

weatherTRACE™

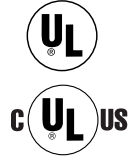
Freeze Protection Heat Trace Panels

- Standard NEMA 4 Enclosures
- NEMA 4X Stainless Steel Enclosure Option
- Hand/Off/Auto Selector Switch
- 12, 18, 20, 30, and 42 Position Panelboards
- 15, 25, 30, and 40 Amp Single-pole and Double-pole 30 mA Ground Fault Thermal-Magnetic Circuit Breakers
- 100 and 225 Amp Main Bus
- Single-phase 120/240 Vac
- Three-phase 120/208 Vac 4-Wire
- Three-phase 277 Vac 4-Wire
- 100 and 250 Amp Main Disconnect Switch Option
- Ambient and Line Sensing Control
- WeatherTrace Sentinel Monitoring with Common Alarm and Re-Ring Feature*
- Z-Purge Pressurization System for Class 1, Division 2 Option
- Enclosure Heater Option
- UL and cUL Third Party Approvals

* The re-ring feature allows the WeatherTrace panel to communicate additional alarm conditions in the system by momentarily clearing and resetting the alarm output contact. The customer's monitoring device such as a PLC or DCS would interpret this condition to alert the operators of an additional alarm occurring.



FPASM Shown



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 standard housed 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 12, 18, 20, 30, and 42 position panelboards with 100 and 225 amp bus ratings in Single and Three-Phase configurations.

Branch circuit breakers are available in 20, 25, 30, and 40 amp single-pole and two-pole configurations with 30 mA ground-fault equipment protection.

FPAS – Freeze Protection Ambient Sensing Series

The FPAS series controls groups of heat trace circuits with an external controller/thermostat.

The FPAS series requires external ambient sensing control or thermostats. Chromalox recommended On/Off controllers include: RTAS, RTAS-EP, B100, E100 or a panel door mounted 1601E microprocessor controller.

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 Monitor Series

The FPLS series controls heat trace lines with individual Chromalox RTBC, RTBC-EP, E-100 or E121 pipe line sensing controls. Multiple sensors should be used to control the individual circuits or may be gauged based on the application and amperage.

FPASM – Freeze Protection Ambient Sensing Monitor Series

The FPASM series controls groups of heat trace circuits with an external controller/thermostat.

The FPASM series require external ambient sensing control or thermostats. Chromalox recommended On/Off controllers include: RTAS, RTAS-EP, B100, E100 or a panel door mounted 1601E microprocessor controller.

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

The FPASM WeatherTrace Sentinel 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 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 with the re-ring feature.*

FPLSM – Freeze Protection Line Sensing Monitor Series

The FPLSM series controls heat trace lines with individual Chromalox RTBC, RTBC-EP, E100 or E121 pipe line sensing controls. Multiple sensors should be used to control the individual circuits or may be gauged based on the application and amperage.

The FPLSM WeatherTrace Sentinel 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 with the re-ring feature.*

