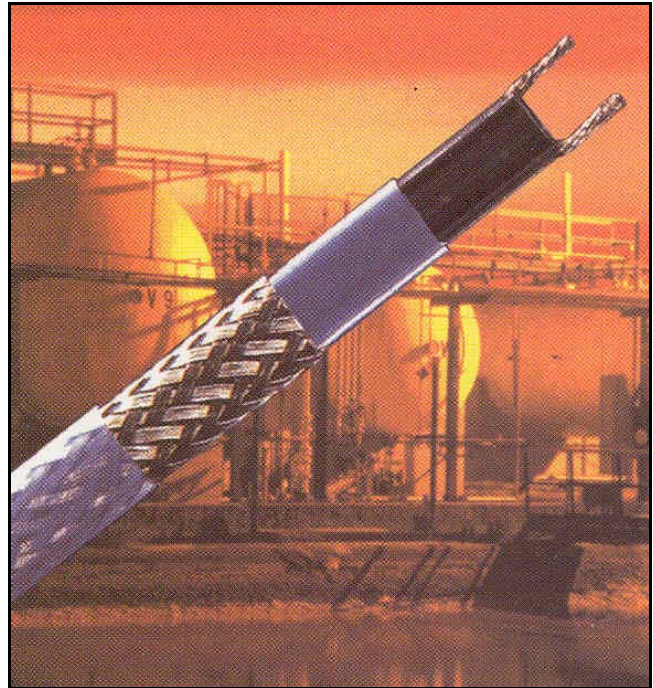




INDUSTRIAL GRADE  
SELF-REGULATING  
HEATING CABLES



WinterSafe  
WinterSafe Plus  
AutoWatt Xtra

FM and CSA Approved



# WSR

For freeze protection and process heating applications up to 150°F (65°C).

# WinterSafe®

## Self-Regulating Heating Cable



- ◆ *Automatically adjusts heat output in response to increasing or decreasing pipe temperature*
- ◆ *Can be cut to length without any waste*
- ◆ *Will not overheat or burn out even when overlapped*
- ◆ *Available in 120 and 240 volt versions*
- ◆ *FM and CSA approved for use in unclassified, hazardous and corrosive areas and environments*
- ◆ *Standard range of power connection kits, splice and tee splice kits, connection hardware and controls*

### INTRODUCTION

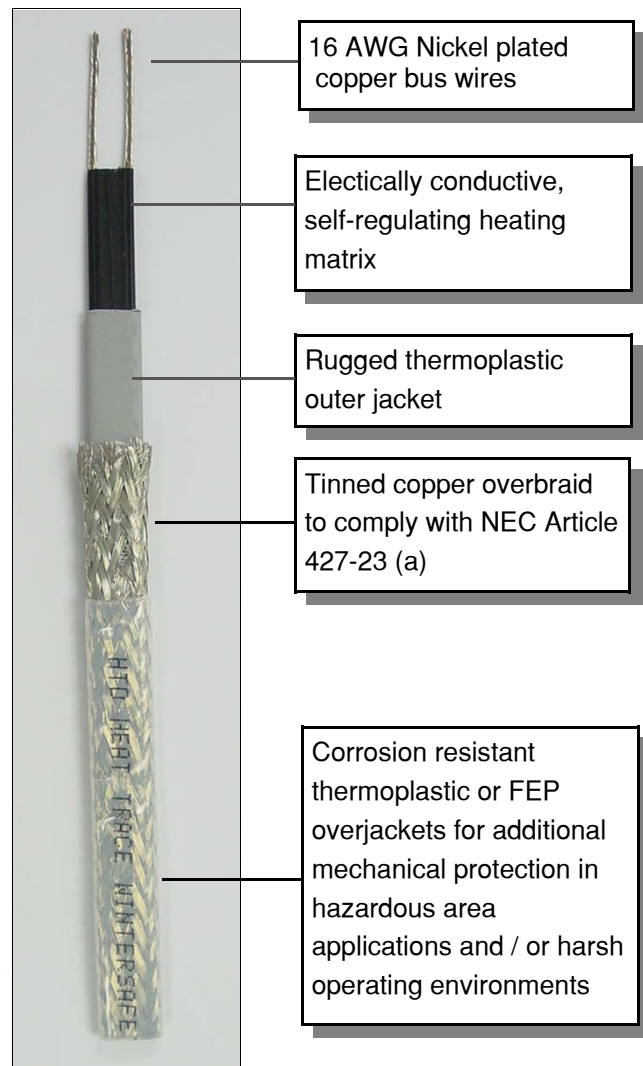
WinterSafe is an industrial grade, self-regulating heating cable that can be used on many applications ranging from freeze protection to process temperature maintenance of 150°F (65°C).

