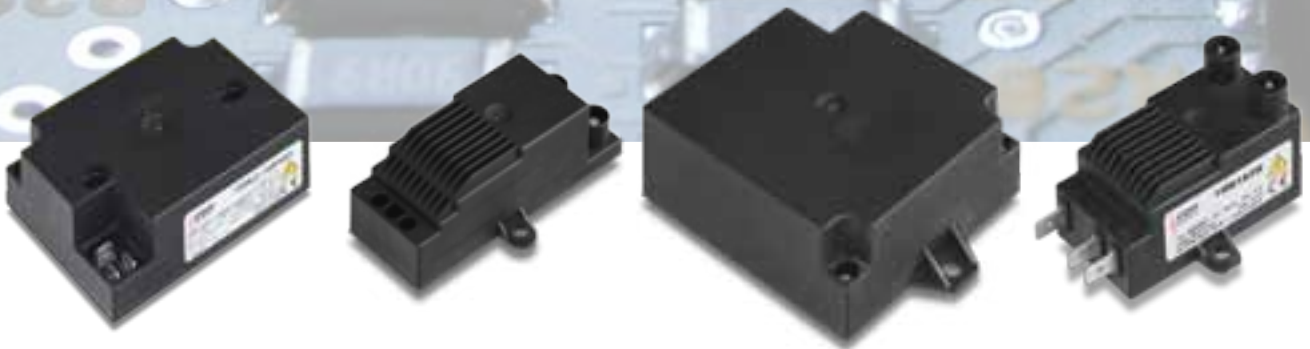


COFI

ignitions



Ignition Transformers

ELECTRONIC IGNITION TRANSFORMERS

This transformer is produced with the electronic technology, the system is vacuum impregnated to ensure the highest rate of insulation. The features of this transformer make it suitable for gas and oil burners where continuous power and size and weight that is less than conventional inductive transformers are required.

The 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 application are indicated by a symbol beside each type of product as follows.

Oil Burners



Gas Burners



Hot water high pressure cleaners



Anti-mosquito equipment



The inlets

These icons represents the inlets types available on every single product

Plug D



Plug K



The outlets

These icons represents the outlets types available on every single product

H plug, horizontal output plug, Ø 4mm
(13.5 mm deep)



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



CAPACITANCE DISCHARGE IGNITER TRW



This Ignition transformer is built to satisfy the power requirement of condensing and atmospheric boilers. Thanks to its particular electronic configuration it deliver a very high power output to ensure the ignition even on most difficult conditions. This product is available as "over the gas valve" mounting version. The integrated single pole flame detection signal is available.

Type	Vin	Pin	Iout cc	Energy	Vout	ED	Ta	Output
TRW1P2R	230V	7W	5mA	5 mJ	1x15kV	100%	60°C	Grounded pole
TRW1P4	230V	7W	5mA	5 mJ	1x15kV	100%	60°C	Grounded pole
TRW1S2M	230V	7W	5mA	5 mJ	15kV	100%	60°C	Insulated
TRW1S4	230V	7W	5mA	5 mJ	15kV	100%	60°C	Insulated



ELECTRONIC IGNITION TRANSFORMER TRJ



This EXTREMELY SMALL transformer. The features of this transformer are comparable with the larger sized electronic transformer, with a lower cost and dimensions.

Type	Vin	Pin	Iout cc	Iout Burn*	Vout	ED	Ta	Output
TRJ1-30PVA	230V	50W	30mA	18mA	1x15kV	33% 3'	60°C	Grounded pole
TRJ1-30SVA	230V	50W	30mA	18mA	15kV	33% 3'	60°C	Insulated
TRW2-P4R	230V	7W	5mA	-	1x15kV	100%	60°C	Grounded pole



*Iout Burn.= Current measured on the burner with 6mm spark gap, blowing air and suppressed cables.