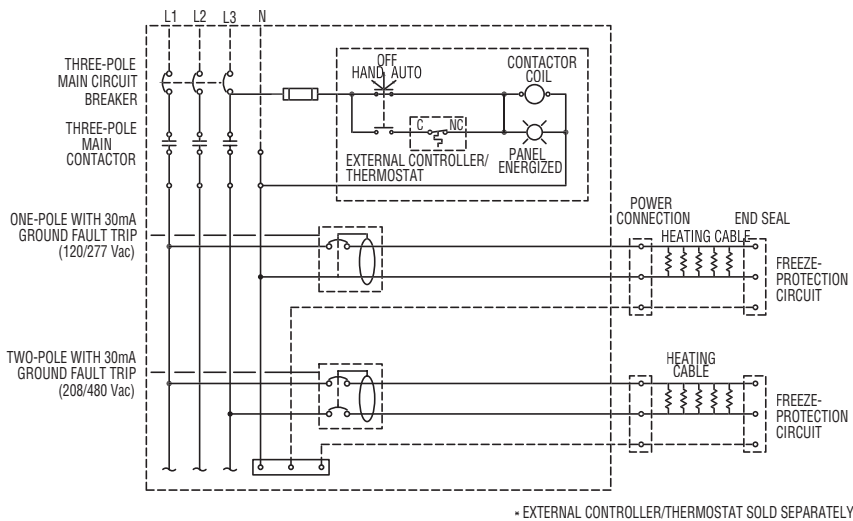
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Freeze Protection
Heat Trace Panels
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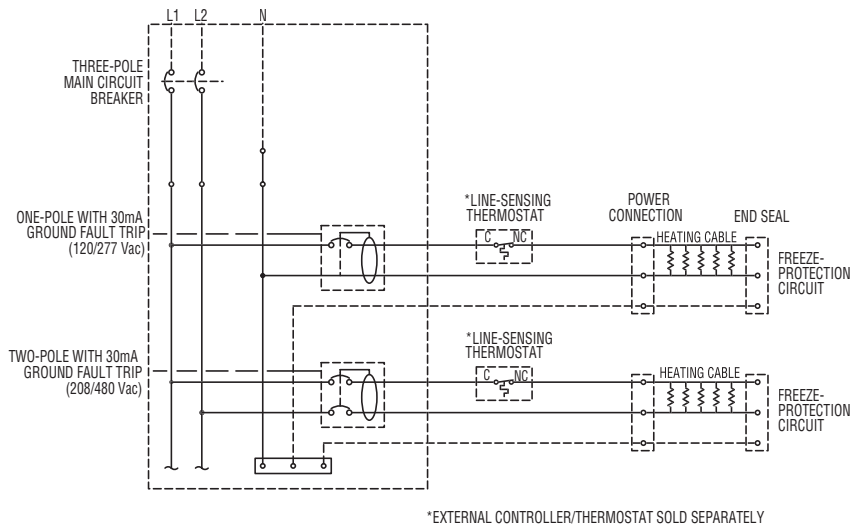
Specifications

Power Source	120/240 Vac Single Phase 120/208 Vac Three-Phase 4-Wire 277/480 Vac Three-Phase 4-Wire
Ambient Operating Temperature	32°F to 122°F (without enclosure heater option)
Field Wire Size	14 - 18 AWG (15 - 30 Amp C.B), 8 - 4 AWG (40 Amp C.B)
Ground Fault Breaker Type	30mA Ground Fault Equipment Protection
Enclosure	NEMA 4 or NEMA 4X 304 Stainless Steel (option)
Main Bus Size	100 Amp and 225 Amp
Main Breaker Size	100 Amp Two-Pole Main Disconnect Switch with through Door Rotary Handle 250 Amp Three-Pole Main Disconnect Switch with through Door Rotary Handle
Pressurization System	Type Z Purge Pressurization System for Class 1 Division 2 Area
Approvals	UL and cUL



**Ambient Sensing
Three Phase
208/120 4-Wire or 480/277 4-Wire**

**Line Sensing
Single Phase
240/120**



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Freeze Protection Heat Trace Panels

