**Features:**

- **UL 1449 Fourth Edition Listed & CSA 22.2 No. 269.2**
- **120kA & 160kA per phase ratings**
- **Type 2 SPD –**
  - All UL required OCP & Safety Coordination included inside
  - Can be installed load-side of main disconnect
- **Replaceable module construction**
- **200kA SCCRs**
- **Voltage Specific Design – Highly configurable**
- **MOV suppression elements monitored**

**Performance Specifications**

Surge Capacities (L-N, L-L, N-G)

**120kA Per Phase**

**160kA Per Phase**

- UL 1449 4<sup>th</sup> Edition Listed, UL 1283 Listed & CSA 22.2 No. 269.2
- UL 1449-4 Type 2 SPD
- UL 1449-4 tested SCCR: 200kA
- UL 1449-4 Voltage Protection Ratings (VPRs):
  - 208Y/120V: as low as 600V
  - 480Y/277V: as low as 1000V
- Less than 1 nanosecond response time
- Repetitive Impulse: 5,000 hits
- AC Sinewave Tracking Filter with EMI/RFI Filtering up to -50dB from 10kHz to 100MHz

**Diagnostic Monitoring**

- Green LED Status indicator per phase
- Redundant monitoring LEDs on modules
- Phase Loss monitoring (toggles LED & dry contacts)
- Electrically isolated circuitry ensures surges do not damage diagnostics
- Optional Form C Dry Contacts, 240V, 5A (two sets)

**Design Features**

- Designed, Manufactured & Tested consistent with:
  - ANSI/IEEE C62.41.1-2002, C62.41.2-2002, and C62.45-2002
  - NEMA LS-1
  - NEC® Article 285
  - IEC 61643
- High Energy Parallel Design for Category C3 & C-High applications
- For External Mounting next to Switchgear, Motor Controls Centers or Panelboards
- Individually Fused Suppression Modules
- Large-Block 34mm square MOVs
- Replaceable Phase Module Construction
- Thermal Cutout in Each Mode
- Busbar Construction
- Solid State Bidirectional Operation

**Physical Specifications**

- Relative Humidity Range: 0 -95% non-condensing
- Operating Frequency: 47 - 63Hz
- Operating Temperature: -25°C (-15°F) to +60°C (140°F)
- Weight: 25 lbs (11.4 kg)
- Standard NEMA 1/12/3R/4 enclosure
- Standard size: 12" x 12" x 7.5" (30.5cm x 30.5cm x 19cm)
- Lug size: #1/0 - #14 AWG
- Typical connection: #6 AWG and 60A breaker

**Quality, Standards & Validation**

- UL 1449 4<sup>th</sup> Edition, UL 1283 Listed & CSA 22.2 No. 269.2
- UL file: VZCA.E321351 at [www.UL.com](http://www.UL.com)
- RoHS-compliant
- IEC 61643, CE
- 10 year warranty (longer optional)
- Burn-In tested Prior to Shipment
- ISO 9001:2008 Quality Management System
- ISO 17025:2005 Laboratory Qualification



# TEHPS Model Number Configurator & Options

TE / HPS / ... **M**

**TE = Transient Eliminator, Listed Type 2 SPD in NEMA 1/3R/04/12 enclosure**

**Model Family**

HPS = HPS Family

**Option Suffixes (Separated by slashes -/)**

CX = 120kA Option  
 CL = 160kA Option (Not Available on TE/8, 9, 91)  
 DC = Dry Contacts  
 Two sets Form C on terminal strip  
 FM = Flush Mount enclosure, NEMA 1 only (wall cavity size: 12"x12"x6" deep)

