



# FGI 301

## Burner Management System *for atmospheric industrial heaters*



The FGI 301 burner management system has been specifically developed for atmospheric heaters. It has the complete electrical and performance certification approval as a combustion safety control as required in CSA codes such as B149.3, CAN 1- 3.1, etc. Due to the of the lack of choice when it comes to compliant products available for the often severe oil patch environment, this product was designed especially for that use - harsh outdoor conditions and the low power requirements at remote sites.

Gone are the days when an operator is required to light an industrial burner using the traditional 'flaming rag on a stick', with all its inherent safety concerns. Using the FGI 301 this procedure is performed safely, conveniently, and reliably. And if the pilot does blow out, the FGI 301 will take the necessary actions to attempt re-ignition or safety shut down. There is no better time than now to incorporate these significant advantages into your atmospheric heater.

### applications

- Treaters
- Line heater
- Glycol heaters
- Salt bath heaters
- Dehydrators
- Direct fired heaters
- Non-blower type furnaces
- Heated Tanks
- Incinerators
- Other natural draft heaters

- Approved for CSA Class I Div 2, C22.2 #199 M89
- Cost Effective: Save-a-valve with Proof of closure
- Economic: minimal heater down-time; helps prevent hydrate formation
- Environmental: reduction in emission of unburnt fuel gas
- Advanced unique features (see back for more!)



Nagy Burner Control is now **Titan Logix Corp.**, with dealer sales and service offices throughout Western Canada



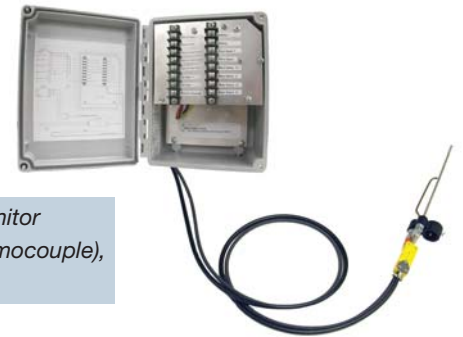
# FGI 301 features



*After the programmed purge cycles are complete, the FGI 301 turns on the pilot gas and supplies the ignition spark for the pilot. The pilot flame is then monitored with the flame rod (thermocouple is an additional option). When acceptable, the main burner gas is turned on. The FGI 301 then continuously monitors the pilot flame and takes action to promptly stop the flow of fuel gas if the pilot flame fails, or if a safety interlock condition occurs. After appropriate purge routines are completed it initiates the burner relight sequence (manual or automatic operation). Flame failure trips local and remote alarm outputs.*

- Approvals: CSA Class 1 Division 2 Groups A, B, C, D. T5 Temperature rating. CSA C22.2 No.199-M89, 0-M91, 0.4, 3, 94-M91, 213-M1987
- Power Requirements: 12 VDC or 24 VDC +/- 10%; or 24 VAC +/- 10%
- Display: 2 line x 20 character vacuum fluorescent display. Full text messages. - 40 to + 60C.
- Solenoid Ratings Supported: 12 VDC, 24 VDC, or 24 VAC
- Appliance Size: Up to 10MM Btuh per burner
- Programming: Factory Programmed to correspond to the heater's specific design parameters. User replaceable EEPROM.
- Timers: Prepurge: 1 second to 180 minutes. Postpurge: 1 second to 180 minutes. High Fire Start: 1 seconds to 180 minutes
- 3 relight attempts
- Flame-out timing: 0.8 seconds
- Operating Temperature: -40 to +60C
- Ignition Source - FMI 100: DC Transformer spark ignition coil.  
FGI 301 Controller can be 100's of feet away from ignition coil
- Safety Switch Input: Series alarm, Low Pressure alarm, High Pressure alarm, Low Liquid Level alarm, High Temperature alarm.
- Flame monitor Input - Flame Rod: FMI 100, once ignition is completed then the ignitor becomes a flame rod. Proves the presence of a pilot flame.
- Flame monitor Input - Thermocouple: Optional Thermocouple input. Proves the quality of the pilot flame.
- Proof of Closure Inputs: Main burner, Low fire start.
- Remote run/stop Input
- Alarm Output
- Solenoid Outputs: 1 x pilot, 2 x main, 1 x high fire start
- Communications: RS 232/485 (Modbus)
- One sensor for ignition and flame fail using Titan's advanced flame rod design.
- 3 operator push buttons: Start, Stop, Menu

*Standard FGI 301 kit includes: FGI 301 Controller, FMI 100 Sparker and Flame Rod circuitry, Ignitor (doubles as the flame-rod), Pilot mounting bracket (for ignitor, user-supplied pilot, optional thermocouple), Ignition cable. Thermocouple and thermocouple cable is optional.*



## locations

### Head Office

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### Calgary Sales Office

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