

Application Information

Article 440 of the National Electrical Code applies to electric motor-driven air conditioning and refrigerating equipment, and to the branch circuits and controllers for such equipment. It provides for the special considerations necessary for circuits supplying hermetic refrigerant motor-compressors and for any air conditioning and/or refrigerating equipment that is supplied from an individual branch circuit.

The National Electric Code Requirements

Disconnecting means shall be located within sight from and readily accessible from the air-conditioning or refrigerating equipment. The disconnecting means shall be permitted to be installed on or within the air-conditioning or refrigerating equipment. The disconnecting means shall not be located on panels that are designed to allow access to the air-conditioning or refrigeration equipment or to obscure the equipment nameplates.

Additionally, the National Electric Code states that listed or labeled equipment shall be used or installed in accordance with any instructions included in the listing or labeling.

Thus, when an equipment's label or instruction specifies circuit breaker protection, Article 110.3(b) can be met with a branch circuit breaker in the load center while article 440.14 can most economically be met using a disconnect without overcurrent protection. When an equipment's label or instructions specifies fuse protection, Article 110.3(b) mandates that fuse(s) must be present in the branch circuit. Since most load centers are of the circuit breaker variety, fuses must be installed elsewhere in the branch circuit. The most economical installation involves combining the fuse protection and disconnecting functions into a single device to be installed per Article 440.14. See illustration.

Air Conditioner Disconnect Selection Guide

Existing Branch Circuit Protection	Sight Disconnect Selection
Fusible ¹	Non-Fusible or Fusible
Circuit Breaker	Fusible
HACR ²	Non-Fusible or Fusible

¹ See Air Conditioner nameplate for correct selection.

² HACR = Heating, air conditioning, refrigeration type circuit breaker.

Features and Benefits

Flexibility

- 30-100 Amps
- 240 volts AC
- 1-phase or 3-phase fusible or non-fusible
- Horsepower rated
- 10kAIC
- Available with GFCI receptacle

Rugged Durability

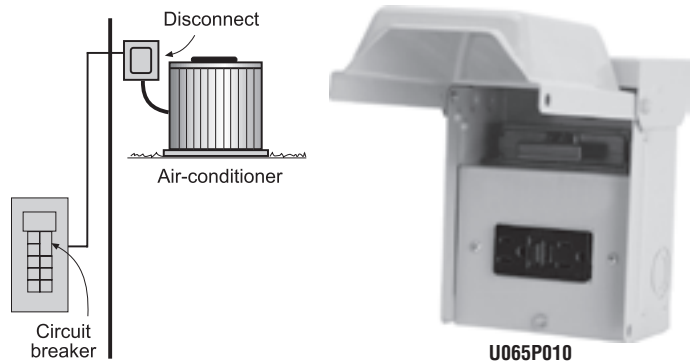
- NEMA 3R weatherproof enclosure
- Noryl[®] thermoplastic enclosure is corrosion resistant and extremely durable, giving long maintenance free service
- Metallic models are made of G90 galvanized steel for superior corrosion protection and have a durable polyester powder coat finish which resists chipping and fading

User Safety

- Padlock provision on door helps prevent unauthorized access

Installation Ease

- Three-piece construction that opens up mounting and wiring areas
- Terminals approved for 60°C and 75°C wire, accepts solid 14-8 copper, 12-8 aluminum or stranded 14-3 copper, 12-3 aluminum
- Numerous knockouts reduce installation time
- Straight-in, straight-out wiring saves time and money



U **065** **3** **F** **2**

<p>Material</p> <p>P = Plastic</p> <p>U = Metallic</p>	<p>Amp Rating</p> <p>035 = 30 Amps</p> <p>065 = 60 Amps</p> <p>045 = 90 Amps Heat Pump</p> <p>220 = 20 Amps Evap Cooler</p> <p>261 = 40 Amps Evap Cooler</p> <p>610 = 100 Amps Heat Pump</p>	<p>Phase</p> <p>Blank = Single Phase</p> <p>3 = Three Phase</p>	<p>Fusing</p> <p>F = Fusible</p> <p>P = Non-Fusible</p> <p>PC = Non-Fusible, 20 GFI, Receptacle</p> <p>H = DPST, SPST Switch, Evap Cooler</p> <p>NA = Non-Fusible, Non-Automatic</p>	<p>Other Features</p> <p>1 = Midwest Assigned</p> <p>2 = Midwest Assigned</p> <p>1010 = Single Phase GFCI Receptacle</p> <p>010 = Single Phase GFCI Receptacle</p>
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Data subject to change without notice.

Non-Automatic

1-Phase, 60 Amps, 120/240V

Model Number	Phase	Amps	Horsepower Rating	Wire Range*	Cabinet Size	Unit Wt.	Std Pkg.	UL
U065NA1	1	60	10	D	5 x 7	2.5	6	cUL _{us}
U065NA2	1	60	10	D	7 x 10	6.5	6	cUL

* Wire Range Table on page 7-7.

Heat Pump

Fusible, 90 – 100 Amps, 120/240V

Multiple disconnect devices are offered for heat pump applications that require individual disconnects for the heating and cooling cycles. All pullers are removable or reinstallable in the OFF position for user safety during equipment maintenance. Their UL listing includes the ability to field replace the 60 Amp puller in the left fuse block with a 30 Amp puller (FR352) for installation flexibility but prohibits the interchangeability of pullers between fuse blocks to insure the proper fuse/puller combination is always reinstalled into the proper fuse block.

