Application
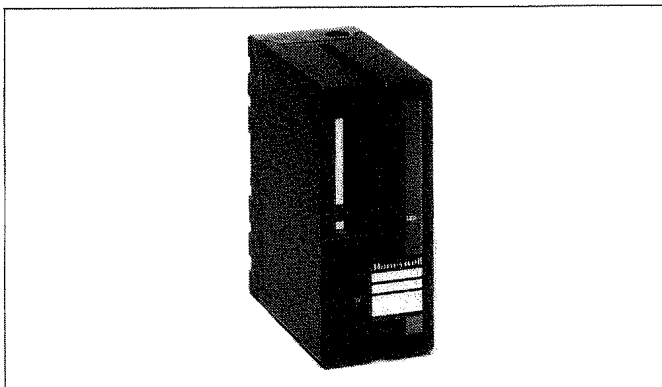
These flame switches are for application in large commercial and industrial burner installations where they can be used:
(i) as simple flame switches - model R4348A - indicating the presence or absence of flame, or,
(ii) as flame safeguard controls - model R4348B - capable of providing system «safe-start» check and flame sensing functions.
They can also be used in installations using an R7241 microcomputer-based burner control system-to extend the number of burners being controlled.
Both models include a 3-pole flame relay which is energised when flame is sensed and de-energised when «no-flame» is sensed; the «B» model additionally includes a 3-pole line voltage «load relay».

Specifications

Electrical rating: can operate on 110 Vac, 120 Vac, 220 Vac and 240 Vac, 50/60 Hz

Power consumption: less than 15 VA

Enclosure: IP40

Ambient temperature limits (°C): storage: – 40°C to + 80 °C
operating: – 40°C to + 60°C

Contact ratings:

Load	Typical power factor	Maximum current rating (continuous operation)		Maximum In-rush current (A)
		220 V~ 240 V~	110 V~ 120 V~	
Solenoid valve	0.4	1,5A	2A	10 × rated current
Motorized valve	0.5	2A	4A	3 × rated current
Burner valve	0.6	3A	3A	5 × rated current
Ignition transformer	0.2	2.5A	4A	none
Other	0.95	4A	4A	none

If more than one safety shut-off valve is to be actuated by the R4348 it is recommended to use separate relay contacts rather than paralleling from one contact.

Maximum relative humidity: 90 % RH at 40°C (not to exceed saturation point).

Weight: 1.5 kg.

Flame sensors and amplifiers: will accept any of plug-in amplifiers and appropriate sensors listed in the table on page 3.

Flame indication: green LED on face of unit when illuminated indicates presence of flame. Logic output (see OPTIONS) enables remote indication of flame presence to be made.

Mounting: can be wall, DIN rail or panel mounted (with special adaptor). Ref. 46176617-502

Options: (see MODELS also)
(i) LED-METER. A series of colour coded LED's on the face of the unit which give a direct indication of flame current strength.
Green LED's indicate normal flame current strength; Yellow LED's indicate marginal signals; Red LED's indicate unsatisfactory flame signal strength.
(ii) JACK SOCKET. Allows the flame signal strength to be measured using a Honeywell W 136 micro-ammeter (or equivalent).
(iii) 4-20mA OUTPUT. The flame current value can be registered and/or displayed at a local or remote location. Load: 0 to 750Ω; Isolation: VDE 110, Group C, 250 Vac.
(iv) LOGIC OUTPUT. A voltage output state (0 or 1) which indicates the absence/presence of a flame - which may be utilised in a computer-based system. Level 1: 10V/10mA max; Isolation: VDE 110, Group C, 250 Vac.
(v) MARGINAL ALARM. When the flame current value drops to an unsatisfactory level this option provides an «early warning» of the condition. Contact output rating 1A, power factor 0,4. Isolation: VDE 110, Group C, 250 Vac.

Features

• R4348A with 3-pole flame relay performs flame detection function only.
• R4348B with 3-pole flame relay and 3-pole line voltage «load-relay» can perform flame detection and burner «safe-start» functions.
• Standard on all models is a green LED which is illuminated when the flame relay is energised.
• Options include:
- a variety of methods for indicating and/or recording the flame current strength.
- logic to commununicate relay status to a computer based system.
- manual alarm facilities.
• Unpowered relay outputs enable Honeywell sensors and amplifiers to be used with a wide range of logic schemes according to customer needs.
• Plug-in unit makes wiring and servicing easy.
• Plug-in flame signal amplifiers available to match a wide range of flame sensors (see page 12).

Accessories

46176612-501 - Subbase

Ordering information

Model Numbers		Notes (see OPTIONS, also)
R4348A	**R4348B**	
R4348A1000	R4348B1008	standard models
R4348A1018	R4348B1016	with flame current jack socket
R4348A1026	R4348B1024	with LED-meter
R4348A1034	R4348B1032	with 4-20mA output
R4348A1042	R4348B1040	with 4-20mA output and flame current jack socket

Model Numbers		Notes (see OPTIONS, also)
R4348A	**R4348B**	
R4348A1059	R4348B1057[a]	with 4-20mA output and LED-meter
R4348A1067	R4348B1065	with logic output
R4348A1075	R4348B1073	with logic output and flame current jack socket
R4348A1083	R4348B1081	with logic output and LED-meter
R4348A1091	R4348B1099	with marginal alarm and LED-meter

[a] ATG approved (France) with R7241