PROGRAMMER FOR FLAME START AND SUPERVISION, AND SAFE STOP OF BURNER

PRODUCT: PRG-E-□-□1-C□□-P□ **TECHNICAL SHEET 1/4**

☎ Costumer Service 55 11 3019-1616 **For further details see technical bulletin**

• *APPLICATION*

PRG-E programmer is a programmer for start, flame supervision and safe stop recommended for industrial or commercial use burner, with a ***discontinuous use*** cycle (on/off burner in a period less than 24 hours), for power lower than 120 KW (100 000 Kcal/h). For use in closed combustion chamber, the user must arrange a safe system of pre-purge before each start sequence, or ask a programmer PRG-E with purge timer incorporated. Used in gas, oil or other kind of fuel burners.

The product fulfills the requirements of rule ABNT NBR 12313 – revision Sept. /2000. The options are:

⇒ **PRG-E- I** – Input for flame sensor by ionization, when gas is used as fuel in burners that work with this kind of sensor. See electrodes, sensors, line SEL-HT-I or SEL-HT-E (electrode assembled under draft or sample from the special-client).

⇒ **PRG-E-F** - Input sensor infrared flicker of the flame.
Detecting presence of flame when using gas, oil or other fuel that causes flame light emission with characteristics mentioned above.
See information of the sensors, line SEL-SV-F.

⇒ **PRG-E- U** - Input for ultraviolet radiation sensor, when gas, light oils or any kind of fuel that stimulate flame with ultraviolet rays emission are used. See sensors; line SEL-SV-U.

⇒ **PRG-E- L** – Input for photo-resistance sensor of cadmium sulfide – visible radiation, when oils or any other fuel that stimulate flame with yellow light emission in dark combustion chamber are used. See sensors; line SEL-SV-L.

• *TECHNICAL DATA*

⇒ Watch dog micro process – to provide safe failure.

⇒ Feeding 115 or 220Vac +10 -15% **(phase / phase or phase / neutral non-grounded)** - 50/60 Hz ± 3%.

⇒ Power Consumption: 4 VA

⇒ **Fuses: Foresee two external fuses, one for internal circuits´ protection (100 mA delayed), and other to protect outlet circuits in accordance to the foreseen load in the project, respecting the boundaries of this specification. O PRG-E does note have internal fuse.**

⇒ Protection against tension outbreaks.

⇒ Input for flame sensor: **I, F**, **U** or **L** (to order, see field code).

⇒ Input for the flame ionization. ultraviolet, visible light, infrared.

⇒ Minimum current of flame (uA-dc):

I ➔ 2 / U ➔ 200 / L ➔ 500 / F ➔ 2000

NOTE: The cable of the sensor of fire should be installed separate from the other cables that integrate the group of command of the burner. The best cable type recommended for this purpose is it used for ignition.

⇒ Protection against failure due to short-circuit of the mass ionization sensor

⇒ With previous flame verification or false flame signal, before beginning the ignition.

⇒ Ignition time (Tig): 6 sec.

⇒ Purge time: 10 or 20 seconds (to order, see field code).

⇒ Maximum outlet currents: 2 A in 250 Vac (resistive) for the ignition N.A. contacts and vs of fuel ; 100 mA in 12 Vdc in the alarm version open collector or 1A in 250Vac for contact N.A. of relay (isolated or with common in the feeding system)