ELECTRONIC IGNITION TRANSFORMERS TRK



Type	Vin	Pin	Iout cc	Iout Burn*	Vout	ED	Ta	Output	Notes
TRK1-20CVD	230V	30W	20mA	12mA	2x14kV	100%	60°C	Grounded center	
TRK1-30CVD	230V	30W	26mA	17mA	2x12kV	100%	60°C	Grounded center	
TRK1-20PCVD	230V	30W	18mA	13mA	1x15kV	100%	60°C	Grounded pole	
TRK1-30PCVD	230V	30W	30mA	16mA	1x15kV	100%	60°C	Grounded pole	
TRK2-35	230V	60W	35mA	19mA	2x12kV	33% 3'	60°C	Grounded center	
TRK2-40VD	230V	65W	35mA	23mA	2x12kV	33% 3'	60°C	Grounded center	
TRK2-40SHK	230V	65W	35mA	23mA	15kV	33% 3'	60°C	Insulated	
TRK2-30PVD	230V	60W	30mA	20mA	1x15kV	33% 3'	60°C	Grounded pole	IMQ
TRK2-30PFVD	230V	60W	30mA	20mA	1x15kV	33% 3'	60°C	Grounded pole	Without filter
TRK2-40PVD	230V	65W	30mA	26mA	1x15kV	33% 3'	60°C	Grounded pole	
TRK3-30CVD	230V	40W	23mA	25/20/17mA**	2x12kV	100%	60°C	Grounded center	
TRK1-20CUVD	120V	25W	20mA	14mA	2x12kV	100%	60°C	Grounded center	
TRK1-20PCUVD	120V	30W	20mA	14mA	1x15kV	100%	60°C	Grounded pole	
TRK2-30UVDUS	120V	60W	30mA	20mA	2x12kV	33% 3'	60°C	Grounded center	
TRK2-30PUVDUS	120V	60W	30mA	20mA	1x15kV	33% 3'	60°C	Grounded pole	
TRK3-30CUVD	120V	50W	30mA	25/20/17mA**	2x12kV	100%	60°C	Grounded center	

This is the STANDARD electronic transformer. The features of this transformer make it suitable for gas and oil burners where continuous power and size and weight that is less than conventional inductive transformers are required. Many versions are available with a wide range of performance as power supply voltages, circuit configuration and duty cycles.



The inlets



The outlets



*Iout Burn. = Current measured on the burner with 6mm spark gap, blowing air and suppressed cables.
 **Temperature controlled transformer. Currents at -20°C / +20°C / +60°C.

ELECTRONIC IGNITION TRANSFORMERS TRH



Type	Vin	Pin	Iout cc	Iout Burn*	Vout	ED	Ta	Output
TRH2-30CU	120V	70W	30mA	25mA	2x12kV	100%	60°C	Grounded center
TRH2-30C	230V	60W	30mA	25mA	2x12kV	100%	60°C	Grounded center
TRH2-30CQ	400V	60W	30mA	25mA	2x12kV	100%	60°C	Grounded center
TRH2-60	230V	100W	50mA	30mA	2x12kV	33% 3'	60°C	Grounded center

This is a HIGH POWER electronic transformer. The features of this transformer make it suitable for heavy gas and oil burners where high spark currents on continuous duty conditions and severe working temperatures are required as on Professional high pressure cleaners. It is available on 120V 230V and 400V versions.



The inlets



The outlets



*Iout Burn. = Current measured on the burner with 6mm spark gap, blowing air and suppressed cables.

ELECTRONIC IGNITION TRANSFORMERS TRL



Type	Vin	Pin	Iout cc	Iout Burn*	Vout	ED	Ta	Output
TRL12-30C	12V DC	80W	30mA	22mA	2x12kV	100%	60°C	Grounded center
TRL24-30C	24V DC	80W	30mA	22mA	2x12kV	100%	60°C	Grounded center

This is a 12 and 24 VDC HIGH POWER electronic transformer. The features of this transformer make it suitable for heavy gas and oil burners where the power supply is given by a portable system supplying 12V or 24V DC. It is very performant, with high spark currents on continuous duty conditions even on severe working temperatures as required by Professional portable high pressure cleaners.



The inlets



The outlets



*Iout Burn. = Current measured on the burner with 6mm spark gap, blowing air and suppressed cables.

INDUCTIVE TRANSFORMERS

Traditional electro-mechanic transformer, It can be customized in many different versions to fit the requirements of any kind of application like oil and gas burners, high pressure cleaners, anti-mosquito equipments, ozone generators.

The Applications

The conventional 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 application are indicated by a symbol beside each type of product as follows.

