R.K. Instruments & Controls

TECHNICAL DATASHEET

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Flame Relay — Ionization / Flame Sensor Module

Brand: R.K. Instruments & Controls | Category: FLAME RELAY

Specifications

Product Type	**Ionization / Flame Sensor Flame Relay Module**
Operating Voltage	**230V AC (±10%), 50Hz**
Power Consumption	**~3 to 5VA**
Input Sensing Type	**Flame Rod / Ionization Sensor (Rectification Principle)**
Response Time	**Flame Failure Detection ≤1 to 2 Seconds**
Output Contacts	**2 Potential-Free Changeover Contacts (2×SPDT / 2 C/O)**
Contact Rating	**~5A at 230V AC (Resistive)**
Mounting	**DIN-Rail or Panel Surface Mount**
Status Indicators	**POWER (Red LED — Mains On) · FLAME (Green LED — Valid**
Output Terminals	**Top Row: 2× NO-C-NC Potential-Free Contact Groups**
Supply & Sensor Terminals	**Bottom Row: L/N Mains Input · FLAME SENSOR / EARTH Sensor Input**
Manufacturer	**R.K. Instruments & Controls**



Description

R.K. Instruments & Controls manufactures this Flame Relay, an ionization / flame sensor module used for flame monitoring and supervision in industrial gas and oil burners. It detects the rectification current generated across a flame rod (ionization electrode) and provides potential-free changeover contacts for burner sequence interlocks or alarm annunciators. The unit operates on 230V AC (±10%), 50Hz, drawing approximately 3 to 5VA, and senses the flame rod / ionization sensor via the rectification principle, with flame-failure detection response typically within 1 to 2 seconds. Output is via 2 independent potential-free changeover contact sets (2×SPDT), each rated approximately 5A at 230V AC resistive — one set for burner-run status/safety-valve interlock, the second for remote PLC signalling or auxiliary interlocks. The unit is DIN-rail or panel-surface mountable, with POWER (red LED, illuminates on mains-on) and FLAME (green LED, illuminates on valid flame signal) visual status indicators on the front face. Wiring: the top terminal row carries the two NO-C-NC output contact groups; the bottom row carries L/N mains supply input and the FLAME SENSOR / EARTH sensor input, with FLAME SENSOR connecting directly to the ionization flame rod inside the combustion chamber and EARTH connecting to the burner body/chassis ground to complete the ionization rectification path.

Typical media compatibility: CNG, PNG, LPG, Air, Nitrogen — confirm against application before installation.