
White	W
Beige	BG
Dark Brown	DB



The heart of the Altech philosophy is the standardized DIN Rail and snap-on terminal block. The DIN Rail makes possible a compact, organized arrangement of terminal blocks and other DIN Rail mount components. This gives more than just the appearance of quality; it saves time and space, enhances design capabilities and provides a centralized connect-disconnect area where external and/or internal wiring can be connected quickly and efficiently. At the same time, the DIN concept allows designers to take advantage of constant advances in terminal block technology. Altech DIN Rail components do more than terminate wires. They distribute power and ground, protect against overloads and perform a host of other sophisticated functions. Whatever the application: control systems, instrumentation, automation - DIN Rail terminal blocks can help you create it and keep it as up-to-date as tomorrow.

Altech terminal blocks feature screw clamps for maximum wiring efficiency and reliability. The blocks are supplied with open clamps, ready to accept wires. No special wire preparation or wire lugs are required. Simply strip the wire, insert and tighten the screw to the torque for gas-tight, vibration resistant, solid connections.

The spring clamp series terminal blocks offer a time saving alternative to the popular screw clamp connection. The pre-stressed spring is opened using a tool (screw driver) so the conductor can be inserted into the insertion space through an opening in the spring leg. The conductor is pulled against the current bar under spring force when the tool is removed.

Altech offers a comprehensive array of DIN Rail accessories, carefully crafted to enhance your design capabilities and to put the crucial finishing touch on your designs.

Internal and External Jumpers are available in standard 2, 3, 4 and 10 pole assemblies for inter-connection to distribute potentials within terminal block assemblies. Marking Tags make DIN Rail assemblies easier to wire and facilitate troubleshooting. Altech's extensive terminal block marking system includes standard or custom imprinted snap-on tags in a variety of sizes for circuit identification. The Altech marking system offers two different versions of marking systems for printing of accessories. DIN Rails are internationally standardized and available in 35mm, 32mm, and 15mm sizes, with or without perforations.



Last, but not least, the indispensable extras. End Stops prevent terminal blocks and other components from sliding laterally on the rail. End Plates close off the last terminal in a row of terminals. Isolation Partitions provide visual separation of terminal groups and ensure electrical isolation between adjacent terminals of different potentials. A wide selection of insulated and uninsulated ferrules is offered for your applications and whenever stranded flexible wires must be terminated.



# DIN Rail Terminal Blocks

**Altech Corp.**<sup>®</sup>

## SCREW CLAMP SERIES

### Feed Through



### Feed Through Double Level



### Ground Blocks



### Stud Type Block



### Mini Feed Through DIN / Panel Mount



## ACCESSORIES

### DIN Rail & Mounting



### Group Identification



### End Stops



### End Stops / Circuit Separator



### Jumpers



## SPRING CLAMP SERIES

### Feed Through & Multi-Connection



### Angular Feed Through



### Ground Blocks



### Panel Mount



## EUROSTRIP<sup>®</sup> SERIES

### Feed Through Flat Base



### Feed Through Standoff Feet



### Pluggable Panel Mount (Flat and Standoff Feet)



### Customization and Accessories





# B-Series Terminal Blocks

Eagle Connector B-Series terminal blocks were designed to provide reliable, versatile, and cost effective wire connectors in rugged industrial equipment and commercial appliance applications. The B-Series is used as a power connection point for loads up to 85 amps. The B-Series is also used in low power applications where large wire, as large as #4 AWG, is used to minimize voltage drop.

Eagle can print markings on individual circuits as an option in the B-Series terminal blocks.



## General Specifications

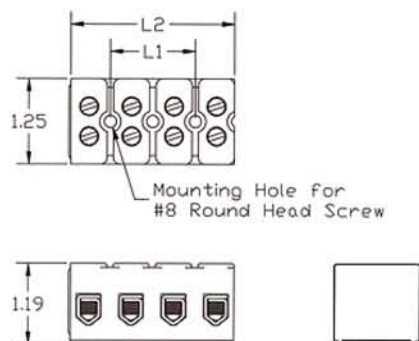
- Voltage Rating:** 600 Volts
- Current Rating:** 85 Amps
- Wire Range:** #18 to #4 AWG Solid or Stranded, Copper
- Temp Range:** -30°C to 130°C
- Screw Torque:** 20 Inch-Pounds
- Wire Strip Length:** 3/8 inch

## Material Specifications

- Insulator:** Phenolic, Black, 94V-0, 150°C
- Connector:** .0002" (200 micro-inch) thick 60/40 Electro Tin/Lead over Copper Flash over .050" thick 70/30 Brass
- Screw:** 1/4-28 UNF Class 2 Slotted, Headless, Domed Point Set Screw. Clear Chromate over .0001" (100 micro-inch) thick Zinc over Steel.

Catalog #	Manufacturer #	Description
EP10500	B-02	
EP11500	B-03	
EP11550	B-04	
EP11575	B-04-P-65	
EP11597	B-05	
EP12100	B-05	with Nickel Plated Brass Screws
EP12300	B-06	
EP12400	B-07	
EP12500	B-07	with Nickel Plated Brass Screws
EP12645	B-08	
EP12650	B-08	with Nickel Plated Brass Screws
EP15450	B-10	
EP15500	B-12	

B-04 Drawing



B Series

Catalog Number	L1	L2
B-02	----	1.19
B-03	.0625	1.81
B-04	1.250	2.44
B-05	1.875	3.06
B-06	2.500	3.69
B-07	3.125	4.31
B-08	3.750	4.94
B-09	4.375	5.56
B-10	5.000	6.19
B-11	5.625	6.84
B-12	6.250	7.46





# C-Series Terminal Blocks



**Eagle Connector  
Corporation**



Eagle Connector C-Series terminal is a power input field wiring terminal block offered for commercial appliance and industrial equipment applications. The terminal block is a one-piece, dead front connector with color coded circuits. The C-Series is rated for loads up to 85 amps and for wire as large as #4 AWG. Large 3/8 inch diameter, screwdriver entry holes allow wire connections to be made with 1/4 inch flare point screwdrivers, the most common screwdriver size.

## General Specifications

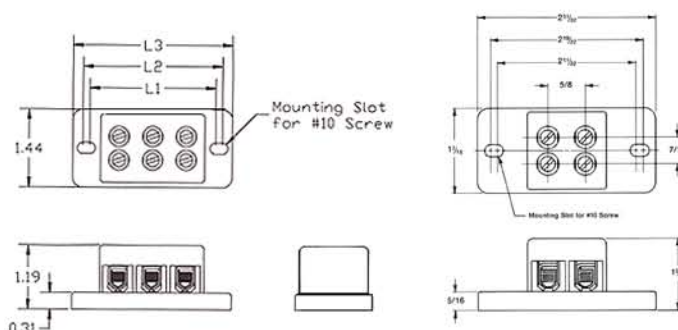
**Voltage Rating:** 600 Volts  
**Current Rating:** 85 Amps  
**Wire Range:** #18 to #4 AWG Solid or Stranded, Copper  
**Temp Range:** -30°C to 130°C  
**Screw Torque:** 20 Inch-Pounds  
**Wire Strip Length:** 3/8 inch

## Material Specifications

**Insulator:** Thermoplastic Polyester, Glass Filled 94V-0, 130°C  
**Connector:** .0002" (200 micro-inch) thick 60/40 Electro Tin/Lead over Copper Flash over 70/30 Brass  
**Screw:** Clear Chromate over .0001" (100 micro-inch) thick Zinc over Steel

## Standard Colors

**Body:** Black or White  
**Circuits:** Black, White, Red, Green, or Blue



Catalog #	Manufacturer #	Description
EP15611	C-02-NU	2 Position Terminal Block
EP15900	C-02-RB	2 Position Terminal Block - Red / Black Circuits
EP16000	C-02-WB	2 Position Terminal Block - White / Black Circuits
EP16450	C-03-RUB	3 Position Terminal Block - Red / Blue / Black Circuits
EP16460	C-03-BRU	3 Position Terminal Block - Black / Red / Blue Circuits
EP16500	C-03-RWB	3 Position Terminal Block - Red / White / Black Circuits
EP16600	C-04-BRUW	4 Position Terminal Block - Black / Red / Blue / White Circuits



# DIN Rail Terminal Blocks

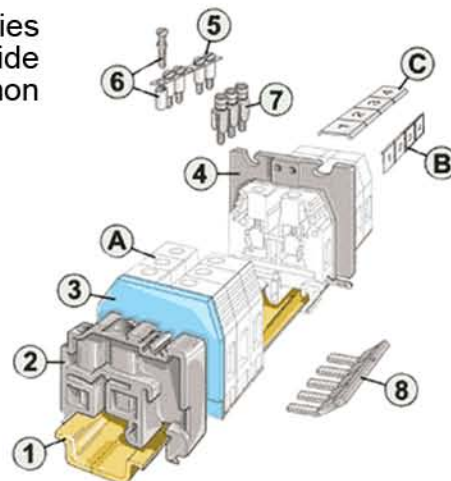
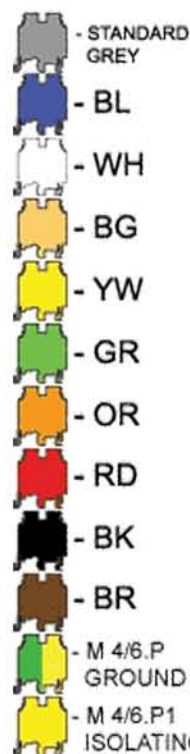
**entrelec**  
Member of ABB Group

An economical industry standard, the popular Entrelec M 4/6 Series Screw Clamp type, modular terminal blocks and accessories provide great flexibility of design with reduced installation time. The most common items are shown below, but the full Entrelec line is readily available.

## M 4/6.P - 4 mm<sup>2</sup> ground block with rail contact - 6 mm .238" spacing

### Characteristics

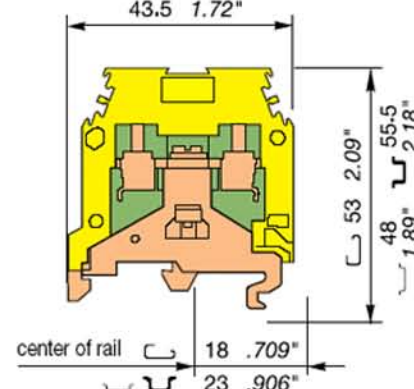
		IEC NFC VDE	UL	CSA
Wire size mm <sup>2</sup> / AWG	Solid	0.2 - 4 mm <sup>2</sup>	22-10 AWG	24-10 AWG
	Stranded	0.22 - 4 mm <sup>2</sup>		
Short circuit current	A / s	480A/1s		
Rated wire size	mm <sup>2</sup> / AWG	4 mm <sup>2</sup>	10 AWG	10 AWG
Wire stripping length	mm / inches	9.5 mm / .37"		
Recommended torque	Nm / lb.in	0.5-0.8 Nm / 4.4-7.1 lb.in		



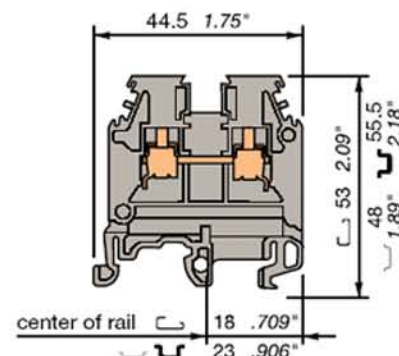
## M 4/6 - 4 mm<sup>2</sup> blocks - 6 mm .238" spacing

### Characteristics

		IEC NFC VDE	UL	CSA
Wire size mm <sup>2</sup> / AWG	Solid	0.2 - 4 mm <sup>2</sup>	22-10 AWG	22-10 AWG
	Stranded	0.22 - 4 mm <sup>2</sup>		
Voltage	V	800	600	600
Current	A	32	30	25
Short circuit current (M 4/6.PI)	A / s	480A/1s		
Rated wire size	mm <sup>2</sup> / AWG	4 mm <sup>2</sup>	10 AWG	10 AWG
Wire stripping length	mm / inches	9.5 mm / .37"		
Recommended torque	Nm / lb.in	0.5-0.8 Nm / 4.4-7.1 lb.in		



**M 4/6.P**



**M 4/6**

Lectro #	Mfg #	Description	Standard Pack	KEY
EN00810	011511607	M4/6 Rail Terminal Block - Grey	50	A
EN01060	016511316	M4/6.P Ground Terminal Block - Yellow/Green	50	
EN01310	017322005	PR30 Prepunched Steel DIN Rail - 2 Meter Length	20*	1
EN00500	020635116	BAM End Stop	50	2
EN00910	011836816	FEM6 End Section	20	3
EN00960	011870703	SCF6 Circuit Separator	20*	4
EN01360	017478420	BS6 20-Pole Jumper Bar	10	5
EN01260	016860416	EV6 Jumper Screw & Post Hardware (PAK 20)	20*	6
EN01410	017666704	BJMI6 10-Pole Touch Proof Jumper Bar	10*	7
EN00770	011354826	EIP 10-Pole Comb Jumper Bar	10	8
EN01210	016841007	RTM7 Blank Top Mount Marker Strip .5 Meter Long	100	C
EN01510	023300001	RC610 Blank Side Mount Marker Strips	45	B
EN01560	023300227	RC610/1-10 10 Marker Strips Numbered 1-10	45	
EN01610	023300320	RC610/11-20 10 Marker Strips Numbered 11-20	45	
EN01660	023300421	RC610/21-30 10 Marker Strips Numbered 21-30	45	
EN01685	023314126	RC610/1-50 2 Marker Strips Numbered 1-50	45	
EN01710	023303026	RC610/1-100 1 Marker Strip Numbered 1-100	10*	
EN01490	019909513	ML10/13.SF 13mm Fuse Holder Block - Black	20*	
EN00860	011537805	M10/16.SFL 16mm Fuse Holder Block - Grey	20	
EN01160	016707525	LEN 110-230VAC Neon Blown Fuse Indicator	100*	

\* Sold in standard packs only



# DIN Rail Terminal Blocks

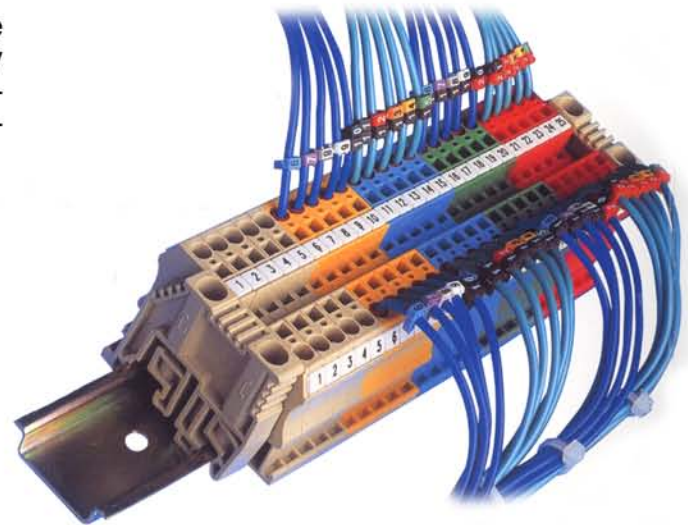


Konvar's line of DIN Rail terminal blocks are of the highest quality and design. In comparison tests they outperform all major competitors for strength and durability. Call us to realize your savings and improved performance.