Oil Burners



Gas Burners



Hot water high pressure cleaners



Anti-mosquito equipment



The inlets

These icons represents all the different kind of connection for each product

Standard buried cable
L=380mm



COFI plug



Triangle plug



Flower plug



The outlets

These icons represents the outlets types available on every single product

Code SP,
eccentric plug,
Ø 4
(21.5 mm deep)



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)



Transformer TRZ



Type	Vin	Freq	Vout	Iout	ED	Output	Notes
TRZ410CL	230V	50Hz	4000	10	100%	Grounded center	Lamp power supply
TRZ510C	230V	50Hz	5000	10	100%	Grounded center	
TRE4,509PC	230V	50Hz	4500	9	100%	Grounded pole	

The smallest conventional transformer of the range, especially developed for the anti-mosquito equipments, a version can be made with the optional integrated neon lamp power supply.



The outlets



The inlets



***The whole range is available with input voltages between 100 and 400V

Transformer TRE



Type	Vin	Freq	Vout	Iout	ED	Output	Notes
TRE308C	230V	50Hz	3000	8	100%	Grounded center	
TRE510C	230V	50Hz	5000	10	100%	Grounded center	
TRE820	230V	50Hz	8000	20	19%	Grounded center	 
TRE210PC	230V	50Hz	2000	10	100%	Grounded pole	
TRE410PC	230V	50Hz	4000	10	100%	Grounded pole	
TRE510PC	230V	50Hz	5000	10	100%	Grounded pole	
TRE820P	230V	50Hz	8000	20	19%	Grounded pole	 
TRE820PISO	230V	50Hz	8000	20	19%	Grounded pole	Insulated

Small dimension transformer, it achieve 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. Can also be applied to anti-mosquito equipment or ozone generators.



The outlets



The inlets



***The whole range is available with input voltages between 100 and 400V

Transformer TRS



Type	Vin	Freq	Vout	Iout	ED	Output	Notes
TRS513C	230V	50Hz	5.000	10	100%	Grounded center	 
TRS812C	230V	50Hz	8.000	12	100%	Grounded center	 
TRS818C	230V	50Hz	8.000	18	100%	Grounded center	
TRS820	230V	50Hz	8.000	20	25%	Grounded center	 
TRS1020	230V	50Hz	10.000	20	25%	Grounded center	 
TRS1020	230V	50Hz	10.000	20	33%	Grounded center	 
TRS1030	230V	50Hz	10.000	30	25%	Grounded center	
TRS1220	230V	50Hz	12.000	20	25%	Grounded center	
TRS404PC	230V	50Hz	4.000	4	100%	Grounded pole	
TRS505PC	230V	50Hz	5.000	5	100%	Grounded pole	
TRS508PC	230V	50Hz	5.000	8	100%	Grounded pole	
TRS510PC	230V	50Hz	5.000	10	100%	Grounded pole	
TRS515PC	230V	50Hz	5.000	15	100%	Grounded pole	
TRS6.508PC	230V	50Hz	6.500	8	100%	Grounded pole	
TRS606PC	230V	50Hz	6.000	6	100%	Grounded pole	
TRS610PC	230V	50Hz	6.000	10	100%	Grounded pole	
TRS708PC	230V	50Hz	7.000	8	100%	Grounded pole	
TRS818PC	230V	50Hz	8.000	18	100%	Grounded pole	
TRS820P	230V	50Hz	8.000	20	25%	Grounded pole	 
TRS723P US	120V	60Hz	8.000	23	25%	Grounded pole	
TRS820PISO	230V	50Hz	8.000	20	33%	Grounded pole	Insulated
TRS830P	230V	50Hz	8.000	30	25%	Grounded pole	
TRS1815CISO	230V	50Hz	2.000	15	100%	Grounded pole	Insulated

Medium-size conventional 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 range 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.



