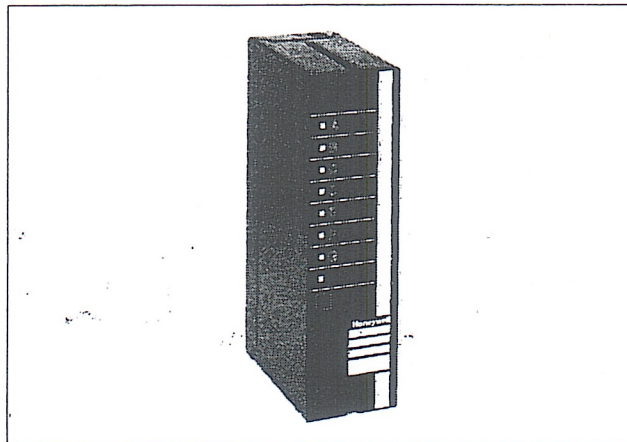


Application

The R7241 is an intelligent micro-computer based integrated control system for automatically fired gas, oil or combination fuel burner applications.

Its principal control and logic element is a highly reliable microcomputer which is programmed to provide levels of safety, functional capability and features beyond the capacity of conventional electro-mechanical or discrete solid state controls.

Functions provided by the R7241 burner control system include: automatic burner sequencing, flame supervision, status indication, first-out annunciation, self-diagnostics and energy conservation.



Features

- Dynamic self-check programmes continuously monitor system performance to ensure correct operation.
- Safety features include:
 - Special dynamic self-check logic
 - Expanded safe start check
 - Dynamic input check
 - Closed loop output check
 - High fire purge switch test
 - Low fire start switch test
 - Tamper resistant timing and logic
 - Check for flame-out at shut down
- First-out annunciation, and system diagnostics are provided by a system of flashing lights.
- Fault codes isolate the cause of a safety shutdown and identify the cause of a failure to start or proceed in the burner control sequence.
- LED sequence status lights provide positive visual information regarding programme position and alarm status.
- Energy saving features reduce unnecessary purge related heat losses.
- System chassis accepts any of seven solidstate plug-in flame amplifiers.
- Interlock circuits are «de-bounced» to reduce nuisance shutdowns due to intermittent/bouncing limit switches.
- Microcomputer technology provides dependable long-term operation.
- Com. output to be used with O7241 (Com. interface).

Specifications

Electrical ratings: Models available to operate at 110Vac, 120Vac, 220Vac and 240Vac, 50Hz, (60Hz on request)

Power consumption: Less than 25 W

Ambient temperature limits (°C):
 Operating: -10°C to + 60°C, Storage: - 40°C to + 80°C

Enclosure: IP40

Terminal ratings:

Terminal	Function	Rating (A)
1	Mains inlet (fuse)	≤ 7
10	Alarm	5A @ cos φ = 0,5
15	Blower	2A @ cos φ = 0,6
16	Ignition	1A @ cos φ = 0,2
17	Interrupted pilot	1A @ cos φ = 0,5
18	Intermittent pilot	1A @ cos φ = 0,5
19	Main valve	4A @ cos φ = 0,5
20,21 22,23	Firing rate motor and control	1A @ cos φ = 0,5
30	Shutter for C7012E,F or C7076	

Weight: 2,2 kg

Relative humidity limits: Should not reach saturation point

Flame failure response times: See page 3

Flame sensors: See page 3

Mounting: Can be wall, DIN rail or panel mounted. normally in the vertical position. Can also be mounted horizontally in which case a new label (order separately) must be stuck on the R7241 face. Subbase to be ordered separately.

Accessories: (to be ordered separately)

- (i) W136A test meter (includes 196146 meter connector plug; has SPL position with damping for testing self-checking flame detection systems)
- (ii) DIN rail mounting kit: 46 172737-502
- (iii) Panel mounting kit: 46 176553-501
- (iv) Label for horizontal mounting: 46 176546-502

Approvals: Designed to meet all appropriate European approval requirements

Ordering information

Microcomputer based burner control system with or without communication (com)

R7241		SUBBASE REF. 46176602	PROM SETTINGS ^a														OPTIONS ^b					SUPPLY VOLTAGE (V, 50Hz)	NOTES
w/o com	with com		T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	A	B	C	D	E		
		sec	sec	sec	sec	sec	sec	sec	sec	sec	min	min	sec	min	sec								
A1068	E1028	-503	30	2	2	5	5	5	5	10	5	10	15	20	10	5	NO	NO	LO	DYN	STA	220 V ac	(c)
B1033	F1000	-504	30	2	2	4,4	5,6	2,6	5	10	5	5	15	20	5	5	NO	NO	LO	DYN	STA	240 V ac	(d)
B1041	F1018	-504	30	2	2	4,4	5,6	2,6	5	10	5	5	15	20	5	5	NO	NO	LO	DYN	STA	110 V ac	(d)
B1056	F1026	-504	30	2	2	4,4	5,6	2,6	5	10	5	5	15	20	5	5	NO	NO	LO	DYN	STA	220 V ac	(e)
	C1007	-505	30	2	4	4	4	2	2	16	0,2	4	4	20	4	4	NO	NO	LO	DYN	STA	220 V ac	(f)
	C1015	-506	5	2	4	4	4	2	2	16	0,2	4	4	20	4	4	NO	NO	LO	STA	STA	220 V ac	(f)
	C1023	-507	30	2	4	1,2	4	2	2	16	0,2	4	4	20	4	4	YES	YES	LO	DYN	DYN	220 V ac	(f)

Notes: a) Firings description

- T1: prepurge
- T2: wait
- T3: preignition
- T4: pilot ignition
- T5: pilot proving
- T6: main ignition
- T7: main proving

- T8: postpurge with or w/o flame
- T9: postpurge w/o flame
- T10: no air not proven by T10 after call for heat
- T11: high fire not proven by T11 after start
- T12: air not proven by T12 after start
- T13: low fire not proven by T13 after T1
- T14: flame on by more than T14, during start-up, and prepurge

result: lockout condition

b) Options

- A = spark proving: YES or NO
- B = lock-out if low fire lost during ignition YES or NO
- C = air flow lost during prepurge (T1) lockout (LO) or recycle (RE)
- D = air flow check: static (STA) or dynamic (DYN)
- E = low and high fire check: static (STA) or dynamic (DYN)

Approvals: Models A - (220 V) CEI - (240 V)

B - (110 V) Certified By British Gas

C - (110 V) CEI - (220 V)