## FEATURES

- Smallest Terminals mountable on 35mm DIN Rail
- Six colors available for circuit identification
- UL, CE, CSA and VDE approvals
- Popular screw connection method



KV01220



KV00820



KV01170



KV00640



KV00500



KV00620



KV00530



- Standard Gray



- BG



- BL



- GR



- YW



- RD



- AVK 2.5/4T

Lectro #	Mfg #	Description	Other Colors
KV00500	K001-304130	AVK-4 DIN Rail Terminal Block - Grey	YES
KV01220	K001-495049	KD3 End Stop (2 required)	
KV00820	K001-444120	NPP End Plate / Circuit Separator (Gray - 1 required)	YES
KV00670	K001-334120	AVK2.5/4T DIN rail Grounding Block (Yellow / Green)	
KV00770	K001-351109	ASK2S-GR Fuse / Disconnect (8mm) Block (Gray)	
KV01120	K001-450049	NPP ASK 2-GR ASK2B End Plate (Gray)	
KV00720	K001-351100	ASK2S-BG Fuse / Disconnect (8mm) Block (Beige)	
KV01070	K001-450040	NPP ASK 2-BG ASK2 End Plate (Beige)	
KV01170	K001-474139	UK4/10 Jumper Bar (10 poles per bar)	
KV01270	K001-505000	DY5 Blank Marker Card - 1 card with 5 strips of 10 tags	
KV01320	K001-505020	DY5/1-10 1 card with 5 strips numbers 1-10	
KV01370	K001-505040	DY5/1-50 1 card with 5 strips numbers 1-50	

**NOTE:** AVK-4 terminal block color is gray. To order other colors, simply add the color suffix as shown above. (Example: AVK-4-BL is for a Blue block)



# Barrier Strip Terminal Blocks



Marathon manufactures many different series of Barrier Strip Terminal Blocks. The following pages highlights some of the more popular series.

**Lectro Components carries the full line of Marathon Barrier Strip Terminal Blocks.**



## 411-GP Series

- Base, Phenolic, 150°C
- Open Back Design (Insulator Strip Required for Voltage Rating)
- JJ (GDI-30F) Material Available
- Screws, #2-56 Binder Head, Phil-Slot Brass
- Terminals, Plated Brass
- 1-23 Poles
- 1/4" Centers
- Wire Range with Wire Binding Screw #18 - #20 AWG
- 5 Amps
- RoHS Compliant



Catalog #	Mfg #	Poles	AWG	Volts
KD16320	411-GP-1921-02	2	#18 - #20	300
KD16795	411-GP-1921-03	3	#18 - #20	300
KD16453	411-GP-1921-03-NH	3	#18 - #20	300
KD16800	411-GP-1921-05	5	#18 - #20	300
KD16101	411-GP-1921-07	7	#18 - #20	300
KD16109	411-GP-1921-09	9	#18 - #20	300
KD16108	411-GP-1921-10-NH	10	#18 - #20	300
KD16150	411-GP-1921-12	12	#18 - #20	300
KD16772	411-GP-1921-13	13	#18 - #20	300
KD16250	411-GP-1921-16	16	#18 - #20	300
KD16450	411-GP-1921-16-NH	16	#18 - #20	300
KD16275	411-GP-1921-21	21	#18 - #20	300

## 601-GP Series

- Base, Phenolic, 150°C
- Open Back Design (Insulator Strip Required for Voltage Rating)
- JJ (GDI-30F) Material Available
- Screws, #6-32 Binder Head, Phil-Slot Steel
- Terminals, Plated Brass
- 1-23 Poles
- 7/16" Centers
- Wire Range with Wire Binding Screw #12 - #22 AWG
- 20 Amps
- RoHS Compliant



Catalog #	Mfg #	Poles	AWG	Volts
KD36900	601-GP-02	2	#12 - #22	300
KD38200	601-GP-03	3	#12 - #22	300
KD38700	601-GP-04	4	#12 - #22	300
KD39500	601-GP-05	5	#12 - #22	300
KD40100	601-GP-06	6	#12 - #22	300
KD40900	601-GP-07	7	#12 - #22	300
KD41400	601-GP-08	8	#12 - #22	300
KD42256	601-GP-09	9	#12 - #22	300
KD33700	601-GP-10	10	#12 - #22	300
KD34700	601-GP-12	12	#12 - #22	300
KD35050	601-GP-13	13	#12 - #22	300
KD35058	601-GP-14	14	#12 - #22	300
KD35700	601-GP-16	16	#12 - #22	300
KD37700	601-GP-20	20	#12 - #22	300
KD38020	601-GP-21	21	#12 - #22	300

## 670A-RZ Series

- Base, Phenolic, 130°C
- Closed Back Design
- Screws, #6-32 Saddle Plate, Phil-Slot Steel, Nickel-Plated
- Terminals, Plated Brass
- 1-30 Poles
- 3/8" Centers
- Wire Range with Wire Binding Screw #12 - #22 AWG
- 20 Amps
- RoHS Compliant



Catalog #	Mfg #	Poles	AWG	Volts
KD61187	670A-RZ-04-3865	4	#12 - #22	150
KD61190	670A-RZ-05-3865	5	#12 - #22	150
KD61198	670A-RZ-06-3865	6	#12 - #22	150
KD61201	670A-RZ-08-3865	8	#12 - #22	150
KD61202	670A-RZ-08-3865	8	#12 - #22	150
KD61203	670A-RZ-08-3865	8	#12 - #22	150
KD61205	670A-RZ-08-3865	8	#12 - #22	150
KD61200	670A-RZ-10-3865	10	#12 - #22	150
KD61215	670A-RZ-15-3865	15	#12 - #22	150
KD61230	670A-RZ-20-3865	20	#12 - #22	150
KD61235	670A-RZ-25-3865	25	#12 - #22	150





# Barrier Strips Terminal Blocks



## 599-GP Series

- Base, Phenolic, 150°C
- Open Back Design (Insulator Strip Required for Voltage Rating)
- Screws, #5-40 Binder Head, Phil-Slot, Brass
- Terminals, Plated Brass
- 1-30 Poles
- 3/8" Centers
- Wire Range with Wire Binding Screw #16 - #22 AWG
- 15 Amps
- RoHS Compliant



Catalog #	Mfg #	Poles	AWG	Volts
KD22430	599-GP-01-UH	1	#16 - #22	150
KD22455	599-GP-02-PSB	2	#16 - #22	150
KD23100	599-GP-03-PSB	3	#16 - #22	150
KD24100	599-GP-04-KT34-LUG	4	#16 - #22	150
KD24600	599-GP-05	5	#16 - #22	150
KD24700	599-GP-05-NH	5	#16 - #22	150
KD24711	599-GP-06	6	#16 - #22	150
KD24735	599-GP-07	7	#16 - #22	150
KD24741	599-GP-08-PSB	8	#16 - #22	150
KD22000	599-GP-10-UH	10	#16 - #22	150
KD22360	599-GP-14-UH	14	#16 - #22	150
KD22460	599-GP-20	20	#16 - #22	150
KD23820	599-GP-2004-04-PSB	4	#16 - #22	150
KD23826	599-GP-2004-08	8	#16 - #22	150

## 602-GP Series

- Base, Phenolic, 150°C
- Open Back Design (Insulator Strip Required for Voltage Rating)
- JJ (GDI-30F) Material Available
- Screws, #8-32 Binder Head, Phil-Slot, Brass
- Terminals, Plated Brass
- 1-26 Poles
- 9/16" Centers
- Wire Range with Wire Binding Screw #12 - #14 AWG
- 30 Amps
- RoHS Compliant



Catalog #	Mfg #	Poles	AWG	Volts
KD44800	602-GP-03	3	#12 - #14	300
KD44900	602-GP-04	4	#12 - #14	300
KD45400	602-GP-05	5	#12 - #14	300
KD45600	602-GP-06	6	#12 - #14	300
KD46200	602-GP-07	7	#12 - #14	300
KD46400	602-GP-08	8	#12 - #14	300
KD42600	602-GP-10	10	#12 - #14	300
KD42800	602-GP-11	11	#12 - #14	300
KD43000	602-GP-12-PSB	12	#12 - #14	300
KD43440	602-GP-13-NH	13	#12 - #14	300
KD43500	602-GP-14	14	#12 - #14	300
KD43850	602-GP-16	16	#12 - #14	300
KD46875	602-GP-17	17	#12 - #14	300
KD43865	602-GP-18	18	#12 - #14	300
KD44665	602-GP-24	24	#12 - #14	300

## 672-GP Series

- Base, Phenolic, 150°C
- Closed Back Design
- Screws, #8-32 Binder Head, Phil-Slot, Brass
- Terminals, Plated Brass
- 1-24 Poles
- 9/16" Centers
- Wire Range with Wire Binding Screw #10 - #14 AWG
- 30 Amps
- RoHS Compliant



Catalog #	Mfg #	Poles	AWG	Volts
KD70500	672-GP-02	2	#10 - #14	600
KD71100	672-GP-03	3	#10 - #14	600
KD71200	672-GP-04	4	#10 - #14	600
KD71255	672-GP-05	5	#10 - #14	600
KD71700	672-GP-06	6	#10 - #14	600
KD71950	672-GP-08	8	#10 - #14	600
KD72000	672-GP-09	9	#10 - #14	600
KD69450	672-GP-10	10	#10 - #14	600
KD69790	672-GP-12	12	#10 - #14	600
KD70075	672-GP-13	13	#10 - #14	600
KD70150	672-GP-14	14	#10 - #14	600
KD70480	672-GP-18	18	#10 - #14	600
KD70825	672-GP-20	20	#10 - #14	600
KD70900	672-GP-21	21	#10 - #14	600
KD70950	672-GP-24	24	#10 - #14	600



# Sectional Terminal Blocks

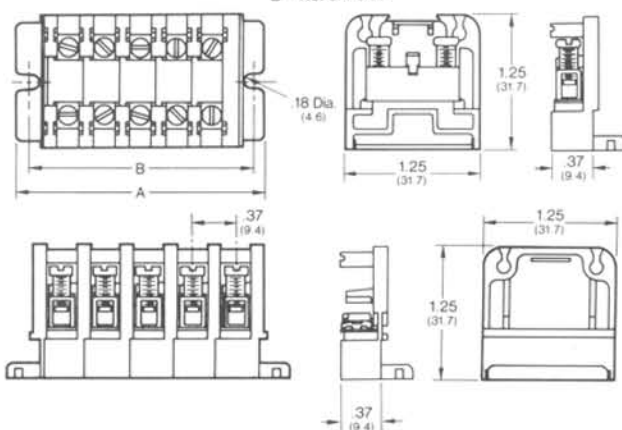


These versatile Sectionals are terminal blocks made up of individually molded units with electrically conductive members which, when assembled together, make up the block producing the required number of circuits.

