8600™

Detects Heater Loss - Avoids Production Problems

1/8 DIN Controller with Heater Break Alarm

DESCRIPTION

The 8600 is designed specifically to provide quality process control for Plastics Extrusion applications.

This control features a special Heater Break Alarm Function which monitors heater current and alerts the operator to failures when they occur – prior to production problems. Its Quick Transfer feature is a one shot operation which automatically sets the alarm condition for the heater break and is based on the nominal current value. In addition, its Auto/Manual key can be configured for fast display of amps or process temperature by a single key stroke.

Soft Start prevents premature heater failure due to high levels of moisture at start-up by drying heaters out prior to production. Soft-start is used in injection molding hot runner and other cartridge heater applications.

The 8600 controller incorporates our advanced tuning algorithms, with selectable pre-tune and self-tuning. The pre-tune is used on start-up and is a one-step tuning algorithm designed to get you to setpoint fast with self-tuning being enabled near setpoint and normal operating conditions to control overshoot. The self-tune is a continuous tuning algorithm or sometimes referred to as adaptive tuning. This control can also be manual fine tuned for specific applications.

Features can be specified to include up to 4 outputs, 1 sensor input, 1 current transformer input, and RS-485 Communication. This capability makes the West 8600 one of the most powerful controllers in its class.

APPLICATIONS:

Its powerful feature set and user-friendly, controls make the 8600 ideal for temperature control in plastic extruding applications. The 6800 reduces scrap and quality problems by monitoring and alarming heater break conditions.

INDUSTRIES

- Plastics extrusion and thermal forming
- Any others where temperature control can be aided by the monitoring of heater

FEATURES/BENEFITS

- Dual, 4-Digit Displays
- Special Algorithm for Electric Heater Application Combines West's Pre-Tune and Self-Tune
- Constant Display of Both Process and Alarm Status
- Setpoint Lock Security
- Optional Alarm Output
- Supplied Pre-Configured from the Factory

DANAHER
INDUSTRIAL CONTROLS

Customer Service +1 800.390.6405 • Technical Support +1 800.866.6659
www.westinstruments.com • www.danaherindustrialcontrols.com

Process Automation Worldwide Brands: LFE™ • Partlow™ • PMA™ • Rustrak™ • West™

WEST™ brand

8600™

1/8 DIN Controller with Heater Break Alarm

Detects Heater Loss
- Avoids Production Problems

SPECIFICATIONS*

STANDARD FEATURES

Control Types - Full PID with Pre-tune, Self-tune, Manual Tuning, or On-Off control. Heat only or heat & cool

Soft Start - Allows lower SP value and cycle time during the process start-up phase

Auto/Manual - Selectable from front panel, with bumpless transfer. Instant power-off feature also available as standard

Output Configuration - Up to 4 total. Max 2 for control (Heat & Cool), max 3 for Alarms, max 1 for retransmit Process value or Setpoint

Process Alarm Types - Process high, process low, SP deviation, band, logical OR

Heater Break Alarm Types - Current low or high, (in absolute amps or % of nominal current) plus contactor/thyristor short circuit

Human Interface - 4 button operation, dual 4 digit LED displays, plus LED indicators

PC Configuration -Off-line configuration from serial port if RS485 option is fitted.

ENVIRONMENTAL CHARACTERISTICS

Operating Temperature: 0° to 55°C (32° to 131°F)

Storage Temperature: -20° to 80°C (-4° to 176°F)

Relative Humidity: 20% to 95% non-condensing

ELECTRICAL

Supply Voltage: 90-264 VAC, 50/60 Hz, optional 20 - 50VAC; 22 - 65VDC

Power Consumption: 4 Watts, maximum

DISPLAY:

Type: Dual, Red 7 segment LED, 4 digit, Upper: 10mm high (0.39″) Lower: 8mm high (0.31″)

Annunciators: 3 LED status indicators

SENSOR/PROCESS INPUTS:

Thermocouple: J, K, R, S, T, B, L, & N.