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**Ordering
Information**

To Order —
Complete the
Model Number
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Model	240/120 Vac Single-Phase, 208/120 Vac Three-Phase 4-Wire									
FPAS	FPAS Series Ambient Sensing Heat Trace Panels are designed for use in industrial Freeze Protection and Snow Melt applications. The Chromalox FPAS series offers the following standard features: NEMA 4 enclosure, Hand/Off/Auto Selector Switch, Load Energized Indicator Lamp, Main Power On Lamp, Main Contactor, and Thermal Magnetic Branch Circuit Breakers with 30 mA Ground Fault Equipment Protection. Options include: NEMA 4X 304 Stainless Steel Enclosures, Main Disconnect Switch, Remote or Local Ambient Temperature Controller, Enclosure Heater, and Type Z Pressurization System. The FPAS series panels have UL and cUL Third Party Approvals.									
Code	Panelboard	Available Breaker Poles								
12	12 Positions (100 Amp Main Rating)	(12) 1-pole breakers or (6) 2-pole Breakers								
20	20 Positions (100 Amp Main Rating)	(20) 1-pole breakers or (10) 2-pole Breakers								
30	30 Positions (225 Amp Main Rating)	(30) 1-pole breakers or (14) 2-pole Breakers								
42	42 Positions (225 Amp Main Rating)	(42) 1-pole breakers or (20) 2-pole Breakers								
Code	Power Source									
1	1 Phase Power, 240/120 Vac (Code 12 & 20 Only)									
2	3 Phase Power, 208/120 Vac 4-Wire (Code 30 & 42 Only)									
Code	Enclosure									
1	NEMA 4 Single-Door, Wall-Mount Steel Enclosure									
2	NEMA 4X 304 Stainless Steel Wall-Mount Enclosure; 48"H x 36"W x 10"D (Code 12 & 20)									
3	NEMA 4X 304 Stainless Steel Wall-Mount Enclosure; 60"H x 36"W x 10"D (Code 30 & 42)									
Code	Branch Circuit Breaker Selection (DO NOT EXCEED MAIN RATING)									
1(*)	1-Pole Breaker, 120 Vac, 15 Amps, 30 mA Ground Fault Equipment Protection									
2(*)	1-Pole Breaker, 120 Vac, 20 Amps, 30 mA Ground Fault Equipment Protection									
3(*)	1-Pole Breaker, 120 Vac, 25 Amps, 30 mA Ground Fault Equipment Protection									
4(*)	1-Pole Breaker, 120 Vac, 30 Amps, 30 mA Ground Fault Equipment Protection									
5(*)	2-Pole Breaker, 120/240 Vac, 15 Amps, 30 mA Ground Fault Equipment Protection									
6(*)	2-Pole Breaker, 120/240 Vac, 20 Amps, 30 mA Ground Fault Equipment Protection									
7(*)	2-Pole Breaker, 120/240 Vac, 25 Amps, 30 mA Ground Fault Equipment Protection									
8(*)	2-Pole Breaker, 120/240 Vac, 30 Amps, 30 mA Ground Fault Equipment Protection									
9(*)	2-Pole Breaker, 120/240 Vac, 40 Amps, 30 mA Ground Fault Equipment Protection									
Code	Main Disconnect Switch Selection									
0	None									
1	100 Amp with 65k Fault Protection (Code 12 & 20 Only)									
2	250 Amp with 65k Fault Protection (Code 30 & 42 Only)									
Code	Ambient Controller									
0	None (Customer Supplied)									
1	RTAS Ambient Sensing Thermostat (Remote Mounted)									
2	RTAS-EP Ambient Sensing Thermostat (Remote Mounted Division 2 Hazardous Area)									
3	B-100 NEMA 4X Ambient Sensing Thermostat (Remote Mounted)									
4	E-100-EP Ambient Sensing Thermostat (Remote Mounted Division 1 Hazardous Area)									
5	1601E-11030 1/16 DIN Temperature Controller (Panel Door Mounted)									
6	LCD-1 Snow Switch (Remote Mounted)									
Code	Cabinet Heater									
0	None									
1	Thermostat Controlled Enclosure Heater									
Code	Pressurization Control System									
0	None									
1	Type Z Class 1, Division 2									
FPAS	42	2	1	1(*)	1	1	0	0	Typical Model Number	

Technical Notes:

NEMA 4 Enclosure Dimensions:

