

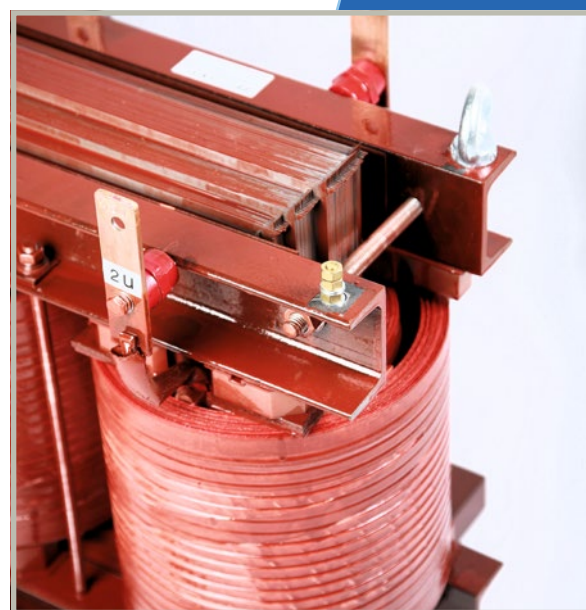
ELECTRICAL TRANSFORMERS

SINCE 1960





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ELECTRICAL TRANSFORMERS

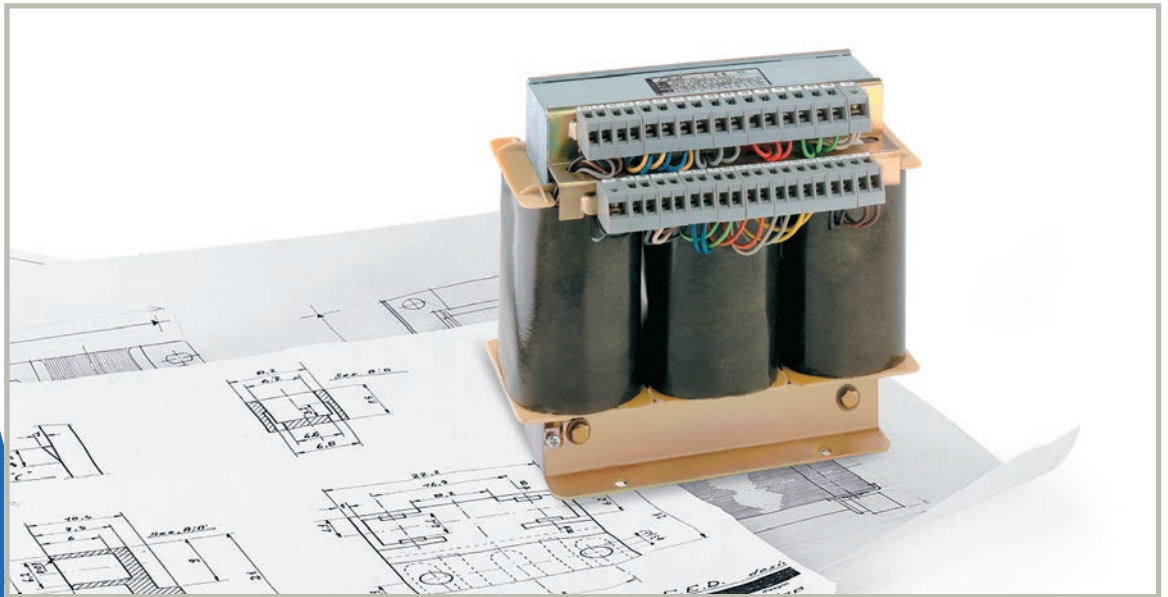
SINCE 1960

On the Italian and international markets since 1960, producing electrical transformers, **CED** offers a wide range of high-quality transformers, from single pieces designed around the unique requirements of a client to standard mass-produced items.

Our design engineers work to create **bespoke** and mass-produced transformers, establishing us as the go-to partner for companies of a range of types and sizes.

In its sixty years of history, experience and professionalism, our company has also developed a strong drive for research and **innovation**, seeking out **new materials**, **greater energy efficiency** and **reduced environmental impact**.

