

Mini-Pak™ 3000 Injector

Honeywell Enraf



INCORPORATES A STATE OF THE ART
METERING/CONTROL MANIFOLD DESIGN
WITH THE ENHANCED MINI-PAK CONTROL
MODULE.

**The most advanced technology additive injector
on the market**

Mini-Pak™ 3000 Injector

This injector is a dedicated, customized micro-controller built exclusively to manage chemical injection. Functionality of it is the result of decades of chemical injection control experience. Dedicated solely to chemical injection, the program optimizes the uniquely selected hardware to produce an extremely fast and efficient device. Users familiar with Honeywell Enraf's existing parameter sets will feel at home setting up the Mini-Pak™ 3000 for their application.

Features

- Cyclical injection control
- Process paced recipe tracking
- Explosion proof construction (Class 1, Division I & II, Groups C & D)
- Infrared Hand-Held Controller access (Intrinsically safe)
- 4 levels of password security (up to 8 users)
- Setup parameters and totals stored in non-volatile memory
- CONTREC 1010 Smartcom Additive ready

Electrical Inputs

- **AC Power:** 90 - 265 Volts, 48 - 63 Hz
- Instrument current consumption: 5 watts
- **AC Power Input:** fuse protected GMC-1/2
- **AC Status Input:**
 - (1) optically isolated
 - 30K ohms (capacitive) to L2 (Neutral) @ 50 Hz
 - 25K ohms (capacitive) to L2 (Neutral) @ 60 Hz
 - Driving circuit must rise to greater than 85 Vac for "on" state and fall below 20 Vac for "off" state
 - Maximum on-off-on frequency 5 Hz
- **DC Status Input (reset, enable, pacing) and DC Pulse Input (additive meter sensor input)::**
 - Driving circuit must sink 10 mA to within 0.8 volts of DC common, signal must rise

Find out more

For more information...

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to at least 4.5 Vdc

- 30 Vdc open circuit maximum
- Maximum pulse input frequency 1 kHz

Electrical Outputs

AC Multi-functional Outputs:

- (2) Optically isolated, AC solid state triac outputs, with one feed
- Feed voltage range: 24 Vac to 280 Vac
- Steady state load current range: 5A (rms) maximum into an inductive load
- Leakage current at maximum voltage: 100 microamps maximum

DC Multi-functional outputs:

- (1) Optically isolated open collector-open emitter transistor
- 100 mA maximum current
- 30 Vdc maximum open circuit voltage
- Raw additive meter signal 1:1
- Additive meter feedback pulses, 1, 10, 100, 1000 pulse per unit volume of additive; 50% duty cycle
- Piston switch/post injector feedback
- **Communications:**
 - EIA RS-485 multi-drop, poll and reply, slave only
 - 2-wire 32 injectors total on one drop
 - Data rates of 1200/2400/9600/19,200 baud supported
 - 8 data bits, no parity, one stop bit, fixed

Other

Display:

- Module format: 2 line by 16 character per line
- Type: liquid crystal, backlit
- Character format: 5 by 7 dot matrix

Environmental:

- Ambient operating range: -40°F - 150°F
- Display may appear slow at temperatures below 0°F. Humidity 5 - 95% without condensation

Enclosure Ratings:

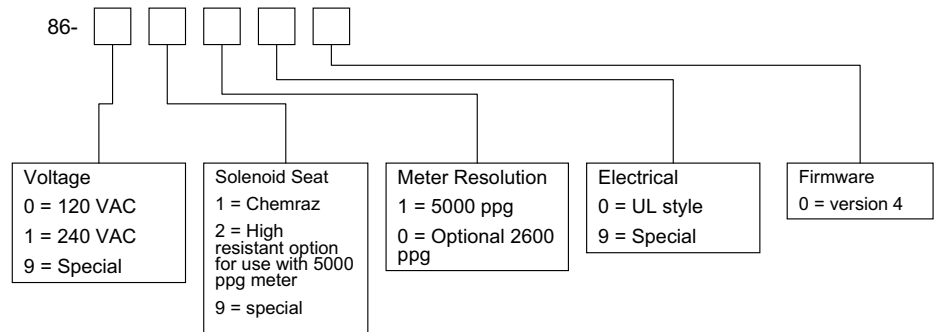
- Killark GRB type, Class I, Division I, Groups C & D
- Class II, Groups E, F, & G explosion proof when installed with approved seals
- Otherwise, Class I, Division 2, Groups C & D

Monoblock Electrical Specifications

- Explosion proof solenoid standard, available in 120/240 VAC models
- 3-wire hall effect meter pickup requires 5-30 VDC supply and supplies open collector high speed pulses, unsourced
- 5000 PPG
- UL approvals for solenoid and meter sensor for Class I, Division I, Group C & D
- 1/2" FNPT conduit openings in sensor and solenoid may be oriented to top or bottom of the block
- 3/8" FNPT Inlet and Outlet connections machined into the block

Monoblock Mechanical Specifications

- 303 stainless steel block
- Explosion-proof solenoid machined into the block with Chemraz seat
- Combination isolation and flow control valves on inlet and outlet
- Quick Connect test port intergrated in the block with Viton Seal
- All other elastomers are Teflon or Teflon encapsulated silicon
- Optional all Kalrez/Chemraz seals are available
- Standard with Ryton Gears: Standard oval gear meter (flow range .1 - 3 GPM) nominal K-factor 5000



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