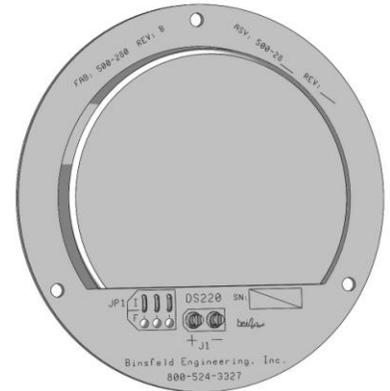


DS220 Digital Stator (801-100 and 801-101)

The DS220 is a digital upgrade option for Rieter/SwissTex frequency-based rotary temperature transmitter systems. The device mounts in place of the original stator circuit board and accepts the Rieter frequency signal directly from the rotating transmitter. The DS220 is configurable for one of two different output signals using a set of jumpers. With the jumpers in the first position, the DS220 generates the original Rieter frequency signal for use with a standard Rieter heater control system. With the jumpers in the second position, the DS220 generates a linear 4-20 mA current signal suitable for off-the-shelf process controllers.

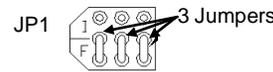


Installation

1. Configure DS220 for current or frequency output as indicated in the adjacent figures for "Current Output" and "Frequency Output".
2. Remove existing stator assembly from machine.
3. Disconnect power/signal wires from existing stator circuit board.
4. Remove and retain plastic retaining ring, screws, and washers from stator.
5. Install DS220 in stator with solder forks and serial number block facing outward. See Installation Overview (pg. 2).
6. Secure DS220 with hardware from step 4 above.
7. Reconnect (solder) power/signal wires to J1 on DS220 with correct polarity. See adjacent Power/Signal Connections.
8. Reinstall stator assembly on machine.

Frequency Output

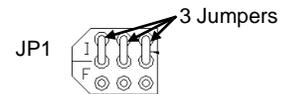
For frequency output (21,731 Hz to 14,935 Hz) install 3 jumpers from center holes to "F" holes as shown.



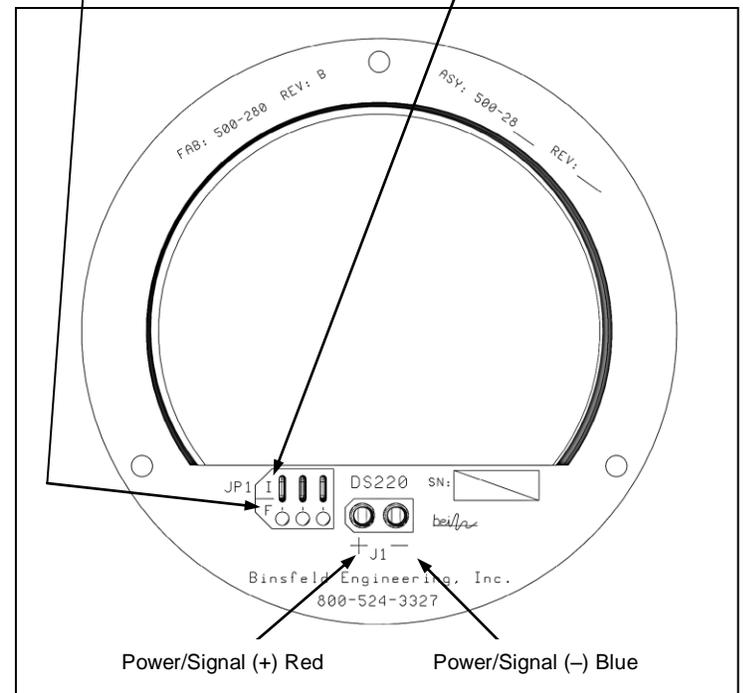
801-101 Frequency Output "F"

Current Output

For current output (4-20 mA) install 3 jumpers from center holes to "I" holes as shown.



801-100 Current Output "I"



Power/Signal Connection

DS220 Digital Stator (801-100 and 801-101)

Specifications

Current Output Configuration (801-100)

Current Loop Power Input: 12 VDC to 24 VDC, 25 mA max

Current Draw: 4 mA for 21,731 Hz input (0°C RTD temperature)
20 mA for 14,935 Hz input (300°C RTD temperature)
24 mA for error condition (out of range or no input signal)

Max. Current Draw Error: $\pm 0.167\%$ of full scale ($\pm 0.5^\circ\text{C}$ for 300°C range) for 14,935 Hz to 21,731 Hz input frequency, over specified power supply and operating temperature range

Operating Environment: Temperature: 0-85°C
Humidity: 0-90% RH, non-condensing

Input Signal: Infrared phototransistor at 940 nm

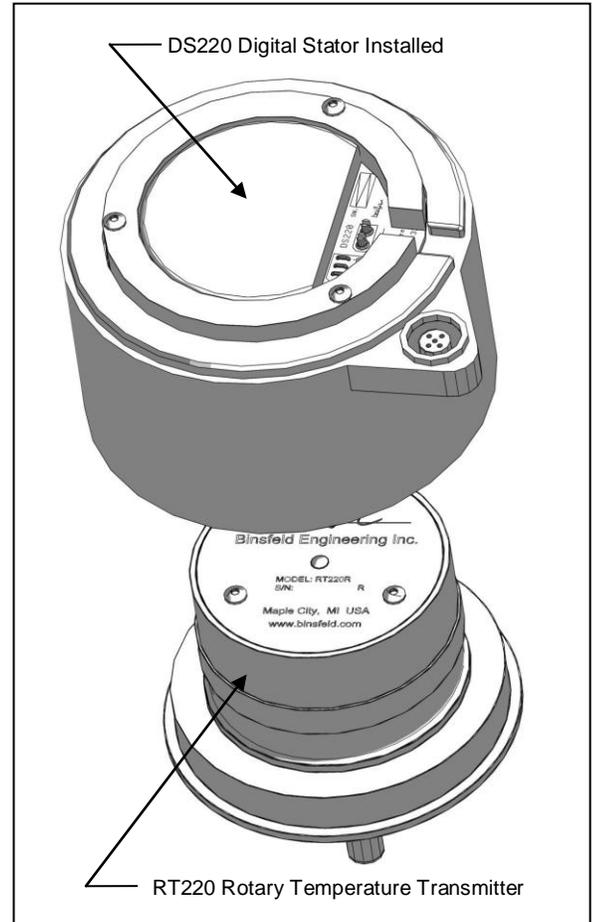
Rieter Frequency Output Configuration (801-101)

Output Signal: Open collector output: 30 V max, 120 mA max

Frequency Form: Rectangular pulses

Frequency Range: 14,935 Hz to 21,731 Hz

Input Signal: Infrared phototransistor @ 940 nm



Installation Overview

This User's Guide is subject to change without notice.

Warranty

Binsfeld Engineering Inc. warrants this product to be free from defective materials and workmanship for a period of two years from the date of delivery to the original purchaser and that its products will conform to specifications and standards published by Binsfeld Engineering Inc. Upon evaluation by Binsfeld Engineering Inc., any product found to be defective will be replaced or repaired at the sole discretion of Binsfeld Engineering Inc. Our warranty is limited to the foregoing. Binsfeld Engineering Inc. disclaims any warranty of merchantability or fitness for intended purpose.