***The whole range is available with input voltages between 100 and 400V

Transformer TRG



Type	Vin	Freq	Vout	Iout	ED	Output	Notes
TRG1015C	230V	50Hz	10.000	15	100%	Grounded center	 
TRG1020C	230V	50Hz	10.000	20	100%	Grounded center	
TRG1035	230V	50Hz	10.000	35	25%	Grounded center	 
TRG1035 US	120V	60Hz	10.000	35	25%	Grounded center	
TRG1225	230V	50Hz	12.000	25	25%	Grounded center	
TRG1230	230V	50Hz	12.000	30	33%	Grounded center	
TRG1230	120V	60Hz	12.000	30	25%	Grounded center	
TRG623PC US	120V	60Hz	6.000	23	100%	Grounded pole	
TRG820PC	230V	50Hz	8.000	20	100%	Grounded pole	
TRG835P	230V	50Hz	8.000	35	25%	Grounded pole	
TRG1020PC	230V	50Hz	10.000	20	100%	Grounded pole	
TRG1035P	230V	50Hz	10.000	35	25%	Grounded pole	

Large-size conventional 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.



***The whole range is available with input voltages between 100 and 400V

i-GAS
Automatic control for gas burners with ignition and flame detection integrated:


It is allowed the control of a single direct ignition burner till 350kW, with flame detection integrated (single electrode) or separate electrode. i-GAS can freely fit to many different application conditions thanks to its easy programmability.

Some parameters are factory settled and password protected, directive compliant, others than customizable following customer's needs. An advanced self diagnostic provide through an alphanumeric display all information about the cycle, lock causes, or eventual applied device's failures, or burner's failures.

The reset push button, and the warning light that indicate it, can be remoted through a socket connection.

The ignition transformer provide a high energy spark that warrant the ignition in every situation.

It is possible to use the same ignition electrode both to make ignition and flame readings, for ionization, or with a separate electrode (dedicated), plugging it directly to the control device socket. The socket give to the device easy serviceability.

Allowing quick plug/unplug operability.

i-GAS represent the burner's supervisor being active all the time the power is on, but the thermo switch do not require heat. All connected devices are than watched all the time, even in stand by condition. Any uneven failure might be detected before power heat is demanded by the thermo switch.

The circuit configuration allow to simplify the manufacturer cable harness of its burner main case.

Technical specification

Power Supply	230 V $\pm$ 15%	Pre-blowing	1÷250 s	Minimum ionization current	> 1 μ A
Frequency	50/60 Hz	Pre-ignition	500 ms	ionization current limits	0,5 mA
Power Consumption	3 VA MAX	Safety time on ignition	2÷25 s	Flame detection probe voltage	250 V ac
Power dissipation	2W MAX	Safety time running	1÷12 s	Flame detection probe insulation	> 50 M Ω
Max output's current	3 A @ 230 V cos ϕ 0.4	Post-blowing	1÷250 s	Flame detection probe wire lenght	< 30 m
Line Fuse	5x20mm RAPIDO 3,15 A	Allowed Post-combustion time	< 20 s	Single electrode wire lenght	< 1 m
Working temperature range	0÷60 °C	Auto shutoff & timer (opzional)	00h05m	Output ignition Voltage	1x15kV $\pm$ 10%
Storage temperature range	-20÷80 °C	Ignition Cycle counter	±20h50m	Short circuit ignition current	30mA rms $\pm$ 10%
Relative umidity	45÷85 %		524288		
Enclosure Nylon UL94 V-0	115x97x41 mm				
IP degree EN60529	IP00				
Weight	400 g MAX				

§ Sinusoidal, quasi-sinusoidal, square

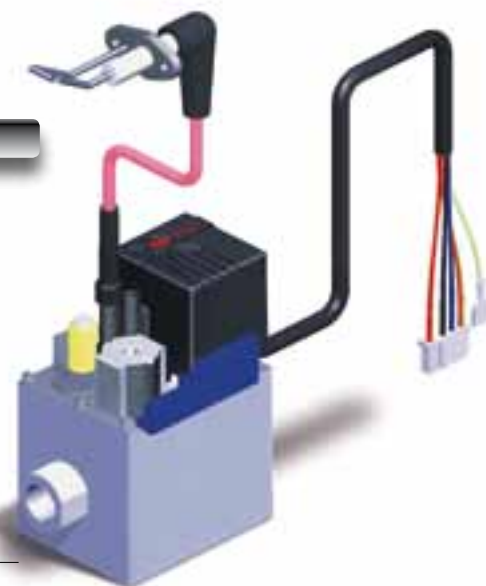
Compliance

- Directive for Gas Devices (90/396/CEE)
- Directive Low voltage (73/23/CEE)
- Directiva Macchine (89/392/CEE)
- Directive EMC (89/336/CEE)
- Conform to EN298
- Conform to EN230
- Conform to EN746-2
- Conform to UNI10156
- DPR 15 November 1996 n° 661