The self-regulating characteristics of WinterSafe ensure complete safety and reliability. WinterSafe heating cable cannot overheat or burnout even when overlapped upon itself.

WinterSafe heating cable can be cut to length at the job site to automatically match the exact length of pipe to be traced. Use only what is needed. There is no waste and any leftover cable can be stored and kept ready for use on future applications.

The installation of WinterSafe heating cable is quick, simple and requires no special tools, knowledge or skills. A complete range of standard power connection kits, splice kits, tee splice kits and controls are readily available.

WinterSafe heating cable is third party approved by both FM and CSA for use in unclassified areas, hazardous areas and corrosive environments (see Specification on the opposite page).



# SPECIFICATION

# WinterSafe

**MAXIMUM TEMPERATURE** Maintenance 150° F (65°C)  
Exposure 185° F (85°C)

**TEMPERATURE CLASSIFICATION** T5 (10 w/ft)  
T6 (3, 5, and 8)

**OPERATING VOLTAGES** 110 / 120  
208 / 220 / 240 / 277

## APPROVALS AND CERTIFICATIONS

FM Approval (Factory Mutual) Class I Div 1\* Groups B, C & D  
Class I Div 2 Groups B, C & D  
Class II Div 2 Groups F & G  
Class III Div 2

Canadian Standards Association (CSA) Class I Div 1\* & 2 Groups A,B,C & D  
Class II Div 1\* & 2 Groups E, F & G  
Class III Div 1\* & 2

\* Consult HTD Heat Trace, Inc. for specific information on all Division 1 applications and systems.

## MAX LENGTH (FT) vs. CIRCUIT BREAKER SIZE

Ref	Start up temp	120				240			
		15A	20A	30A	40A	15A	20A	30A	40A
WSR 3	50°F	300	-	-	-	660	-	-	-
	0°F	200	270	330	-	410	560	660	-
	-20°F	180	230	330	-	360	480	660	-
WSR 5	50°F	230	270	-	-	460	540	-	-
	0°F	150	200	270	-	300	400	540	-
	-20°F	130	175	260	270	260	345	520	540
WSR 8	50°F	150	200	210	-	295	390	420	-
	0°F	95	125	190	210	195	250	375	420
	-20°F	85	100	170	210	170	225	340	420
WSR 10	50°F	115	150	180	-	230	305	360	-
	0°F	70	95	145	180	150	200	300	360
	-20°F	60	85	120	165	130	175	260	360

### Note:

HTD Heat Trace Inc and the 2002 National Electric Code, Sections 426 and 427 require the use of ground fault equipment protection .

Square D type QO-EPD and QOB-EPD circuit breakers with 30mA trip levels are recommended.

## PRODUCT RANGE

Product Ref	Watts/ft	Voltage	Max Circuit
WSR 31	3	120	330
WSR 51	5	120	270
WSR 81	8	120	210
WSR 101	10	120	180
WSR 32	3	240	660
WSR 52	5	240	540
WSR 82	8	240	420
WSR 102	10	240	360

## ACCESSORIES

HTD Heat Trace, Inc supplies a full range of accessories for use with the WinterSafe product range. Accessories include termination kits, splice kits, tee splice kits, fixing tape, heat transfer tape, junction boxes and thermostats. Please consult HTD for full details.

