WeatherTrace
Freeze Protection Heat Trace Panels

- Standard NEMA 4 Enclosures
- NEMA 4X Stainless Steel Enclosure Option
- Hand/Off/Auto Selector Switch
- 6, 12, 18, 24, 30, 36, 42 Circuit Options
- 15, 20, 30, 40, and 50 Amp Single-pole and Double-pole Thermal-Magnetic Circuit Breakers.
- Ground Fault Protectors for Equipment Protection (≤30 mA)
- Single-phase 120/240 VAC
- Three-phase 120/208 VAC 4-Wire
- Three-phase 277/480 VAC 4-Wire (15, 20, and 30 Amp Breakers Only)
- Ambient and Line Sensing Control
- WeatherTrace Sentinel Monitoring with Common Alarm
- Z-Purge Pressurization System for Class 1, Division 2 Option
- Enclosure Heater Option for Subzero Ambients
- UL and cUL Third Party Approvals

FPAS, FPLS

FPASM, FPLSM

Description

The Chromalox FPAS, FPLS, FPASM and FPLSM series freeze protection heat trace panels offer power-distribution, ground-fault protection, individual circuit alarming, line and ambient sensing control.

The panels are housed in NEMA 4 enclosures for indoor/outdoor applications. NEMA 4X 304 stainless steel enclosures may be selected as an option for more harsh environments.

The standard models are available in 6, 12, 18, 24, 30, 36, 42 circuit options that can be configured with 50 to 250 Amp main breaker ratings in Single and Three-Phase configurations.

Branch circuit breakers are available in 15, 20, 30, 40 and 50 amp single-pole and two-pole configurations with ≤30 mA ground-fault equipment protection. Only available up to 30A single-pole and two-pole configurations for 480/277V.

FPAS – Freeze Protection Ambient Sensing Series

The FPAS series controls multiple heat trace circuits via an ambient sensing external thermostat, external electronic controller or via an ambient sensing, door mounted PID controller. Chromalox recommended controllers include: RTAS, RTAS-EP, B100, E100 or the THL, TXL.

The FPAS may be operated in two modes; automatically with the external controller, or in manual override via the Hand/Off/Auto selector switch.

FPLS – Freeze Protection Line Sensing Series

The FPLS series controls each heat trace line with individual Chromalox RTBC, RTBC-EP, E-100, E121, THR or TXR pipe line sensing controls. Each circuit should be controlled by an individual sensor/controller. Depending on the application, controllers can switch more that one circuit.

FPASM – Freeze Protection Ambient Sensing Monitor Series

The FPASM WeatherTrace with the Sentinel System, continually monitors the supply voltage to each individual heat trace circuit. Loss of voltage or a ground fault condition will trigger an automatic alarm condition, alerting plant personnel of critical process problems and reducing downtime. An annunciator panel then identifies the faulted zone and a Common Alarm is activated.

The FPASM series controls multiple heat trace circuits via an ambient sensing external thermostat, external electronic controller or via an ambient sensing, door mounted PID controller. Chromalox recommended controllers include: RTAS, RTAS-EP, B100, E100 or the THL, TXL.

The FPASM may be operated in two modes; automatically with the external controller or in manual override via the Hand/Off/Auto selector switch.

FPLSM – Freeze Protection Line Sensing Monitor Series

The FPLSM series controls heat trace lines with individual Chromalox RTBC, RTBC-EP, E100, E121, THR or TXR pipe line sensing controls. Each circuit should be controlled by and individual sensor/controller. Depending on the application, controllers can switch more that one circuit.

The FPLSM features the WeatherTrace Sentinel which continually monitors the supply voltage to each individual heat trace circuit without the need for additional staff. Loss of voltage or a ground fault condition triggers an automatic alarm condition, alerting plant personnel of critical process problems and reducing downtime. An annunciator panel then identifies the faulted zone and a Common Alarm is activated.

WeatherTrace Freeze Protection Heat Trace Panels *(cont'd.)*

Specifications

Power Source	208/120 VAC 3-Phase, 4-Wire 240/120 VAC Single Phase, 3-Wire 480/277 VAC 3-Phase, 4-Wire
Ambient Operating Temperature	-40˚F to 104˚F (With Enclosure Heater)
Incoming Wire Size	50A - 100A MCCB, 14 - 3/0 AWG 200A - 250A MCCB, 3/0 AWG - 350 kcmil
Load Wire	18 - 8 AWG (15 - 30 Amp CB) 18 - 6 AWG (40 - 50 Amp CB)
Ground Fault Breaker Type	≤30mA Ground Fault Equipment Protection
Enclosure	NEMA 4 or NEMA 4X 304 Stainless Steel (option)
Pressurization System	Type Z Purge Pressurization System for Class 1 Division 2 Area
Approvals	UL and cUL

WeatherTrace Freeze Protection Heat Trace Panels *(cont'd.)*

Ordering Information

To Order — Complete the Model Number using the Matrix provided.