RTD: 3 Wire PT100, 50 per lead maximum (balanced)

Impedance: >100M

Sampling: 4 per second, 14 bit resolution approximately

Sensor Break Detection: <2 secs, control O/P's turn off, high alarms activate for thermocouple ranges, low alarms activate for RTD

Heater Current: 0-50mA secondary from external current transformer. Display is scaleable up to 100 amps

OUTPUTS

Control Output:

Relay: SPDT 2A at 120/240V AC

SSR: >10V DC into 1 KOhm minimum

Triac: 1amp @ 40°C, Derate to 1/2amp @ 80°C

Alarms Option: 1 or 2 alarms plus Heater Break Alarm 2A 120/240V AC or SSR > 10V into 500 Ohm minimum

Recorder Output: 0-5V and 0-10V Retransmission SP/PV 500 ohm min 0-20mA and 4-20mA 500 ohm minimum

CONTROL FEATURES

Tuning: Pre-Tune and Self Tune Auto/Manual with "bumpless" transfer

Proportional Band: .5% to 999.9% of input span

Auto Reset: 1 second to 99 minutes 59 seconds and OFF

Manual Reset (Bias): 0 to 100%

Rate: 0 to 99 minutes 59 seconds

ELECTRICAL PERFORMANCE

Accuracy: +/- 0.25% of input span +/- 1 LSD (T/C CJC better than 0.7°C)

COMMUNICATIONS INTERFACE

Interface: RS-485; Modbus or West ASCII (Selectable)

Baud Rate 1200 to 9600 Baud

RATINGS/AGENCY APPROVALS

Conformance: CE, UL & cUL

PROTECTION

Front Panel Protection - IEC IP66 (NEMA 4) (Behind panel protection is IP20)

PHYSICAL DIMENSIONS

Height/Width: 96mm x 48mm (3.78″ x 1.89″)

Depth: 100mm (3.94″)

Panel Cutout: 92mm x 45mm (3.62″ x 1.77″)

Mounting: Panel Mount (bracket supplied)

WARRANTY

3 Years

* Specifications are for base models with standard features only unless otherwise noted. Specifications subject to change without notice in accordance with our DBS policy of continuous improvement. All product and brand names are trademarks of their respective owners. All rights reserved.

West™ brand and 8600™ are trademarks of Danaher Industrial Controls Group. All rights reserved.

© 2005 DICG Corp.

West Brand 8600 Data Sheet (8/05)

DANAHER
INDUSTRIAL CONTROLS

Customer Service +1 800.390.6405 • Technical Support +1 800.866.6659
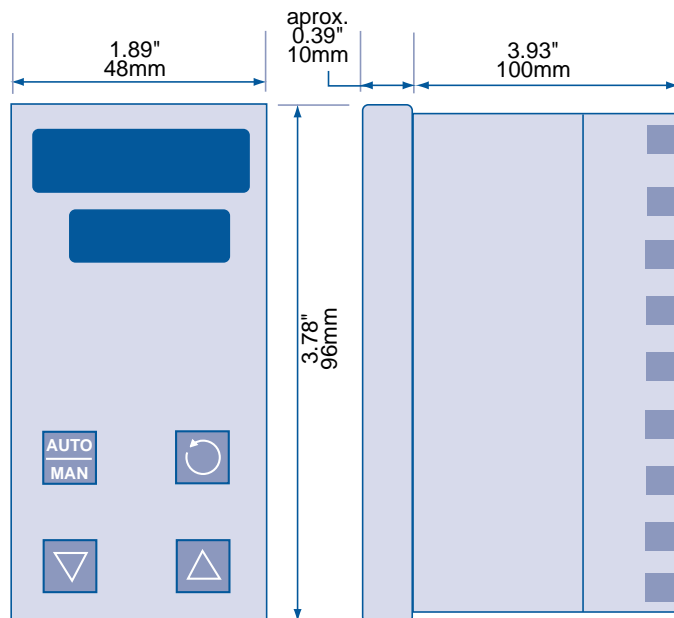www.westinstruments.com • www.danaherindustrialcontrols.com

