

### INTRODUCTION

The IntelliSENS™ PH Series of high frequency induction preheaters precisely heat the wire or conductor prior to the extrusion process.

The NEXiS™ PH interface controls a high frequency power unit which applies electrical current at the optimum frequency and precise voltage, providing the exact pre-heat temperature at the desired line speed.

IntelliSENS™ PH Series preheaters utilize precision machined pulleys to ensure an even tension is applied to the wire, reducing SRL problems in data cable applications. Low-loss pulleys are available for slow moving products, reducing the amount of heat absorbed by the pulley and improving the efficiency and performance of the preheater. Long-life pulleys are made from a harder material, improving the longevity of the pulley when used with abrasive wire.

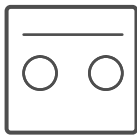
The NEXiS™ PH Interface features a 120mm x 85mm (4.73 x 3.35") screen and membrane navigation pad. Digital communication is provided via RS232, CANbus and optional ProfiBUS, ProfiNet or Ethernet IP. The analogue input is for external temperature setting. Analogue output represents the current applied to the wire. PH Series preheaters feature relay outputs for Alarm Condition, including Wire Break Detection and Over Voltage Range warnings. The unit has relay inputs for Emergency Stop and Remote Start / Stop.



### FEATURES



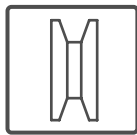
LINE SPEED  
DISPLAY



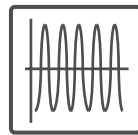
RELAYS



ANALOGUE  
INPUTS &  
OUTPUTS



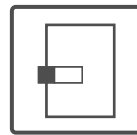
PRECISION  
LONG-LIFE  
PULLEYS



OPTIMIZED  
FREQUENCY



EMERGENCY  
STOP



DOOR  
INTERLOCK



WIRE BREAK  
DETECTION

### TECHNOLOGY

#### Advanced Frequency Control

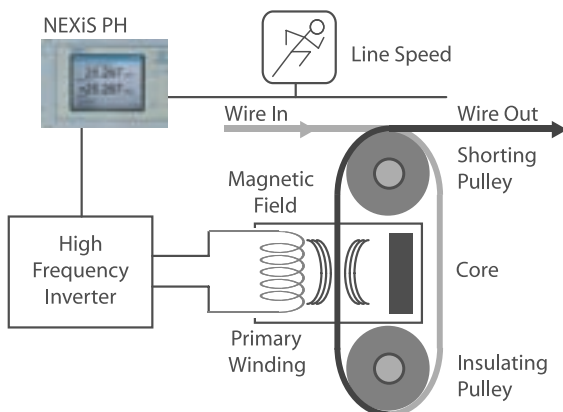
R = Resistance of Wire or Conductor within the heating loop

P = Power in Watts, required to heat the wire

V = Heating Loop Voltage, required to dissipate the power required

$V = \sqrt{(V \times R)}$ , where  $P \times R = \Delta T \times \text{Speed} \times K$

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### BENEFITS

- High Frequency Heating
- Advanced Frequency Control Technology
- Optimum Heating Cycle
- Consistent Conductor Temperature
- Precision Pulley and Bearing Assembly
- Hardened Pulley Surface for Long Life
- Wire Break Detection
- Line Speed, Voltage and Current Display
- Compact Design
- Digital Communication
- Door Interlocking and Emergency Stop

# SPECIFICATIONS

Model	PH160-10-200V	PH160-12-400V	PH300-20-400V
Maximum Wire Size	1.60 mm (0.063 inch) 14 AWG	1.60 mm (0.063 inch) 14 AWG	3.00 mm (0.12 inch) 8 AWG
Material	Cu/Al	Cu/Al	Cu/Al
Max Line Speed @ 100°C	1800m/min @ 1 mm <sup>2</sup> 5900 ft/min	1800m/min @ 1 mm <sup>2</sup> 5900 ft/min	1278m/min @ 2.5 mm <sup>2</sup> 4190 ft/min
Maximum Wire Temperature	200°C (392°F)	200°C (392°F)	200°C (392°F)
Power Output	10 kW	12 kW	20 kW
Maximum Loop Voltage	15 V	15 V	24 V
Induction Frequency (Maximum)	1469 Hz	1469 Hz	1469 Hz
Power Supply	200 VAC 3 Phase	400 VAC 3 Phase	400 VAC 3 Phase
Input Voltage	190 V to 240 V, 47 - 65 Hz	360 V to 440 V, 47 - 65 Hz	360 V to 440 V, 47 - 65 Hz
Pulley Diameter	160 mm (6.3 inch)	160 mm (6.3 inch)	300 mm (11.8 inch)
Wire Line Height		980 mm - 1200 mm (38.6 inch - 40.16 inch)	
Pulley Type		Contact / Insulating	
Dimensions	380 x 550 x 1500 mm 15 x 21.7 x 59.1 inch	380 x 550 x 1500 mm 15 x 21.7 x 59.1 inch	620 x 504 x 1575 mm 24.5 x 24.4 x
Preheater Weight	245 kg (540 lb)	290 kg (639 lb)	360 kg (794 lb)
Degree of Protection		IP53	
Operating Temperature		+5°C - 45°C (41°F - 113°F)	
Serial I/O		Profibus, CANbus, RS232	
Analogue Input (Preset Temp.)		0 - 10 Vdc = 0 - 250°C	
Analogue Output (Secondary Current)		0 - 10Vdc = 0 - 2000A	
Door Lock Solenoid		+24 Vdc Input to Release	
Start Input		Contact Closure or Logic Input	
Stop Input		Contact Closure or Logic Input	
Run Output		Contact Closure	
Emergency Stop Out/In		Out Relay - In 24 Vdc	
Controller Type		NEXiS PH	

## COMMUNICATIONS

**RS232**  
RS232 / USB  
Standard: in all PH units

**PROFIBUS**  
Profibus  
Option: in preheater

## PREHEATED & LARGE PULLEYS

PP320



PH450



## CONTROLLER FUNCTIONS

- Start & Stop Preheating
- Temperature Preset
- Multiple Languages
- Power Range Notification
- Set Material Type
- Wire Break Indication
- Active Current Limit
- Product Menu
- Pulley Loss Power Compensation
- Line Speed, Current, Voltage Display

## GENERAL OPTIONS

- Twin Wire Applications
- Range Switch
- Height Adjustable Plinth
- High Temperature Pulley Set
- Low Loss Pulley Set

## ACCESSORIES

CUSTOM VENTS



GUIDE ROLLERS



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