



IGNITION TRANSFORMERS





THE CAL

of never ending innovation

THE A

We start the flame



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COMPANY



COFI _® ignitions

4



COFI, since 1974

The company was founded in 1974 with the aim of applying an innovative technology in the production of transformers for the ignition of gas burners and diesel. The application of this technology has revolutionized traditional production techniques for the isolation of high voltages, improving the electrical properties and durability, increasing the mechanical properties and while reducing the environmental impact of the materials used in the isolation.

The company has grown steadily investing in the search for solutions, materials and equipment.

Technology

The technology applied to the construction of high-voltage insulation of the highest quality, is the driving force behind the company and represents a breakthrough in this area. The high insulation is obtained by a combined system of encapsulating low pressure of thermosetting epoxy resin and the use of technology to polyester film in the insulation of the coils. The benefits of this innovative

- combination are manifold:
 Mechanical properties and excellent aesthetic
- Electrical properties of unquestionable superiority
- Resistance to high temperatures superior to other materials traditionally applied
- Heat dissipation extremely effective
 Excellent resistance to chemi-
- cals and fuel oils
- Elimination of harmful materials

from the manufacturing process resulting in volatile reducing environmental impact. This production process has shown its validity technology both conceptually and in practice, with millions of applications, used for many years by leading manufacturers internationally recognized. The policy of the company throughout its history has always been directed towards the achievement of total quality is constructive and aesthetic, paying particular attention to the supply of top guality materials and following the technological changes constantly.

R&D

COFI has always invested heavily in research and development, while continuing to improve existing products and to find new solutions to the increasingly demanding market. In recent years COFI products range has been able to benefit from this ongoing research with the release of several new and innovative products in the field of ignitions, making only the width of the range in this area. COFI is also able to provide a customized product for any need, our technical department is available to test the feasibility and to perform sampling of non-standard specifications. COFI constructs in series ionizers transformers, demagnetizers, voltage doublers, equipment for fencing and other areas that do not belong to the world of ignitions where the construction of the transformer is sometimes considerably distant from the standard. COFI also works on the development of sensors and transducers that produce using her technology.

COFI is also active in the field of fuel cells with important research projects in the field of renewable energy in collaboration with important Italian and foreign universities.

Service

The optimal application of the high-voltage requires a careful study of the accessories to guarantee a certainty of ignition performance, therefore the maximum attention is dedicated to the study of functions of the cables and connections of the protections of the outputs of high tension, with the realization of parts that integrate various solutions in a single cable, eliminating assembly difficulties and uncertainties of operation.

The company also takes great care of the special needs of the customer, realizing also accessories specification, studying the effectiveness and optimization. Relevant in this regard is the EMC measures laboratory with the latest generation of equipments for performing measurements of electromagnetic compatibility according to EN55014 standards, and the subsequent study of the details necessary to make compatible the installation of the transformer. Most of the products are certified by the most representative organizations in Europe such as VDE and IMQ, as well as UL and CSA for the American market.







* Available certifications

* The indicated certifications are available on

some models depending on the target market and the type of product, and are indicated in

the product tables for each series. On request

approved. All products are still designed and

it can be extended to models not currently

built according to the standards IEC

c AL US

CE

A COMPANY DRIVEN BY TECHNOLOGY

Construction of high-voltage transformers

The COFI transformers are manufactured with top-quality choice materials in accordance with CEI EN 61558-2-3. The copper wire used for the secondary circuit winding is H 180°C class, while the wire for the primary circuit winding is H 200°C class. The insulation between layers in the high-voltage coils is ensured by a polyester film with high dielectric constant. The transformer is then encapsulated with, a thermosetting epoxy resin resistant to a temperature of over 180°C, that offers it high mechanical resistance together with excellent dielectric properties, resistance to fuel oils and to chemical agents, very good thermal dissipation and - last but not least - elimination of harmful volatile materials from the production cycle. Moreover, the materials enable a surface finish that is comparable with metal. All the other components have been chosen from the best available on the market, taking into account the best resistance to temperature in order to ensure indestructibility even in the most severe duty conditions.

Encapsulation

The company has developed over the years different systems of encapsulation with epoxy resins, to obtain the maximum level of insulation of different applications, always taking advantage of the best available technology on the market. In inductive transformers are used thermosetting epoxy resins to transfer injection, now widely used in the automotive industry. Electronic transformers are potted with epoxy resin under a very high vacuum. The line, fully automated, guarantees a constant quality on a large scale. Both systems offer exceptional performance and longevity of the product. The company is as always at the forefront in the isolation of high voltages and in production technologies.

Operation cycles

The transformer can operate, depending on the type, on continuous or intermittent duty in accordance with the technology applied to the burner and the control device. The transformers at intermittent duty can work at different inserting time, depending on the type: ED=25% on 4' means that the transformer can be switched ON for 1 min. and then shall be OFF for at list 3 min. Total cycle time is 4 min. So ED=33% on 3' means that the transformer work 1 min. ON and 2 min. OFF.

ED=100% means that the transformers can operate continuously.

The electronic transformers are designed to work with ambient temperatures up to 60° C, the inductive one at 35°C.