Model

FP FP WeatherTRACE series Heat Trace Panels are designed for use in Line Sensing or Ambient Sensing Industrial Applications. FP WeatherTRACE series offers the following standard features: Choose between Line Sensing or Ambient Sensing, Choose between Ground Fault Monitoring with a 7" HMI or No Monitoring & HMI, NEMA 4 enclosure, Main Contactor, Main Circuit Breaker/Disconnect, Hand/Off/Auto Selector Switch, Load Energized Indicator Lamp, Main Power On Lamp, Thermal Magnetic Branch Circuit Breakers with 30mA Ground Fault Equipment Protection, and Thermostat Controlled Enclosure Heater. The FP WeatherTRACE series panels have UL and cUL Third Party Approvals. Additional features & options available, please see below for more details or the Data Sheet.

Code	Control Type
LS	Individual circuit control
AS	Group control with Main Contactor

Code	HMI Breaker Trip Alarm Monitoring
N/A	No Breaker Monitoring
M	HMI breaker trip alarm monitoring

Code	Circuits	Code	Circuits
6	6 Circuits	**30**	30 Circuits
12	12 Circuits	**36**	36 Circuits
18	18 Circuits	**42**	42 Circuits
24	24 Circuits		

Code	Line Voltage	Cable Voltage
1	208/120 VAC, 3 Phase, 4 Wire	120 V- 1 Pole or 208 V - 2 Pole
2	240/120 VAC, Single Phase, 3 Wire	120 V- 1 Pole or 240 V - 2 Pole
3	480/277 VAC, 3 Phase, 4 Wire	277 V- 1 Pole or 480 V - 2 Pole

Code	Cable Load Circuit Breaker Rating (Multiply the Number of Circuits by the Circuit Breaker Price)
	Select Breaker Amperage & *1P/2P to Select Breaker Voltage 1(1P)=15A, 120V Breakers
0	No Breakers
1(*)	15A Thermal Magnetic
2(*)	20A Thermal Magnetic
3(*)	30A Thermal Magnetic
4(*)	40A Thermal Magnetic
5(*)	50A Thermal Magnetic

Select Breaker Amperage and *1P/2P to Select Breaker Voltage 1(1P)=15A, 120V Breakers

Code	Main Circuit Breaker	Typical Voltage
0	None	None
1	50A Thermal Magnetic	120/208V 3P, 120/240V 1P, 277/480V 3P
2	100A Thermal Magnetic	120/208V 3P, 120/240V 1P, 277/480V 3P
3	150A Thermal Magnetic	120/208V 3P
4	200A Thermal Magnetic	120/240V 1P, 277/480V 3P
5	250A Thermal Magnetic	120/208V 3P, 120/240V 1P, 277/480V 3P
X	Other(Consult Sales for assistance)	

Code	Enclosure Heater (Anti-Condensation Heater Required at a Minimum)
1	Thermostat Controlled Enclosure Heater (Anti-Condensation Heater)
2	Thermostat Controlled Enclosure Heater (Needed for 0°F, -18°C Minimuim Ambient Temperature)
3	Thermostat Controlled Enclosure Heater (Needed for -40°F, -40°C Minimuim Ambient Temperature)

Code	Temperature Controller (Group Control with AS version only)
1	None (See Accessories)
3	6040-R00000 1/16 DIN Controller (Panel Door Mounted)

Code	Enclosure (Size determined by Table 2)
1	NEMA 4 Steel, Wall-Mount Enclosure 30 X 30 X 12
2	NEMA 4 Steel, Wall-Mount Enclosure 42 X 36 X 12
3	NEMA 4 Steel, Wall-Mount Enclosure 60 X 36 X 12
4	NEMA 4 Steel, Wall-Mount Enclosure 72 X 36 X 12
A	NEMA 4 Stainless Steel, Wall-Mount Enclosure 30 X 30 X 12
B	NEMA 4 Stainless Steel, Wall-Mount Enclosure 42 X 36 X 12
C	NEMA 4 Stainless Steel, Wall-Mount Enclosure 60 X 36 X 12
D	NEMA 4 Stainless Steel, Wall-Mount Enclosure 72 X 36 X 12