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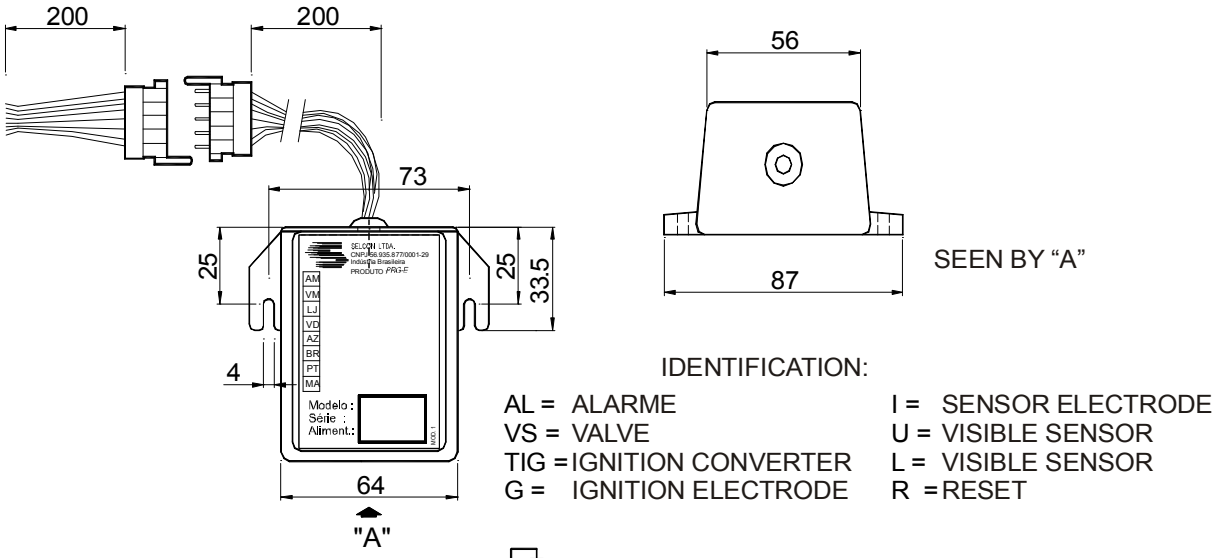
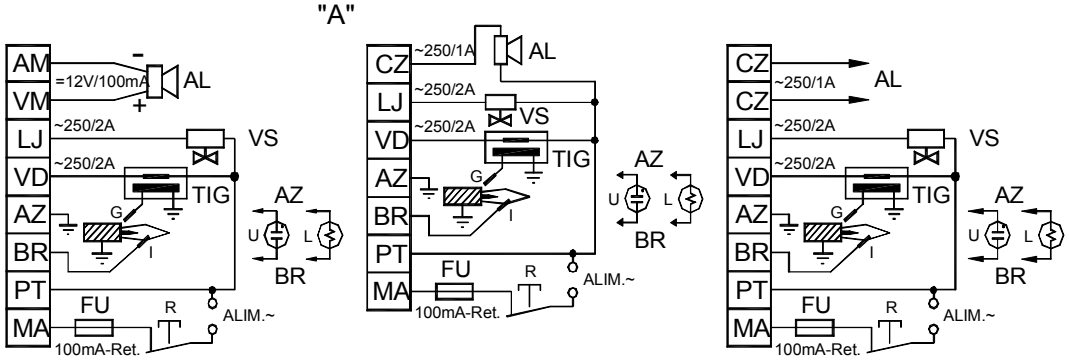
- ⇒ Electrical connections: Through whip (8 cables); with quick adapter polarized socket(see figure above)
- ⇒ Confirmation time for flame inlet: < 1 sec.
- ⇒ Response time for flame failure: < 4 sec.
- ⇒ Electrical useful life expectancy of outlet contacts: > 100.000 operations
- ⇒ Mechanical useful life expectancy of outlet contacts: > 100.000 operations
- ⇒ Work temperature: 0 a 60ºC
- ⇒ Storage ambient temperature: -5° a 65°C.
- ⇒ Maximum ambient air moisture for operation: 90% (40 ± 2°C) – NBR 5291
- ⇒ Ambient protection degree: IP 55 (except quick socket connector -IP 50)
- ⇒ Outer covering: ABS black Plastic Box
- ⇒ Assembly: In sheltered flat surface
- ⇒ Fixation: through two lugs attached to the side of the outer covering
- ⇒ Weight: 350 grams
- ⇒ Warranty: 06 months **(see term of warranty)**