Electromagnetic Compatibility (EMC)

CE marking made it mandatory for all manufacturers of consumer and industrial machines to comply with the European directives on low voltage 2014/35/EU and on electromagnetic compatibility 2014/30/EU. The discharge from the burner causes electromagnetic disturbance, both conducted and radiated. The disturbance propageates differently according to the set-up of the machines electric connections or for instance the different opening of the terminals or the different positioning of the transformer in the machine. COFI laboratory found a general solution to help the users of transformers to not exceed the curves provided in the CEI ED 55014-1 standards.

Final testing

All COFI transformers undergo strict final testing before being packed in order to ensure trouble-free operation and almost unlimited durability for the transformers that pass the test.

Customized supply

In some applications, the input values (foreign countries) and the output values of the standard transformer as shown in our catalogue must be changed. The personnel in our technical department checks if this can be done, and produces samples with non-standard features. We mass-produce transformers for ionizers, demagnetizers, voltage doublers, devices for fencing, and other fields apart from ignition devices, where the transformer often requires special features. We also develop sensors and transducers, which we manufacture, with our technology.







5

ELECTRONIC TRANSFORMERS



6

Series of transformers designed with the electronic technology able to produce a discharge of high potential in high frequency (10-20kHz). There are several electronic configurations, from simple and more economical one, to the most sophisticated versions of high power and continuous operation with temperature and current control, for gas applications (1 pole) and oil application (2 poles). The power supply voltages ranging is from 100 Vac to 400 Vac, 12 and 24 Vdc. Thanks to the complete potting of transformer with premium resins, our electronic products enable safe operation even in extreme environmental conditions, from -20 ° C to + 60

° C and on some models it is allowed to use it at also - 40 ° C or + 90 ° C. Numerous configurations, with inputs / outputs and dimensions, are available to meet international standards, making available a range of products suitable for any installation. The company also manufactures products tailored to the specific customer applications. All products are filtered internally against electromagnetic disturbances. The range of products suitable for use in the US market is approved (UL Recognized Component), while models for the European market are IMQ approved according to the product standard for burners EN 61558-2-3.

Serie TRK	Standard
Serie TRJ	Best Price
Serie TRH	High power
Serire TRL 12 e 24 Vdc	High power
Serie TRM 24 Vdc	Middle power
Serie TRW	Condensing Boilers
Serie TRJ3 The power of an intermittent	Smart igniter transformer that adapt itself at an eventual continuous duty.

Applications

The electronic ignition transformer is suitable to be applied to all kind of oil and gas burners, wall hang boilers, hot water high pressure cleaners and anti-mosquito equipment. These applications are indicated by a symbol beside each type of product as follows.



Inlets | Ingressi



Outlets

H plug, Horizontal output plug, Ø 4mm



V plug, Vertical output plug, Ø 4mm (13.5 mm deep)



Transformer code system on last page (35)

INDUCTIVE TRANSFORMERS



Applications

The inductive ignition transformer is suitable to be applied to all kind of oil and gas burners, hot water high pressure cleaners and anti-mosquito equipment. These applications are indicated by a symbol beside each type of product as follows. 50/60Hz operations allow to use the transformers also with very long cable.



Inlets

These icons represent all the different kind of primary connetion for each product



Outlets

These icons represent all the different kind of high voltage connetions for each product

Code SP, plug, Ø 4 (21.5 mm deep) eccen tric hole	Code SPPRO, hole Ø 6, plug Ø 4 for cable Ø 5.2 (35 mm deep)	
Code VIMAN, self-tapping screw with sleeve (25 mm deep)	Code SPMAN, plug Ø 4 with sleeve (23 mm deep)	
Code SPRAS, flush plug, Ø 4 (13.5 mm deep)	Code VIRAS, flush self-tapping screw (18 mm deep)	

Classic wound transformer with ferromagnetic core, covered with thermosetting epoxy resin which gives it a metallic appearance and at the same time highly insulating. Produced for over 40 years in over 10 million pieces, are designed for ignition applications at 360°, from gas and oil burners to the high-pressure washers machines and anti-mosquito equipment, in addition to high-voltage and ozone generators. They are available in 4 product families depending on the power from the smaller Z, the small E, the standard S, up to the great power G. The principle of operation at 50 or 60 Hz makes it suitable for applications where the cables length are longer than 2m. Available in several versions of inlets and outlets combined with input voltages and output currents fully customizable.

