

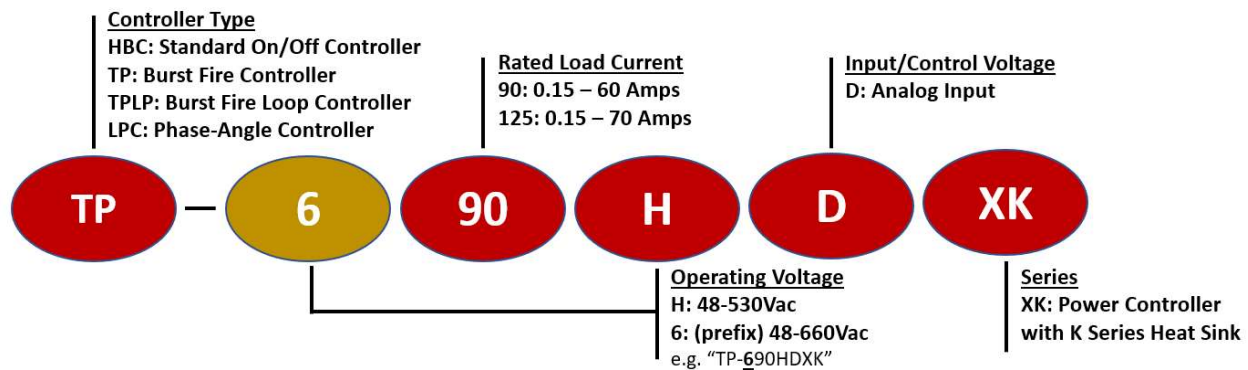
K Series TP

70 Amp Burst Fire Power Controller



- SCR output DIN mount proportional output (burst fire) Power Controller
- Output ratings up-to 70 amps @ 40°C ambient temperature
- True linear output controller with selectable soft-start, suitable for resistive or inductive loads
- Selectable analog input; 0-10Vdc, 1-5Vdc, 2-10Vdc, 1-5Vdc, 4-20mA or potentiometer
- Line-voltage compensation with automatic 50/60Hz operation
- Thermally efficient heat sink to maximize overall product life expectancy
- Direct-bond copper (DBC) substrate for superior thermal performance
- MTBF > 7 million hours (>800 years)
- Agency approvals; UL, CSA, VDE/TUV, and CE

Series Nomenclature



Output Specifications

| Part Number: TP - | 90HDXK | 690HDXK | 125HDXK |
|---|-----------|-----------|-------------|
| Operating Voltage (Vrms; 47-440Hz) | 48-530 | 48-660 | 48-530 |
| Load Current Range (Amps RMS) | .15 - 60 | .15 - 60 | .15 - 70 |
| Transient Overvoltage (Vpk) | 1200 | 1200 | 1200 |
| Max. Surge Current (A _{pk} ; 50/60Hz) | 1145/1200 | 1145/1200 | 1670/1750 |
| Max. On-State Voltage Drop (Vrms) | 1.15 | 1.15 | 1.15 |
| Max I ² T for Fusing (A ² S; 50/60Hz) | 6560/5976 | 6560/5976 | 13950/12709 |
| Max. Off-State Leakage Current (mArms) | 1 | 1 | 1 |
| Min. Power Factor with Max. Load | 0.5 | 0.5 | 0.5 |



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Input Specifications (Selectable on controller) *

| | |
|---------|------------------------------------|
| 0-10Vdc | 4-20mA |
| 0-5Vdc | 0-20mA |
| 2-10Vdc | Potentiometer |
| 1-5Vdc | 0-135Ω (change prefix to “TP135-“) |

* 24Vac power supply required (optional HBCcontrols PS series if 24Vac supply is not available). Must be connected to same phase as the Power Controller.

