

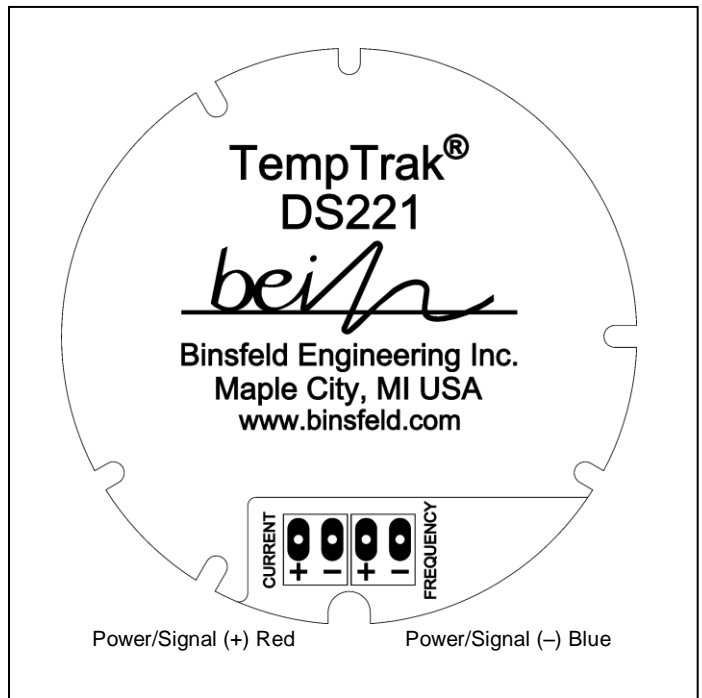
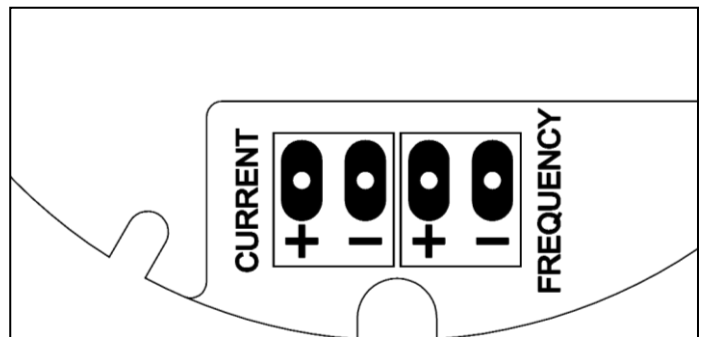
# DS221 Digital Stator (801-104)

The DS221 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 DS221 is capable of one of two different outputs. When connected to + and - FREQUENCY, the DS221 generates the original Rieter frequency signal for use with a standard Rieter heater control systems. When connected to + and - CURRENT, the DS221 generates a linear 4-20 mA current signal suitable for off-the-shelf process controllers.



## Installation

1. Disconnect power/signal wires from existing stator circuit board.
2. Remove plastic retaining ring, screws, and washers from stator.
3. Remove existing stator assembly from the machine.
4. Install DS221 in stator housing with serial number block facing outward. See Installation Overview (pg. 2).
5. Secure the new stator with the hardware provided with the DS221 digital stator.
6. Reconnect (solder) power/signal wires to either "FREQUENCY" or "CURRENT", but not both. on the DS221 with correct polarity. See adjacent Power/Signal Connections.
7. Reinstall stator assembly on machine.



**Note:** It is recommended that you do not use both the Frequency and Current outputs simultaneously. This could cause ground loop problems and possible damage to the DS221 and connected equipment.

### Power/Signal Connection

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## Specifications

### Current Output (+/- CURRENT)

Current Loop Power Input: 12 VDC to 30 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)  
20.1 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

Temperature: 0-85° C, non-condensing

Input Signal: Infrared phototransistor at 940 nm

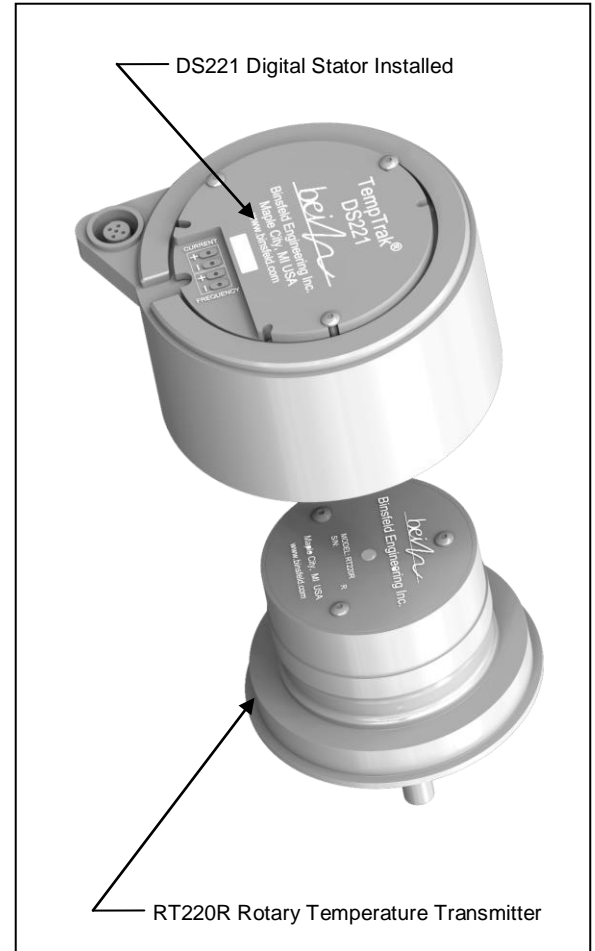
### Rieter Frequency Output (+/- FREQUENCY)

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.