ELECTRONIC TRANSFORMERS

TRJ3-40CVD

220-240V

30

100%

Grounded center



18

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								1		
Series	Туре	Vin	lout cc mA	ED	Output	A	pplicatio	ons	page	
TRK ELECTRONIC	C TRANSFORMERS			1						
	TRK1-20CVD	220-240V	20	100%	Grounded center		•	•	12	
	TRK1-20PCVD	220-240V	20	100%	Grounded pole	•		•	13	
	TRK1-30CVD	220-240V	30	100%	Grounded center		•	•	12	
4.	TRK1-30CHD	220-240V	30	100%	Grounded center		•	•	16	
	TRK1-30PCVD	220-240V	30	100%	Grounded pole	•		•	13	
	TRK2-35	220-240V	35	33% on 3'	Grounded center		•		12	
	TRK2-30PVD	220-240V	30	33% on 3'	Grounded pole	•			13	
2	TRK2-30PFVD	220-240V	30	33% on 3'	Grounded pole	•			13	
	TRK2-30PVDUS	220-240V	30	33% on 3'	Grounded pole	•			13	
	TRK2-30PFVDUS	220-240V	30	33% on 3'	Grounded pole	•			13	
	TRK2-30PHD	220-240V	30	33% on 3'	Grounded pole	•			16	
	TRK2-40VD	220-240V	40	33% on 3'	Grounded center		•		12	
	TRK2-40HD	220-240V	40	33% on 3'	Grounded center		•		16	
	TRK2-40HK	220-240V	40	33% on 3'	Grounded center		•		14	
	TRK2-40HKL	220-240V	40	33% on 3'	Grounded center		•		14	
	TRK2-40PVD	220-240V	40	33% on 3'	Grounded pole	•			13	
	TRK2-40PHK	220-240V	40	33% on 3'	Grounded pole	•			15	
	TRK2-40PHKL	220-240V	40	33% on 3'	Grounded pole	•			15	
	TRK2-40SHK	220-240V	40	33% on 3'	Insulated		•		14	
	TRK2-40SVD	220-240V	40	33% on 3'	Insulated		•		12	
	TRK2-40PHD	220-240V	40	33% on 3'	Grounded center		•		16	
	TRK1-20CUVD	120V	20	100%	Grounded center		•		12	
	TRK1-20PCUVD	120V	20	100%	Grounded pole	•			13	
	TRK2-30PUVD	120V	26	33% on 3'	Grounded pole	•			13	
	TRK2-30PUFVD	120V	26	33% on 3'	Grounded pole	•			13	
	TRK2-30UVD	120V	30	33% on 3'	Grounded center		•		12	
RJ ELECTRONIC	TRANSFORMER							I		
	TRJ2-30VD	220-240V	21	33% su 3'	Grounded center		•		17	
	TRJ2-30PVD	220-240V	20	33% su 3'	Grounded pole	•			17	

Series	Туре	Vin	Energy /lout cc [mA]	ED	Output	Applications	page

TRW CAPACITANCE DISCHARGE IGNITER

	TRW1P2E	220-240V	20 mJ	100%	Grounded center	•		22
	TRW1P2ER	220-240V	20 mJ	100%	Grounded center	•		22
	TRW1P4E	220-240V	20 mJ	100%	Grounded center	•		22
0	TRW1P4ER	220-240V	20 mJ	100%	Grounded pole	•		22
	TRW1S2M1	220-240V	20 mJ	100%	Insulated	•		22
	TRW1S4E	220-240V	20 mJ	100%	Insulated	•		22
	TRW2P4M	220-240V	20 mJ	100%	Grounded center	•		23
	TRW2P4ER	220-240V	20 mJ	100%	Grounded pole	•		23

TRM ELECTRONIC TRANSFORMER

	TRM24-20PC	24 Vdc	14	100%	Grounded pole	•	•	•	19
TRL POWER ELECTRONIC	TRANSFO	RMERS							

TRL12-30C	12 Vdc	22	100%	Grounded center		•	•	20
TRL24-30C	24 Vdc	22	100%	Grounded center		•	•	20
TRL12-30PC	12 Vdc	22	100%	Grounded pole	•		•	20
TRL24-30PC	24 Vdc	22	100%	Grounded pole	•		•	20

TRH POWER ELECTRONIC TRANSFORMERS

1011000	TRH2-30CU	120V	30	100%	Grounded center	•	•	21
	TRH2-30C	230V	30	100%	Grounded center	•	•	21
	TRH2-30CQ	400V	30	100%	Grounded center	•	•	21
	TRH2-60	230V	40	33% on 3'	Grounded center	•		21
	TRH2-40U	120V	50	33% on 3'	Grounded center	•		21

TRUP TOP MOUNTED IGNITION TRANSFORMER

TRUP25-30C	220-240V	30	100%	Grounded center		24

INDUCTIVE TRANSFORMERS

TRG1035P

230V 1x10



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Series	Туре	Vin	Vout [kV]	lout cc [mA]	ED	Output		Applic	ations		page
								Ø	*		
TRZ INDUCTIVE TRAN	SFORMER					1					·
	TRZ410CL	230V	2x2	10	100%	Grounded center			•		32
TEL	TRZ510C	230V	2x2,5	10	100%	Grounded center			•		32
	TRZ4.509PC	230V	1x4,5	9	100%	Grounded pole			•		32
RE INDUCTIVE TRAN	SFORMER										
	TRE308C	230V	2x1,5	8	100%	Grounded center			•		26
1 tomat	TRE510C	230V	2x2,5	10	100%	Grounded center			•		26
and the second s	TRE820	230V	2x4	20	19% on 3'	Grounded center	•	•			26
	TRE210PC	230V	1x2	10	100%	Grounded pole			•		25
	TRE410PC	230V	1x4	10	100%	Grounded pole	•				25
	TRE510PC	230V	1x5	10	100%	Grounded pole	•				25
	TRE820P	230V	1x8	20	19% on 3'	Grounded pole	•				25
	TRE820PISO	230V	1x8	20	19% on 3'	Insulated	•				25
RG INDUCTIVE TRAN	SFORMER										·
	TRG1015C	230V	2x5	15	100%	Grounded center		•		•	30
	TRG1020C	230V	2x5	20	100%	Grounded center		•		•	30
- Total	TRG1035	230V	2x5	35	25% on 4'	Grounded center		•		•	30
	TRG1035 US	120V	2x5	35	25% on 4'	Grounded center		•			30
	TRG1225	230V	2x6	25	25% on 4'	Grounded center		•			30
	TRG1230	230V	2x6	30	33% on 3'	Grounded center		•			30
	TRG1230	120V	2x6	30	25% on 4'	Grounded center		•			30
	TRG623PC US	120V	1x6	23	100%	Grounded pole	•				31
	TRG820PC	230V	1x8	20	100%	Grounded pole	•				31
	TRG835P	230V	1x8	35	25% on 4'	Grounded pole	•				31
	TRG1020PC	230V	1x10	20	100%	Grounded pole	•				31
		1		1			1	1			