Code	Pressurization Control System
0	None
1	Type Z Class I, Division 2

FPAS-		**42**	**2**	**1**	**1(1P)**	**2**	**5**	**1**	**0**	**Typical Model Number FPASM-1213(1P)3212**

CONTROL SYSTEMS

WeatherTrace

Freeze Protection Heat Trace Panels *(cont'd.)*

Table 2: WeatherTrace Panel Enclosure Size Selection (H" x W" x D")

Panel Size: # of Circuits - Pole	DISC < 150A, NO HMI Breaker Trip Monitoring	DISC > 150A, NO HMI Breaker Trip Monitoring	With HMI Breaker Trip Monitoring	With HMI Breaker Trip Monitoring & 480/277V Line Voltage
6-1P	30 X 30 X 12	30 X 30 X 12	42 X 36 X 12	42 X 36 X 12
6-2P	30 X 30 X 12	30 X 30 X 12	42 X 36 X 12	42 X 36 X 12
12-1P	30 X 30 X 12	30 X 30 X 12	42 X 36 X 12	42 X 36 X 12
12-2P	30 X 30 X 12	30 X 30 X 12	42 X 36 X 12	42 X 36 X 12
18-1P	42 X 36 X 12	42 X 36 X 12	42 X 36 X 12	60 X 36 X 12
18-2P	42 X 36 X 12	42 X 36 X 12	42 X 36 X 12	60 X 36 X 12
24-1P	42 X 36 X 12	42 X 36 X 12	60 X 36 X 12	60 X 36 X 12
24-2P	42 X 36 X 12	42 X 36 X 12	60 X 36 X 12	60 X 36 X 12
30-1P	60 X 36 X 12	60 X 36 X 12	60 X 36 X 12	72 X 36 X 12
30-2P	60 X 36 X 12	60 X 36 X 12	60 X 36 X 12	72 X 36 X 12
36-1P	60 X 36 X 12	60 X 36 X 12	60 X 36 X 12	72 X 36 X 12
36-2P	60 X 36 X 12	60 X 36 X 12	60 X 36 X 12	72 X 36 X 12
42-1P	72 X 36 X 12	72 X 36 X 12	72 X 36 X 12	72 X 36 X 12
42-2P	72 X 36 X 12	72 X 36 X 12	72 X 36 X 12	72 X 36 X 12

Note: Table 2 is a general guideline for Enclosure Size Selection. Adding certain options could cause enclosure size to differ. If Panel dimensions are critical Consult Factory for exact selection.

Technical Notes:

1. Refer to PK557 for Installation & Operation details.
2. Standard Panel Short Circuit Current Rating (SCCR) is 5kAIC. Consult Sales if a different rating is needed.

Model Number Note:

An "X" in the FP Panel Model Number indicates the design has deviated from standard order table parameters and is considered custom. Contact Sales for pricing and feasibility. Custom options may include special tagging, labeling, materials, venting, cooling, indications, alarms, or third-party approvals. Please note that custom panels typically require additional lead time for engineering, procurement, manufacturing, and quality assurance testing.

Remote Mounted Control Accessories	PCN
RTAS Thermostat	389589
RTAS-EP Division 2 Thermostat	389597
B-100 NEMA 4X Thermostat	305365
B-121 Division 2 Thermostat	384104
THL NEMA 4X Thermostat	387014
TXL Division 2 Thermostat	387022

Spare / Replacement Parts List:

Part Number	Item Description
0017-43857	15A 1P Circuit Breaker (120V or 277V)
0017-43858	20A 1P Circuit Breaker (120V or 277V)
0017-43859	30A 1P Circuit Breaker (120V or 277V)
0017-43860	40A 1P Circuit Breaker (120V)
0017-43861	50A 1P Circuit Breaker (120V)
0017-43865	15A 2P Thermal Mag Circuit Breaker (208/240V or 480V)
0017-43866	20A 2P Thermal Mag Circuit Breaker (208/240V or 480V)
0017-43867	30A 2P Thermal Mag Circuit Breaker (208/240V or 480V)
0017-43868	40A 2P Thermal Mag Circuit Breaker (208/240V)
0017-43869	50A 2P Thermal Mag Circuit Breaker (208/240V)
0017-43761	120V, 208/240V Ground Faul Protection
0017-43762	277/480V Ground Faul Protection