Codes: 12 & 20 – 48"H x 36"W x 10"D Single Door, Wall Mount Enclosure

Codes: 30 & 42 – 60"H x 36"W x 10"D Single Door, Wall Mount Enclosure

(*) Enter number of circuit breakers in parenthesis

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Ordering Information

To Order —
Complete the
Model Number
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Model	240/120 Vac Single-Phase, 208/120 Vac Three-Phase 4-Wire							
FPLS	FPLS Series Line Sensing Heat Trace Panels are designed for use in industrial Freeze Protection and Snow Melt applications. The Chromalox FPLS series offers the following standard features: NEMA 4 enclosure, Main Power On Lamp and Thermal Magnetic Branch Circuit Breakers with 30 mA Ground Fault Equipment Protection. Options include: NEMA 4X 304 Stainless Steel Enclosures, Main Disconnect Switch, Enclosure Heater, and Type Z Pressurization System. The FPLS series panels have UL and cUL Third Party Approvals.							
	Code	Panelboard	Available Breaker Poles					
	12	12 Positions (100 Amp Main Rating)	(12) 1-pole breakers or (6) 2-pole Breakers					
	20	20 Positions (100 Amp Main Rating)	(20) 1-pole breakers or (10) 2-pole Breakers					
	30	30 Positions (225 Amp Main Rating)	(30) 1-pole breakers or (14) 2-pole Breakers					
	42	42 Positions (225 Amp Main Rating)	(42) 1-pole breakers or (20) 2-pole Breakers					
	Code	Power Source						
	1	1 Phase Power, 240/120 Vac (Code 12 & 20 Only)						
	2	3 Phase Power, 208/120 Vac 4-Wire (Code 30 & 42 Only)						
	Code	Enclosure						
	1	NEMA 4 Single-Door, Wall-Mount Steel Enclosure						
	2	NEMA 4X 304 Stainless Steel Wall-Mount Enclosure; 48"H x 36"W x 10"D (Code 12 & 20)						
	3	NEMA 4X 304 Stainless Steel Wall-Mount Enclosure; 60"H x 36"W x 10"D (Code 30 & 42)						
	Code	Branch Circuit Breaker Selection (DO NOT EXCEED MAIN RATING)						
	1(*)	1-Pole Breaker, 120 Vac, 15 Amps, 30 mA Ground Fault Equipment Protection						
	2(*)	1-Pole Breaker, 120 Vac, 20 Amps, 30 mA Ground Fault Equipment Protection						
	3(*)	1-Pole Breaker, 120 Vac, 25 Amps, 30 mA Ground Fault Equipment Protection						
	4(*)	1-Pole Breaker, 120 Vac, 30 Amps, 30 mA Ground Fault Equipment Protection						
	5(*)	2-Pole Breaker, 120/240 Vac, 15 Amps, 30 mA Ground Fault Equipment Protection						
	6(*)	2-Pole Breaker, 120/240 Vac, 20 Amps, 30 mA Ground Fault Equipment Protection						
	7(*)	2-Pole Breaker, 120/240 Vac, 25 Amps, 30 mA Ground Fault Equipment Protection						
	8(*)	2-Pole Breaker, 120/240 Vac, 30 Amps, 30 mA Ground Fault Equipment Protection						
	Code	Main Disconnect Switch Selection						
	0	None						
	1	100 Amp with 65k Fault Protection (Code 12 & 20 Only)						
	2	250 Amp with 65k Fault Protection (Code 30 & 42 Only)						
	Code	Cabinet Heater						
	0	None						
	1	Thermostat Controlled Enclosure Heater						
	Code	Pressurization Control System						
	0	None						
	1	Type Z Class 1, Division 2						
FPLS	42	2	1	1(*)	1	1	0	Typical Model Number

Technical Notes:

NEMA 4 Enclosure Dimensions:

Codes: 12 & 20 – 48"H x 36"W x 10"D Single Door, Wall Mount Enclosure

Codes: 30 & 42 – 60"H x 36"W x 10"D Single Door, Wall Mount Enclosure

(*) Enter number of circuit breakers in parenthesis

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Freeze Protection Heat Trace Panels