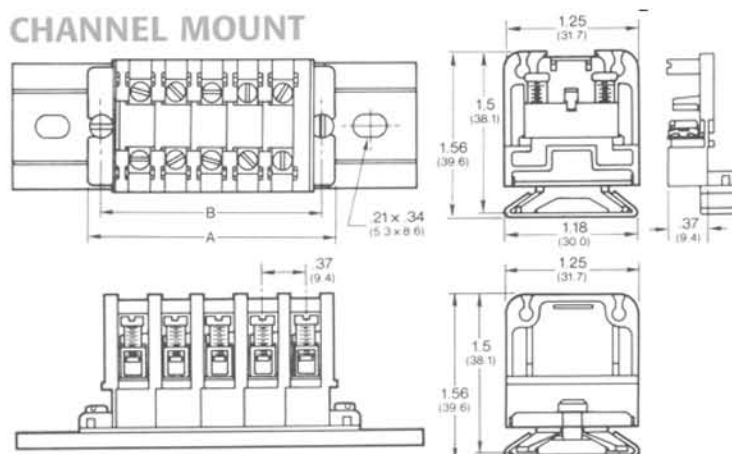


## FLAT MOUNT

A = .79 + (.375 X E)  
B = .36 + (.375 X E)  
E = No. of Poles



## CHANNEL MOUNT



Catalog #	Mfg #	Poles	AWG	Volts	Spacing	Std Pack
MH28305	6H38-TSKK-C Channel Mount	1	10-22	600	3/8" Sectional	25
MH28505	6H38-TSKK-F Flat Mount	1	10-22	600	3/8" Sectional	25
MH30900	6W30A1C Channel Mnt Fuse Blk	1	10-14	600	11/16" Sectional	10
MH31000	6W30A1F Flat Mnt Fuse Blk	1	10-14	600	11/16" Sectional	10



MH30900

Catalog #	Mfg #	Description	Std Pack
MH27505	6H38E-C	Channel Mount End Section	25
MH28005	6H38E-F	Flat Mount End Section	25
MF34000	J38	Jumper for MH28305 / MH28505	25
MF43000	MPC-3	Mounting DIN Rail - 3 Foot length	10
MF430050	MPC-6	Mounting DIN Rail - 6 Foot length	10
MF40000	MC	End Clamp	25



MH28505





# Terminal Block Accessories



Marathon offers an extensive selection of hardware and add-ons for their terminal blocks. Below are some of the most popular items we carry. The full Marathon line is available through Lectro Components.



KM99050



KM98950



KM96350



KM85300



KM89450



MF29705

Catalog #	Mfg #	Accessory	Catalog #	Mfg #	Accessory
KM91000	602-Z	Quick Connect	MF20891	1612105	Jumper
KM93900	KT-19	Quick Connect	MF20911	1612-MCJ	Jumper
KM94000	KT-20	Quick Connect	KM85300	600-J	Jumper
KM94100	KT-21	Quick Connect	KM86030	600-RJS-02	Jumper
KM94900	KT-29	Quick Connect	KM86040	600-RJS-03	Jumper
KM95000	KT-30	Quick Connect	KM86043	600-RJS-04	Jumper
KM95200	KT-34	Quick Connect	KM86150	600-RJS-06	Jumper
KM95300	KT-35	Quick Connect	KM86160	600-RJS-10	Jumper
KM95350	KT-39	Quick Connect	KM88000	601-J	Jumper
KM95400	KT-43	Quick Connect	KM89185	601-RJ-03	Jumper
KM95410	KT-44	Quick Connect	KM89200	601-RJS-02	Jumper
KM96350	KT-46	Quick Connect	KM89205	601-RJS-03	Jumper
KM96480	KT-47	Quick Connect	KM89450	601-RJS-04	Jumper
KM96580	KT-48	Quick Connect	KM89481	601-RJS-20	Jumper
KM97280	KT-52	Quick Connect	KM90400	602-J	Jumper
KM97289	KT-53	Quick Connect	KM91200	603-J	Jumper
KM97380	KT-54	Quick Connect	MF34000	J-38	Jumper
KM98700	KT-64	Quick Connect	MF37000	LL (200HB)	Jumper
KM98750	KT-65	Quick Connect	KM84655	411-ST	Lug
KM98755	KT-66	Quick Connect	KM85285	600-3/4-ST	Lug
KM98850	KT-69	Quick Connect	KM90450	602-JS	Lug
KM98900	KT-73	Quick Connect	KM90857	602-Y	Lug
KM98950	KT-74	Quick Connect	KM90850	602-YSY	Lug
KM99050	KT-75	Quick Connect	MF29705	9202593	Screw
KM99063	KT-81	Quick Connect	MF29701	9813535	Screw
			KM85901	3780	Screw w/Wire Clamp
			KM87500	600-Y	Solder Terminal
			KM87912	601-3/4-ST	Solder Terminal
			KM90000	601-Y	Solder Terminal
			KM92100	699-3/4ST	Solder Terminal



KM86160



# Terminal Blocks

## 0987 RZ TC XX

Replace XX with 02 thru 12 for number of poles

## Deadfront Type 50 Amps, 600 Volts AC/DC

### Wire Range:

#8 - #24 AWG Copper Wire Only

.475" Centerline spacing

Wire strip length - 7/16"

Panel mountable: #6 fastener, torque to 10-15 in. lbs.

### Electrical Ratings:

- 50A (Based on NEC Table 310-16, 75°C columns)
- 600 Volts AC/DC (UL 1059 Class C, User Group - General Industrial)
- Short Circuit Current Rated for 10,000 Amps.
- Factory and Field Wiring

### Mechanical Ratings:

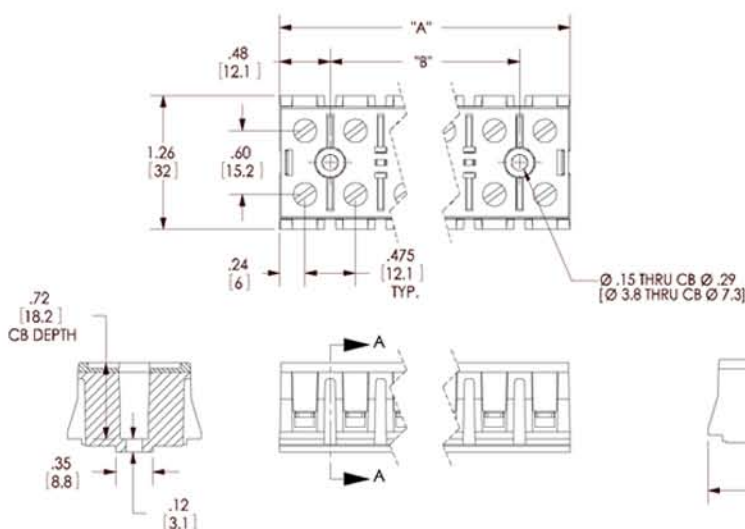
- Maximum insulator base temperature: 125°C (257°F) UL RTI
- Storage and transportation temperature range: -35°C to 110°C (-31°F to 230°F)
- Flammability rating of insulator base: UL 94 V-0
- Protection rating: IP-20 (IEC standard 60529)
- Use outside these ratings needs to be judged in the end-use application.

### Materials:

- Connector: Copper Alloy, Nickel plated
- Insulator base: Glass-filled Polycarbonate (Thermoplastic)
- Terminal set screws: Steel, nickel plated

### Agency Approvals:

- UL Recognized, UL 1059 Terminal Block Standard, File No. XCFR2.E47811
- CSA Certified, CSA C22.2 No. 158, File No. LR19766
- CE compliant to IEC 60947-7-1



### Dimensions

		A	B
0987 RZ TC 02	2	0.95	N/A
0987 RZ TC 03	3	1.43	0.48
0987 RZ TC 04	4	1.90	0.95
0987 RZ TC 05	5	2.38	1.43
0987 RZ TC 06	6	2.85	1.90
0987 RZ TC 07	7	3.33	2.38
0987 RZ TC 08	8	3.80	2.85
0987 RZ TC 09	9	4.28	3.33
0987 RZ TC 10	10	4.75	3.80
0987 RZ TC 11	11	5.23	4.28
0987 RZ TC 12	12	5.70	4.75

Catalog #	Mfg #	Poles	Custom	Printing
KD90000	0987-RZ-TC-02	02		
KD90001	0987-RZ-TC-03	03		
KD90002	0987-RZ-TC-03-73983	03	Yes	X1 / X2 GRD / X3
KD90003	0987-RZ-TC-04	04		
KD90004	0987-RZ-TC-04-74005	04	Yes	X1 / X2 / X3 / X4
KD90005	0987-RZ-TC-04-73625	04	Yes	240 / 220 / N / G
KD90006	0987-RZ-TC-05	05		
KD90007	0987-RZ-TC-06	06		
KD90008	0987-RZ-TC-06-73442	06	Yes	277 / 240 / 220 / 120 / N / G
KD90009	0987-RZ-TC-06-74002	06	Yes	H1 / H2 / H3 / H4 / X1 / X2
KD90010	0987-RZ-TC-07	07		
KD90011	0987-RZ-TC-07-74003	07	Yes	H1 / H2 / H3 / H4 / H5 / X1 / X2 GRD
KD90012	0987-RZ-TC-07-73550	07	Yes	277 / 240 / 220 / 208 / 120 / G / N
KD90013	0987-RZ-TC-08	08		
KD90014	0987-RZ-TC-09	09		
KD90015	0987-RZ-TC-10	10		
KD90016	0987-RZ-TC-10-74004	10	Yes	H1 / H2 / H3 / H4 / H5 / X1 / X2 / X3 / X4 / X5
KD90017	0987-RZ-TC-10-74006	10	Yes	H1 / H2 / H3 / H4 / H5 / H6 / H7 / H8 / X1 / X2 GRD
KD90018	0987-RZ-TC-10-73981	10	Yes	H1 / H2 / H3 / H4 / H5 / H6 / H7 / H8 / H9 / H10
KD90019	0987-RZ-TC-12	12		
KD90021	0987-RZ-TC-11	11		



KD90009



KD90003



KD90014





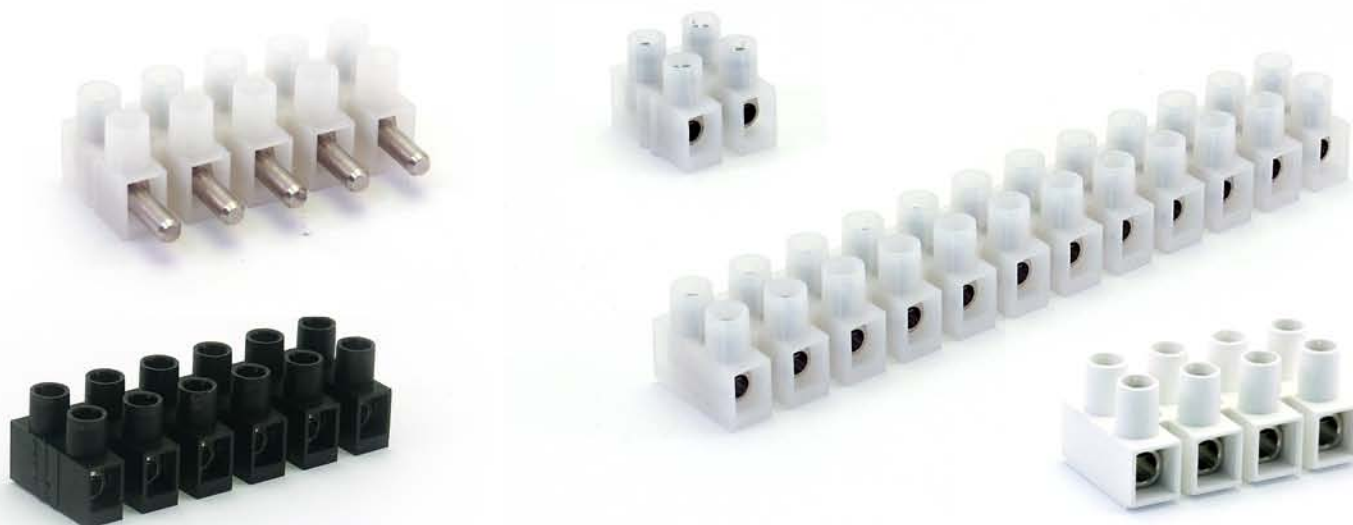
# Eurostyle Terminal Blocks

**WECO**

The 300 series of terminal strips provides for safe, efficient and reliable wiring connections. Screws are recessed and the shrouded molding design greatly reduces the chance of accidental contact with current-carrying metal parts. The -HDS designation refers to the stainless steel wire protector which is recommended for use with standard wiring. The flexible polyamide insulating material allows installation on uneven surfaces. The strips can easily be cut to the number of needed positions with common hand tools.

## FEATURES

- Touch safe construction
- Provides a safe, efficient and reliable wire connection
- Accepts a wide range of wire sizes
- Easily cut to needed number of positions
- UL, CSA, and VDE approvals



Catalog #	Manufacturer #	Poles	AWG	Amps	Volts	Spacing	Pack Qty
WE12000	302-HDS-12	12	12-20	20	300	8mm	50
WE12220	302-N-HDS-12	12	12-20	20	300	8mm	50
WE14540	323-FU-16-5-HDS-12	12	10-22	30	600	10mm	50
WE14700	323-FU-18-5-HDS-12	12	10-22	30	600	10mm	50
WE15700	323-HDS-12	12	10-22	30	600	10mm	50
WE16750	324-HDS-12	12	8-22	35	600	11.5mm	50
WE17080	327-FU-12	12	6-14	65	600	14.5mm	25
WE17158	327-FUHDS-12	12	6-14	65	600	14.5mm	25
WE17750	327-HDS-12	12	6-14	65	600	14.5mm	25
WE12229	302-J-12	Jumper					100
WE10322	323-J/12	Jumper					100
WE10333	324-J/12	Jumper					100
WE10344	327-J/12	Jumper					100



# PCB Terminal Blocks

WECO

These Printed Circuit Board Terminal Blocks are among the smallest in their respective series. They are designed to save precious real estate in the printed circuit board.

They are available in a variety of different configurations, including solid versions from 2 to 32 positions as well as in 2 and 3 position dovetail (-T) blocks. These dovetail blocks can be clipped together quickly to provide the designer with the needed number of positions while maintaining center-to-center pin-spacing. Another advantage of the dovetail system is that both inventory and delivery times can be kept to a minimum. Blocks can be installed end-to-end to provide the needed pole configuration while maintaining center-to-center spacing. A number of the Weco series have matching pinstrips available, allowing for more convenient connection options.