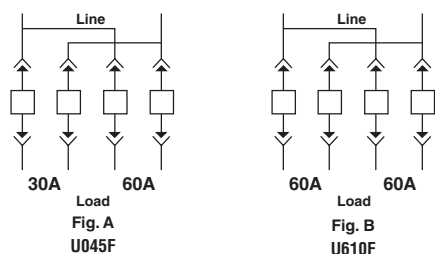


Fig.	Model Number	Amps	Horsepower Rating	Neutral Bar	Wire Range*	Cabinet Size	Unit Wt.	Std Pkg.	UL
	Fusible								
A	U045F	90	10	NU100B2	Y	9 x 17	13.5	1	Y
B	U610F	100							

* Wire Range Table on page 7-7. See Technical Data on page 7-6 for available replacement parts.

AC with Ground Fault

1-Phase / 3-Phase, 30 – 60 Amps, 120/240V or 240V

Model Number	Phase	Receptacle	Amps	Horsepower Rating	Wire Range*	Cabinet Size	Unit Wt.	Std Pkg.	UL
Phase 1 – 120/240V									
U035F010	1	5-15R2GFI	30	3	D	5 x 7	4	4	cUL
U065F010	1	5-15R2GFI	60	3-10	D	7 x 9-1/10	6.44	1	Y
U065P010	1	5-15R2GFI	60	10	D	5 x 7	4.3	6	cUL _{us}
U065NA1010	1	5-15R2GFI					4	6	
U065PC2	1	5-20R2					4.3	4	
Phase 3 – 240V									
U0353F010	3	5-20R2GFI	30	7.5-15	D	7 x 14	9.5	4	Y
U0653F010	3	5-20R2GFI	60				8.5	4	cUL

* Wire Range Table on page 7-7. See Technical Data on page 7-6 for available replacement parts.

Technical Data

Model Number	Replacement Parts			Cabinet Size	Enclosure Style	Cabinet Dimensions (inches)				Knockout Figure ¹
	Complete Block and Puller	Fuse Block Only	Puller Only			Height (A)	Width (B)	Depth (C)	Depth (D)	
P035F	FR39	—	FR352	6 x 8	C	8	5-3/4	3-1/8	—	5
P065F	FR69	—	FH682	6 x 8	C	8	5-3/4	3-1/8	—	5
P065NA1	—	—	—	5 x 7	D	7-1/4	5	2-1/8	2-3/4	1
P065P	—	NF65	NF652	6 x 8	D	8	6	5-3/4	2-3/4	5
P065P1	—	NF65	NF652	5 x 7	D	7	5	2-1/8	2-3/4	1
U035F010	FR35R	—	FR352R	9 x 7	A	9	6-3/5	3-4/5	5-1/5	7
U035F2	FR35R	—	FR352R	5 x 7	A	7	5	2-1/8	2-3/4	1
U0353F	265A6035G27	—	265A6035G27	6 x 14	B	14-3/8	7-1/4	5-3/16	—	6
U0353F010	265A6035G27	—	265A6035G27	7 x 14	B	14	7	5-3/16	—	6
U045F	FR35XFR67	—	FR352, FH682	9 x 17	B	17-3/8	9-3/4	5-3/16	—	2
U0653F	265A6036G69	—	265A6036G69	6 x 14	B	14-3/8	7-1/4	5-3/16	—	6
U0653F010	265A6036G69	—	265A6036G69	7 x 14	B	14	7	5-3/16	—	6
U0653P	265A6036G73	—	265A6036G73	6 x 14	B	14-3/8	7-1/4	5-3/16	—	6
U0653P010	—	—	—	7 x 14	B	14	7	5-3/16	—	6
U065F010	FR69	—	FH682	9 x 7	B	9	7	5-1/5	—	7
U065F1	FR65	—	FH682	5 x 9	A	9	5	2-1/8	2-3/4	1
U065NA1	—	—	—	5 x 7	D	7	5	2-1/8	2-3/4	1
U065NA2	—	—	—	7 x 10	E	10	7-1/2	4	—	8
U065NA1010	—	—	—	5 x 7	D	7	5	3-5/8	5-3/16	3
U065P	—	NF65	NF652	5 x 7	A	7-1/4	5	2-1/8	2-3/4	1
U065PD	—	NF65	NF652	7 x 10	E	10	7-1/2	4	—	8
U065P010	—	NF65	NF652	5 x 7	D	7	5	3-5/8	5-3/16	3
U065PC2	—	NF65	NF652	5 x 7	D	7	5	2-1/8	2-3/4	3
U220H	—	FH1	—	5 x 7	B	7-1/8	5-3/4	5-3/16	—	3
U261F	—	FH1	—	6 x 9	B	9-1/8	7-1/4	5-3/16	—	4
U610F	FR67X2	—	FH682	9 x 17	B	17-3/8	9-3/4	5-3/16	—	2

¹ Knockout Figures on page 7-7.

Enclosure Styles / Cabinet Dimensions

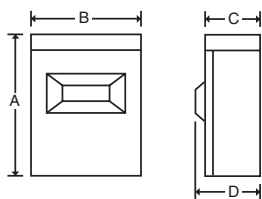


Fig. A

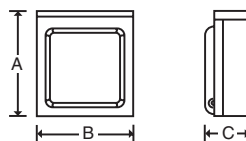


Fig. B

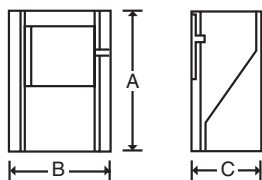


Fig. C

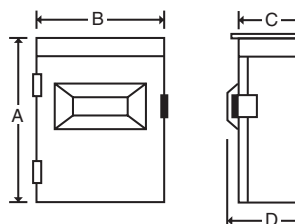


Fig. D