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Ordering Information

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

Model 240/120 Vac Single-Phase, 208/120 Vac Three-Phase 4-Wire

FPASM FPASM Series Ambient Sensing Heat Trace Panels are designed for use in industrial Freeze Protection and Snow Melt applications. The Chromalox FPASM series offers the following standard features: NEMA 4 enclosure, Hand/Off/Auto Selector Switch, Load Energized Indicator Lamp, Main Power On Lamp, Main Contactor, and Thermal Magnetic Branch Circuit Breakers with 30 mA Ground Fault Equipment Protection. The FPASM WeatherTrace Sentinel continually monitors the supply voltage to each individual heat trace circuit. Loss of voltage or a ground fault condition triggers and automatic alarm condition to an annunciator panel which identifies the faulted zone and a common alarm is activated with the re-ring feature. Options include: NEMA 4X 304 Stainless Steel Enclosures, Main Disconnect Switch, Remote or Local Ambient Temperature Controller, Enclosure Heater, and Type Z Pressurization System. The FPASM series panels have UL and cUL Third Party Approvals.

Code	Panelboard	Available Breaker Poles
12	12 Positions (100 Amp Main Rating)	(12) 1-pole breakers or (6) 2-pole Breakers
20	20 Positions (100 Amp Main Rating)	(20) 1-pole breakers or (10) 2-pole Breakers
30	30 Positions (225 Amp Main Rating)	(30) 1-pole breakers or (14) 2-pole Breakers
42	42 Positions (225 Amp Main Rating)	(40) 1-pole breakers or (20) 2-pole Breakers

Code Power Source

1	1 Phase Power, 240/120 Vac (Code 12 & 20 Only)
2	3 Phase Power, 208/120 Vac 4-Wire (Code 30 & 42 Only)

Code Enclosure

1	NEMA 4 Single-Door, Wall-Mount Steel Enclosure
2	NEMA 4X 304 Stainless Steel Wall-Mount Enclosure; 48"H x 36"W x 10"D (Code 12 & 20)
3	NEMA 4X 304 Stainless Steel Wall-Mount Enclosure; 60"H x 36"W x 10"D (Code 30 & 42)

Code Branch Circuit Breaker Selection (DO NOT EXCEED MAIN RATING)

1(*)	1-Pole Breaker, 120 Vac, 15 Amps, 30 mA Ground Fault Equipment Protection
2(*)	1-Pole Breaker, 120 Vac, 20 Amps, 30 mA Ground Fault Equipment Protection
3(*)	1-Pole Breaker, 120 Vac, 25 Amps, 30 mA Ground Fault Equipment Protection
4(*)	1-Pole Breaker, 120 Vac, 30 Amps, 30 mA Ground Fault Equipment Protection
5(*)	2-Pole Breaker, 120/240 Vac, 15 Amps, 30 mA Ground Fault Equipment Protection
6(*)	2-Pole Breaker, 120/240 Vac, 20 Amps, 30 mA Ground Fault Equipment Protection
7(*)	2-Pole Breaker, 120/240 Vac, 25 Amps, 30 mA Ground Fault Equipment Protection
8(*)	2-Pole Breaker, 120/240 Vac, 30 Amps, 30 mA Ground Fault Equipment Protection
9(*)	2-Pole Breaker, 120/240 Vac, 40 Amps, 30 mA Ground Fault Equipment Protection

Code Main Disconnect Switch Selection

0	None
1	100 Amp with 65k Fault Protection (Code 12 & 20 Only)
2	250 Amp with 65k Fault Protection (Code 30 & 42 Only)

Code Ambient Controller

0	None (Customer Supplied)
1	RTAS Ambient Sensing Thermostat (Remote Mounted)
2	RTAS-EP Ambient Sensing Thermostat (Remote Mounted Division 2 Hazardous Area)
3	B-100 NEMA 4X Ambient Sensing Thermostat (Remote Mounted)
4	E-100-EP Ambient Sensing Thermostat (Remote Mounted Division 1 Hazardous Area)
5	1601E-11030 1/16 DIN Temperature Controller (Panel Door Mounted)
6	LCD-1 Snow Switch (Remote Mounted)