The optional wire protectors (-DS designation) are strongly recommended to prevent damage to stranded wiring from the clamping screw mechanism. Solid wiring does not require wire protectors - this makes insertion of larger wires easier in field wiring applications.



Catalog #	Manufacturer #	Type	Spacing	AWG	Amps	Volts
WE19599	930-DS-03	Solid Block	3.5mm	18-26	10	300
WE19690	930-TDS-02	Dovetail Block	3.5mm	18-26	10	300
WE19700	930-TDS-03	Dovetail Block	3.5mm	18-26	10	300
WE19750	931-TDS-02	Dovetail Block	3.5mm	16-26	10	300
WE19752	931-TDS-03	Dovetail Block	3.5mm	16-26	10	300
WE19800	940-DS-02	Solid Block	5.08mm	12-26	15	300
WE20100	940-DS-04	Solid Block	5.08mm	12-26	15	300
WE20345	940-DS-08	Solid Block	5.08mm	12-26	15	300
WE20510	940-DS-14	Solid Block	5.08mm	12-26	15	300
WE20825	940-TDS-02	Dovetail Block	5.08mm	12-26	15	300
WE20850	940-TDS-03	Dovetail Block	5.08mm	12-26	15	300
WE24400	950-TDS-02	Dovetail Block	5mm	12-26	15	300
WE24452	950-TDS-03	Dovetail Block	5mm	12-26	15	300
WE31880	950-FLDS-02	Solid Block	5mm	12-26	15	300
WE31885	950-FLDS-03	Solid Block	5mm	12-26	15	300
WE31890	950-FLDS-04	Solid Block	5mm	12-26	15	300
WE31895	950-FLDS-05	Solid Block	5mm	12-26	15	300
WE31910	950-FLDS-06	Solid Block	5mm	12-26	15	300
WE31900	950-FLDS-07	Solid Block	5mm	12-26	15	300
WE31913	950-FLDS-08	Solid Block	5mm	12-26	15	300
WE31915	950-FLDS-10	Solid Block	5mm	12-26	15	300
WE31920	950-FLDS-14	Solid Block	5mm	12-26	15	300
WE31940	950-FLDS-24	Solid Block	5mm	12-26	15	300
WE38525	951-TDS-02	Dovetail Block	5mm	12-26	15	300
WE38535	951-TDS-03	Dovetail Block	5mm	12-26	15	300
WE40010	952-SVG-07	Solid Block	5mm	12-26	15	300
WE40800	964-TDS-02	Dovetail Block	5.08mm	10-22	20	300
WE40820	964-TDS-03	Dovetail Block	5.08mm	10-22	20	300
WE55400	970-TDS-02	Dovetail Block	5mm	10-22	20	300
WE55500	970-TDS-03	Dovetail Block	5mm	10-22	20	300
WE65900	971-SLK-04	Pinstrip	5mm	---	10	300
WE65915	971-SLK-06	Pinstrip	5mm	---	10	300
WE65926	971-SLK-09	Pinstrip	5mm	---	10	300
WE65879	971-SLK-12	Pinstrip	5mm	---	10	300
WE65969	971-SLK-64	Pinstrip	5mm	---	10	300
WE66011	971-SLS-06	Pinstrip	5mm	---	10	300
WE66550	971-SLW-02	Pinstrip	5mm	---	10	300
WE66600	971-SLW-03	Pinstrip	5mm	---	10	300
WE66650	971-SLW-06	Pinstrip	5mm	---	10	300
WE66665	971-SLW-07	Pinstrip	5mm	---	10	300
WE66675	971-SLW-08	Pinstrip	5mm	---	10	300
WE66690	971-SLW-10	Pinstrip	5mm	---	10	300
WE66695	971-SLW-14	Pinstrip	5mm	---	10	300
WE66832	971-SLW-64	Pinstrip	5mm	---	10	300



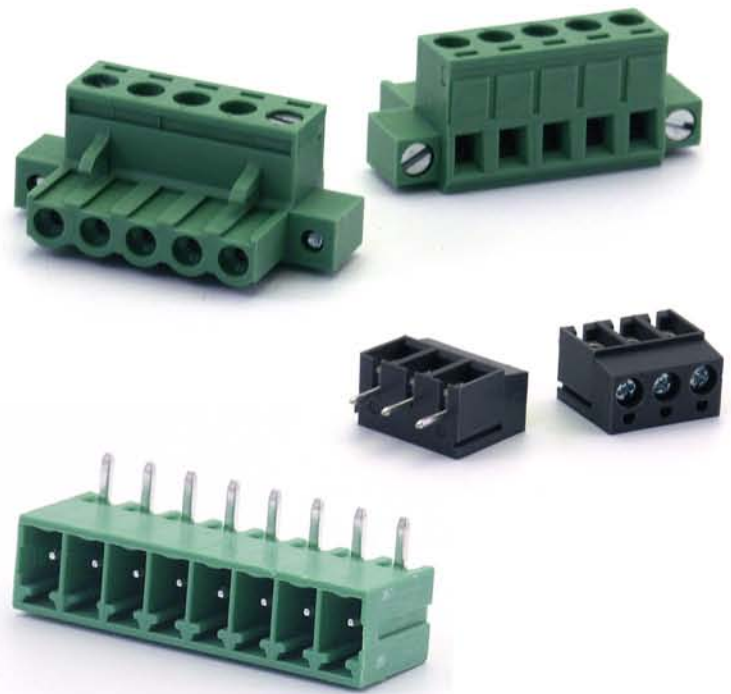


# PCB Terminal Blocks



The Dinkle PCB Terminal Block series are available in a large selection of sizes and pole positions. These connectors come in 3.50mm, 3.81mm, 5.00mm, 5.08mm, 7.50mm and 7.62mm pitches. They are available in horizontal, vertical, and front wire entry to meet multiple design requirements. Dinkle's steel yoke design is utilized to create a reliable connection suited for use in industrial controls, information technology, and other applications requiring highly reliable interconnection with the flexibility of simplified modifications and installation.

Listed below are some of the most popular terminal blocks available through Lectro Components. To access the full line of Dinkle blocks, or for more details, please call us at 800-323-2282.



Catalog #	Manufacturer #	Poles	Amps	Volts	Spacing	Description
DK10013	2EHDR-05P	5	15A	300	5.08mm	2EHDR Series PCB Block
DK10015	2EHDRM-05P	5	15A	300	5.08mm	2EHDRM Series PCB Block
DK10018	2ESDVM-02P	2	15A	300	5.08mm	Plug with Locking Flange
DK10020	2ESDVM-05P	5	15A	300	5.08mm	Plug with Locking Flange
DK10025	DT-29-B01W-03	3	15A	300	6.35mm	DT-29 Barrier Style Terminal Block
DK10045	EK500V-06P	6	20A	300	5.00mm	EK Series PCB Block
DK10046	ED130R-2966-02	2	7A	300	5.00mm	ED Series PCB Block
DK10047	ED130R-2966-03	3	7A	300	5.00mm	ED Series PCB Block
DK10048	ED130R-2966-04	4	7A	300	5.00mm	ED Series PCB Block
DK10049	ELK508V-06P	6	13.5A	300	5.08mm	ELK508V Series PCB Block
DK10050	ED130R-2966-06	6	7A	300	5.00mm	ED Series PCB Block
DK10052	ED130R-2966-08	8	7A	300	5.00mm	ED Series PCB Block
DK10055	ECH350R-02P	2	8A	300	3.50mm	ECH350R Series Vertical Header
DK10058	ECH350R-05P	5	8A	300	3.50mm	ECH350R Series Vertical Header
DK10061	ECH350R-08P	8	8A	300	3.50mm	ECH350R Series Vertical Header
DK10072	TB03V-02P	2	16A	300	5.00mm	TB03 Series PCB Block
DK10076	TB03V-03P	3	16A	300	5.00mm	TB03 Series PCB Block



# Modular Terminal Blocks



IEDEC terminal blocks are molded from UL94-V0 material, with excellent flame and shock resistance, and mount on a standard 35mm DIN rail or surface mount (2 types). They come in sectional or one-piece construction with current ratings from 10A to 350A. Models include fuse blocks with optional blown fuse indication. A variety of accessories are available, including marking strips and dust covers.



IK32500



## IEDEC Modular Terminal Blocks & Self-Contained Fuse Blocks

Catalog #	Manufacturer #	Poles	AWG	Amps	Volts	Width	Mounting
IF31829	BNH30W	1	18-10	30	600	12 mm	35 mm DIN Rail
IF31837	BNF10SW	1	18-10	10	600	15 mm	35 mm DIN Rail
IF31841	BNH50W	1	16-6	50	600	20 mm	35 mm DIN Rail
IF31711	BN15MW	1	22-14	10	600	8 mm	35 mm DIN Rail
IF31838	BNH15MW	1	22-14	10	600	8 mm	35 mm DIN Rail
IK31950	BA111TU2	3	22-14	15	300	25 mm	35 mm DIN Rail
IK32000	BA211TU	3	22-12	20	300	30.5 mm	35 mm DIN Rail
IK32500	BAF111SNU	1	18-10	10	600	16 mm	35 mm DIN Rail
IK32502	BAF111SU	1	18-10	10	600	16 mm	35 mm DIN Rail



IF31711



IK32000

## IEDEC Terminal Block Accessories

Catalog #	Manufacturer #	Description
IF31817	BNDN-1000	Aluminum DIN Rail - 1 M length
IF31815	BNC230	Din Rail Dust Cover - Polycarbonate Material - 1 M length
IF31850	BNL-5	Din Rail Mount Rail Stop
IF31870	BNL-6	Din Rail Mount Rail Stop
IF31890	BNL-8	Din Rail Mount Rail Stop
IF31835	BNE15W	End Plate
IF31836	BNE50W	End Plate
IF31843	BNE30W	End Plate
IF32000	BNM-7	Marking Strip - Polyvinyl Chloride Material - 1 M length
IF32010	BNM3	Marking Strip - Polyvinyl Chloride Material - 1 M length





# Terminal Blocks

**MAGNUM®**

For over 50 years, the Magnum® name has stood for wire connection solutions, the most comprehensive selection of barrier-style terminal blocks in the industry and superior service. Originally known as USD -- Underwriters Safety Device -- the Magnum brand continues its leadership by introducing more versatile and innovative designs in the terminal block field for use in both the electrical and electronic markets.

Only the most popular styles of terminal blocks are shown here. The full Magnum product line is available through Lectro Components, Inc.



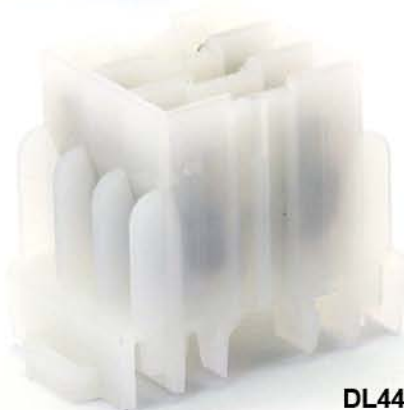
**CS67310**



**CS57063**



**UA16000**



**DL44590**

Catalog #	Manufacturer #	Poles	AWG	Amps	Volts	Width	Series
DL31500	KU-12	12	6-22	60	600	0.625	KU Series
DL33000	KU-2	2	6-22	60	600	0.625	KU Series
DL37463	KUX-08	8	6-22	60	600	0.625	KU Series
DL37490	KUX-12	12	6-22	60	600	0.625	KU Series
DL30600	KT-3	3	8-22	40	600	0.390	KT3 Series
DL44000	NC-3 WH	3	2/0-14	175	600	1.060	NC3 Series
DL44550	NDN-111	3	2-18	90	600	0.635	NDN Series
DL44590	NDN-3-WH	3	10-22	30	600	0.300	NDN Series
DL44591	NDN-3	3	10-22	30	600	0.300	NDN Series
DL44620	NDN-63-WH	3	6-18	65	600	0.375	NDN Series
DL44900	NDNV-4	4	10-22	30	600	0.250	NDNV4 Series
DL47500	NFT-3W	3	8-22	55	600	0.390	NFT3 Series
CS57060	A403504-A3	4	8-16	50	600	0.562	A4000 Series
CS57063	A481304-04	4	10-16	35	600	0.562	A4000 Series
CS57071	A481308-04	8	10-16	35	600	0.562	A4000 Series
CS57081	A481312-04	12	10-16	35	600	0.562	A4000 Series
CS57085	A481314	14	10-16	35	600	0.562	A4000 Series
CS57090	A481316-04	16	10-16	35	600	0.562	A4000 Series
CS67209	CB202102-07	2	12-22	30	300	0.437	CB2000 Series
CS67250	CB202202-04	2	12-22	30	300	0.437	CB2000 Series
CS67251	CB202202-09	2	12-22	30	300	0.437	CB2000 Series
CS67275	CB202203-07	3	12-22	30	300	0.437	CB2000 Series
CS67294	CB202204-07	4	12-22	30	300	0.437	CB2000 Series
CS67296	CB202205-07	5	12-22	30	300	0.437	CB2000 Series
CS67297	CB202207-07	7	12-22	30	300	0.437	CB2000 Series
CS67299	CB202208-07	8	12-22	30	300	0.437	CB2000 Series
CS67306	CB20220907LT1	9	12-22	30	300	0.437	CB2000 Series
CS67305	CB202210-07	10	12-22	30	300	0.437	CB2000 Series
CS67304	CB202212-09	12	12-22	30	300	0.437	CB2000 Series
CS67312	CB202212-04	12	12-22	30	300	0.437	CB2000 Series
CS67316	CB202216-09	16	12-22	30	300	0.437	CB2000 Series
UA15500	14002-2	2	2-14	115	600	--	14002 Series
UA16000	14002-3	3	2-14	115	600	--	14002 Series
UA16100	14002-3H	3	2-14	115	600	--	14002 Series
UA16500	14002-4	4	2-14	115	600	--	14002 Series



# Assembled Pushbuttons

## FEATURES

TW NEMA Style switches with Snap-On contacts

- Corrosion resistant octagonal chrome plated locking bezel
- Snap-on 10A contact blocks
- Transformer or full voltage
- Slow make, double break, self cleaning contacts
- Modular construction for maximum flexibility
- Available assembled or as sub-components
- NEMA 4X and IP65 watertight/oiltight panel
- Large M3.5 Screw Terminals with captive Sems Plate

## Non-Illuminated Pushbuttons

AB ( ) W 1 10 ( ) - B

### Degrees of Protection

A: IP65/NEMA4X

### Function

B: Momentary  
O: Alternate  
V: Pushlock Turn Reset  
Y: Push-Pull  
K: Key On/Off Lock  
X: Pushlock Key Reset

### Bezel Shape

Blank: Octagonal  
F: Full Shroud

### Button Color

B: Black G: Green W: White  
R: Red S: Blue Y: Yellow

### Contact Style

Blank Standard  
N: Fingersafe

### Contact Arrangement

10: 1NO 01: 1NC  
20: 2NO 02: 2NC  
11: 1NO-1NC 22: 2NO-2NC

### Button Shape

1: Flush  
2: Extended  
3: Mushroom Ø 1-13/64" (Ø 29mm)  
4: Mushroom Ø 1-37/64" (Ø 40mm)

### Series Type

W: TW Ø7/8" (Ø 22mm)

To be used for interpreting part numbers only,  
not for part number development.