Process Automation Worldwide Brands: LFE™ • Partlow™ • PMA™ • Rustrak™ • West™

8600™

1/8 DIN Controller with Heater Break Alarm

Detects Heater Loss - Avoids Production Problems

MODELS

Code 1: Model #	Code 2: Input Type	Code 3: Output 1 (Heat Output)	Code 4: Output 2 (Cool Output/Alarm and/or Heater Break)	Code 5: Output 3 (Alarm 1 or Recorder O/P)	Code 6: Options
N8601Z	☐	☐	☐	☐	☐ ☐
I/8 DIN Controller with Heater Break Alarm	**1** 3-wire RTD **2** Thermocouple	**1** Relay **2** SSR Driver **8** Triac	**0** None **1** Relay **2** SSR Driver **8** Triac **9** Dual Relay	**0** Not fitted **1** Relay **3** DC 0-10V **4** DC 0-20mA **5** DC 0-5V **7** DC 4-20mA **8** Triac	**10** RS-485 Serial Communication **02** 24VAC/DC Power Supply **12** RS-485 Serial Communication and 24VAC/DC Power Supply **30** Dual Setpoint **32** Dual Setpoint and 24VAC/DC Power Supply

DIMENSIONS - 1/8 DIN

1.89" 48mm

aprox. 0.39" 10mm

3.93" 100mm

3.78" 96mm

AUTO / MAN

Panel Cutout: 45mm x 92mm (1.77" x 3.62")

* Specifications are for base models with standard features only unless otherwise noted. Specifications subject to change without notice in accordance with our DBS policy of continuous improvement. All product and brand names are trademarks of their respective owners. All rights reserved.

West™ brand and 8600™ are trademarks of Danaher Industrial Controls Group. All rights reserved.

© 2005 DICG Corp.

West Brand 8600 Data Sheet (8/05)

Headquarters: 1675 Delany Road • Gurnee, IL 60031-1282 • USA
Phone: +1 847.662.2666 • Fax: +1 847.662.6633

Satellite Locations:
North America: North Carolina, South Carolina, Connecticut, Massachusetts, New York, Canada, British Virgin Islands • **Europe:** United Kingdom, Italy, France, Germany, Spain, Slovakia • **Latin America:** Brazil • **Asia:** China, Japan, Korea, Singapore

Customer Service:
Tel.: +1.800.390.6405
Fax: +1.910.879.5486
west.custserv@dancon.com

Technical Support:
Tel.: +1.800.866.6659
Fax: +1.847.782.5277
west.techsupport@dancon.com