Code Cabinet Heater

0	None
1	Thermostat Controlled Enclosure Heater

Code Pressurization Control System

0	None
1	Type Z Class 1, Division 2

FPASM 42 2 1 1(*) 1 1 0 0 Typical Model Number

Technical Notes:

NEMA 4 Enclosure Dimensions:

Codes: 12 & 20 – 48"H x 36"W x 10"D Single Door, Wall Mount Enclosure

Codes: 30 & 42 – 60"H x 36"W x 10"D Single Door, Wall Mount Enclosure

(*) Enter number of circuit breakers in parenthesis

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Freeze Protection Heat Trace Panels

(cont'd.)

Ordering Information

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

Model	240/120 Vac Single-Phase, 208/120 Vac Three-Phase 4-Wire							
FPLSM	FPLSM Series Line Sensing Heat Trace Panels are designed for use in industrial Freeze Protection and Snow Melt applications. The Chromalox FPLSM series offers the following standard features: NEMA 4 enclosure, Main Power On Lamp, and Thermal Magnetic Branch Circuit Breakers with 30 mA Ground Fault Equipment Protection. The FPLSM WeatherTrace Sentinel continually monitors the supply voltage to each individual heat trace circuit. Loss of voltage or a ground fault condition triggers and automatic alarm condition to an annunciator panel which identifies the faulted zone and a common alarm is activated with the re-ring feature. Options include: NEMA 4X 304 Stainless Steel Enclosures, Main Disconnect Switch, Enclosure Heater, and Type Z Pressurization System. The FPLSM series panels have UL and cUL Third Party Approvals.							
	Code	Panelboard	Available Breaker Poles					
	12	12 Positions (100 Amp Main Rating)	(12) 1-pole breakers or (6) 2-pole Breakers					
	20	20 Positions (100 Amp Main Rating)	(20) 1-pole breakers or (10) 2-pole Breakers					
	30	30 Positions (225 Amp Main Rating)	(30) 1-pole breakers or (14) 2-pole Breakers					
	42	42 Positions (225 Amp Main Rating)	(40) 1-pole breakers or (20) 2-pole Breakers					
	Code	Power Source						
	1	1 Phase Power, 240/120 Vac (Code 12 & 20 Only)						
	2	3 Phase Power, 208/120 Vac 4-Wire (Code 30 & 42 Only)						
	Code	Enclosure						
	1	NEMA 4 Single-Door, Wall-Mount Steel Enclosure						
	2	NEMA 4X 304 Stainless Steel Wall-Mount Enclosure; 48"H x 36"W x 10"D (Code 12 & 20)						
	3	NEMA 4X 304 Stainless Steel Wall-Mount Enclosure; 60"H x 36"W x 10"D (Code 30 & 42)						
	Code	Branch Circuit Breaker Selection (DO NOT EXCEED MAIN RATING)						
	1(*)	1-Pole Breaker, 120 Vac, 15 Amps, 30 mA Ground Fault Equipment Protection						
	2(*)	1-Pole Breaker, 120 Vac, 20 Amps, 30 mA Ground Fault Equipment Protection						
	3(*)	1-Pole Breaker, 120 Vac, 25 Amps, 30 mA Ground Fault Equipment Protection						
	4(*)	1-Pole Breaker, 120 Vac, 30 Amps, 30 mA Ground Fault Equipment Protection						
	5(*)	2-Pole Breaker, 120/240 Vac, 15 Amps, 30 mA Ground Fault Equipment Protection						
	6(*)	2-Pole Breaker, 120/240 Vac, 20 Amps, 30 mA Ground Fault Equipment Protection						
	7(*)	2-Pole Breaker, 120/240 Vac, 25 Amps, 30 mA Ground Fault Equipment Protection						
	8(*)	2-Pole Breaker, 120/240 Vac, 30 Amps, 30 mA Ground Fault Equipment Protection						
	Code	Main Disconnect Switch Selection						
	0	None						
	1	100 Amp with 65k Fault Protection (Code 12 & 20 Only)						
	2	250 Amp with 65k Fault Protection (Code 30 & 42 Only)						
	Code	Cabinet Heater						
	0	None						
	1	Thermostat Controlled Enclosure Heater						
	Code	Pressurization Control System						
	0	None						
	1	Type Z Class 1, Division 2						
FPLSM	42	2	1	1(*)	1	1	0	Typical Model Number