### Momentary Action Flush Button

Catalog #	Part Number
IK00015	ABW110-B,G,R
IK00050	ABW101-B,G,R
IK00020	ABW111-B,G,R
IK00025	ABW120-B,G,R
IK00010	ABW102-B,G,R

### Maintained Action Flush Button

Catalog #	Part Number
IK18033	AOW110-B,G,R
IK17993	AOW101-B,G,R
IK18036	AOW111-B,G,R
IK18050	AOW120-B,G,R
IK17996	AOW102-B,G,R

### Momentary Action Extended Button

Catalog #	Part Number
IK00060	ABW210-B
IK00065	ABW210-G
IK00070	ABW210-R
IK00030	ABW201-B
IK00035	ABW201-G
IK00040	ABW201-R
IK00075	ABW211-B
IK00080	ABW211-G
IK00085	ABW211-R
IK00090	ABW220-B
IK00095	ABW220-G
IK00100	ABW220-R
IK00045	ABW202-B
IK00050	ABW202-G
IK00055	ABW202-R

### Maintained Action Extended Button

Catalog #	Part Number
IK18011	AOW210-B
IK18012	AOW210-G
IK18013	AOW210-R
IK18005	AOW201-B
IK18006	AOW201-G
IK18007	AOW201-R
IK18014	AOW211-B
IK18015	AOW211-G
IK18016	AOW211-R
IK18017	AOW220-B
IK18018	AOW220-G
IK18019	AOW220-R
IK18008	AOW202-B
IK18009	AOW202-G
IK18010	AOW202-R

### Momentary Action Mushroom Button (40mm)

Catalog #	Part Number
IK00135	ABW410-B
IK00140	ABW410-G
IK00145	ABW410-R
IK00105	ABW401-B
IK00110	ABW401-G
IK00115	ABW401-R
IK00150	ABW411-B
IK00155	ABW411-G
IK00160	ABW411-R
IK00165	ABW420-B
IK00170	ABW420-G
IK00175	ABW420-R
IK00120	ABW402-B
IK00125	ABW402-G
IK00130	ABW402-R

### Maintained Action Mushroom Button (40mm)

Catalog #	Part Number
IK18066	AOW410-B
IK18068	AOW410-G
IK18070	AOW410-R
IK18021	AOW401-B
IK18023	AOW401-G
IK18025	AOW401-R
IK18072	AOW411-B
IK18074	AOW411-G
IK18076	AOW411-R
IK18078	AOW420-B
IK18080	AOW420-G
IK18082	AOW420-R
IK18060	AOW402-B
IK18062	AOW402-G
IK18064	AOW402-R





# Assembled Pushbuttons

## Incandescent Illuminated Pushbuttons

To be used for interpreting part numbers only,  
not for part number development.

**A L ( ) W 2 126 11 (D) (N) - R-**

### Degree of Protection

A: IP65

### Function

L: Momentary Action  
OL: Alternate Action  
VL: Pushlock Turn Reset  
YL: Push-Pull

### Bezel Shape

Blank: Octagonal  
F: Full Shroud  
Q: Square

### Series Type

W: TW o 7/8" (O 22 mm)

### Lens Shape

2: Extended Non-Marking  
2B: Extended Marking  
4: Mushroom O 1-37/64" (O 40 mm)  
4B: Mushroom O 1-37/64" (O 40 mm)

### Rated Operational Voltage (Primary)

Transformer/AC Adaptor Type Full Voltage  
Type  
126: 120V AC  
246: 240V AC  
486: 480V AC (Transformer type only)

### Lamp Voltage

(Full Voltage Only)

#### Incandescent

6: 6V AC/DC  
12: 12V AC/DC  
24: 24V AC/DC

#### LED

6: 6V AC/DC  
12: 12V AC/DC  
24: 24V AC/DC  
120: 120V AC  
240: 240V AC

### Lens Code

A: Amber  
G: Green  
R: Red  
S: Blue

C: Clear (Square Only)  
W: White  
Y: Yellow

### Contact Style

Blank: Standard  
N: Fingersafe

### Lamp Type

Blank: Incandescent Lamp

### Contact Arrangement

10: 1NO  
20: 2NO  
11: 1NO-1NC  
01: 1NC  
02: 2NC  
22: 2NO-2NC



### Momentary Action Illuminated

Catalog #	Part Number
IK10322	ALW29911-A-24
IK10323	ALW29911-G-24
IK10324	ALW29911-R-24
IK10340	ALW29920-A-24
IK10345	ALW29920-G-24
IK03500	ALW29920-R-24
IK10314	ALW29902-A-24
IK10315	ALW29902-G-24
IK10316	ALW29902-R-24

### Maintained Action Illuminated

Catalog #	Part Number
IK00630	AOLW29911-A-24
IK00635	AOLW29911-G-24
IK00640	AOLW29911-R-24
IK00660	AOLW29920-A-24
IK00665	AOLW29920-G-24
IK00670	AOLW29920-R-24
IK00600	AOLW29902-A-24
IK00605	AOLW29902-G-24
IK00610	AOLW29902-R-24

### Momentary Action Extended Lens with Full Shroud

Catalog #	Part Number
IK00210	ALFW29911-A-24
IK00215	ALFW29911-G-24
IK00220	ALFW29911-R-24
IK00240	ALFW29920-A-24
IK00245	ALWF29920-G-24
IK00250	ALWF29920-R-24
IK00180	ALWF29902-A-24
IK00185	ALWF29902-G-24
IK00190	ALWF29902-R-24

### Maintained Action Extended Lens with Full Shroud

Catalog #	Part Number
IK00430	AOLFW29911-A-24
IK00435	AOLFW29911-G-24
IK00440	AOLFW29911-R-24
IK00460	AOLFW29920-A-24
IK00465	AOLFW29920-G-24
IK00470	AOLFW29920-R-24
IK00400	AOLFW29902-A-24
IK00405	AOLFW29902-G-24
IK00410	AOLFW29902-R-24

### Momentary Action Mushroom Lens (40mm)

Catalog #	Part Number
IK10740	ALW49911-A-24
IK10745	ALW49911-G-24
IK10750	ALW49911-R-24
IK10770	ALW49920-A-24
IK10775	ALW49920-G-24
IK10780	ALW49920-R-24
IK10710	ALW49902-A-24
IK10715	ALW49902-G-24
IK10720	ALW49902-R-24

### Maintained Action Mushroom Lens (40mm)

Catalog #	Part Number
IK00830	AOLW49911-A-24
IK00835	AOLW49911-G-24
IK00840	AOLW49911-R-24
IK00860	AOLW49920-A-24
IK00865	AOLW49920-G-24
IK00870	AOLW49920-R-24
IK00800	AOLW49902-A-24
IK00805	AOLW49902-G-24
IK00810	AOLW49902-R-24

# Assembled Pushbuttons



## FEATURES

- LEDs can operate at low temperatures
- LEDs consume 50 times less power than incandescent lamps
- LEDs last 500 times longer than incandescent lamps
- LEDs do not generally "blow out" unless subject to a severe overvoltage
- IDEC's SUPERBRIGHT LEDs have high visibility
- LEDs require little or no maintenance because of long life and high reliability

## LED Illuminated Pushbuttons

### Momentary Action Flush Button

Catalog #	Part Number
IK10755	ALW49911D-G-24
IK10760	ALW49911D-R-24
IK10765	ALW49911D-Y-24
IK10785	ALW49920D-G-24
IK10790	ALW49920D-R-24
IK10795	ALW49920D-Y-24
IK10725	ALW49902D-G-24
IK10730	ALW49902D-R-24
IK10735	ALW49902D-Y-24

### Maintained Action Flush Button

Catalog #	Part Number
IK00845	AOLW49911D-G-24
IK00850	AOLW49911D-R-24
IK00855	AOLW49911D-Y-24
IK00875	AOLW49920D-G-24
IK00880	AOLW49920D-R-24
IK00885	AOLW49920D-Y-24
IK00815	AOLW49902D-G-24
IK00820	AOLW49902D-R-24
IK00825	AOLW49902D-Y-24

### Momentary Action Extended Button

Catalog #	Part Number
IK10326	ALW29911D-G-24
IK10327	ALW29911D-R-24
IK10328	ALW29911D-Y-24
IK10355	ALW29920D-G-24
IK10360	ALW29920D-R-24
IK10365	ALW29920D-Y-24
IK10318	ALW29920D-G-24
IK10319	ALW29902D-R-24
IK10320	ALW29902D-Y-24

### Maintained Action Extended Button

Catalog #	Part Number
IK00645	AOLW29911D-G-24
IK00650	AOLW29911D-R-24
IK00655	AOLW29911D-Y-24
IK00675	AOLW29920D-G-24
IK00680	AOLW29920D-R-24
IK00685	AOLW29920D-Y-24
IK00615	AOLW29902D-G-24
IK00620	AOLW29902D-R-24
IK00625	AOLW29902D-Y-24

### Momentary Action Mushroom Button (40mm)

Catalog #	Part Number
IK00225	ALFW29911D-G-24
IK00230	ALFW29911D-R-24
IK00235	ALFW29911D-Y-24
IK00255	ALFW29920D-G-24
IK00260	ALFW29920D-R-24
IK00265	ALFW29920D-Y-24
IK00195	ALFW29902D-G-24
IK00200	ALFW29902D-R-24
IK00205	ALFW29902D-Y-24

### Maintained Action Mushroom Button (40mm)

Catalog #	Part Number
IK00445	AOLFW29911D-G-24
IK00450	AOLFW29911D-R-24
IK00455	AOLFW29911D-Y-24
IK00475	AOLFW29920D-G-24
IK00480	AOLFW29920D-R-24
IK00485	AOLFW29920D-Y-24
IK00415	AOLFW29902D-G-24
IK00420	AOLFW29902D-R-24
IK00425	AOLFW29902D-Y-24



## Non-Illuminated Selector Switches

**A S W 3 1 L 20 (N)**

**Degree of Protection**  
A: IP (IP40 for Key Type operators)

**Function**  
S: Selector Switch

**Series Type**  
W: TW O 7/8" (O 22mm)

**Number of Positions**  
2: 2-Position  
3: 3-Position

**Spring Return Action**  
Blank: Maintained  
1: Spring return from Right  
2: Spring return from Left  
3: 2-Way spring return from Left and Right

**Contacts Type**  
Blank: standard  
N: Fingersafe

**Contact Arrangement Code**  
10: 1NO 01: 1NC  
20: 2NO 02: 2NC  
40: 4NO 04: 4NC  
11: 1NO-1NC 22: 2NO-2NC

**Operator Style Code**  
Blank: Knob Operator  
L: Lever Operator  
K: Key Operator

### Selector Switch w/ Knob Two Position Maintained

Catalog #	Part Number
IK25946	ASW210
IK25942	ASW210-116
IK25950	ASW211
IK25955	ASW220
IK25944	ASW202-104
IK25960	ASW222
IK25965	ASW222-111

To be used for interpreting part numbers only,  
not for part number development.



# Air Pressure Switches



Cleveland Controls' AFS Series Air Pressure Switches are designed for HVAC, Energy Management, and Direct Digital Control (DCC) applications. They have adjustable set points, and are available in 0.03" to 2.00" or 0.03" to 12.00" w.c. ranges. Wiring connections may be open or enclosed, depending on the model.

Optional features include manual reset, visual set point indicator, operation indicator, alarm light, single or multiple time delay configurations, and NEMA-rated housings.