We were the first to introduce a line of **aluminium-wound** products, including for lower-power transformers, truly **blazing a trail**. This enables our clients to **make significant savings**.



Our Strengths

- Experience and competency in industrial production
- Assistance in design and customized production
- A wide range of products on the catalogue
- Rapid, punctual delivery
- Competitive prices
- Accurate selection of materials
- Product reliability and safety
- 100% of production is inspected using computerized equipment
- Presence on the Italian and worldwide market

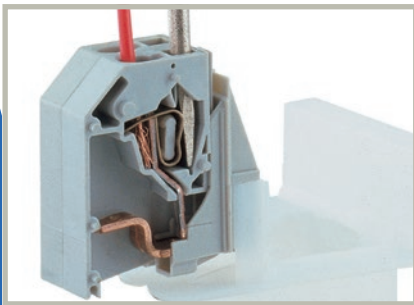


QUALITY POINT BY POINT



Our transformers are **tropicalized** using oven-cured polyester resin. This procedure results in:

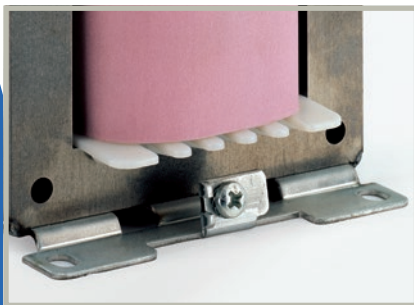
- resistance to external agents such as damp and dust;
- better winding adhesion;
- elimination of vibrations;
- better insulation;
- better heat transfer to the environment.



On request, the transformer can be supplied with **spring-loaded connection terminals**.

This choice results in:

- faster cabling times;
- greater safety;
- greater vibration resistance;
- less maintenance.



Our transformers are **earthed** using the fixing bracket welded to the magnetic core of the transformer. The result is an extremely low resistance rate between the earth and the nearby metal parts of the transformer.



We produce **class H winding** with double-enamelled conductors, guaranteeing excellent durability.



Our products are **inspected** using computerized equipment.

We use **innovative core lamination**: we have developed core laminates with revolutionary materials and forms. This innovation enables us to:

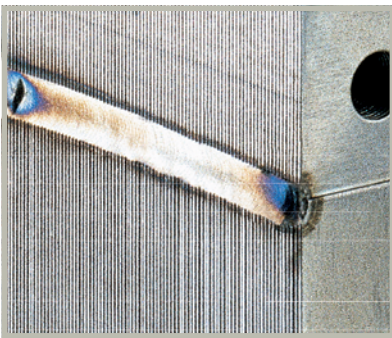
- reduce the magnetic gap
- improve the magnetic circuit
- improve permeability and reduce dispersion
- reduce magnetizing current.



Our transformers have a **welded magnetic core**. Single-phase transformers with power up to 1000 VA are built by welding the magnetic core. This results in:

- elimination of vibrations and resonance;
- considerable reduction of the magnetic gap, and thus reduced magnetic reluctance and magnetizing current.

