



**Model 270**  
**Isolatrol E Series - DC**  
(DC Voltage EMI/RFI  
Noise Filter & SPD)



**Model 275**  
**Isolatrol IC+/LRIC+ Series**  
(AC Voltage EMI/RFI  
Noise Filter & SPD)



**Model 277**  
**Isolatrol IE Series**  
(AC Voltage EMI/RFI  
Noise Filter & SPD)

**Model 270**  
**Model 275**  
**Model 277**

**ASCO 200 SERIES** power line filters offer the original Active Tracking™ technology to guard against commonly occurring, but very damaging, lower energy transients and offers excellent noise reduction. The Model 277 & Model 275 combine rugged, high energy current diverters with the Active Tracking™ Filter to provide protection against the full spectrum of voltage transients and surges.

## INSTALLATION



**DANGER! ONLY QUALIFIED PERSONNEL SHOULD INSTALL OR SERVICE THIS SYSTEM. ELECTRICAL SAFETY PRE-CAUTIONS MUST BE FOLLOWED WHEN INSTALLING OR SERVICING THIS EQUIPMENT. TO PREVENT RISK OF ELECTRICAL SHOCK, TURN OFF AND LOCK OUT ALL POWER SOURCES TO THE UNIT BEFORE MAKING ELECTRICAL CONNECTIONS OR SERVICING.**

**DANGER! SEULEMENT LE PERSONNEL QUALIFIÉ DOIT INSTALLER OU MAINTENIR CE SYSTÈME. DES PRÉCAUTIONS DE SÉCURITÉ EN ÉLECTRICITÉ DOIVENT ÊTRE SUIVIS LORS DE L'INSTALLATION OU DE LA MAINTENANCE DE CET ÉQUIPEMENT. POUR ÉVITER TOUT RISQUE DE CHOC ÉLECTRIQUE, DÉBRANCHEZ ET VEROUILLER TOUTES LES SOURCES D' ALIMENTATION DE CET ÉQUIPEMENT AVANT DE LE BRANCHER OU LE MAINTENIR.**

Proper installation is required for maximum system performance. Read the following information to assure a quality installation. These instructions do not replace national or local electrical codes.

**Environment** – For use indoors, in an ambient temperature of -40°C to +50°C, with a relative humidity 0% to 95% (non-condensing).

**Maximum Current Capability** – The total current draw for all loads that a model may continuously handle is given in the MODEL NUMBER CONFIGURATION table found on the next page. Overloading the unit can permanently damage the device.

**Nominal Voltage** – The nominal operating voltage for each model is given in the MODEL NUMBER CONFIGURATION table found on the next page. Failure to use the unit at its rated voltage can permanently damage the unit or provide inadequate surge protection.

**Supplemental Enclosures** – All units provided with exposed terminal blocks must be installed inside an enclosure and located so as to prevent accidental contact with terminals during maintenance or servicing.

**Summary Alarm Contacts (Model 277 only)** – Summary alarm Form C (1 N.O. and 1 N.C.) relay contacts rated 125VAC, 5A max. are provided for remote indication of protection status. Connections may be made to these terminals on the unit using 18 AWG conductors.

**Grounding** – Input and output ground terminals (if provided) must be connected for proper operation. This grounding is not only required for safety, but also for equipment performance. Incorrect grounding can reduce or impede the operation of the unit.

**Line Cord Units (Model 275 only)** – Plug unit into wall outlet and turn on power switch (if provided). For best results, plug equipment to be protected directly into the unit (do not use extension cords or power strips). Keep data cables as far away from power cords as possible.

## OPERATION

These products are designed for years of trouble-free operation and require little or no operator intervention after installation. Should the unit not appear to be functioning properly and/or the indicator LED (if provided) is extinguished, check all connections, and assure the voltage is correct and that the total current draw on the unit from all loads does not exceed the rated current. If the unit still is not functioning properly, call ASCO Surge Protection at 800-237-4567.

## TROUBLESHOOTING

If any of the diagnostic indicators indicates a problem (i.e. red LED ON, and/or green LED OUT), check all connections and voltages to the unit. If all connections are reliable, and proper voltages are supplied to the unit, call ASCO Surge Protection, Inc at 800-237-4567.