CE30100



CE30075



CE30263

Catalog #	Manufacturer #	Range (w.c.)	Connections	Type
CE30011	AFS-222	0.05 - 12.0	Compression	SPDT N/O
CE30075	AFS-262	0.05 - 2.0	Compression	SPDT N/O
CE30100	AFS-262-112	0.05 - 2.0	Barb	SPDT N/O
CE30263	AFS-460	0.4 - 12.0	Compression	SPST N/C with Manual Reset
CE30270	AFS-460-DSS	0.4 - 12.0	Compression	SPST N/C (2) with Manual Reset



# Switches

**MOLVENO**

The Molveno range is highly diversified, encompassing everything from rocker, rotary, pushbutton and slide switches to connectors and illuminated indicators. Moreover, the choice of sizes, ratings, finishes and accessories is unequalled. Molveno components can be found in an almost endless array of different products, including small appliances, white goods, heating and ventilation systems, cooker hoods, toys, computer accessories and gardening equipment.

The selection on these pages is only a small example of what is available. Lectro Components is an authorized distributor for the full line of Molveno switches. For more details, please call us at 800-323-2282.

## Rocker Switches



GP



TECNO



A1



A2



A4



B4D



B4MASK



C0



CB



A8



B1



B10



B2



B4



CN



CK



CP



DC





# Switches

**MOLVENO**

## Pushbutton Switches



## Rotary Switches



## Slide Switches



Transformers

Relays & Timers

Power Supplies

Circuit Protection

Terminal Blocks

Switches

Electronics

Enclosures

Additional Products

# Smart Relays



IDEC's FL1B SmartRelay series can replace multiple relays, timers, and counters in many applications. More advanced than a time delay relay, but less expensive than a Micro PLC, the IDEC SmartRelay series fills the need for a small, flexible control and monitoring device. It is the ideal solution for managing automatic lighting, access control, watering systems, pump control, or ventilation systems.

The IDEC SmartRelay integrates programming and display functions into the control unit with an on-board display (LCD) and keypad. Enter and modify programs, or monitor status information, with no need for additional hardware. IDEC also offers WindLGC, an easy-to-use, Windows-based software package that creates and simulates programs for the IDEC SmartRelay series with drag and drop simplicity. Plug-in memory modules make it easy to back up and store data, or even transfer programs between multiple IDEC SmartRelays.



## "SMARTer" Problem Solving!

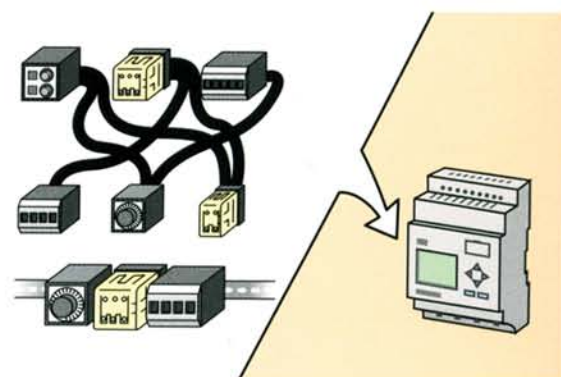
Reduce your programming time by utilizing and selecting from one of the 29 function blocks. Edit or modify programs without any special skills or advanced training.

### IDEC SmartRelays

Catalog #	Manufacturer #	Description
ID23045	FL1E-H12RCA	24Vac, 8I/4O, RTC, Relay Output
ID23050	FL1E-H12RCC	110/240Vac, DC, 8I/4O, RTC, Relay Output
ID23055	FL1E-H12RCE	12/24 Vdc, 8I/4O, 2 Analog In, RTC, Relay Output

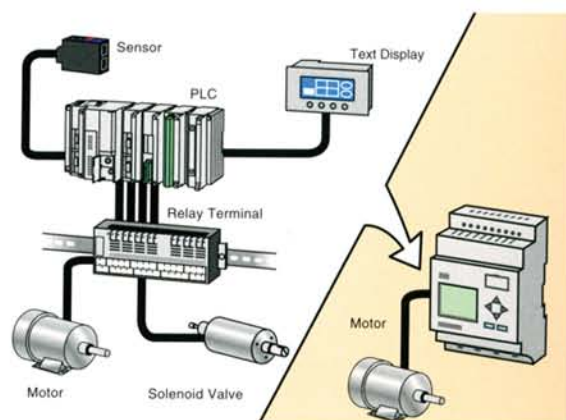
### IDEC SmartRelay Accessories

Catalog #	Manufacturer #	Description
ID23015	FL1A-PC1	FL1A-PC1 Interface Cable
ID23020	FL1C-PM3	FL1C-PM3 Yellow Memory Cartridge
ID23023	FL1C-PM3	FL1C-PM3 Red Memory Cartridge
ID23099	FL9Y-LP1CDW	Wind Lgc V 2.0 SmartRelay Software



## "SMARTer" than Relays, Counters, and Timers!

Change your current system easily, from multiple relays, counters, and timers to a single IDEC SmartRelay.



## "SMARTer" than systems with Programmable Logic Systems!

The IDEC SmartRelay can "smartly" mimic many functions of programmable logic controller components. The IDEC SmartRelay also features max. 10A output contacts and up to 40 letters of display.



# Enclosures



Unity Manufacturing offers a wide selection of steel enclosures in hundreds of sizes. Only the most common items are listed below. Please call us at 800-323-2282 for information on the entire line of enclosures from Unity.

## Type 1 Screw Cover Junction and Pull Boxes Gray Powder Coated



SC



### Application

- Designed for use as junction and pull boxes
- Flush covers available (see page 5)

### Construction

- Formed from code gauge, low carbon steel
- Keyhole slotted cover allows plated screws to stay in place
- Complies with UL 50

### Specials

- Custom sizes and modifications available
- Optional powder coat colors available

Popular sizes in stock

When ordering always specify width, height and depth

### With Knock-outs

Catalog #	UPC 1515	Size W"xH"xD"	STD CTN	WGT	List Price, \$
444SC	22010	4x4x4	1	1	17.78
664SC	22130	6x6x4	12	3	20.00
684SC	22160	6x8x4	1	3	26.67
6124SC	22166	6x12x4	1	5	35.56
884SC	22280	8x8x4	6	4	31.11
8104SC	22320	8x10x4	1	5	33.33
8124SC	22360	8x12x4	1	6	37.78
10104SC	22430	10x10x4	6	6	37.78
12124SC	22580	12x12x4	6	8	47.78
12184SC	22700	12x18x4	1	11	73.33
666SC	22140	6x6x6	8	3	25.56
886SC	22290	8x8x6	4	5	35.56
10106SC	22440	10x10x6	4	7	46.67
12126SC	22590	12x12x6	4	10	60.00
12186SC	22710	12x18x6	1	14	84.44

### No Knock-outs

Catalog #	UPC 1515	Size W"xH"xD"	STD CTN	WGT	List Price, \$
444SCNK	22012	4x4x4	1	1	17.78
664SCNK	22132	6x6x4	12	3	20.00
884SCNK	22282	8x8x4	6	4	31.11
10104SCNK	22432	10x10x4	6	6	37.78
12124SCNK	22582	12x12x4	6	8	47.78
16164SCNK	22940	16x16x4	1	12	84.18
18184SCNK	23020	18x18x4	4	16	96.67
24244SCNK	23290	24x24x4	3	27	231.11
666SCNK	22142	6x6x6	8	3	25.56
886SCNK	22292	8x8x6	4	5	35.56
10106SCNK	22442	10x10x6	4	7	46.67
12126SCNK	22592	12x12x6	4	10	60.00
16166SCNK	22950	16x16x6	1	14	97.78
18186SCNK	23030	18x18x6	3	19	106.67
18246SCNK	23100	18x24x6	1	24	194.44
24246SCNK	23300	24x24x6	2	30	222.22
30306SCNK	23420	30x30x6	1	45	533.33
36366SCNK	23440	36x36x6	1	60	533.33
888SCNK	22300	8x8x8	2	6	57.78
12128SCNK	22600	12x12x8	2	11	80.00
18188SCNK	23040	18x18x8	2	20	133.33
24248SCNK	23310	24x24x8	2	34	248.89
30308SCNK	23480	30x30x8	1	51	553.33
36368SCNK	23500	36x36x8	1	78	533.33
48488SCNK	23505	48x48x8	1	195	1,502.22
121210SCNK	22610	12x12x10	1	13	111.11
181810SCNK	23050	18x18x10	1	23	186.67
242410SCNK	23320	24x24x10	1	38	346.67
303010SCNK	23530	30x30x10	1	55	555.56
363610SCNK	23550	36x36x10	1	79	711.11
121212SCNK	22620	12x12x12	1	15	133.33
181812SCNK	23060	18x18x12	1	25	186.67
242412SCNK	23330	24x24x12	1	44	355.56
303012SCNK	23580	30x30x12	1	65	555.56
363612SCNK	23600	36x36x12	1	87	711.11
484812SCNK	23605	48x48x12	1	220	1,555.56



### Spray Paint Gunsmoke Gray

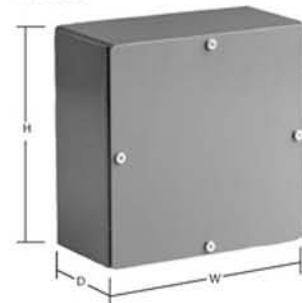
Catalog #	UPC 1515	Size	STD CTN	WGT	List Price, \$
SPG	17990	12 oz., can	1	1	100.00

## Type 3 Gasketed Weatherproof

### Construction

- Seam welded
- Gasketed
- No knockouts
- No mounting holes

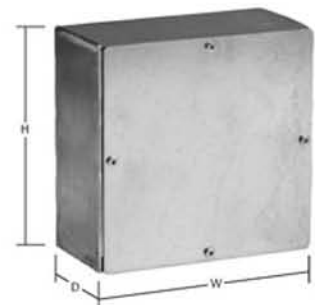
### SCWP



## Gray Powder Coated

- Formed from code gauge, low carbon steel

Catalog #	UPC 1515	Size W"xH"xD"	STD CTN	WGT	List Price, \$
664SCWP	37360	6x6x4	1	4	82.22
884SCWP	37440	8x8x4	1	5	100.00
10104SCWP	37020	10x10x4	1	7	133.33
12124SCWP	37080	12x12x4	1	9	142.22
12126SCWP	37110	12x12x6	1	11	155.56
18186SCWP	37210	18x18x6	1	20	231.11
24246SCWP	37220	24x24x6	1	39	355.56
24248SCWP	37225	24x24x8	1	42	444.44



SCWP

## Galvanized

- Mill galvanized steel

Catalog #	UPC 1515	Size W"xH"xD"	STD CTN	WGT	List Price, \$
664SCWPG	39100	6x6x4	1	4	82.22
884SCWPG	39110	8x8x4	1	5	100.00
10104SCWPG	39140	10x10x4	1	7	133.33
12124SCWPG	39120	12x12x4	1	9	142.22
12126SCWPG	39130	12x12x6	1	11	155.56
18186SCWPG	39160	18x18x6	1	20	231.11
24246SCWPG	39170	24x24x6	1	39	355.56



# Enclosures

Whatever your application, you can rely on enclosures by Altech Corporation to meet the most demanding requirements for housing and protecting components and devices. From light to heavy duty industrial or marine environments, our family of enclosures secure and protect control components, DIN rail mount terminal blocks and circuit breakers, switches, meters, printed circuit boards, as well as instruments and sensors. Please call us at 800-323-2282 for more details.

## Rustproof

- Polycarbonate/Polystyrene enclosures will last indefinitely without corrosion

## Visibility

- Components and devices are fully visible through transparent covers, while completely protected and insulated

## Impact Resistant

- Non-metallic enclosures withstand bumps and blows, they will not dent

## Maintenance Free

- Surface finish does not deteriorate and requires no special painting or refinishing

