HARMON PART NUMBERING

HPN	VOLTAGE (NOMINAL)	TYPE OF SERVICE	CLAMPING VOLTAGE	MCOV	TOTAL PEAK SURGE CURRENT	SURGE ENERGY PER PHASE (MIN)	RESPONSE TIME	RELATIVE HUMIDITY	DESCRIPTION	TERMINATION	DIMENSIONS / WIRING DIAGRAM	NOTES
-000	240 VAC RMS L-L	3-WIRE, SINGLE PHASE, 50/60 HZ	260 VOLTS AT 1 mA L-N	NOT AVAILABLE	---	16667 JOULES (SEE NOTE 1)	6 ns	100%	FUSED SURGE PROTECTOR WITH INDICATORS	LEAD WIRES 14 AWG 18" LONG MIN.	SEE FIGURES 1 AND 2	---
-001	120/240 VAC 50/60 HZ 50-100 A SERVICE	SINGLE PHASE WYE; 3 WIRE + GROUND CONNECTION	NOT AVAILABLE	275 VAC L-L; 150 VAC L-G, L-N, N-G	117,000 A	1,800 JOULES	1 ns	0-97% NON-CONDENSING	PRIMARY SURGE PROTECTOR WITH INDICATORS	SCREW TERMINALS, ACCEPTS 10AWG AND SMALLER STRANDED WIRE.	SEE FIGURE 3 (NEMA TYPE 12 ENCLOSURE)	NOT FOR NEW DESIGN USE -003
-002	120/240 VAC 50/60 HZ 50-100 A SERVICE	SINGLE PHASE WYE; 3 WIRE + GROUND CONNECTION	NOT AVAILABLE	275 VAC L-L; 150 VAC L-G, L-N, N-G	117,000 A	1,800 JOULES	1 ns	0-97% NON-CONDENSING	PRIMARY SURGE PROTECTOR WITH INDICATORS, INTERNALLY FUSED	PRESSURE TYPE, ACCEPTS 8AWG AND SMALLER STRANDED WIRE.	SEE FIGURES 4 AND 5 (NEMA TYPE 12 ENCLOSURE)	NOT FOR NEW DESIGN USE -004
-003	120/240 VAC 50/60 HZ 300 A SERVICE	SPLIT PHASE WYE; 3 WIRE + GROUND CONNECTION	---	275 VAC L-L; 150 VAC L-G, L-N, N-G	120,000 A (8/20µs)	1,800 JOULES	1 ns	0-90% NON-CONDENSING	PRIMARY SURGE PROTECTOR WITH INDICATORS, WITH FORM C CONTACTS FOR REMOTE UNIT STATUS MONITORING, 2A@ 30VDC, 0.6A@ 110VDC, 0.6A@ 125VAC	SCREW TERMINALS, ACCEPTS 10AWG AND SMALLER STRANDED WIRE.	SEE FIGURES 6 AND 7	---
-004	120/240 VAC 50/60 HZ 300 A SERVICE	SPLIT PHASE WYE; 3 WIRE + GROUND CONNECTION	---	275 VAC L-L; 150 VAC L-G, L-N, N-G	120,000 A (8/20µs)	1,800 JOULES	1 ns	0-90% NON-CONDENSING	PRIMARY SURGE PROTECTOR WITH INDICATORS, INTERNALLY FUSED, WITH FORM C CONTACTS FOR REMOTE UNIT STATUS MONITORING, 2A@ 30VDC, 0.6A@ 110VDC, 0.6A@ 125VAC	SCREW TERMINALS, ACCEPTS 2 AWG AND SMALLER STRANDED WIRE.	SEE FIGURES 8 AND 9	---
-005	120/240 VAC 50/60 HZ 300 A SERVICE	SPLIT PHASE WYE; 3 WIRE + GROUND CONNECTION	---	275 VAC L-L; 150 VAC L-G, L-N, N-G	120,000 A (8/20µs)	1,800 JOULES	1 ns	0-90% NON-CONDENSING	PRIMARY SURGE PROTECTOR WITH INDICATORS, WITH FORM C CONTACTS FOR REMOTE UNIT STATUS MONITORING, 2A@ 30VDC, 0.6A@ 110VDC, 0.6A@ 125VAC	WIRE LEADS	SEE FIGURES 6 AND 7	THIS SURGE PROTECTOR IS IDENTICAL TO –003 EXCEPT THAT IT HAS FLYING LEADS WIRED TO THE SCREW TERMINALS.

DESCRIPTION: SURGE PROTECTOR WITH INDICATORS

MARKING: MANUFACTURER AND MODEL NUMBER

ELECTRICAL SPECIFICATION:
SEE HPN TABLE .
EACH PHASE IS EQUIPPED WITH A STATUS INDICATOR LIGHT.

MATERIAL SPECIFICATION:
SEE HPN TABLE.
STORAGE TEMPERATURE: -40°C TO 70°C
OPERATING TEMPERATURE
-000: -40°C TO 50°C
-001/-005: -40°C TO 70°C

MAXIMUM PHYSICAL DIMENSION:
SEE FIGURES.

NOTES:
1. TEST CONDITION FOR SURGE ENERGY PER PHASE: 500A AT 5000V FOR 100 CONSECUTIVE TIMES AT A DURATION OF 0.0083 SECONDS EACH PULSE.
2. 010132-001 IS A SPECIAL BN SPECIFIED SURGE PROTECTOR.
1. THE HPN MAY HAVE A –30 SUFFIX TO DENOTE SPECIAL CUSTOMER CONTRACT PRICING. (I.E. 010132-005-30)

TranSystems — Vermont Agency of Transportation, Lyndon STPG SGNL(48) Project

- [ ] **Approved** — Fabrication/Installation may be undertaken
- [X] **Approved as Corrected** — Approval provided comments are incorporated — 1
- [ ] **Correct, Revise and Resubmit** — Fabrication/Installation MAY NOT be undertaken
- [ ] **No Action Taken**

Review / approval does not relieve the contractor from complying with all the requirements of the contract

1 - Contractor shall confirm the surge protector is compatible and in-line with the proposed battery system and any additional equipment it may be utilized for.

REVISION CONTROL				
REV	ECRN	DATE	BY	APPRV
A	877-0012	10/27/94	ADH	ADH
B	81284-13	4/7/95	ADH	ADH
CA0	90013308	11/10/97	ADH	ADH
CB0	90024496	12/17/99	DFR	ADH
CC0	90020330	2/6/01	ADH	ADH

ENGINEERING	
Approved A. HOWERY	Date 10/94
Engineer A. HOWERY	
Drawn By A. HOWERY	Date 10/27/94

Harmon Industries
Grain Valley, MO

Title: SURGE PROTECTOR WITH INDICATORS

Drawing No. 010132-XXX — Sheet 1 of 3