## 16 DIGIT MODEL NUMBER CONFIGURATION

Model			Configuration & Voltage				Max Current Capability				Modes of Protection	Connection Type		Enclosure	Accessories
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>2</b>	<b>7</b>	<b>0</b>	D	2	5	0	F	0	0	7	A	N	2	N	0
							F	0	1	5				J	
							F	0	3	0				G	
							F	0	5	0				L	
							F	1	0	0					
<b>2</b>	<b>7</b>	<b>5</b>	1	2	0	N	F	0	0	2	A	N	3	N	0
			2	4	0	L	F	0	0	5		L	C		
			4	8	0	L	F	0	0	7		W	L		
							F	0	1	5					
							F	0	3	0					
<b>2</b>	<b>7</b>	<b>7</b>	1	2	0	N	F	0	0	3	A	N	3	N	0
			2	4	0	L	F	0	0	5					X
							F	0	1	0					
							F	0	2	0					

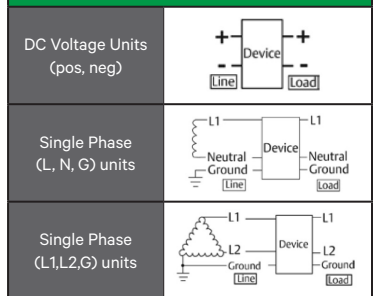
### KEY

270	Islatrol E Series (DC)	120N	120VAC Single Phase (L,N,G)	F002	2.5 Amps Max	All Modes of Protection	A	LC	Line Cord/ Receptacle	G	NEMA Type 4 (metal)	0	Standard
				F003	3 Amps Max								
275	Islatrol IC+ / LRIC+ Series	240L	220, 230, 240VAC Single Phase (L,N,G or L1,L2,G)	F005	5 Amps Max	All Modes of Protection	A	N2	2 Position Terminal Blocks	J	NEMA Type 4X (plastic)	0	Standard
				F007	7.5 Amps Max								
				F010	10 Amps Max								
277	Islatrol IE Series	480L	480VAC Single Phase (L1,L2,G)	F015	15 Amps Max	All Modes of Protection	A	N3	3 Position Terminal Blocks	N	Open Style – Exposed Terminals	X	SPD with additional Options/ Accessories
				F020	20 Amps Max								
				F030	30 Amps Max								
				F050	50 Amps Max								
277	Islatrol IE Series	D250	0-250VDC (Pos,Neg)	F050	50 Amps Max	All Modes of Protection	A	WL	Wire Leads	L	NEMA Type 12 (metal)	X	SPD with additional Options/ Accessories
				F100	100 Amps Max								

### WIRE SIZING & FUSING/CIRCUIT BREAKER AMPACITY

Device Maximum Current Capability	Suggested Min. Wire Size (AWG)	Suggested Fusing / Circuit Breaker Size
F002 = 2.5 Amps Max	26 AWG	2.5 Amp
F003 = 3 Amps Max	24 AWG	3 Amp
F005 = 5 Amps Max	22 AWG	5 Amp
F007 = 7.5 Amps Max	18 AWG	7.5 Amp
F010 = 10 Amps Max	14 AWG	10 Amp
F015 = 15 Amps Max	14 AWG	15 Amp
F020 = 20 Amps Max	12 AWG	20 Amp
F030 = 30 Amps Max	10 AWG	30 Amp
F050 = 50 Amps Max	6 AWG	50 Amp
F100 = 100 Amps Max	2 AWG	100 Amp

### WIRE DIAGRAMS



*Continued on Back*

- For units provided with a ground connection, a green (with or without one or more yellow stripes) insulated grounding conductor identical in size, insulation material, and thickness to the grounded and ungrounded conductors must be installed (ref. NEC Table 250-95) and referenced back to an acceptable building earth ground. Attachment plugs, receptacles, etc. in the vicinity of the filter must be of a grounding type, with the grounding conductors serving them connected to an acceptable building earth ground.
- Terminals, lugs, and connectors used in installation must be suitable for the material of the conductors. Conductors of dissimilar metals shall not be intermixed in a terminal or splicing.

# ASCO®

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