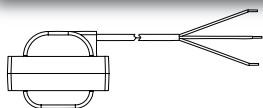
The Applications

TOP MOUNTED VALVE IGNITER

Development of capacitance discharge igniters to be mounted directly on the gas valve's top. This igniter is been studied for the application on wall hang boilers where the spaces are narrow and the wiring harness need to be simplified. The transformer can drive the solenoid valves directly or with an inner DC converter. Only one wire is connected with the control device providing Ignition power, flame signal and valve driving power. The output wire is used both for ignition and flame detection with single electrode. Different version are available to be fitted on each valve.



Primary connections



Standard buried cable



Plug A



Plug B



Plug C



Plug D



Plug T



Plug K

High-voltage cables

Cofi manufacture high voltage ignition cable for all market needs. From the simple copper wire with connector to more complex cable with carbon fibre 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.



SILICONE/CARBON FIBRE cable
1x1 diameter 7
Resistive cable 10 kOhm/m
Cable diameter 7 mm 35 kV
r.m.s. -40 +180°C
Sold in lengths or by meter
Code: 09CA091868



SILICONE/ CARBON FIBRE cable
1x1 diameter 5.2 mm
Resistive cable 10 kOhm/m
Cable diameter 5.2 mm 20 kV
r.m.s. -40 +180°C
Sold in lengths or by meter
Code: 09CA091869



SILICONE/COPPER Cable 1x1
diameter 7 mm
Tear-resistant silicone cable,
insulation
20kV EI 2 -50 +180°C
Sold in lengths or by meter
Code: 09CA091804



SILICONE/COPPER Cable 1x1
diameter 4.7 mm
Tear-resistant silicone cable,
insulation
15kV EI 2 -50 +180°C
Sold in lengths or by meter
Code: 09CA091807



OZONE, PVC/COPPER Cable 1x1
diameter 7 mm
PVC Cable insulation 20kV EI 2
-20 +90°C
Sold in lengths or by meter
Code: 09CA091803

Connessioni e protezioni



Connector for faston
2,8x0,8 mm
For cables with diameter
5 mm
Code: 11PC112031



Connector in phosphor
bronze
Diameter 4 mm for cable
with diameter 4.7 mm
Code: 11PC112004



Connector in phosphor
bronze
Diameter 4 mm for cable
with diameter 7 mm
Code: 11PC112010



Connector, diameter
6.3 mm, for cables with
diameters 4.7 - 5.2 - 7 mm
Straight without spring
Code: 11PC112013



Connector, diameter
6.3 mm, for cables with
diameters 4.7 - 5.2 - 7 mm
Straight with spring
Code: 11PC112011



Connector, diameter
6.3 mm, for cables with
diameters 4.7 - 5.2 - 7 mm
90° with spring
Code: 11PC112018



PVC over moulded Cap
D. 4 mm for cables with
diameter 4.7-5.2-7 mm
Code: 17GOST0000



PVC over moulded 90° Cap
D. 4 mm for cables with
diameter 4.7-5.2-7 mm
Used with electronic
transformers' "V" outlets.
Code: 17GOST000K



Silicone Cap L = 35 mm for
cables with diameters 4.7-
5.2-7 mm
Used with conventional
transformers' VIMAN and
SPMAN outlets
Code: 17GO172601



Terminal cap, type A, in
PBT, straight for cables with
diameters 4.7 - 5.2 - 7 mm
Code: 04PL041442



90° Silicone Cap for 6.3mm
connector for cables with
diameters 4.7-5.2-7 mm
Code: 17GO172605



90° Silicone Cap for 4 mm
connector for cables with
diameters 4.7-5.2-7 mm
Code: 17GO172604

Installed cable lengths



Complete high-voltage cables. Complete cable for
high pressure cleaners. It ensures perfect sealing of
the transformer outputs for perfect protection against
humidity in dirty and contaminated environments.
Cable in silicone/copper or silicone/ carbon fibre,
diameter 7 mm. Custom-made length.
Connector, diameter 4 mm, overmolded.
90° Connector, diameter 6.3 mm, with terminal cover.
Code: 09SP01XXXX