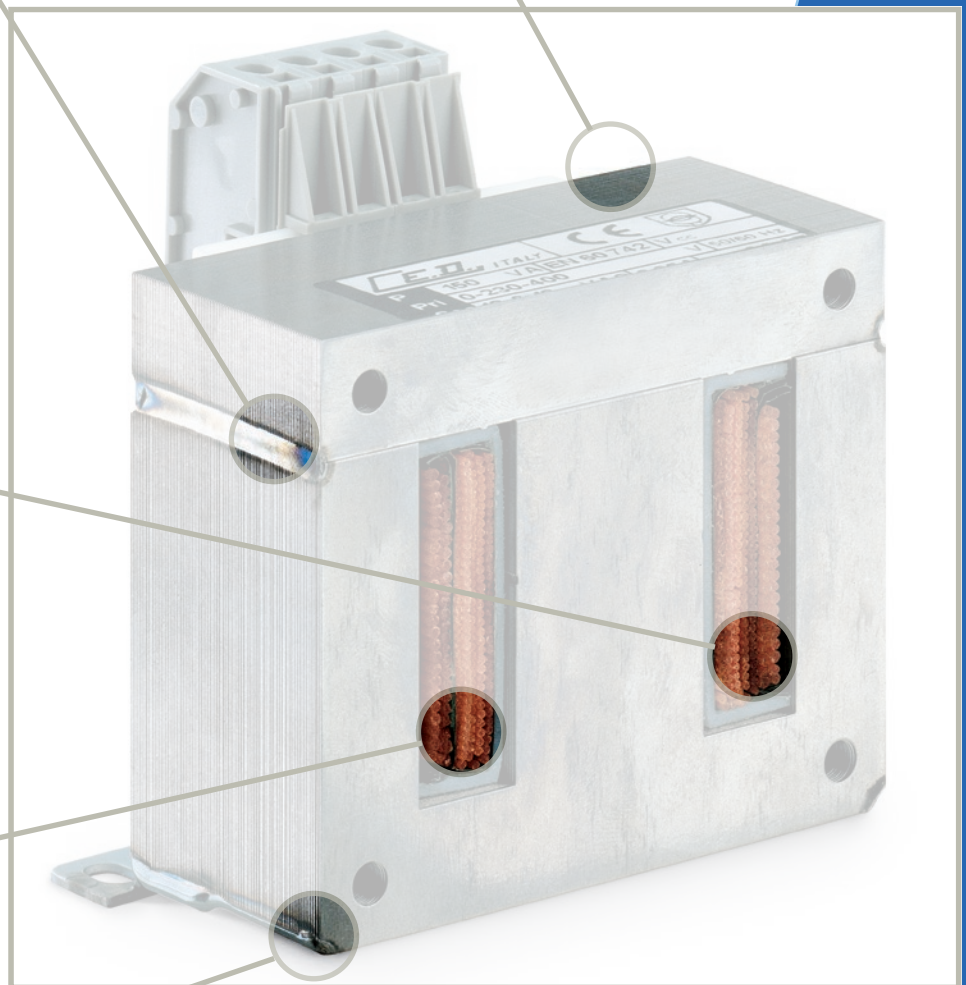
We use **self-extinguishing plastic materials**, ensuring our transformers are safe even in case of failures



Our transformers come with **multilayer insulation**, which ensures perfect separation between input and output windings. This reinforced insulation passes dielectric testing at over 5000 V.

Our transformers are built on **concentric coils**. This technique makes it possible to reduce dispersion of magnetic flow and voltage drop from no-load to full-load.

Our transformers come with anticorrosive **galvanized metal accessories** and a **welded fixing bracket**.

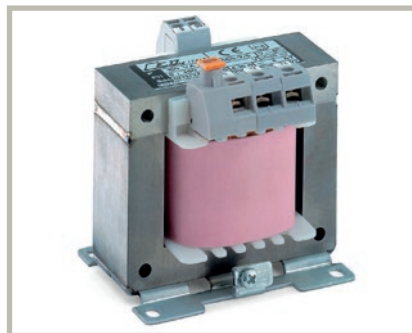
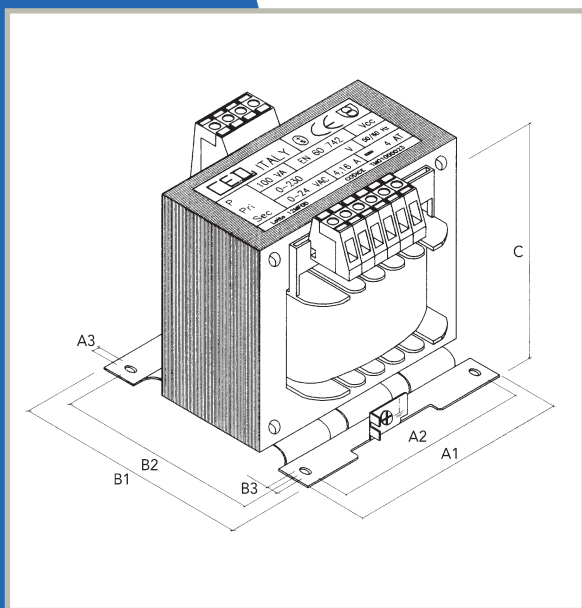