35 25% on 4' Grounded pole



Series	Туре	Vin	Vout [kV]	lout cc [mA]	ED	Output	Applications	page
							🚺 🚺 🔭 🔍	

TRS INDUCTIVE TRANSFORMER



TRS513C	230V	2x2,5	10	100%	Grounded center			•	•	28
TRS812C	230V	2x4	12	100%	Grounded center		•		•	28
TRS815C	230V	2x4	15	100%	Grounded center				•	28
TRS818C	230V	2x4	18	100%	Grounded center		•		•	28
TRS820	230V	2x4	20	25% on 4'	Grounded center		•			28
TRS1020	230V	2x5	20	25% on 4'	Grounded center		•			28
TRS1020	230V	2x5	20	33% on 3'	Grounded center		•		•	28
TRS1030	230V	2x5	30	25% on 4'	Grounded center		•			28
TRS1220	230V	2x6	20	25% on 4'	Grounded center		•			28
TRS404PC	230V	1x4	4	100%	Grounded pole	•	•			29
TRS505PC	230V	1x5	5	100%	Grounded pole	•	•			29
TRS508PC	230V	1x5	8	100%	Grounded pole	•	•			29
TRS510PC	230V	1x5	10	100%	Grounded pole	•	•			29
TRS515PC	230V	1x5	15	100%	Grounded pole	•	•			29
TRS6.508PC	230V	1x6,5	8	100%	Grounded pole	•	•			29
TRS606PC	230V	1x6,5	6	100%	Grounded pole	•	•			29
TRS610PC	230V	1x6,5	10	100%	Grounded pole	•	•			29
TRS708PC	230V	1x7	8	100%	Grounded pole	•	•			29
TRS818PC	230V	1x8	18	100%	Grounded pole	•	•			29
TRS820P	230V	1x8	20	25% on 4'	Grounded pole	•	•			29
TRS723P US	120V	1x7	23	25% on 4'	Grounded pole	•	•			29
TRS820PIS0	230V	1x8	20	33% on 3'	Insulated	•	•			29
TRS830P	230V	1x8	30	25% on 4'	Grounded pole	•	•			29
TRS1815C/IS	230V	1x2	15	100%	Insulated	•	•			29



Plug D



Outlet

V plug, vertical output plug, Ø 4mm



Туре	Vin	Pin	lout cc	lout burn*	Vout	ED	Та	Output	Note

CONTINUOUS 100%

TRK1-20CVD	220-240V	30W	20 mA	12 mA	2x14 kV	100%	60°C	Grounded center	CE
TRK1-30CVD	230V	30W	30 mA	17 mA	2x12 kV	100%	60°C	Grounded center	(E
TRK1-20CUVD	120V	22W	20 mA	12 mA	2x14 kV	100%	60°C	Grounded center	c FN us

INTERMITTENT

TRK2-35	220-240V	65W	35 mA	20 mA	2x12 kV	33% on 3'	60°C	Grounded center	CE
TRK2-40VD	220-240V	65W	40 mA	24 mA	2x10 kV	33% on 3'	60°C	Grounded center	® (E
TRK2-40SVD**	220-240V	65W	40 mA	24 mA	15 kV	33% on 3'	60°C	Insulated	
TRK2-30UVD	120V	60W	30 mA	20 mA	2x12 kV	33% on 3'	60°C	Grounded center	c FL us

*Current measured on the burner with 5mm spark gap, blowing air and suppressed cables. **One pole shall be grounded.



Applications





Transformers of widely used standards, produced in many different versions, with different powers and suitable for all applications on the market inputs and outputs configurations. Available in intermittent and continuous version for gas and oil applications, it is available filtered or unfiltered (F).







Plug D

Outlet

Inlet

V plug, vertical output plug, Ø 4mm



Туре	Vin	Pin	lout cc	lout burn*	Vout	ED	Та	Output	Note

CONTINUOUS 100%

TRK1-20PCVD	220-240V	30W	20 mA	12 mA	1x15 kV	100%	60°C	Grounded pole	CE
TRK1-30PCVD	220-240V	30W	30 mA	17 mA	1x15 kV	100%	60°C	Grounded pole	CE
TRK1-20PCUVD	120V	30W	20 mA	12 mA	1x15 kV	100%	60°C	Grounded pole	CE

INTERMITTENT

TRK2-30PVD	220-240V	63W	30 mA	20 mA	1x15 kV	33% on 3'	60°C	Grounded pole	() (CE
TRK2-30PFVD	220-240V	63W	30 mA	20 mA	1x15 kV	33% on 3'	60°C	Grounded pole	CE
TRK2-30PVDUS	230V	69W	30 mA	20 mA	1x15 kV	33% on 3'	60°C	Grounded pole	c RU us
TRK2-30PFVDUS	230V	69W	30 mA	20 mA	1x15 kV	33% on 3'	60°C	Grounded pole	c 🔁 us
TRK2-40PVD	220-240V	65W	40 mA	24 mA	1x15 kV	33% on 3'	60°C	Grounded pole	() (CE
TRK2-30PUVD	120V	60W	36 mA	20 mA	1x15 kV	33% on 3'	60°C	Grounded pole	c Ru s
TRK2-30PUFVD	120V	60W	36 mA	20 mA	1x15 kV	33% on 3'	60°C	Grounded pole	c 🔁 us

*Current measured on the burner with 5mm spark gap, blowing air and suppressed cables.