## Chemical resistant

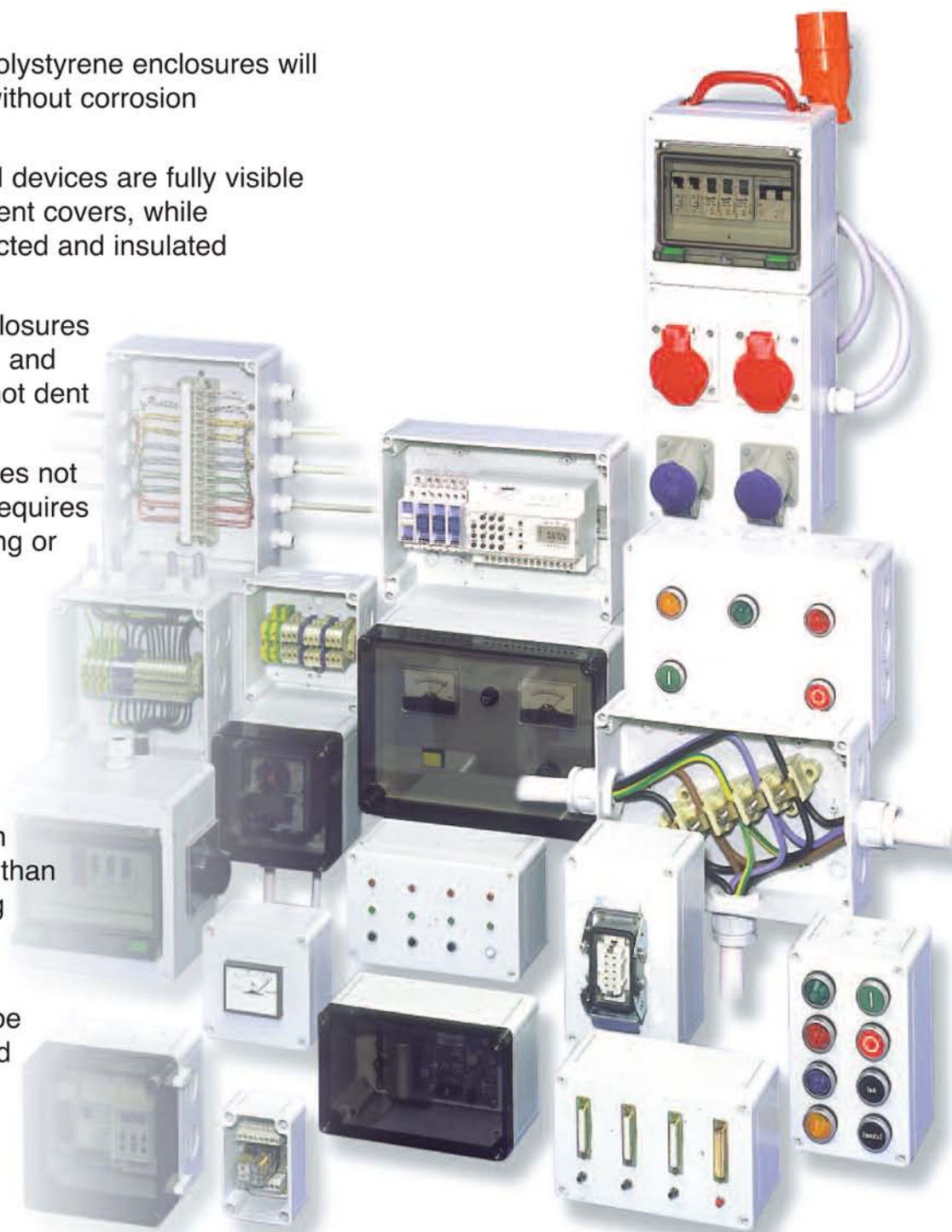
- Resist weak and strong acids and alkali

## Lightweight

- Non-metallic enclosures weigh significantly less than metal, simplifying handling

## Flexibility

- Enclosures can be easily customized





# DIN Rail

Lectro Components, Inc. stocks a large selection of industry standard DIN rail in many different lengths and configurations. Listed below are some of the most popular items available. For more details, please call 800-323-2282.



Catalog #	Manufacturer	Part #	Material	Length	Description
AM22000	Altech	2094-0-2M	Steel	2 meter	Prepunched
DL49000	Cooper Bussman	NFTA-72	Steel	6 foot	Prepunched
ED12450	Custom Connector	C103-PM	Aluminum	1 meter	Prepunched
EN01310	Entelec	017322005	Steel	2 meter	DIN 3 Series Mounting Rail - PR30 - Zinc Bichromate Plated Steel - Prepunched
IF31817	Idec	BNDN-1000	Aluminum	1 meter	BX Series - Punched Center With 1.99 inch (51MM) Spacing
MF43000	Marathon	MPC-3	Steel	3 foot	Prepunched
MF43005	Marathon	MPC-6	Steel	6 foot	Prepunched
WE19390	Weco	63-W02-100	Steel	1 meter	H-35 DIN Rail - Prepunched
WE19393	Weco	63-W02-12	Steel	12 inch	H-35 DIN Rail - Prepunched - Custom Stickered
WE19396	Weco	63-W02-14	Steel	14 inch	H-35 DIN Rail - Prepunched - Custom Stickered
WE19452	Weco	65-W02-24	Steel	24 inch	H-35 DIN Rail - Prepunched - Custom Stickered
WE19453	Weco	65-W02-39	Steel	39 inch	H-35 DIN Rail - Prepunched - Custom Stickered
ZZ39950	E-Rail	ER35-P-1M	Steel	1 meter	35MM Perforated Cold Rolled Steel DIN Rail
ZZ40000	E-Rail	ER35	Steel	1 meter	35MM Non-Perforated Cold Rolled Steel DIN Rail
ZZ40263	E-Rail	ER-35HPP-1	Steel	1 meter	35MM Perforated Cold Rolled Steel DIN Rail
ZZ40270	E-Rail	ER-35HPP	Steel	1 meter	35MM Perforated Cold Rolled Steel DIN Rail
ZZ40365	E-Rail	ER35-P	Steel	2 meter	35MM Perforated Cold Rolled Steel DIN Rail
ZZ40369	E-Rail	ER35-P-SPECIAL	Steel	2 meter	35MM Cold Rolled Steel DIN Rail



## Wire Duct

ABB SACE thermoplastic wiring ducts with vertical slots are designed and manufactured to guarantee an appropriate level of mechanical and electrical protection to the wires, cables and other devices housed inside them. They also guarantee resistance to the different kinds of stress to which they are subjected during transport, installation and use, both at minimum storage and maximum utilization temperatures.

Choosing from the numerous different versions available, those requiring considerable space for cables will find their needs met by ABB wiring ducts, now also available in the 100 mm height and in a choice of six different base sizes (25, 40, 60, 80, 100 and 150 mm). These new wiring ducts join the established designs in their catalogue (with heights between 17 and 80 mm), bringing to 28 the total size combinations offered, all available with 8-12 mm and 4-6 mm slots.



Catalog #	Manufacturer #	Color	Size (inches)	Density
AB10444	QD150X300HW	White	3/8 x 3/8	LD 8-12 mm
AB10172	QD050X050SG	Gray	1/2 x 5/8	HD 4-6 mm
AB10510	QD300X225SG	White	3/4 x 3/4	LD 8-12 mm
AB10175	QD100X150HG	Gray	1 x 1 1/2	HD 4-6 mm
AB10035	QD100X150SG	Gray	1 x 1 1/2	LD 8-12 mm
AB10565	1SL5163A00	White	1 x 2 1/4	HD 4-6 mm
AB10435	QD100X225SW	White	1 x 2 1/4	LD 8-12 mm
AB10195	05163	Gray	1 x 2 1/4	HD 4-6 mm
AB10055	QD100X225SG	Gray	1 x 2 1/4	LD 8-12 mm
AB10585	1SL5183A00	White	1 x 3	HD 4-6 mm
AB10455	QD100X300SW	White	1 x 3	LD 8-12 mm
AB10215	QD100X300HG	Gray	1 x 3	HD 4-6 mm
AB10095	QD100X300SG	Gray	1 x 3	LD 8-12 mm
AB10545	1SL5143A00	White	1 x 1 1/2	HD 4-6 mm
AB10415	QD100X150SW	White	1 x 1 1/2	LD 8-12 mm
AB10555	1SL5145A00	White	1 1/2 x 1 1/2	HD 4-6 mm
AB10425	QD150X150SW	White	1 1/2 x 1 1/2	LD 8-12 mm
AB10185	05145	Gray	1 1/2 x 1 1/2	HD 4-6 mm
AB10045	QD150X150SG	Gray	1 1/2 x 1 1/2	LD 8-12 mm
AB10535	1SL5135A00	White	1 1/2 x 1 3/4	HD 4-6 mm
AB10405	1SL5035A00	White	1 1/2 x 1 3/4	LD 8-12 mm
AB10165	05135	Gray	1 1/2 x 1 3/4	HD 4-6 mm
AB10025	QD150X125SG	Gray	1 1/2 x 1 3/4	LD 8-12 mm
AB10438	QD150X225SW	White	1 1/2 x 2 1/4	LD 8-12 mm
AB10069	QD150X225SG	Gray	1 1/2 x 2 1/4	LD 8-12 mm
AB10475	QD150X300SW	White	1 1/2 x 3	LD 8-12 mm
AB10169	QD150X300HG	Gray	1 1/2 x 3	HD 4-6 mm
AB10115	QD150X300SG	Gray	1 1/2 x 3	LD 8-12 mm
AB10575	1SL5167A00	White	2 1/4 x 2 1/4	HD 4-6 mm
AB10445	QD225X225SW	White	2 1/4 x 2 1/4	LD 8-12 mm
AB10205	QD225X225HG	Gray	2 1/4 x 2 1/4	HD 4-6 mm
AB10075	QD225X225SG	Gray	2 1/4 x 2 1/4	LD 8-12 mm
AB10595	QD225X300HW	White	2 1/4 x 3	HD 4-6 mm
AB10485	QD225X300SW	White	2 1/4 x 3	LD 8-12 mm
AB10225	05187	Gray	2 1/4 x 3	HD 4-6 mm
AB10125	QD225X300SG	Gray	2 1/4 x 3	LD 8-12 mm
AB10152	QD225X400SG	Gray	2 1/4 x 4	LD 8-12 mm
AB10449	1SL5069A00	White	3 x 2 1/4	LD 8-12 mm
AB10605	1SL5189A00	White	3 x 3	HD 4-6 mm
AB10505	1SL5089A00	White	3 x 3	LD 8-12 mm
AB10235	05189	Gray	3 x 3	HD 4-6 mm
AB10135	QD300X300SG	Gray	3 x 3	LD 8-12 mm
AB10625	1SL5197A00	White	3 x 4	HD 4-6 mm
AB10525	1SL5097A00	White	3 x 4	LD 8-12 mm
AB10255	05197	Gray	3 x 4	HD 4-6 mm
AB10451	1SL5071A00	White	4 x 2 1/4	LD 8-12 mm
AB10615	1SL5191A00	White	4 x 3	HD 4-6 mm
AB10515	1SL5091A00	White	4 x 3	LD 8-12 mm
AB10245	05191	Gray	4 x 3	HD 4-6 mm
AB10530	QD400X400SW	White	4 x 4	LD 8-12 mm
AB10260	QD400X400HG	Gray	4 x 4	HD 4-6 mm
AB10279	QDC100G Cover		1 inch	
AB10313	Q39P82C Spiral Wrap Roll			





# Distributor Services

## Capabilities

- JIT Deliveries
- Bar Coding
- Quality Control
- EDI Orders
- Custom Labeling
- Custom Packaging
- Same Day Shipping
- Flexible Delivery Methods

## Customized Stocking Programs

- **Blanket Orders** with predetermined release dates - Flexible to accommodate demand fluctuations
- **Blanket Order / Hold For Release** - Sufficient stock maintained with product shipped on demand

## Modification / Assembly Expertise

- Value Added Services
- Custom Component Assembly
- Custom Component Modification
- Hot Stamping
- Pad Printing
- Same Day Customization Capabilities

## Personal Account Manager

- Finding solutions to your application and inventory needs
- Offering **unbiased** component consultation
- Broad product line knowledge and experience

# Line Card

## ALARMS

East (Myntahl USA)

## CABLE MANAGEMENT

ABB  
Altech  
Qualtek

## CAPACITORS / RESISTORS

Meritek

## CIRCUIT BREAKERS

ABB  
Altech  
Circuit Breaker Industries  
Cooper Bussman Magnum  
IDEC

## CONNECTORS

Altech  
Cooper Bussman Magnum  
Dinkle  
EDAC  
Keltron  
Konvar  
Lumberg  
Marathon  
Micro Plastics  
Molex Industrial Products  
RIA  
Sullins Electronics  
Weco

## CONTACTORS & STARTERS

ABB  
IDEC  
Magnecraft

## CORDS & CORD SETS

Qualtek

## CURRENT SENSORS / TRANSDUCERS

ABB  
CR Magnetics  
Nielsen - Kuljian

## DIN RAIL & PLASTIC TRACK

Cooper Bussman  
Curtis Industries

## Custom Connector

Entrelec  
E-Rail  
IDEC  
Konvar  
Marathon  
Weco

## DIODES / THERMISTORS / VARISTORS

Meritek

## DISPLAY LIGHTS

Altech  
IDEC

## ENCLOSURES

Adalet  
Altech  
Teko  
Unity Mfg

## FANS & ACCESSORIES

Gardtec  
Qualtek  
Sunon

## FILTERS

## RFI & TRANSCIENT VOLTAGE

Curtis Industries  
Qualtek

## FLASHERS

Amperite  
Core Components

## FUSES & FUSE BLOCKS

ABB  
Altech  
Bussman Fuses  
Cooper Bussman Magnum  
Entrelec  
Marathon

## IEC POWER ENTRY MODULES

Cooper Bussman Magnum  
Qualtek

## LIQUID LEVEL CONTROLS

Curtis Industries

## PLCs

ABB  
IDEC

## PLUGS & SOCKETS

Amperite  
Cooper Bussman Magnum  
Lumberg  
Molex Industrial Products  
Qualtek

## POWER SUPPLIES

Altech  
Core Components  
IDEC

## REED SWITCHES & MAGNETS

Hasco

## RELAYS

ABB  
Air Products  
Altech  
American Zettler  
Ametek NCC  
Core Components  
Hasco  
Hongfa  
IDEC  
Magnecraft  
Sky Electronics  
Song Chuan

## RELAY SOCKETS

Curtis Industries  
Custom Connector  
IDEC  
Magnecraft  
Sky Electronics  
Young Electronics

## SCREWS & HARDWARE

Cooper Bussman Magnum  
Curtis Industries  
Entrelec  
ITW / Ark-les  
Konvar  
Marathon  
Marsh Fasteners  
Molex Industrial Products  
Weco

## SENSORS

Altech  
Cleveland Controls  
IDEC

## SPEAKERS

East (Myntahl USA)

## SWITCHES & CONTROLS

Altech  
E-Z Switch  
Hasco  
IDEC  
Molveno  
Necon

## TERMINAL BLOCKS

Altech  
Cooper Bussman Magnum  
Curtis Industries  
Custom Connector  
Dinkle  
Eagle Connector  
Eby  
Entrelec  
IDEC  
Konvar  
Kulka  
Lumberg  
Marathon  
Molex Industrial Products  
RIA  
Weco

## TIMERS

ABB  
Ametek NCC  
IDEC  
Magnecraft  
Sky Electronics

## TRANSFORMERS

Basler Electric  
Core Components  
CR Magnetics  
Micron Industries  
Revere Engineering



# Line Card



## Product Offerings

Alarms & Buzzers  
Capacitors & Resistors  
Circuit Protection  
Connectors & Headers  
Contactors & Starters

DIN Rail & Plastic Track  
Electronics  
Fans & Enclosures  
Filters  
Flashers

Plugs & Sockets  
Power Supplies  
Pushbuttons  
Relay Modules  
Relays & Sockets

Screws & Hardware  
Sensors  
Switches  
Terminal Blocks  
Timers

Transformers  
Wire Duct



# Terms & Conditions

## 1. Acceptance:

All quotations are valid for 30 days unless otherwise stated. The nature of our business is such that as we handle for our customers a large number of orders, many of which specify terms and conditions which would add to, or differ from those set forth herein. To negotiate individually with respect to these terms and conditions, which vary from customer to customer, would seriously interfere with our service to all our customers. Consequently, notwithstanding any terms or conditions that may appear on the order, the terms and conditions of this document shall govern irrespective of whether the Buyer accepts these conditions by a written acknowledgment by implication or acceptance and payment of goods hereunder. Seller's failure to object to provisions contained in any communications from Buyer shall not be deemed a waiver of the provisions of this document.