Mounting brackets



40X40 mm galvanized bracket
Bracket for horizontal mounting of
transformer on any surface.
Code: 15MI152457
Kit with screws and nuts available



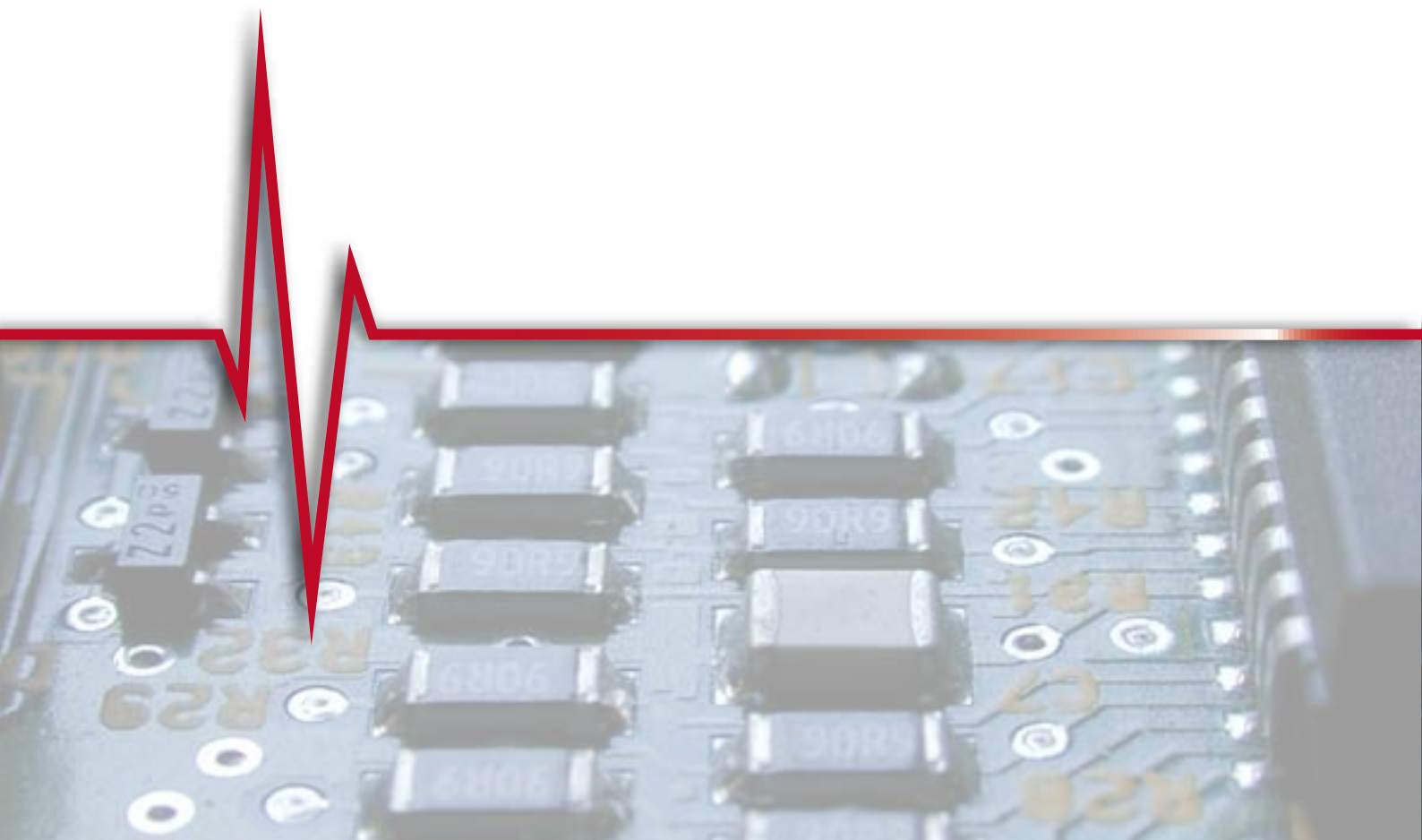
102X26 mm galvanized bracket
Bracket for vertical mounting of
transformer on any surface.
Code: 15MI152452
Kit with screws and nuts available

Filters



Emi disturbance suppression filter
Code: 06CE061517

ACCESSORIES



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