INTERMITTENT

TRK2-40HK	220-240V	65W	40 mA	24 mA	2x10 kV	33% on 3'	60°C	Grounded center	(E
TRK2-40HKL	220-240V	65W	40 mA	24 mA	2x10 kV	33% on 3'	60°C	Grounded center	® (E
TRK2-40SHK**	220-240V	65W	40 mA	24 mA	15 kV	33% on 3'	60°C	Insulated	

*Current measured on the burner with 5mm spark gap, blowing air and suppressed cables. **One pole shall be grounded.









Transformers of widely used standards, produced in many different versions, with different powers and suitable for all applications on the market inputs and outputs configurations. Available in intermittent and continuous version for gas and oil applications.



1 POLE



*Current measured on the burner with 5mm spark gap, blowing air and suppressed cables.

Applications











INTERMITTENT

TRK2-30PHD	220-240V	63W	30 mA	20 mA	1x15 kV	33% on 3'	60°C	Grounded pole	CE
TRK2-40PHD	220-240V	65W	40 mA	24 mA	1x15 kV	33% on 3'	60°C	Grounded pole	CE

*Current measured on the burner with 5mm spark gap, blowing air and suppressed cables.

Applications







Transformer 4th generation and new concept, which incorporates all the experience and knowledge, accumulated in over 20 years of electronic design and production, is able to combine excellent power performance at a very affordable price.



TRJ



 TRJ2-30PVD
 220-240V
 63W
 30 mA

 *Current measured on the burner with 5mm spark gap, blowing air and suppressed cable.

Vin

Pin

lout cc

lout burn*

CE

20 mA

Applications

Туре



INTERMITTENT

Available certification

Vout

1x15 kV

ED

33% su 3'

Та

60°C

Output

Grounded pole



Note

CE



*Current measured on the burner with 5mm spark gap, blowing air and suppressed cables.

Transformer with a sophisticated temperature control able to take advantage of the environmental conditions to maximize the benefits provided. As long as the temperatures or duty cycles do not exceed certain conditions, the transformer provides the maximum current of 26mA, for example in the event of ignition in cold climates or after long periods of inactivity. In any case guarantees a 100% continuous service with actual 18mA up to 60 ° C ambient temperature. It can be applied in any application that has very tight insertion cycles of always providing the maximum power available and self-limiting only in extreme environmental conditions.

Applications

TRJ3-40VD CONTINUOS (ED=100%)





Available certification



CE



24 Vdc igniter of compact size with 1 pole, designed for gas applications which do not require high power levels and still fed in systems with portable generators where there is no power line.



TRM

1 POLE



 $^{\ast}\mbox{Current}$ measured on the burner with 5mm spark gap, blowing air and suppressed cables.

Applications









Vertical outlet | Plug D



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High power transformers and sophisticated technology capable of meeting the most stringent requirements demanding high power and extension of the limits of use in extreme temperatures, in off shore and portable systems with supply voltage 12 and 24 Vdc, continuous duty for oil and gas applications .

12 V_{dc}

24 Vdc

HIGH

POWER



Plug D Outlet

V plug, vertical output plug, Ø 4mm

Туре	Vin	Pin	lout cc	lout burn*	Vout	ED	Та	Output	Note
TRL12-30C	12Vdc	80W	30 mA	22 mA	2x12kV	100%	60°C	Grounded center	CE
TRL24-30C	24Vdc	80W	30 mA	22 mA	2x12kV	100%	60°C	Grounded center	CE

*Current measured on the burner with 5mm spark gap, blowing air and suppressed cables.

1 POLE

020

₿"♥

-Ô

101,50

Technical drawing [mm]

Inlet

Presa per spina D



Outlet

V plug, vertical output plug, Ø 4mm



105.50									
Туре	Vin	Pin	lout cc	lout burn*	Vout	ED	Та	Output	Note
TRL12-30PC	12Vdc	80W	30 mA	22 mA	1x15kV	100%	60°C	Grounded pole	CE
TRL24-30PC	24Vdc	80W	30 mA	22 mA	1x15kV	100%	60°C	Grounded pole	CE

*Current measured on the burner with 5mm spark gap, blowing air and suppressed cables.

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5

Applications







High power transformers and sophisticated technology able to meet the most stringent requirements that ask great power and extension of the limits of use at extreme temperatures. The transformers of this series are available in both continuous and intermittent service and supply voltages for all world markets from 120 to 400V.