DANAHER
INDUSTRIAL CONTROLS

www.westinstruments.com • www.danaherindustrialcontrols.com

Process Automation Worldwide Brands: LFE™ • Partlow™ • PMA™ • Rustrak™ • West™
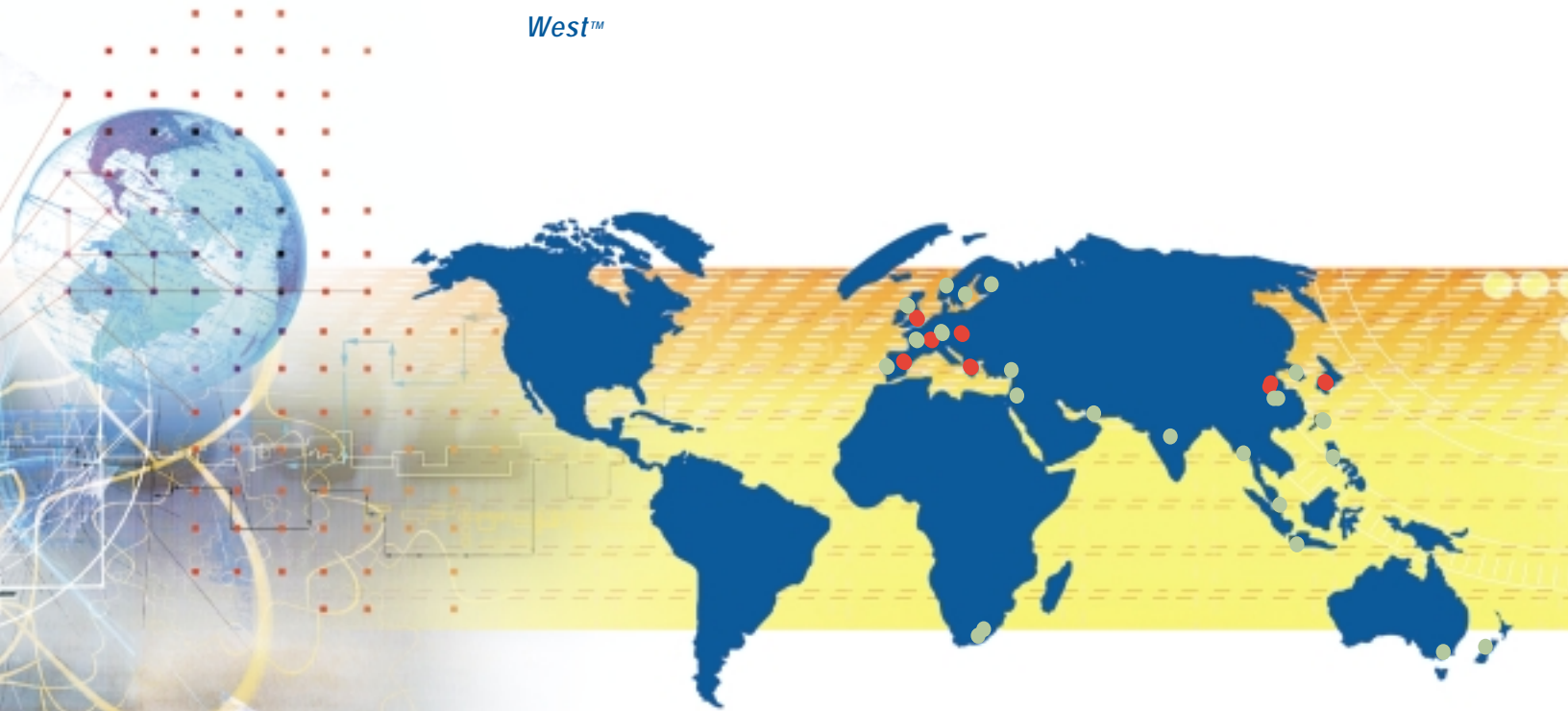
Process Automation Worldwide Brands:

LFE™

Partlow™

PMA™

Rustrak™

West™

More Available. With factories around the world, global sales and applications support, and an expansive network of distributors, we stay close to our customers - shortening lead times and fostering responsiveness. Three-day lead time is standard, with same-day shipments available on many of our products.

More Selection. We have a broad selection of controllers to meet application requirements in a variety of industries. User-configurable, accurate and flexible, with low, mid, or high level performance ranges, our controller products meet your system and budgetary requirements.

More Reliable. Our experience with more than 25,000 customers has taught us to design controllers that are reliable and durable, with quality standards that meet six sigma requirements.

For additional information or a full-line catalog, contact DICG Customer Service or visit our web site.

Headquarters: 1675 Delany Road • Gurnee, IL 60031-1282 • USA
Phone: +1 847.662.2666 • Fax: +1 847.662.6633

West Brand 8600 Data Sheet (8/05)

Satellite Locations:
North America: North Carolina, South Carolina, Connecticut, Massachusetts, New York, Canada, British Virgin Islands • **Europe:** United Kingdom, Italy, France, Germany, Spain, Slovakia • **Latin America:** Brazil • **Asia:** China, Japan, Korea, Singapore

Customer Service:
Tel.: +1.800.390.6405
Fax: +1.910.879.5486
west.custserv@dancon.com

Technical Support
Tel.: +1.800.866.6659
Fax: +1.847.782.5277
west.techsupport@dancon.com

DANAHER
INDUSTRIAL CONTROLS

www.westinstruments.com • www.danaherindustrialcontrols.com

Process Automation Worldwide Brands: LFE™ *• Partlow*™ *• PMA*™ *• Rustrak*™ *• West*™