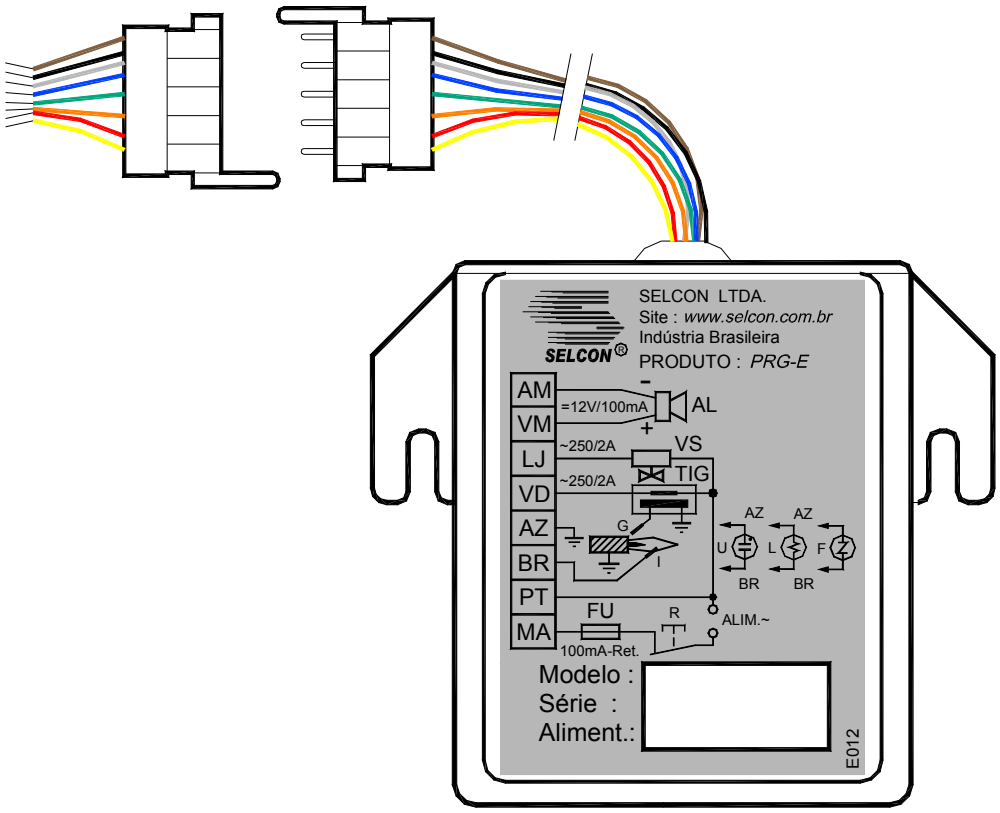
• *Dimensional Draft (mm)*



IDENTIFICATION:

AL = ALARME	I = SENSOR ELECTRODE
VS = VALVE	U = VISIBLE SENSOR
TIG = IGNITION CONVERTER	L = VISIBLE SENSOR
G = IGNITION ELECTRODE	R = RESET





If it is the case, purge time starts to be counted from the equipment energizing, as long as, it does not identify false flame signal. By the end of time, flame ignition starts, as shown in the following sequence:

* Activates ignition converter;
* Counts pre-ignition time;
* Activates a VS fuel;
* Counts ignition time;
* Confirms flame signal. The lack of flame blocks burner operation and activates alarm outlet (12Vdc until 100mA or 115 / 220 Vca until 1A through N.A. contact of isolated relay or with common in the feeding system) – See order code. Reset is done through the momentary interruption of feeding.

PROGRAMMER FOR FLAME START AND SUPERVISION, AND SAFE STOP OF BURNER

PRODUCT: PRG-E-□-□1-C□□-P□ **TECHNICAL SHEET 4/4**

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***ORDER CODE* - PRG-E-□-□1-C□□-P□**

PRG-E	-	SENSOR	-	Feeding		-	C		-	P- Required Program
				Tension	Frequency		Purge time	Outlet type alarm		□ (d5)
		I Ionization		□ (d1)	d2 = 1		□ (d3)	□ (d4)		
		U Ultraviolet		d1 = **1** => 115Vac	=> 50/60 Hz		d3 = **0** => 0 seg	d4 = **0** => open collector NPN -12 Vcc, 100 mA.		d5 = **1** => standard
		L Visible		d1 = **2** => 220Vac			d3 = **1** => 10 seg.	d4 = **1** => contact N.A. isolated - 250Vac -1A		d5 = **2 a n**=> other (under order)
							d3 = **2** => 20 seg.	d4 = **2** => contact N.A. – common in network - 250Vac -1A		

Obs.: The sensor and other accessories must be specified separately, according to a specific code.

BE AWARE:

⇒ **Use the programmers and/or detector relays exclusively with flame sensors of Selcon manufacturing.**

• OTHER PRODUCTS AND ACCESSORIES*:*

⇒ Flame Relays – CHM-E, CHM-P, CHM-M CHM-M-IIIMe (with base) and CHM-F
⇒ Tightness Test Relay of blocking valves – CHM -T
⇒ Ignition Programmers and flame monitoring – PRG-SE, PRG-E, PRG-Ie, PRG-Ie -IIIMe (with base), PRG-I, PRG-M and PRG–M-IIIMe (with base).
⇒ Optical Flame Sensors– SEL- SV
⇒ Flame sensors by ionization and ignitor electrodes – SEL-HT(standard) and SEL-HT-E (sensors and electrodes assembled under draft or sample from the special-client).
⇒ Flame signal transmitter– ACS –TX (until 500 meters between the sensor and relay or programmer)
⇒ Flame Signal Converter for 4 -20 mA – ACS - CV
⇒ Ignition transformers – ACS -TE (for feeding in VAC or VCC)
⇒ Temporized ignition panel ACS – IT
⇒ Portable ignitor (works with common alkaline battery AA type) : ACS-IP
⇒ Ignition panel (works with common alkaline battery AA type) : ACS-PN-E
⇒ Ignition panel of ignition and monitoring of flame : PRG-Ie/03
⇒ Several Cables– ACS - CB (ignition / sensoring / communication / control)
⇒ Connector and protector to touch for ignition cable – ACS - CP
⇒ Articulated socket joint – ACS - CN
⇒ Ignition and monitoring panel – ACS-PN (under consultation)
⇒ Reform services of pilot burners (under consultation)
⇒ **PRODUCTION DATA SUPERVISION LINE**

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