SINGLE-PHASE SAFETY ISOLATING TRANSFORMERS

- Compliant with standard **EN 61558-2-6**
- Standard voltages
Input winding **230/400 V**
Output winding **12, 24, 48 V**
- Other voltages available on request
- Electrostatic screen available on request
- Ambient temperature **40 °C**
- Protection rating **IP00**
- Electrical protection rating **I**
- Thermal insulation class **B**
- Fixing brackets compliant with DIN standards
- Connection terminals **IP 20**

VA	A1	B1	A2	B2	A3	B3	C	KG	W fe	W tot	Vcc %	Δv
30	75	80	53	46	4,8	9	78	1	2,5	6	9	8
50	75	94	53	61	4,8	9	78	1,5	3,5	9	9	8
75	84	85	64	57	4,8	8	89	1,7	4,5	11	8	8
100	96	95	84	63	5,8	9	92	2,4	5,5	14	7	6
150	96	105	84	73	5,8	9	92	3	7	18	6,5	6
200	96	115	84	83	5,8	9	92	3,5	8	20	6,5	5,5
250	120	96	90	69	5,8	12	116	4	9	23	6	5,5
300	120	107	90	79	5,8	12	116	4,6	10	27	5,5	5
400	120	116	90	89	5,8	12	116	5,6	13,5	34	5,5	5
500	120	127	90	99	5,8	12	116	6,5	15	43	5,5	5
600	150	109	122	86	7	15	141	8	16	45	5	4,5
800	150	144	122	116	7	15	141	11,5	23	60	4,8	4,5
1000	150	161	122	126	7	15	151	12,9	29	65	4,7	4,5
1200	180	150	130	95	8	20	182	12,5	24	69	4,5	4
1500	180	170	130	115	8	20	182	16	32	91	4,2	4
2000	192	165	140	125	8	20	220	21	42	99	4,2	4
2500	192	195	140	155	8	20	220	27,5	50	126	4	4
3000	240	180	180	120	10	30	275	32	55	140	4	3,5
4000	240	200	180	140	10	30	290	40	62	150	3,8	3,5
5000	240	220	180	160	10	30	290	48	75	200	3,8	3,5

W fe = no-load losses
W tot = full-load losses
Vcc % = short-circuit voltage
Δv = voltage drop from no-load to full-load



Dimensions are based on 24V output transformers. Transformers with a different voltage may have different dimensions.



SINGLE-PHASE SAFETY ISOLATING TRANSFORMERS for halogen lamps

- Compliant with standard **EN 61558-2-6**
- Standard voltages
Input winding **230 V**
Output winding **12 V**
- Electrostatic screen available on request
- Ambient temperature **40 °C**
- Protection rating **IP00**
- Electrical protection rating **I**
- Thermal insulation class **B**
- Fixing brackets compliant with DIN standards
- Connection terminals **IP 20**

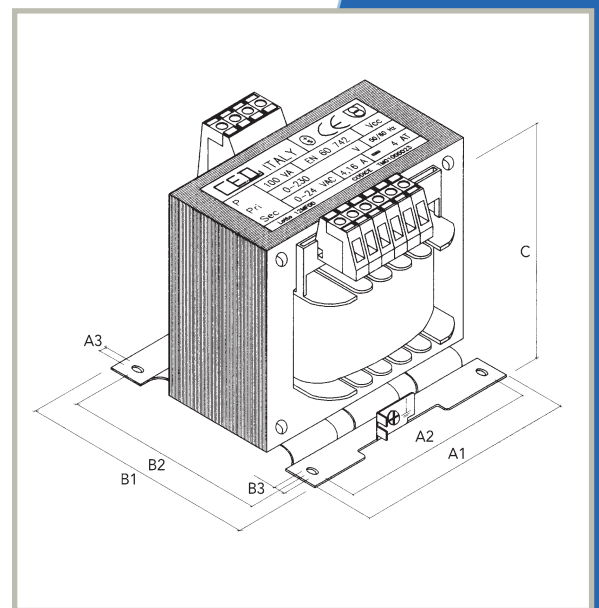
VA	A1	B1	A2	B2	A3	B3	C	KG	W fe	W tot	Vcc %	Δv
50	75	80	53	46	4,8	9	78	1	2,5	6	9	8
100	96	88	84	55	5,8	9	92	2,2	5	13	7	6
150	96	95	84	63	5,8	9	92	2,4	5,5	14	7	6
200	96	105	84	73	5,8	9	92	3	7	18	6,5	6
250	96	115	84	83	5,8	9	92	3,5	8	20	6,5	5,5
300	120	96	90	69	5,8	12	116	4	9	23	6	5,5
400	120	114	90	79	5,8	12	116	4,6	10	27	5,5	5
500	120	130	90	89	5,8	12	134	5,6	13,5	34	5,5	5
600	120	140	90	99	5,8	12	134	6,5	15	43	5,5	5
800	150	130	122	106	7	15	190	10	19	53	5	4,5
1000	150	140	122	116	7	15	190	11,5	23	60	4,8	4,5