## POWER ADJUSTMENT FACTORS WITH ADJUSTED RATINGS

Cable type	208 volts		277 volts	
	0.75	2.25 w/ft	1.28	3.84 w/ft
WSR 32	0.75	2.25 w/ft	1.28	3.84 w/ft
WSR 52	0.86	4.30 w/ft	1.16	5.80 w/ft
WSR 82	0.91	7.28 w/ft	1.10	8.80 w/ft
WSR 102	0.93	9.30 w/ft	1.08	10.80 w/ft

## ORDERING INFORMATION

Feature	Designation
Product Code	WSR
Watts / ft	3, 5, 8 and 10
Voltage	120 240
Tinned Copper Overbraid	C
Optional Overjackets	Thermoplastic (R) Fluoropolymer (T)

## EXAMPLE

To order a 5 watts/ft cable for operation on 120 volts, complete with overbraid and fluoropolymer overjacket, the final product and ordering code should read .

**WSR 51CT**

# WSP

For freeze protection and process heating applications up to 250°F (120°C)

# WinterSafe Plus®

## Self Regulating Heating Cable



- ◆ *Automatically adjusts heat output in response to increasing or decreasing pipe temperature*
- ◆ *Can be cut to length without any waste*
- ◆ *Will not overheat or burn out even when overlapped*
- ◆ *Available in 120 and 240 volt versions*
- ◆ *FM and CSA approved for use in unclassified, hazardous and corrosive areas and environments*
- ◆ *Can be used safely on piping that is routinely steam cleaned*

## INTRODUCTION

WinterSafe Plus is a high temperature, industrial grade self-regulating heating cable that can be used for applications ranging from simple freeze protection up to process temperature maintenance of 250°F.

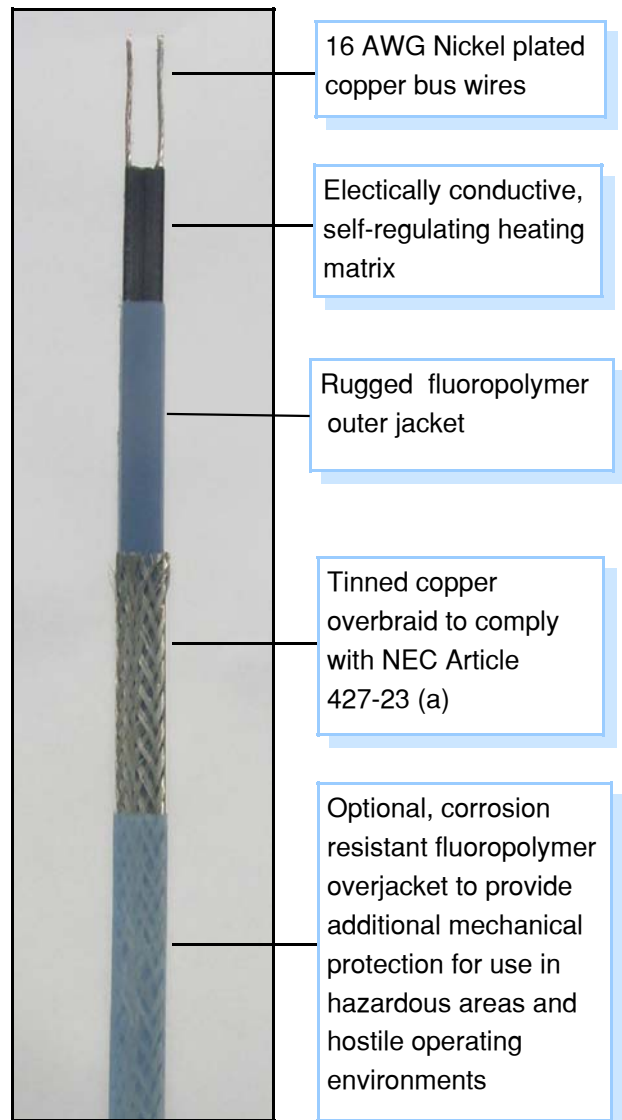
With a maximum exposure temperature rating of 366°F, WinterSafe Plus is ideal for installation on piping systems that may need to be routinely or periodically steam cleaned.

The self-regulating feature of WinterSafe Plus ensures complete safety and reliability. WinterSafe Plus heating cable cannot overheat or burnout even when overlapped upon itself.

WinterSafe Plus can be cut to length at the job site automatically matching the exact piping length being traced. The need to pre-plan and layout the cable routing is unnecessary. Use only what is needed. There is no waste and any leftover cable can be stored and kept ready for use on future applications.