Technical Notes:

NEMA 4 Enclosure Dimensions:

Codes: 12 & 20 – 48"H x 36"W x 10"D Single Door, Wall Mount Enclosure

Codes: 30 & 42 – 60"H x 36"W x 10"D Single Door, Wall Mount Enclosure

(*) Enter number of circuit breakers in parenthesis

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Freeze Protection Heat Trace Panels (cont'd.)

Ordering Information

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

Model	277 Vac 4-Wire							
FPLS	FPLS Series Line Sensing Heat Trace Panels are designed for use in industrial Freeze Protection and Snow Melt applications. The Chromalox FPLS series offers the following standard features: NEMA 4 enclosure, Main Power On Lamp, and Thermal Magnetic Branch Circuit Breakers with 30 mA Ground Fault Equipment Protection. Options include: NEMA 4X 304 Stainless Steel Enclosures, Main Disconnect Switch, Enclosure Heater, and Type Z Pressurization System. The FPLS series panels have UL and cUL Third Party Approvals.							
Code	Panelboard						Available Breaker Poles	
181	18 Positions (100 Amp Main Rating)						(8) 1-pole breakers	
301	30 Positions (100 Amp Main Rating)						(14) 1-pole breakers	
421	42 Positions (100 Amp Main Rating)						(20) 1-pole breakers	
302	30 Positions (225 Amp Main Rating)						(14) 1-pole breakers	
422	42 Positions (225 Amp Main Rating)						(20) 1-pole breakers	
Code	Power Source							
	1 3 Phase Power, 277/480 Vac 4-Wire							
Code	Enclosure							
	1 NEMA 4 Single-Door, Wall-Mount Steel Enclosure							
	2 NEMA 4X 304 Stainless Steel Wall-Mount Enclosure; 48"H x 36"W x 10"D (Code 181, 301 & 302)							
	3 NEMA 4X 304 Stainless Steel Wall-Mount Enclosure; 60"H x 36"W x 10"D (Code 421 & 422)							
Code	Branch Circuit Breaker Selection (DO NOT EXCEED MAIN RATING)							
	1(*) 1-Pole Breaker, 277 Vac, 15 Amps, 30 mA Ground Fault Equipment Protection							
	2(*) 1-Pole Breaker, 277 Vac, 20 Amps, 30 mA Ground Fault Equipment Protection							
	3(*) 1-Pole Breaker, 277 Vac, 30 Amps, 30 mA Ground Fault Equipment Protection							
Code	Main Disconnect Switch Selection							
	0 None							
	1 100 Amp with 25k Fault Protection (Code 181, 301 & 421 Only)							
	2 250 Amp with 35k Fault Protection (Code 302 & 422 Only)							
Code	Cabinet Heater							
	0 None							
	1 Thermostat Controlled Enclosure Heater							
Code	Pressurization Control System							
	0 None							
	1 Type Z Class 1, Division 2							
FPLS	181	2	1	1(*)	1	1	0	Typical Model Number

Technical Notes:

NEMA 4 Enclosure Dimensions:

Codes: 181, 301 & 302 – 48"H x 36"W x 10"D Single Door, Wall Mount Enclosure

Codes: 421 & 422 – 60"H x 36"W x 10"D Single Door, Wall Mount Enclosure

(*) Enter number of circuit breakers in parenthesis

HEAT TRACING
PRODUCTS

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Freeze Protection Heat Trace Panels

(cont'd.)