W fe = no-load losses

W tot = full-load losses

Vcc % = short-circuit voltage

Δv = voltage drop from no-load to full-load



SINGLE-PHASE ISOLATING TRANSFORMERS

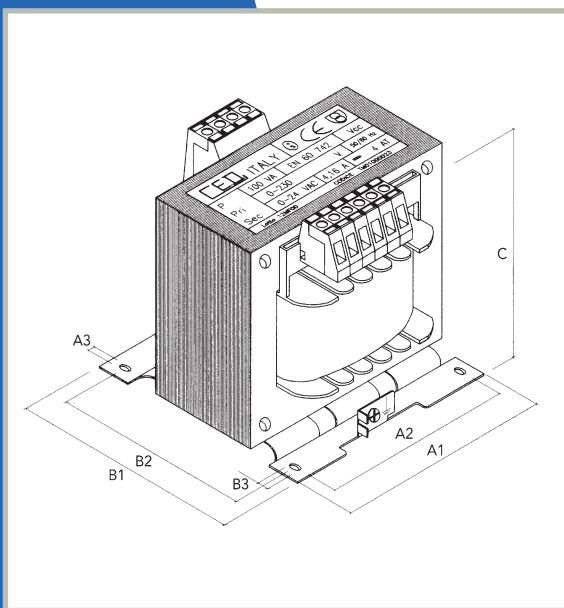
- Compliant with standard **EN 61558-2-4**
- Standard voltages
Input winding **230/400 V**
Output winding **115 V or 230 V**
- Other voltages available on request
- Electrostatic screen available on request
- Ambient temperature **40 °C**
- Protection rating **IP00**
- Electrical protection rating **I**
- Thermal insulation class **B**
- Fixing brackets compliant with **DIN** standards
- Connection terminals **IP 20**



EI Core lamination



UI Core lamination



VA	A1	B1	A2	B2	A3	B3	C	KG	W fe	W tot	Vcc %	Δv
30	75	80	53	46	4,8	9	78	1	2,5	6	9	8
50	75	94	53	61	4,8	9	78	1,5	3,5	9	9	8
75	84	85	64	57	4,8	8	89	1,7	4,5	11	8	8
100	96	95	84	63	5,8	9	92	2,4	5,5	14	7	6
150	96	105	84	73	5,8	9	92	3	7	18	6,5	6
200	96	115	84	83	5,8	9	92	3,5	8	20	6,5	5,5
250	120	96	90	69	5,8	12	116	4	9	23	6	5,5
300	120	107	90	79	5,8	12	116	4,6	10	27	5,5	5
400	120	116	90	89	5,8	12	116	5,6	13,5	34	5,5	5
500	120	127	90	99	5,8	12	116	6,5	15	43	5,5	5
600	150	109	122	86	7	15	141	8	16	45	5	4,5
800	150	139	122	116	7	15	141	11,5	23	60	4,8	4,5
1000	150	150	122	126	7	15	141	12,9	29	65	4,7	4,5
1200	180	134	130	95	8	20	165	12,5	24	69	4,5	4
1500	180	154	130	115	8	20	165	16	32	91	4,2	4
2000	192	168	140	125	8	20	170	21	42	99	4,2	4
2500	192	198	140	155	8	20	170	27,5	50	126	4	4
3000	240	180	180	120	10	30	215	32	55	140	4	3,5
4000	240	205	180	140	10	30	235	40	62	150	3,8	3,5
5000	240	225	180	160	10	30	235	48	75	200	3,8	3,5