Vertical outlet | Plug D

2 POLES

21





Inlet Plug D



Outlet

V plug, vertical output plug, Ø 4mm



Туре	Vin	Pin	lout cc	lout burn*	Vout	FD	Та	Output	Note
Type	•		iout cc	lout burn	Vout	LD	iu.	output	Note

CONTINUOUS 100%

TRH2-30CU	120V	70W	30 mA	25 mA	2x12 kV	100%	60°C	Grounded center	CE c SU us
TRH2-30C	230V	60W	30 mA	25 mA	2x12 kV	100%	60°C	Grounded center	CE
TRH2-30CQ	400V	60W	30 mA	25 mA	2x12 kV	100%	60°C	Grounded center	CE

INTERMITTENT

TRH2-60	230V	100W	50 mA	30 mA	2x12 kV	33% on 3'	60°C	Grounded center	CE
TRH2-40U	120V	90W	40 mA	30 mA	2x12 kV	33% on 3'	60°C	Grounded center	Ce c us

*Current measured on the burner with 5mm spark gap, blowing air and suppressed cables.









Ignition transformer with capacitive discharge technology for applications in condensing boilers and atmospheric gas burners. Developed to produce more power to the classics on board lighters, filtered against electromagnetic interference and available with output for mono-electrode flame detection.

2 POLES 22

TRW1

One pole shall be grounded.

Technical drawing [mm]				Inlet					
	9 ⁽³⁾		42.60	M		E Line Neutral GND		CONDEN BOILE	ISING RS
				Outlet U 2 Faston 2.8x0.5 mm	Jscite	4 Spina Plug Ø4 mm			
Туре	Vin	Pin	lout pick	Energy*	Vout	ED	Та	Output	Note
TRW1S2E	220-240V	5W	800mA	20 mJ	15 kV	100%	60°C	Insulated	CE
TRW1S2M1	220-240V	5W	800mA	20 mJ	15 kV	100%	60°C	Insulated	CE
TRW1S4E	220-240V	5W	800mA	20 mJ	15 kV	100%	60°C	Insulated	CE

*Measured on 2k ohm resistor.

POLE 1

Technical drawing [mm]









ER







4 -|Spina | Plug |Ø4 mm Faston 2.8x0.5 mm

	r d	/ _					9		
Туре	Vin	Pin	lout pick	Energy*	Vout	ED	Та	Output	Note
TRW1P2M	220-240V	5W	800mA	20 mJ	1x15 kV	100%	60°C	Grounded pole	CE
TRW1P2E	220-240V	5W	800mA	20 mJ	1x15 kV	100%	60°C	Grounded pole	CE
TRW1P2ER	220-240V	5W	800mA	20 mJ	1x15 kV	100%	60°C	Grounded pole	CE
TRW1P2ME	220-240V	5W	800mA	20 mJ	1x15 kV	100%	60°C	Grounded pole	CE
TRW1P4M	220-240V	5W	800mA	20 mJ	1x15 kV	100%	60°C	Grounded pole	CE
TRW1P4E	220-240V	5W	800mA	20 mJ	1x15 kV	100%	60°C	Grounded pole	CE
TRW1P4ER	220-240V	5W	800mA	20 mJ	1x15 kV	100%	60°C	Grounded pole	CE
TRW1P4ME	220-240V	5W	800mA	20 mJ	1x15 kV	100%	60°C	Grounded pole	CE

2

*Measured on 2k ohm resistor

Applications









TRW2

1 POLE



Туре	Vin	Pin	lout pick	Energy*	Vout	ED	Та	Output	Note
TRW2P4M	220-240V	5W	800mA	20 mJ	1x15 kV	100%	60°C	Grounded pole	CE
TRW2P4ER	220-240V	5W	800mA	20 mJ	1x15 kV	100%	60°C	Grounded pole	CE

*Measured on 2k ohm resistor.

Applications









*Current measured on the burner with 5mm spark gap, blowing air and suppressed cables.





TRXXXPX-ISO







Transformer built with a special double insulation on the secondary which allows the separation of the winding principle, in such a way as to make it compatible with flame control equipment that uses the flame detection system single electrode. In these types of systems, the winding principle is connected to earth during ignition via a relay, while it is connected to the flame control amplifier input, to monitor the ionization current once completed the ignition phase. It is available in different power and duty cycle versions, as well as intermittent and continuous service.

Туре	Vin	Freq	Vout	lout	ED	Output	Note
INSULATED*							

TRE510PCIS0	230V	50Hz	1x5 kV	10 mA	100%	Insulated	CE
TRE515PISO	230V	50Hz	1x5 kV	15 mA	19% on 3'	Insulated	CE
TRE820PISO	230V	50Hz	1x8 kV	20 mA	19% on 3'	Insulated	CE
TRS820PISO*	230V	50Hz	1x8 kV	20 mA	33% on 3'	Insulated	CE
TRS515PCIS0	230V	50Hz	1x5 kV	15 mA	100%	Insulated	CE
TRS812PCIS0	230V	50Hz	1x8 kV	12 mA	100%	Insulated	CE

*Transformers used with control box designed for igniting and flame detecting.



One pole inductive ISO transformer Internal winding connection

TRE





Technical drawing [mm]













Cod: SPRAS

Cod: VIRAS





Туре	Vin	Freq	Vout	lout	ED	Output	Note
CONTINUOUS 100%							
TRE308C	230V	50Hz	2x1,5 kV	8 mA	100%	Grounded center	CE
TRE510C	230V	50Hz	2x2,5 kV	10 mA	100%	Grounded center	CE

INTERMITTENT

TRE820	230V	50Hz	2x4 kV	20 mA	19% on 3'	Grounded center	DE









Small dimension inductive transformer, it achieves the same performances of medium size transformers with lower costs, largely used for oil and gas burners, available with the secondary insulated for flame detection by ionization of the flame. It can also be applied to anti-mosquito equipment or ozone generators.