Ordering Information

To Order —
Complete the
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Model	277 Vac 4-Wire								
FPAS	FPAS Series Ambient Sensing Heat Trace Panels are designed for use in industrial Freeze Protection and Snow Melt applications. The Chromalox FPAS series offers the following standard features: NEMA 4 enclosure, Hand/Off/Auto Selector Switch, Load Energized Indicator Lamp, Main Power On Lamp, Main Contactor, and Thermal Magnetic Branch Circuit Breakers with 30 mA Ground Fault Equipment Protection. Options include: NEMA 4X 304 Stainless Steel Enclosures, Main Disconnect Switch, Remote or Local Ambient Temperature Controller, Enclosure Heater, and Type Z Pressurization System. The FPAS series panels have UL and cUL Third Party Approvals.								
	Code	Panelboard	Available Breaker Poles						
	181	18 Positions (100 Amp Main Rating)	(8) 1-pole breakers						
	301	30 Positions (100 Amp Main Rating)	(14) 1-pole breakers						
	421	42 Positions (100 Amp Main Rating)	(20) 1-pole breakers						
	302	30 Positions (225 Amp Main Rating)	(14) 1-pole breakers						
	422	42 Positions (225 Amp Main Rating)	(20) 1-pole breakers						
	Code	Power Source							
	1	3 Phase Power, 277/480 Vac 4-Wire							
	Code	Enclosure							
	1	NEMA 4 Single-Door, Wall-Mount Steel Enclosure							
	2	NEMA 4X 304 Stainless Steel Wall-Mount Enclosure; 48"H x 36"W x 10"D (Code 181, 301 & 302)							
	3	NEMA 4X 304 Stainless Steel Wall-Mount Enclosure; 60"H x 36"W x 10"D (Code 421 & 422)							
	Code	Branch Circuit Breaker Selection (DO NOT EXCEED MAIN RATING)							
	1(*)	1-Pole Breaker, 277 Vac, 15 Amps, 30 mA Ground Fault Equipment Protection							
	2(*)	1-Pole Breaker, 277 Vac, 20 Amps, 30 mA Ground Fault Equipment Protection							
	3(*)	1-Pole Breaker, 277 Vac, 30 Amps, 30 mA Ground Fault Equipment Protection							
	4(*)	1-Pole Breaker, 277 Vac, 40 Amps, 30 mA Ground Fault Equipment Protection							
	Code	Main Disconnect Switch Selection							
	0	None							
	1	100 Amp with 25k Fault Protection (Code 181, 301 & 421 Only)							
	2	250 Amp with 35k Fault Protection (Code 302 & 422 Only)							
	Code	Ambient Controller							
	0	None (Customer Supplied)							
	1	RTAS Ambient Sensing Thermostat (Remote Mounted)							
	2	RTAS-EP Ambient Sensing Thermostat (Remote Mounted Division 2 Hazardous Area)							
	3	B-100 NEMA 4X Ambient Sensing Thermostat (Remote Mounted)							
	4	E-100-EP Ambient Sensing Thermostat (Remote Mounted Division 1 Hazardous Area)							
	5	1601E-11030 1/16 DIN Temperature Controller (Panel Door Mounted)							
	6	LCD-1 Snow Switch (Remote Mounted)							
	Code	Cabinet Heater							
	0	None							
	1	Thermostat Controlled Enclosure Heater							
	Code	Pressurization Control System							
	0	None							
	1	Type Z Class 1, Division 2							
FPAS	422	2	1	1(*)	1	1	0	0	Typical Model Number

Technical Notes:

NEMA 4 Enclosure Dimensions:

Codes: 181, 301 & 302 – 48"H x 36"W x 10"D Single Door, Wall Mount Enclosure

Codes: 421 & 422 – 60"H x 36"W x 10"D Single Door, Wall Mount Enclosure

(*) Enter number of circuit breakers in parenthesis