VA	A1	B1	A2	B2	A3	B3	C	KG	W fe	W tot	Vcc %	Δv
6000	280	200	210	125	12	30	410	55	65	250	3,5	3,5
8000	280	220	210	145	12	30	410	60	83	350	3,5	3,5
10000	320	230	240	150	12	30	465	75	100	400	3,5	3,5
12000	320	240	240	160	12	30	465	85	115	480	3,2	3,5
15000	320	270	240	190	12	30	465	115	150	500	3,2	3,5
20000	400	275	222	164	13	30	588	165	195	850	3	3
25000	400	285	222	174	13	30	588	180	215	920	3	3
30000	400	305	222	194	13	30	588	210	250	1010	2,8	3

W fe = no-load losses

W tot = full-load losses

Vcc % = short-circuit voltage

Δv = voltage drop from no-load to full-load



SINGLE-PHASE AUTOTRANSFORMERS

- Compliant with standard **EN 61558-2-13**
- Standard voltages **115, 125, 220, 230, 380, 400 V**
- Can be reversed
- Protection rating **IPO0**
- Electrical protection rating **I**
- Thermal insulation class **B**
- Fixing brackets compliant with DIN standards
- Connection terminals **IP 20**

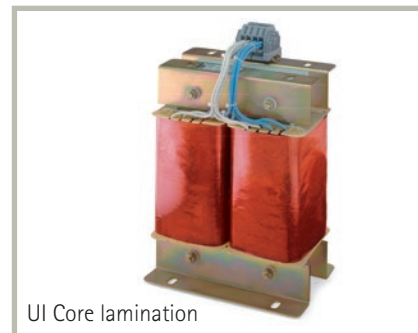
VA	A1	B1	A2	B2	A3	B3	C	KG	W fe	W tot
50	75	80	53	46	4,8	9	78	1	2,5	6
100	75	94	53	61	4,8	9	78	1,5	3,5	9
200	96	88	84	55	5,8	9	92	2,4	5	14
300	96	105	84	73	5,8	9	92	3	7	18
400	96	115	84	83	5,8	9	92	3,5	8	20
500	120	96	90	69	5,8	12	116	4	9	23
600	120	107	90	79	5,8	12	116	4,6	10	27
800	120	116	90	89	5,8	12	116	5,6	13,5	34
1000	150	109	122	86	7	15	141	8	16	45
1500	150	129	122	106	7	15	141	11	19	58
2000	150	150	122	126	7	15	141	12,9	29	65
2500	180	154	130	115	8	20	165	16	32	91
3000	180	154	130	115	8	20	165	18	36	95
4000	192	168	140	125	8	20	170	21	42	99
5000	192	198	140	155	8	20	170	28	50	126
6000	240	180	180	120	10	30	215	32	55	140
8000	240	215	180	150	10	30	235	43	68	158

VA	A1	B1	A2	B2	A3	B3	C	KG	W fe	W tot
10000	280	200	210	125	12	30	410	55	65	250
12000	280	210	210	135	12	30	410	58	85	290
15000	280	230	210	155	12	30	410	72	95	360
20000	320	230	240	150	12	30	465	100	125	470
25000	320	250	240	170	12	30	465	120	150	500
30000	320	270	240	190	12	30	465	140	185	620
40000	400	275	222	164	13	30	588	160	195	850
50000	400	285	222	174	13	30	588	175	215	920