Available powersupply voltages 100V - 400 Vac



INTERMITTENT

TRE610PC

TRE820P	230V	50Hz	1x8 kV	20 mA	19% on 3'	Grounded pole	٤ (٤
INSULATED*							
TRE510PCISO	230V	50Hz	1x5 kV	10 mA	100%	Insulated	CE
TRE515PISO	230V	50Hz	1x5 kV	15 mA	19% on 3'	Insulated	CE
TRE820PIS0	230V	50Hz	1x8 kV	20 mA	19% on 3'	Insulated	CE

1x6 kV

10 mA

100%

Grounded pole

230V

50Hz

*Transformers used with control box designed for igniting and flame detecting.





Available certification





CE

1 POLE

TRS

2 POLES





Inlet Technical drawing [mm] Standard buried cable COFI plug Triangle plug 0 87 Outlet 107 98 Cod: SPRO Cod: VIRAS Cod: SPRAS 90 Ø 5,50 Cod: SPMAN Cod: SP Cod: VIMAN 1,50

Туре	Vin	Freq	Vout	lout	ED	Output	Note
							-

CONTINUOUS 100%

TRS513C	230V	50Hz	2x2,5 kV	10 mA	100%	Grounded center	CE
TRS810C	230V	50Hz	2x4 kV	10 mA	100%	Grounded center	<u> (</u>
TRS812C	230V	50Hz	2x4 kV	12 mA	100%	Grounded center	<u></u> (E
TRS815C	230V	50Hz	2x4 kV	15 mA	100%	Grounded center	CE
TRS818C	230V	50Hz	2x4 kV	18 mA	100%	Grounded center	CE

INTERMITTENT

TRS820	230V	50Hz	2x4 kV	20 mA	25% on 4'	Grounded center	<u> (</u>
TRS1020	230V	50Hz	2x5 kV	20 mA	25% on 4'	Grounded center	<u> (</u>
TRS1020	230V	50Hz	2x5 kV	20 mA	33% on 3'	Grounded center	E (E
TRS1030	230V	50Hz	2x5 kV	30 mA	25% on 4'	Grounded center	CE
TRS1220	230V	50Hz	2x6 kV	20 mA	25% on 4'	Grounded center	CE









Medium-size inductive transformer, suitable for all kinds of gas and oil burners, where continuous or intermittent power and achievement of higher voltages and currents are required. This serie is available in a great number of variations. It suits very different uses such as burners, high-pressure cleaners, anti-mosquito electric equipment and ionizers.

Available powersupply voltages 100V - 400 Vac



CONTINUOUS 100%

TRS404PC	230V	50Hz	1x4 kV	4 mA	100%	Grounded pole	CE
TRS505PC	230V	50Hz	1x5 kV	5 mA	100%	Grounded pole	CE
TRS508PC	230V	50Hz	1x5 kV	8 mA	100%	Grounded pole	CE
TRS510PC	230V	50Hz	1x5 kV	10 mA	100%	Grounded pole	CE
TRS515PC	230V	50Hz	1x5 kV	15 mA	100%	Grounded pole	CE
TRS6.508PC	230V	50Hz	1x6,5 kV	8 mA	100%	Grounded pole	CE
TRS606PC	230V	50Hz	1x6,5 kV	6 mA	100%	Grounded pole	CE
TRS610PC	230V	50Hz	1x6,5 kV	10 mA	100%	Grounded pole	CE
TRS708PC	230V	50Hz	1x7 kV	8 mA	100%	Grounded pole	CE
TRS818PC	230V	50Hz	1x8 kV	18 mA	100%	Grounded pole	CE
TRS1815C/IS	230V	50Hz	1x2 kV	15 mA	100%	Grounded pole	CE

INTERMITTENT

TRS820P	230V	50Hz	1x8 kV	20 mA	25% on 4'	Grounded pole	DYE
TRS723P US	120V	60Hz	1x8 kV	23 mA	25% on 4'	Grounded pole	
TRS830P	230V	50Hz	1x8 kV	30 mA	25% on 4'	Grounded pole	CE
TRS820PISO*	230V	50Hz	1x8 kV	20 mA	33% on 3'	Insulated	CE

*Transformers used with control box designed for igniting and flame detecting.

Applications



Available certification





1 POLE

TRG

2 POLES

30







Туре	Vin	Freq	Vout	lout	ED	Output	Note
CONTINUOUS 10	0%			- I	I	-	1
TRG1015C	230V	50Hz	2x5 kV	15 mA	100%	Grounded center	CE
TRG1020C	230V	50Hz	2x5 kV	20 mA	100%	Grounded center	CE
INTERMITTENT							
TRG1035	230V	50Hz	2x5 kV	35 mA	25% on 4'	Grounded center	NE CE

TRG1035	230V	50Hz	2x5 kV	35 mA	25% on 4'	Grounded center	<u> </u>
TRG1035 US	120V	60Hz	2x5 kV	35 mA	25% on 4'	Grounded center	c FL us
TRG1225	230V	50Hz	2x6 kV	25 mA	25% on 4'	Grounded center	CE
TRG1230	230V	50Hz	2x6 kV	30 mA	33% on 3'	Grounded center	CE
TRG1230US	120V	60Hz	2x6 kV	30 mA	25% on 4'	Grounded center	c RL us









Large-size inductive transformer, suitable for large-flow and heavy fuel burners, where continuous power and higher voltages or currents are required. The versions of this range are suitable for use in large-size transformers and industrial high-pressure cleaners.