## 2. Compliance With Laws:

Seller, to the best of his knowledge and belief, is complying with all state and federal laws, orders and regulations applicable to the manufacture and supply of the articles ordered.

## 3. Prices:

The price of any article scheduled for shipment on a date beyond a period of six months from the date of receipt of order, is subject to increase or decrease by Seller unless otherwise agreed to in writing. Prices are f.o.b. Seller's facility, unless Seller otherwise specifies. Additional services are subject to charge at Seller's standard rates. Prices include ordinary packing only, unless otherwise specified.

## 4. Transportation And Delivery:

Unless Seller otherwise specifies, delivery will be made f.o.b. Seller's facility, title and risk of loss shall pass to Buyer at that point. Seller shall have the right to change means of transportation and to route shipment when specified instructions are not included with Buyer's order. When shipping instructions are vague, such as 'ship best way' or 'ship cheapest way', Seller shall not accept nor be responsible for any claims for alleged excess transportation cost. Seller shall have no liability whatsoever nor shall this order be subject to cancellation for delays in delivery due to act of god, civil or military riot or commotion, strikes, labor disturbance, vandalism, fire, war, insurrection, transportation, weather, federal, state or municipal orders and directions, default of supplier or subcontractor or due to any other cause beyond Seller's control. In such an event or events causing delay for any such cause, the specified delivery date shall be extended for a reasonable length of time but not less than the period of delay.

## 5. Specifications:

All drawings, plans, specifications, additions and change orders must be in writing furnished by Buyer subject to acceptance and approval by Seller.

## 6. Terms Of Payment:

All orders are net thirty days from date of shipment by Seller on approved credit; interest of 1% per month on billings will be charged on all past due accounts until paid. All expenses of collection shall be paid by Buyer, including costs and reasonable attorney's fees.

## 7. Return Policy:

It is our policy to facilitate our customers by accepting returned materials surplus to their requirements, subject to the conditions set out in our Return Policy. The latest version of our Return Policy can be found at [www.lectrocomponents.com](http://www.lectrocomponents.com).

## 8. Limited Warranty Policy:

Seller warrants that articles sold hereunder to be free from defects in material and workmanship. These express warranties are the sole warranties of Seller and any other warranties, expressed, implied in law or implied in fact are hereby specifically excluded. Seller's sole obligation under its warranty shall be, at its option, to either issue a credit, or repair or replace any article or part thereof, which is proved to be other than as warranted. Any adjustment or credits will be based upon original billing prices. All warranties shall expire one year from date of shipment by Seller unless otherwise specified in other written communications from Lectro Components. Notice of claimed breach of warranty must be given within the applicable period. No allowances shall be made to Buyer for any transportation, duties, brokerage fees, labor costs or parts adjustments or repairs, or any other work, unless said charges are authorized in writing, in advance, by Seller. Seller shall in no event be liable for special or consequential damages or for loss of profit. If any article is claimed to be defective in material or workmanship, Seller, upon notice promptly given will either examine the articles at its site, or issue shipping instructions for return to Seller. The warranty shall not extend to any articles or parts thereof which have been installed, used or serviced, other than in conformity with Seller's application specifications, manuals, bulletins, or instructions, or, if none, shall have been subjected to improper installation, misuse or neglect. The warranties shall not apply to any materials or parts thereof, furnished by Buyer, or acquired from others at request and/or to specifications or designs. The foregoing limitations on Seller's liability in the event of breach of warranty, shall also be the absolute limit of Seller's liability in the event of Seller's negligence in manufacture, installation, service or otherwise, with regard to the articles covered hereby; and upon the expiration of the stated warranty period, all such liabilities shall terminate. Seller warrants only those articles which are custom designed based upon specifications, specifically for Buyer, to be fit for the particular purpose identified by Buyer, in writing, for a period set forth on the front page of this document or on our quote. In no event shall Seller be liable for special or consequential damages or loss of profit respecting said articles and Seller's sole obligation shall be to either issue a credit or to repair or replace said article or part thereof.

## 9. Order Changes:

Buyer shall have the right, by giving written notice to Seller, to make changes in the quantity, drawings, designs or specifications for the articles to be manufactured. Upon receipt of any such notice, Seller shall notify Buyer as promptly as possible

changes in price of, or the time required for performance of, the order and an equitable adjustment shall be made in the contract price or delivery schedule, or both, prior to incorporating said changes into the manufactured article.

## 10. Cancellations:

Orders are not subject to cancellation, complete or partial, without Seller's written consent. Any reduction in quantities ordered shall constitute a partial cancellation subject to this clause. Where Seller consents to cancellation, settlement will be made on the following basis: Buyer will pay to Seller, upon delivery, the full purchase price of all articles completed at the time Seller agrees to cancellation. Buyer will further pay to Seller a percentage of the purchase price of all other articles equivalent to the percentage of completion thereof as determined by Seller's normal cost accounting methods. Buyer will also pay the full unamortized cost of materials, dies, tools, patterns and fixtures, made or contracted specifically for order. Invoices for all cancellation charges are payable promptly upon presentation. If within sixty (60) days from the presentation of such invoice Buyer does not instruct Seller as to the disposition of the material, etc. arising from the cancellation, Seller may sell the same, crediting Buyer for the proceeds. Buyer will also pay the reasonable cost and expenses incurred by Seller in making a settlement hereunder and in protecting property in which Buyer has an interest. Where United States government contracts are involved, cancellation shall be in accordance with the appropriate armed service's procurement regulation and contract provisions. Seller will defer manufacture or delivery of any articles only if and to the extent agreed to in writing.

## 11. Partial Shipments:

Seller reserves the right to make and to invoice for partial of completed articles.

## 12. Special Orders-Excess Shipments:

As to specially imprinted and special makeup orders, shipment of a quantity within ten percent (10%) over or under the quantity ordered shall be deemed in compliance with the order, but any such variation in quantity shall be accepted by Buyer and an adjustment made of the invoice or on separate billing by Seller, and otherwise treated as ordered.

## 13. Customer Credits and Defaults:

Accounts are opened only with firms or individuals on approved credit. The Seller reserves the privilege of declining to make deliveries whenever, for any reason, doubt as to the financial responsibility develops, and shall not, in such event be liable for non-performance of contract in whole or in part. If Buyer shall fail to pay promptly, when due, any sum owing to Seller, or to perform any agreement under this order or under any other order, heretofore or hereafter placed with Seller or Buyer shall be adjudicated bankrupt or insolvent, or shall make an assignment for the benefit of creditors, or if there shall be instituted by or against Buyer any proceeding under any bankruptcy, reorganization, arrangement, readjustment of debt or insolvency law of any jurisdiction, or for the appointment of a receiver or trustee in respect of any of property and if such proceeding shall be instituted against Buyer, and it shall not be dismissed within twenty (20) days, or if Seller shall reasonably believe that Buyer is unable to meet debts as they mature, then and in any such event, Seller may, in addition to exercising any or all other rights that Seller may have, require payment of cash upon delivery, and Buyer become obligated to pay to Seller the same sum in respect to each such order as if such order had been cancelled by Buyer with Seller's consent and settlement had been made on the basis set forth in paragraph 10 of these terms and conditions.

## 14. Taxes:

Prices do not include any present or future federal, state or local sales, use, excise, manufacturing, processing or importation tax, or any other tax or charge, that is or may be imposed on the articles or services covered hereby or on subsidiary articles or material incorporated therein. Any such taxes or charges will be added to the invoices as separate items, unless appropriate exemption certificates are furnished to Seller.

## 15. General:

If any clause, sentence, word or other terms of this agreement are found or declared by law or legal proceedings to be unenforceable, void or illegal, the remainder of said agreement shall remain in full force and effect and binding on the parties hereto. The terms and conditions herein contained shall, unless otherwise specifically agreed to by Seller in writing, be the sole terms and conditions governing any purchase and sales contract entered into between the Buyer and Seller. Stenographical and clerical error are subject to correction. No modification or addition to or waiver of any of the terms and conditions hereof will be effective unless agreed to in writing by Seller. This contract is made and entered into in the State of Illinois, therefore, this agreement and all amendments, additions and modifications thereto shall be governed and construed and interpreted in accordance with and by the laws of the State of Illinois and is so accepted.

## 16. Policy Updates:

These terms and conditions as stated here are subject to change without notice. Please visit [www.lectrocomponents.com](http://www.lectrocomponents.com) for the latest version of this policy.

## 17. Catalog Accuracy:

Every effort has been taken to ensure the accuracy of the information contained in this catalog. We reserve the right to refuse responsibility for damage, loss, or expense resulting from any errors or omissions contained herein. All specifications in this catalog are subject to change without notice. All products are sold with the understanding that the end user will perform any and all necessary tests and research to determine the suitability of these products for their intended use. Consult individual regulatory agency guides for specific ratings and limitations on use of specific products under specific conditions. All products sold in accordance with these standard terms and conditions of sale.



## Return Policy

It is our policy to facilitate our customers by accepting returned materials requests, subject to the conditions set out below.

Any material returned must have a Return Material Authorization (RMA) number issued by Lectro Components to be considered for credit, and must accompany all returned materials.

**RETURNS WITHOUT A VALID RMA NUMBER WILL BE REFUSED, AND NO CREDIT WILL BE ISSUED.**

We will accept a return request through our Customer Service Department by phone, fax, mail or e-mail.

Please include the following pieces of information in the return request:

Original Purchase Order number,  
Lectro Invoice number,  
Item Part Number,  
Quantity to return,  
Item/Batch/Lot/Date Code(s),  
Reason for Return Request.

Returned material must be received in saleable condition as new material and in original packaging to qualify for credit. Return of non-stock, custom built or custom labeled product is subject to Lectro's and manufacturer's acceptance and restocking terms.

Please note that any materials sold as non-refundable and non-cancellable (NC/NR) are not eligible for return authorization, except for defect or warranty claims.

RMA requests for defective materials or poor workmanship will be dependent on each specific manufacturer's warranty policy. Time limits for warranty claims will vary. Defective items will be tested, and products that are determined to be undamaged and fully working will be returned to the customer at their expense.

RMA requests for damaged materials must be made within 30 days of receipt of product. Damaged materials can be returned for full credit. RMA requests for damaged product must be from the party the materials were sold to. Any materials that have been reprocessed, repackaged, or reshipped are not eligible for an RMA or credit (excluding direct ship orders from Lectro).

RMA requests for all other reason must be made within 30 days of receipt of materials. These can include customer cancellations, excess stock, duplicate purchase orders, or others. Materials returned to us are subject to a minimum 15% restocking fee (or \$20.00, whichever is greater), and must be shipped back to Lectro at the customer's expense.

RMA Requests resulting from errors made by Lectro will not be subjected to these charges.

After an RMA is issued, product(s) must be shipped to and received by Lectro within 30 days of RMA issuance. Any materials returned to us on a valid RMA that do not meet these guidelines may be returned to the sender at their expense, and the RMA will be cancelled.

Please return all authorized products to:

**Lectro Components Inc.,  
Attention Returns Department,  
154 Easy Street,  
Carol Stream, IL 60188-2314**

## Warranty Statement

**Lectro Components Incorporated is the owner of the Core Components brand name.**

*Core Components manufactured products are warranted to be free from defects in material and workmanship under normal use and service within one year from date of purchase. The buyer must give notice of defect within the one-year period, and return the product intact. Product returned within the one-year shall be inspected to determine the cause of failure.*

*The obligation of Lectro Components Inc. under this warranty is limited to repair, replacement at our facility, or the issue of credit or refund of the purchase price for the defective product at Lectro Components election and sole expense.*

*This warranty shall be void on any product which is repaired or altered outside of the Lectro Components facility, or which has been subject to misuse, negligence, accident, tampering, incorrect wiring by others, or improper installation.*

*This warranty is expressly in lieu of any other warranties, expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose. The remedy provided for under the terms of the warranty is exclusive remedy of the purchaser.*

*This warranty extends only to the customer from Lectro Components Inc. or its authorized dealer.*

*Under no circumstances will Lectro Components Inc. be responsible for other direct, incidental or consequential damages.*

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