The installation of WinterSafe Plus heating cable is quick, simple and requires no special tools, skills or knowledge. A complete range of standard power connection kits, splice kits, tee splice kits and controls are readily available.

WinterSafe Plus heating cable is third party approved by both FM and CSA for use in unclassified areas, most hazardous areas and corrosive environments (see Specification shown on the opposite page)



# SPECIFICATION

# WinterSafe Plus

**MAXIMUM TEMPERATURE** Maintenance 250° F (120°C)  
Exposure 366° F (185°C)

**MAX LENGTH (FT) vs. CIRCUIT BREAKER SIZE**

**TEMPERATURE CLASSIFICATION**

T3

**OPERATING VOLTAGES**

110 / 120  
208/220/240/277

**APPROVALS AND CERTIFICATIONS**

FM Approvals (Factory Mutual) Class I Div 1\* Groups B, C & D  
Class I Div 2 Groups B, C & D  
Class II Div 2 Groups F & G  
Class III Div 2

Canadian Standards Association (CSA) Class I Div 1\* & 2 Groups A,B,C & D  
Class II Div 1\* & 2 Groups E, F & G  
Class III Div 1\* & 2

\* Consult HTD Heat Trace, Inc for specific information on all Division 1 applications and systems

Ref	Start up temp	120			240		
WSP 5	50°F	150	200	240	250	330	480
	0°F	135	180	220	230	305	440
	-40°F	130	170	210	220	295	420
WSP 10	50°F	90	120	180	140	190	280
	0°F	85	110	165	130	175	260
	-40°F	80	105	160	125	170	250
WSP 15	50°F	70	90	135	100	135	200
	0°F	65	85	125	95	125	185
	-40°F	60	80	120	90	120	180

**Note:**

HTD Heat Trace Inc and the 2002 National Electric Code, Sections 426 and 427 require the use of ground fault equipment protection .

Square D type QO-EPD and QOB-EPD circuit breakers with 30 mA trip levels are recommended.

**PRODUCT RANGE**

Product Ref	Watts/ft	Voltage	Max Circuit
WSP 51	5	120	240
WSP 101	10	120	180
WSP 151	15	120	135
WSP 52	5	240	480
WSP 102	10	240	280
WSP 152	15	240	200

**POWER ADJUSTMENT FACTORS WITH ADJUSTED RATINGS**

Cable type	208 volts		277 volts	
WSP 52	0.78	3.90 w/ft	1.25	6.25 w/ft
WSP 102	0.86	8.60 w/ft	1.16	11.60 w/ft
WSP 152	0.92	13.80 w/ft	1.09	16.35 w/ft

**ORDERING INFORMATION**

Feature	Designation
Product Code	WSP
Watts / ft	5, 10 or 15
Voltage	120 240
Tinned Copper Overbraid	C
Optional Overjacket	Fluoropolymer (T)

**ACCESSORIES**

HTD Heat Trace, Inc supplies a full range of accessories for use with the WinterSafe Plus product range. Accessories include termination kits, splice kits, tee splice kits, fixing tape, heat transfer tape, junction boxes and thermostats. Please consult HTD for full details

**EXAMPLE**

To order a 5 watts/ft cable for operation on 120 volts, complete with overbraid and fluoropolymer, overjacket, the final product and ordering code should read:

**WSP 51CT**

# AWX

For freeze protection and process heating applications up to 375°F (190°C).

# AutoWatt Xtra®

## Self-Regulating Heating Cable



- ◆ *Automatically adjusts heat output in response to increasing or decreasing pipe temperature*
- ◆ *Will not overheat or burn out even when overlapped*
- ◆ *Available with power ratings up to 30 w/ft (99 w /m)*
- ◆ *Suitable for applications with exposure temperatures up to 450°F (232°C)*
- ◆ *Extensive power range, available in both 110 -120 VAC and 208 - 277 VAC versions*
- ◆ *FM, CSA and SEMCO approved for use in unclassified areas, most hazardous areas and corrosive environments*

## INTRODUCTION

AutoWatt Xtra encompasses the very latest self-regulating technology combined with the use of high temperature PFA insulating materials to offer one heating cable that is superior to all others.