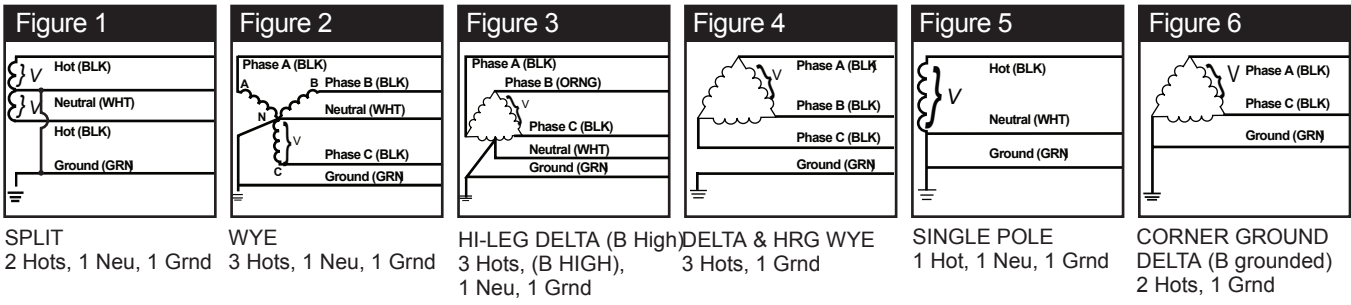
## Voltage Code for Electrical System

- Common North American Systems:**
- 1 = 240/120V Split Phase - 1Ø 3W+Grnd (Fig 1)
  - 2 = 208Y/120V Wye - 3Ø 4W+Grnd (Fig 2)
  - 3 = 240/120V High Leg Delta (B High) (Fig 3)
  - 4 = 480Y/277V Wye - 3Ø 4W+Grnd (Fig 2)
  - 5 = 480V Delta - 3Ø 3W+Grnd (Fig 4) & HRG Wye
  - 8 = 600Y/347V Wye - 3Ø 4W+Grnd (Fig 2)

- Other Available Systems - Confirmation encouraged:**
- 11 = 120V Single Phase - 1Ø 2W + Grnd (Fig 5)
  - 12 = 240V Single Phase - 1Ø 2W + Grnd (Fig 5)
  - 51 = 480V B Corner Grnd Delta, 3Ø 3W+Grnd (Fig 6)
  - 6 = 240V Delta - 3Ø 3W+Grnd (Fig 4)
  - 61 = 240V B Corner Grnd Delta, 3Ø 3W+Grnd (Fig 6)
  - 7 = 380Y/220V Wye - 3Ø 4W+Grnd (Fig 2)
  - 9 = 600V Delta - 3Ø 3W+Grnd (Fig 4) & HRG Wye
  - 91 = 600V B Corner Grnd Delta, 3Ø 3W+Grnd (Fig 6)

## Enclosure Rating

- 04 = Standard: NEMA 1/3R/04/12 (size: 12" x 12" x 7.5")**
- FM = Flush Mount Enclosure, NEMA 1 only**  
(wall cavity size: 12" x 12" x 6")
- 4X = NEMA 4X Non-Metallic (size: 14" x 12" x 6")**  
(polycarbonate, display inside clear front door)
- 4S = NEMA 4X Stainless Steel (size: 12" x 12" x 6")**  
(display inside door)



## Performance Data

Common North American Systems		UL 1449 Fourth Edition Test Data						
		Voltage Protection Ratings (VPR - 3kA)			Type	I <sub>n</sub>	SCCR	MCOV
		L-N	N-G	L-L				
1	= 240/120V Split Phase	800	600	1200	Type 2	5kA	200kA	150
2	= 208Y/120V 3 Wye	800	600	1200	Type 2	5kA	200kA	150
3	= 240Y/120V B High Leg Delta	800/1200	600	1200	Type 2	5kA	200kA	150 / 320
4	= 480Y/277V 3 Wye	1200	1000	1800	Type 2	5kA	200kA	320
5	= 480V 3 Delta	—	—	1800	Type 2	5kA	200kA	550
8	= 600Y/347V 3 Wye	1500	1200	2500	Type 2	5kA	200kA	420

**Other Available Systems:**  
 Please see supplementary data sheet, contact us at [info@aptsurge.com](mailto:info@aptsurge.com) or confirm at [www.UL.com](http://www.UL.com) using CCN of VZCA.

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