F7 Series TPLP Three-Phase
100 Amp Burst Fire Power Controller

- SCR output panel mount, three-phase proportional output (burst fire) Power Controller
- Output ratings up-to 100 amps per-phase @ 40°C ambient temperature
- Forced-air cooled heat sink to maximize overall product life expectancy
- Includes 90°C thermal cutout switch
- Loop powered – auxiliary power supply not required
- 4-20mA input
- 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)
- Solid-state relay approvals include VDE/TÜV, and CE

Series Nomenclature

Controller Type
HBC: Standard On/Off Controller
TP: Burst Fire Controller
TPLP: Burst Fire Loop Controller
LPC: Phase-Angle Controller

Rated Load Current
90: 0.15 – 80 Amps
125: 0.15 – 100 Amps

Series
F73: Three-Phase Power Controller with F7 Series Heat Sink

TPLP — 6 90 D F73 I

Operating Voltage
Blank: 48-530Vac
6: (prefix) 48-660Vac

Input/Control Voltage
D: Analog Input

Fan Voltage
I: 24 Vdc
B: 120Vac
C: 240Vac

Output Specifications

Part Number: TPLP -	90DF73x	690DF73x	125DF73x	6125DF73x
Crydom Solid-State Relay Utilized*	HD4890	HD6090	HD48125	HD60125
Operating Voltage (Vrms; 47-440Hz)	48-530	48-660	48-530	48-660
Load Current Range (Amps RMS Per--Phase)	.15 - 80	.15 - 80	.15 - 100	.15 - 100
Transient Overvoltage (Vpk)	1200	1200	1200	1200
Max. Surge Current (Apk; 50/60Hz)	1145/1200	1145/1200	1670/1750	1670/1750
Max. On-State Voltage Drop (Vrms)	1.15	1.15	1.15	1.15
Max I^2T for Fusing (A^2S; 50/60Hz)	6560/5976	6560/5976	13950/12709	13950/12709
Max. Off-State Leakage Current (mArms)	1	1	1	1
Min. Power Factor with Max. Load	0.5	0.5	0.5	0.5

*UL Recognized Component - E116949 or E116950

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Input Specifications *

4-20mA

* Loop powered; 24Vac power supply not required

General Specifications

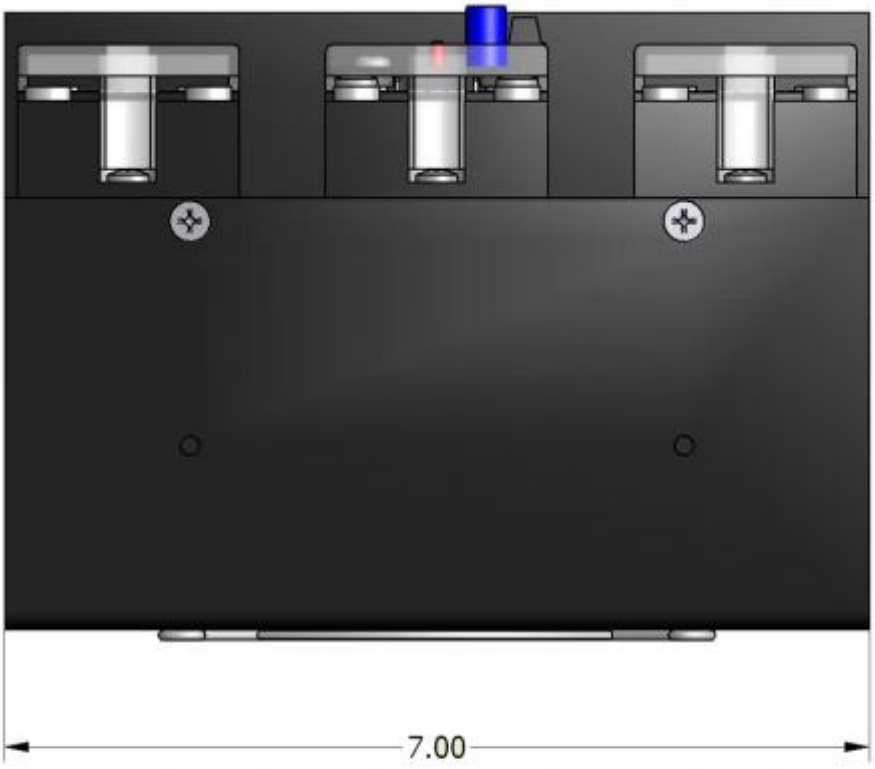
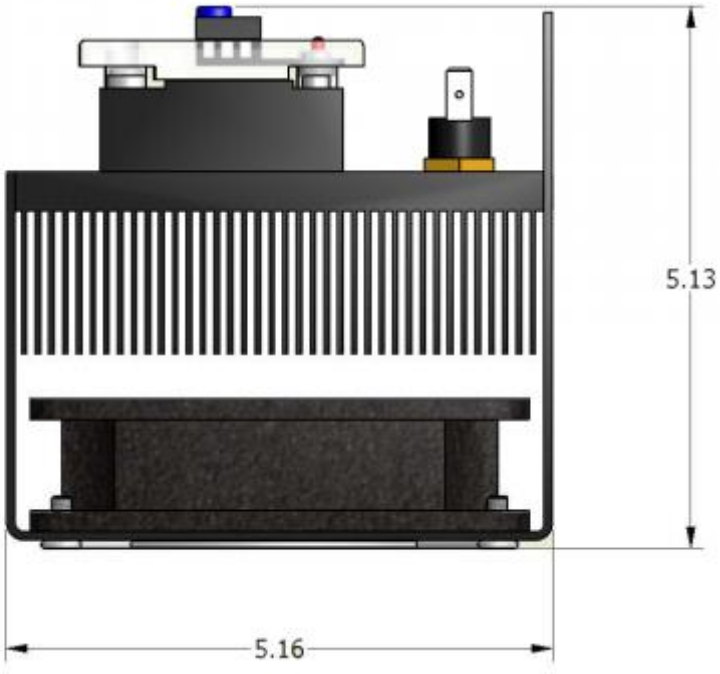
Description	Specification
Dielectric Strength (Input/Output/Heat Sink)	4,000 Vrms
Ambient Operating Temperature Range	-40 to +80 °C
Weight	5.4 lbs (2.45 kg) (24Vdc Fan) / 6.1 lbs (2.77 kg) (120/240Vac Fan)
Solid State Relay Housing Material	UL94 V-0 Polymers
Heat Sink Material	Aluminum
Input Terminal 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
-FD Front DIN mounting
-D DIN clip
-CT Current transducer

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

TP Burst fire (time proportioning) controller. Analog Input; 0-10Vdc, 0-5Vdc, 2-10Vdc, 1-5Vdc, 4-20mA, potentiometer or 0-135Ω rheostat (TP135 prefix). 24Vac power supply required (optional HBControls PS series if 24Vac supply is not available).

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 HBControls PS series if 24Vac supply is not available).

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