Available powersupply voltages 100V - 400 Vac



CONTINUOUS 100%

TRG623PC US	120V	60Hz	1x6 kV	23 mA	100%	Grounded pole	c RL us
TRG820PC	230V	50Hz	1x8 kV	20 mA	100%	Grounded pole	CE
TRG1020PC	230V	50Hz	1x10 kV	20 mA	100%	Grounded pole	CE

INTERMITTENT

TRG835P	230V	50Hz	1x8 kV	35 mA	25% on 4'	Grounded pole	CE
TRG1035P	230V	50Hz	1x10 kV	35 mA	25% on 4'	Grounded pole	CE





Available certification





1 POLE



The smallest inductive transformer of the range, especially developed for the anti-mosquito equipments.

2 POLES

TRZ

Technical drawing [mm]

22,70

0

0

Inlet







Outlet Cod: SP



Туре	Vin	Freq	Vout	lout	ED	Output	Note
TRZ410C	230V	50Hz	2x2 kV	10 mA	100%	Grounded center	CE
TRZ510C	230V	50Hz	2x2,5 kV	10 mA	100%	Grounded center	CE

1 POLE

Technical drawing [mm]









Outlet

Inlet





Туре	Vin	Freq	Vout	lout	ED	Output	Note
TRZ4.509PC	230V	50Hz	1x4,5 kV	9 mA	100%	Grounded pole	CE

Applications







ACCESSORIES

PRIMARY CONNECTIONS



FILTERS



Inductive transformers EMI disturbance suppression filter Code: 06CE061517

MOUNTING BRACKETS



40X40 mm galvanized bracket

Bracket for horizontal mounting of transformer on any surface.

Code: **15MI152457** Kit with screws and nuts available

Code: Staffa 1



102X26 mm galvanized bracket Bracket for vertical mounting of transformer on any surface.

Code: **15MI152452** Kit with screws and nuts available

Code: Staffa 2



ACCESSORIES

34 CONNECTIONS AND PROTECTIONS

Connector for faston 2,8x0,8mm for cable Ø5,2mm. Code: 11PC112031	Bronze phosphor connector Ø 4mm for cable Ø 5,2mm Code: 11PC112020	Bronze phosphor connector Ø 4mm for cable Ø 7mm Code: 11PC112010	Bronze phosphor connector Ø 6,3 mm for cable Ø 5,2 / 7mm straight without spring Code: 11PC112013
Bronze phosphor connector \emptyset 6,3 mm for cable \emptyset 5,2 / 7mm straight with spring Code: 11PC112011	Bronze phosphor connector Ø 6,3 mm for cable Ø 5,2 / 7mm 90° with spring Code: 11PC112018	PVC overmolded protection for Ø 4mm plug for cable Ø5,2 / 7mm Not available as parts Code: 17G0170000	PVC overmolded protection for Ø 4mm 90° plug for cable Ø 5,2 / 7mm Not available as parts Code: 17GOSTOOOK
Silicon Cap L=35mm for cable Ø 5,2 / 7mm Used with inductive transformer VIMAN and SPMAN outlets Code: 17G0172601	Type A PBT straight terminal cap for cables Ø 5,2 / 7mm Code: 04PL041442	Silicone cap for Ø 6,3mm 90° plug connector for cables Ø 5,2 / 7mm Code: 17G0172605	Silicone cap for Ø 4mm 90° plug connector for cables Ø 5,2 / 7mm Code: 17G0172604

ADAPTERS



brass adapter from screw to 4mm plug to mount on the existing connection Code: **11PC112026** tin plate brass adapter with spring from 6.3mm 90° connector to 4mm plug, to be mounted on the 90° connector (11PC112018) Code: 11PC112027



HIGH-VOLTAGE CABLES



High Voltage Ø 7mm tear resistant silicone cable with resistive carbon fiber conductor (R=10kohm/m). Code: **09CA091868**

High Voltage Ø 5,2mm silicone tear resistant cable with resistive carbon fiber conductor (R=10kohm/m). Code: **09CA091869**



High Voltage 1x1 Ø7 mm tear resistant silicone cable with copper conductor. Code: **09CA091804**



35

High Voltage $1 \times 1 \notin 5,2$ mm tear resistant silicone cable with copper conductor. Code: **09CA091810**



COFI realize primary and secondary silicone/copper or silicone/carbon fiber cables with custom-made lengths and finishing.

FINISHED CABLE LENGTHS



PVC PROTECTION | PROTEZIONI IN PVC

Over molded on the cable ensures perfect sealing of the transformer outputs for protection against humidity in dirty and contaminated environments.

Cofi manufactures high voltage ignition cable for all market needs. From the simple copper wire with connector to more complex cable with carbon fiber conductor, connector and moulded protections. The High voltage cables with resistive conductor in carbon fiber and semi-conductive rubber are used for shielding electromagnetic disturbances. Our EMC laboratory is fully equipped with instrument for EMC measurements for cable's and filters verifications.

TRANSFORMER INSTALLED IN IP65 BOX





TRANSFORMERS CODE SYSTEM

INDUCTIVE TRANSFORMERS CODE



ELECTRONIC TRANSFORMERS CODE







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