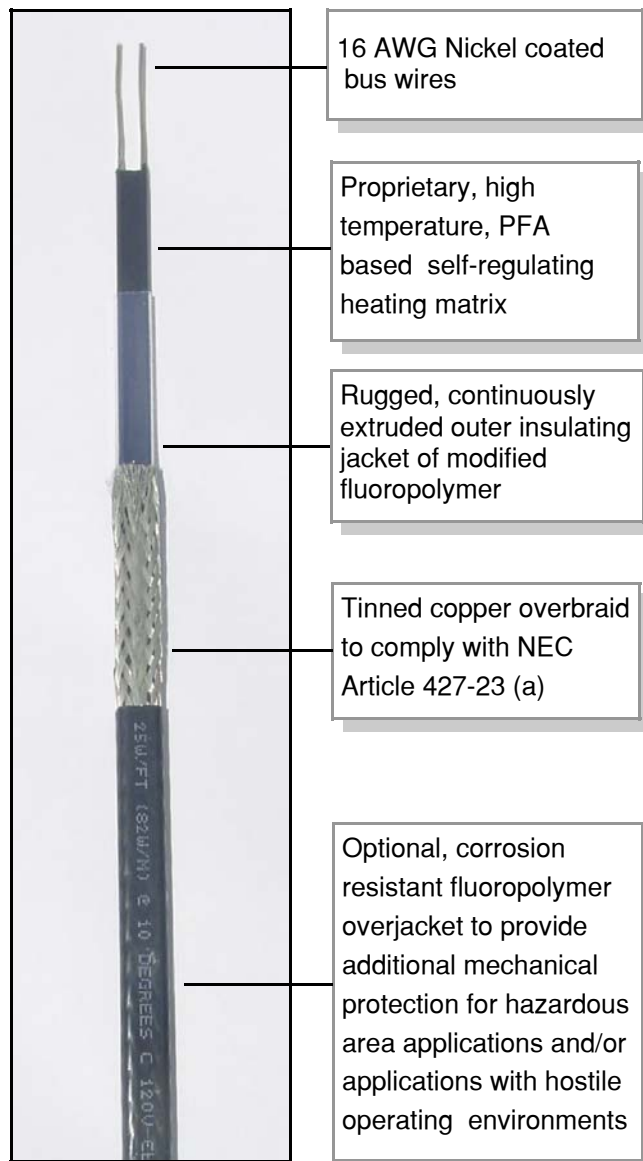
Consider the following competitive facts:

- ◆ AutoWatt Xtra can provide process temperature maintenance up to 375°F. - *nearest competitive capability is 300°F*
- ◆ AutoWatt Xtra can be used on applications with exposure temperatures up to 450°F - *nearest competitive capability is 420°F*
- ◆ AutoWatt Xtra can provide up to 30 watts per foot of power - *nearest competitive capability is 20 watts per foot.*

AutoWatt Xtra heating cables provide an ideal solution for industrial freeze protection and process maintenance applications that require high temperature qualifications. With power ratings up to 30 watts/ft, AutoWatt Xtra heating cables are also perfect for heating large diameter pipes with high levels of heat loss.

The self-regulating feature of AutoWatt Xtra ensures complete safety and reliability. AutoWatt Xtra cannot overheat or burnout even when overlapped upon itself.

AutoWatt Xtra heating cables are third party approved by FM Approval, CSA and SEMCO for use in unclassified areas, most hazardous areas and corrosive environments (see Specification shown on the opposite page)



# SPECIFICATION

# AutoWatt Xtra

**MAXIMUM TEMPERATURES** Maintenance 375°F (190°C)  
Exposure 450°F (232°C)

**TEMPERATURE CLASSIFICATION** T4 5-15 w/ft  
T5 20-30 w/ft

**OPERATING VOLTAGES** 110 / 120  
208/220/240/277

## APPROVALS AND CERTIFICATIONS

FM Approvals (Factory Mutual)      Unclassified locations  
Class I Div 1\* Groups B, C & D  
Class I Div 2 Groups A, B, C & D  
Class II / III Div 1\* Groups E, F & G  
Class II / III Div 2 Groups F & G  
Class I, Zone 1\* Group IIB + H2  
Class I Zone 2, Group IIC

Canadian Standards Association (CSA)      Unclassified locations 3(A,B,C), 5(A,B)  
Class I Div 1\* / 2 Groups B, C, & D  
Class I Div 2 Groups B, C & D  
Class II Div 2 Groups F,G

\* Contact HTD Heat Trace, Inc for specific information on all Div 1 applications and systems.

