BRAHMA
COMPONENTI E SISTEMI PER IL RISCALDAMENTO
COMPONENTS AND SYSTEMS FOR HEATING

TGRD7x and TGRD9x Types Oil burner controls

MAIN FEATURES

- Program versions for forced draft oil burners and air heaters

- TGRD versions available with post-purge function available

- Multicolor indications of operating status and fault status messages

- Controlled intermittent mode after 24 hours of continuous operation

- TGRD versions available with limitation function of the number of repetitions

- External reset facility

- TGRD versions available with preheater supervision with timer

- TGRD versions suitable for EN267 applications

- Approval based on latest European Directive EN298:2012 and UL 372 / CSA C22.2 No. 199

TGRD burner controls ensure reliable operation and supervision of 1-2 or 3-stage oil burners. The products have the same reliability of analogue versions (Kompact TGR) and a high level of safety while offering ease of operation.

Burner controls of the TGRD line feature are equipped with a single-channel microprocessor system with periodic self-check and 2 independent shutdown paths for safety-related functions. The controls are also suitable for driving air dampers by means of 1 or 2 wires of a modulating thermostat. For flame supervision, the photosensors FC… and FT… are used for yellow flame and the flame detector FD… for blue flame.

Technical data (extract)
For further information see data sheets 14540.

Mains voltage:		
		200÷240V~ +10% / -15% @ 50/60Hz
	On request:	100÷120V~ +10% / -15% @ 50/60Hz
Operating temperature range:		-20℃ ÷ +70℃
Ambient humidity:		95% max @ 40℃
Protection degree (with connecting socket):		IP 00
Maximum cables length:		
- Thermostat (T) and external reset (RE):		20 m
- external components:		1 m

Standards and certificates (extract)

CE

Conformity to **EC** directives
- Electromagnetic compatibility EMC (immunity) 2014/30/EU
- Low-voltage directive 2014/35/EU

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CSQ ISO 9001:2008

Conformity to **UL** directives
- UL 372 and CSA C22.2 No. 199
- File No. MH46742

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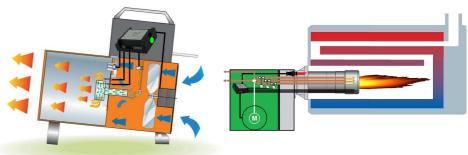
Types reference (extract)

The type reference applies to the TGRD burner control without flame detector. The operating cycle and timers are set on request, further information see data sheets 14540.

Type reference Mains	Fuel Valve stages	Burner capacity	Without Running Pre-heater check	On board Ignitor	External Reset	tw max	TP min.	TS max.	Tj min.	Tdk max.
Standard versions										
TGRD71	V 1	< 30 kg/h	---	✓	✓	2 s	10 s	5 s	10 s	4 s
TGRD91 opt. GZ	V 1	< 30 kg/h	✓	---	✓	2 s	20 s	5 s	10 s	---
TGRD92(*)	V 2	</> 30 kg/h	---	---	✓	2 s	20 s	5 s	20 s	2 s
TGRD93 opt. MJ7 W9	V 3	</> 100 kg/h	---	---	✓	2 s	20 s	5 s	20 s	2 s
Version for flash-steam generators										
TGRD72	V 2	< 30 kg/h	---	✓	✓	2 s	1,5 s	10 s	1,5 s	10 s

(*) Remark: Suited for warm air generators (WLE)

Main options		
opt.Vn	Limitation of repetitions	If the flame is lost during operation, a maximum of 'n' repetitions can be made. If the flame is lost for the 'n+1' time during operation, the burner will initiate lockout. The repetition count is restarted each time with the start-up of the working cycle by heat request «T».
opt.PTnn	post-purge function	'nn' seconds of post-purge that it can be interrupted by the heating demand to service the new working cycle.
opt. Pnn	post-purge function	'nn' seconds of post-purge that it cannot be interrupted by the heating demand to service the new working cycle.
opt.Qnnn	preheater supervision	If the oil preheater's release contact does not close within 'nnn' seconds, the burner control will initiate lockout

Overview of the system with TGRD burner control

Diagnostic possibilities of the TGRD burner controls

Table of colour codes for multi-coloured signal lamp	
Multicolour Code	**Status**
Continuously off	Waiting heat request
Green Continuously on	All OK.
Orange Continuously on	Ignitor On
Flashing Green	Low/bad flame signal during operation
Flashing Orange	Good flame signal during ignition
Green/Orange	Low/bad flame signal during ignition
Red/Orange	Under/Over voltage detect
Blinking Red(*)	Diagnostics (press 5 s reset button) or extraneous light on burner startup
Red Continuously on	Lockout alarm

* Table of error code messages (lockout diagnostic enabled by on-board button)	
Red Blinking Codes	**Description of possible cause**
2 switch off every 2 seconds	No establishment of flame at the end of TS
3 switch off every 2 seconds	Supervision of Preheater thermostat, timeout (only versions with Qnn option)
4 switch off every 2 seconds	Extraneous light or simulation of flame on burner startup (only versions with Knn option)
7 switch off every 2 seconds	too many losses of flame during operation (only versions with Vnn option)
8-14 switch off every 2 seconds	Wiring error or internal error, miscellaneous errors