

AUTOMATIC PRISM WASH WITH STEAM

Availability/Compatibility of features:

| Feature: | Availability/compatibility: |
|------------------------------|-----------------------------|
| Prism wash system with steam | PR-01-S |

INTRODUCTION

For any refractometer it is necessary to keep the prism surface clean. Due to the K-Patents self-cleaning design, two out of three of all applications can be measured without any prism cleaning. In some applications the process flow does not keep the prism clean because of sticky process medium or low flow velocity. K-Patents has developed two cleaning options for these applications: prism wash with steam and prism wash with high-pressure water. Prism wash with steam is for use in applications where steam can remove coating from pipe lines.

The components of a steam wash system are a sensor with integral steam nozzle mounted at the sensor head, a shut-off valve for steam line and an indicating transmitter equipped with a relay unit (Wash Relay –WR or Relay unit PR-7080) to drive the wash valves. A steam pressure reducing valve

and a strainer for the steam line are available as an option.

In the small picture below the steam wash flushes the prism surface effectively. The nozzle is installed near the side of the prism. The steam flush is parallel, so any damages to the prism due to steam shocks or impurities in the steam line are eliminated.

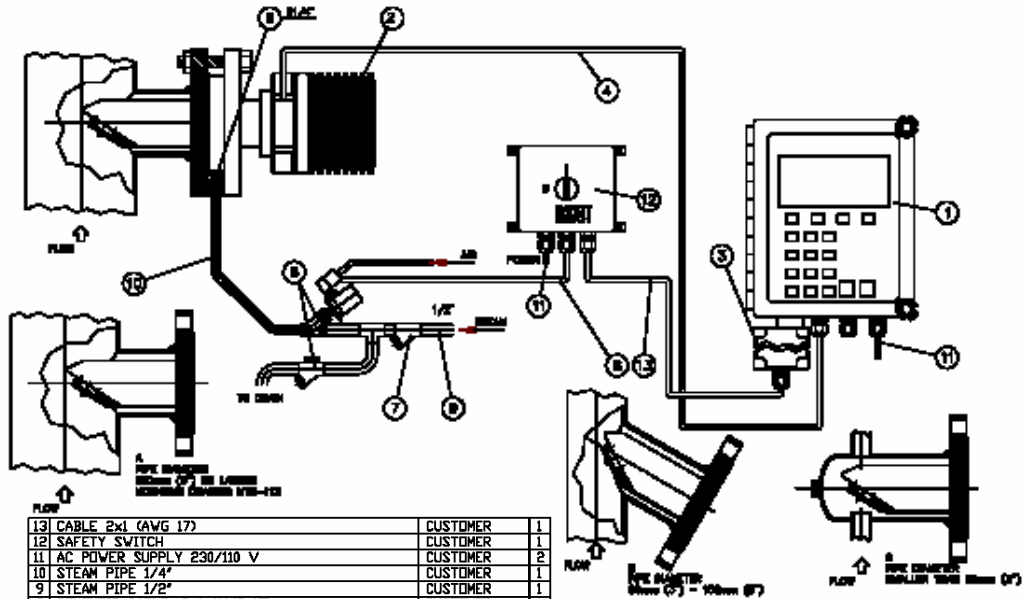


The built-in relays of the Indicating transmitter can be configured to control the prism wash cycle.

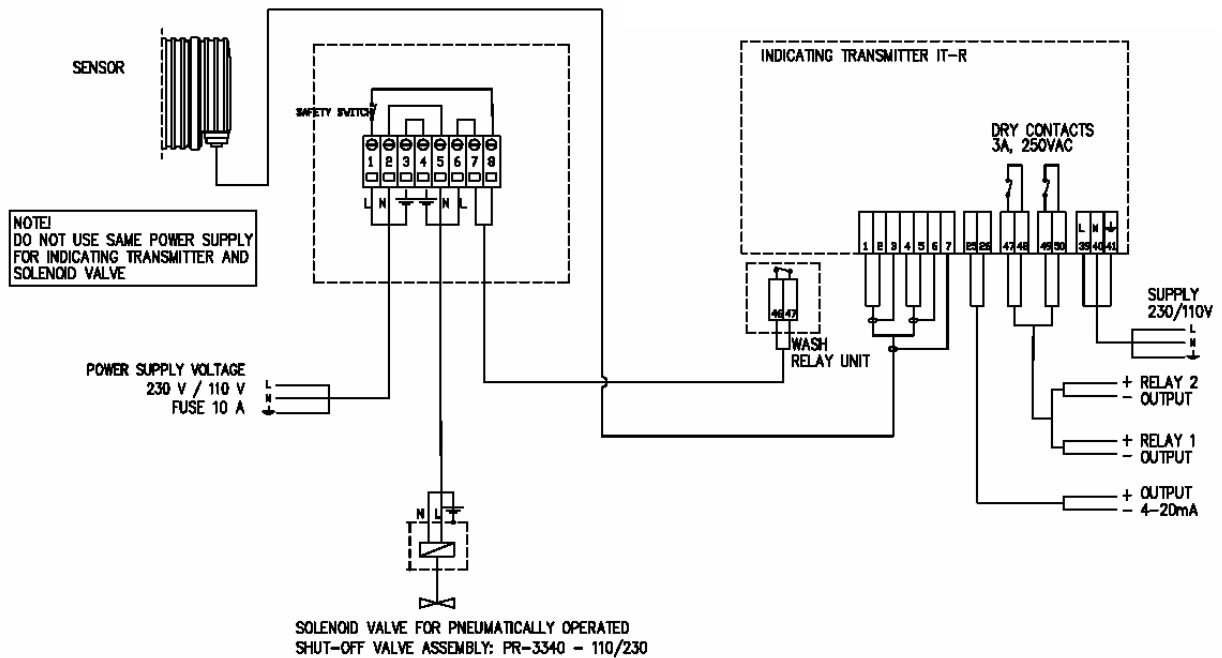
K-Patents has increased the intelligence of the wash systems by implementing prism wash diagnostics. The prism wash is automatically prevented, if the process temperature is below the set low process temperature limit or, if the TEST value (raw data on measurement) is 240 or higher. In addition, it is possible to configure one switch input for prism wash preventing signal.

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A prism wash system for steam with Wash control unit -WR: components and wiring.



| | | | |
|---------------------|---|-------------|---|
| 13 | CABLE 2x1 (AWG 17) | CUSTOMER | 1 |
| 12 | SAFETY SWITCH | CUSTOMER | 1 |
| 11 | AC POWER SUPPLY 230/110 V | CUSTOMER | 2 |
| 10 | STEAM PIPE 1/4" | CUSTOMER | 1 |
| 9 | STEAM PIPE 1/2" | CUSTOMER | 1 |
| 8 | SOLENOID CABLE, 3x1 (AWG 17) | CUSTOMER | 1 |
| 7 | STRAINER PR-3342 | K-PATENTS | 1 |
| 6 | CHECK VALVE PR-3302 | K-PATENTS | 1 |
| 5 | SHUT-OFF VALVE&STEAM TRAP PR-3340-230/110 | K-PATENTS | 1 |
| 4 | CABLE PR-6001 BETWEEN INDICATING TRANSMITTER AND SENSOR | K-PATENTS | 1 |
| 3 | WASH RELAY UNIT | K-PATENTS | 1 |
| 2 | SENSOR PR-01-S | K-PATENTS | 1 |
| 1 | INDICATING TRANSMITTER IT-R | K-PATENTS | 1 |
| PART SPECIFICATIONS | | SUPPLIED BY | |



A prism wash system for steam with Relay unit PR-7080: components and wiring.