## MAX LENGTH (FT) vs. CIRCUIT BREAKER SIZE

Ref	Start up temp	120 VAC			240 VAC		
AWX 5	50°F	180	240	335	360	480	540
	0°F	165	220	330	325	430	540
	-50°F	150	200	300	290	385	540
AWX 10	50°F	120	160	180	240	320	360
	0°F	105	140	180	230	305	360
	-50°F	90	120	180	225	300	360
AWX 15	50°F	80	105	135	160	210	270
	0°F	70	90	135	140	185	270
	-50°F	60	80	120	120	160	240
AWX 20	50°F	60	90	120	115	150	230
	0°F	55	70	110	110	145	220
	-50°F	50	65	100	105	140	210
AWX 25	50°F	45	60	85	90	120	170
	0°F	40	50	80	80	100	160
	-50°F	40	50	80	80	100	160
AWX 30	50°F	40	50	70	80	100	140
	0°F	35	45	70	70	90	140
	-50°F	35	45	70	70	90	140

### Note:

HTD Heat Trace Inc and the 2002 National Electric Code, Sections 426 and 427 require the use of ground fault equipment protection .

Square D type QO-EPD and QOB-EPD circuit breakers with 30mA trip levels are recommended.

## PRODUCT RANGE

Product Ref	Watts/ft	Voltage	Max Circuit
AWX 51	5	120	335
AWX 101	10	120	180
AWX 151	15	120	135
AWX 201	20	120	120
AWX 251	25	120	85
AWX 301	30	120	70
AWX 52	5	240	540
AWX 102	10	240	360
AWX 152	15	240	270
AWX 202	20	240	230
AWX 252	25	240	170
AWX 302	30	240	140

## ORDERING INFORMATION

Feature	Designation
Product Code	AWX
Watts / ft	5, 10,15, 20 or 30
Voltage    120 240	1 2
Tinned Copper Overbraid	C
Optional Overjacket	Fluoropolymer (T)

### EXAMPLE

To order a 15 watts/ft cable for operation on 120 volts, complete with overbraid and fluoropolymer overjacket, the final product and ordering code should read:

**AWX 151CT**

## ACCESSORIES

HTD Heat Trace, Inc supplies a full range of accessories for use with the AutoWatt Xtra product range. Accessories include termination kits, splice kits, tee splice kits, fixing tape, heat transfer tape, junction boxes and thermostats. Please consult HTD for full details.

## *SUPPORTING LITERATURE*

### *POWER OUTPUT GRAPHS*

The power output (watts/ft) of all types of self-regulating heating cables vary with operating temperature. To determine the power output of all WinterSafe, WinterSafe Plus and AutoWatt Xtra heating cables, please see the supporting document titled *"Power Output Graphs"*.

### *SYSTEM ACCESSORIES*

Details of the End Termination, Splice and Tee Splice Kits for use with WinterSafe, WinterSafe Plus and AutoWatt Xtra heating cables are shown in the supporting document titled *"Heating Cable Accessories"*. Please consult the applicable page for the specific kit required.

For details of the pipe mounted Power Junction Box and End of Line Signal Light Kits, please consult the supporting document titled *"Heating Cable Accessories"* and then consult the applicable page for the specific kit required.

Fixing tape, heat transfer tape and Caution Labels can also be found on the final two pages of the supporting document titled *"Heating Cable Accessories"*.

### *CONTROLS*

Unclassified area and hazardous area rated thermostats, controllers and control systems for use with WinterSafe, WinterSafe Plus and AutoWatt Xtra heating cables can be found in the supporting document titled *"Thermostats, Controllers and Control Systems"*.

### *INSTALLATION*

The correct methods and procedures applicable to the installation of WinterSafe, WinterSafe Plus and AutoWatt Xtra heating cables are shown in the supporting document titled *"Self-Regulating Heating Cables - Installation Instructions"*.

Please contact HTD at the address shown below if you have any questions or if you require any of the above referenced support documentation.



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