General Specifications

| Description | Specification |
|--|----------------------------------|
| Dielectric Strength (Input/Output/Heat Sink) | 4,000 Vrms |
| Ambient Operating Temperature Range | -40 to +80 °C |
| Weight | 1.5 lbs (680 g) |
| Solid State Relay Housing Material | UL94 V-0 Polymers |
| Heat Sink Material | Aluminum |
| Input Terminal Screw Torque Range (in-lb/Nm) | 13-15 / 1.5-1.7 |
| Load Terminal Screw Torque Range (in-lb/Nm) | 18-20 / 2.0-2.2 |
| MTBF (Mean Time Between Failures) @ 40°C ambient | ~11 Million Hours (>1,300 years) |
| MTBF (Mean Time Between Failures) @ 60°C ambient | ~7 Million Hours (>800 years) |

Available Options (Suffix at end of part number)

- M MOV (metal oxide varistor) overvoltage protection
- P Internal TVS overvoltage protection
- TP Through-panel mounting
- PM Panel mounting
- ND Without DIN rail clip
- CT Current transducer
- 3 Three-pole configuration (for three-phase loads)

Accessories (add “-3” suffix for three-phase power supply)

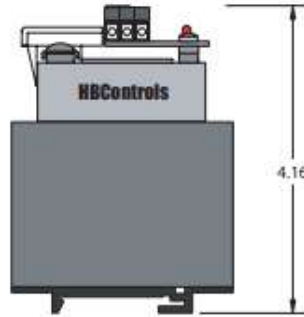
- PS-120 120Vac to 24Vac / 1.5VA power supply
- PS-240 240Vac to 24Vac / 1.5VA power supply
- PS-480 480Vac to 24Vac / 1.5VA power supply

Input Options (Change TP- prefix to TPLP or LPC prefix)

- TPLP** Burst fire loop (time proportioning loop) controller. Analog Input; 4-20mA (24Vac supply not required)
- LPC** Linear phase-angle controller. Analog Input; 0-10Vdc, 0-5Vdc, 2-10Vdc, 1-5Vdc, 4-20mA, potentiometer or 0-135Ω rheostat (LPC135 prefix). 24Vac power supply required (optional HBCcontrols PS series if 24Vac supply is not available)

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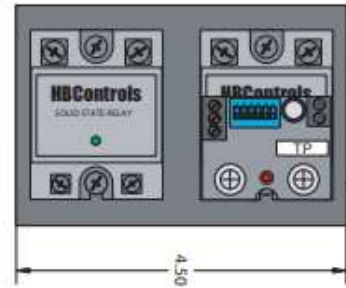
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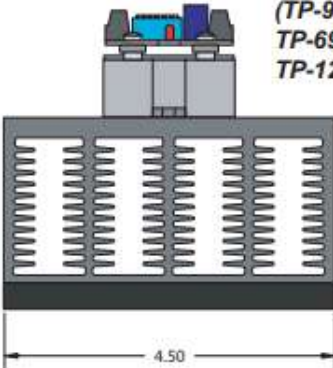
Single Phase
(TP-90HDXK,
TP-690HDXK &
TP-125HDXK)



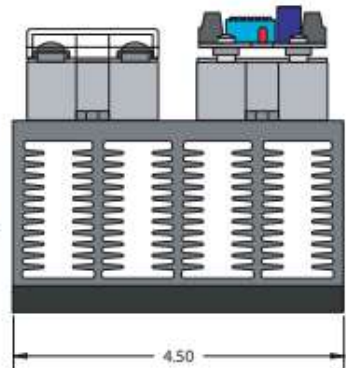
3 Phase /
2 Pole
@ 40A/Pole
(TP-90HDK-2)



Single Phase
(TP-90HDXK,
TP-690HDXK &
TP-125HDXK)



3 Phase /
2 Pole
@ 40A/Pole
(TP-90HDK-2)



Three Phase /
2 Pole
@ 70A/Pole
(TP-90HDXK-2,
TP-690HDXK-2 &
TP-125HDXK-2)