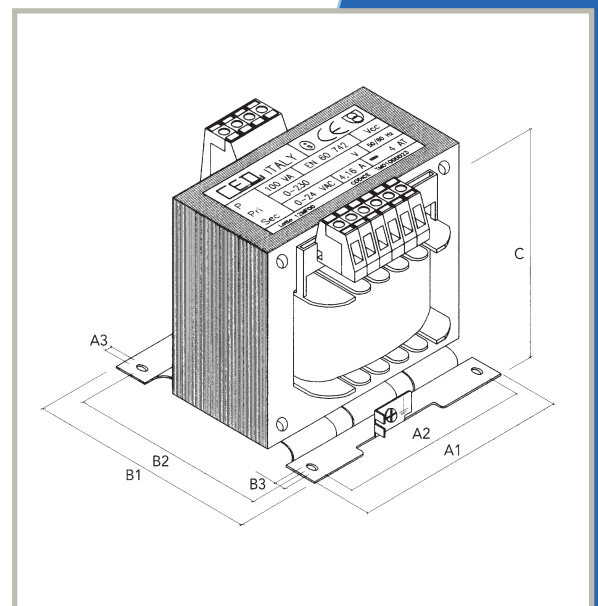
W fe = no-load losses
W tot = full-load losses



EI Core lamination



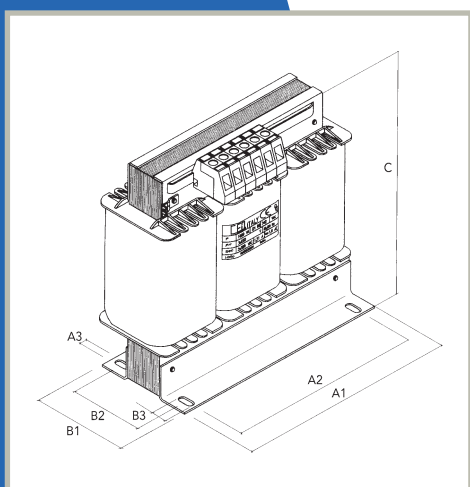
UI Core lamination



THREE-PHASE ISOLATING TRANSFORMERS

- Compliant with standard **EN 61558-2-4**
- Standard voltages
Input winding **230 V** or **400 V**
Output winding **230 V** or **400 V**
- Other voltages available on request
- Electrostatic screen available on request
- Protection rating **IP00**
- Electrical protection rating **I**
- Thermal insulation class **B**
- Fixing brackets compliant with DIN standards
- Connection terminals **IP 20**

KVA	A1	B1	A2	A4	B2	A3	B3	C	KG	W fe	W tot	Vcc %	Δv	BOX
0,5	180	105	111	-	75	6	9	162	8	12	38	6	6	A
1	240	120	200	-	76	10	20	215	14	19	88	6	5	B
1,5	240	130	200	-	86	10	20	215	17	24	110	6	5	B
2	240	140	200	-	96	10	20	215	20	28	125	5	5	B
2,5	300	130	250	-	100	10	20	265	26	37	150	5	4,5	C
3	300	130	250	-	100	10	20	265	27	37	155	5	4,5	C
3,5	300	140	250	-	110	10	20	265	31	45	175	5	4,5	C
4	300	165	250	-	120	10	20	278	35	52	190	5	4,5	C
5	300	175	250	-	130	10	20	278	40	59	245	5	4	C
6	360	165	325	280	113	10	30	325	45	64	310	4,5	4	D
7	360	175	325	280	123	10	30	325	50	75	380	4,5	4	D
8	360	240	325	280	133	10	30	325	60	85	420	4,5	4	D
10	420	240	375	300	125	10	30	375	80	105	510	4,5	3,5	E
12	420	255	375	300	135	10	30	375	90	115	530	4,5	3,5	E
15	480	290	430	375	155	12	30	430	120	155	750	4	3,5	F
20	480	300	430	375	165	12	30	430	150	195	880	4	3	F
25	480	310	430	375	175	12	30	430	165	215	995	4	3	F
30	480	340	430	375	195	12	30	430	195	250	1120	4	3	F
40	600	390	510	360	180	12	30	535	215	315	1220	4	2,5	G
50	600	400	510	360	190	12	30	535	235	340	1550	3,5	2,5	G
60	600	410	510	360	200	12	30	535	260	380	2150	3,5	2,5	G
63	600	420	510	360	210	12	30	535	275	400	2200	3	2,5	G
75	600	450	510	360	240	12	30	535	340	505	2400	3	2,5	H
100	600	450	510	360	240	12	30	535	340	525	2800	3	2,5	H



W fe = no-load losses
W tot = full-load losses
Vcc % = short-circuit voltage
 Δv = voltage drop from no-load to full-load

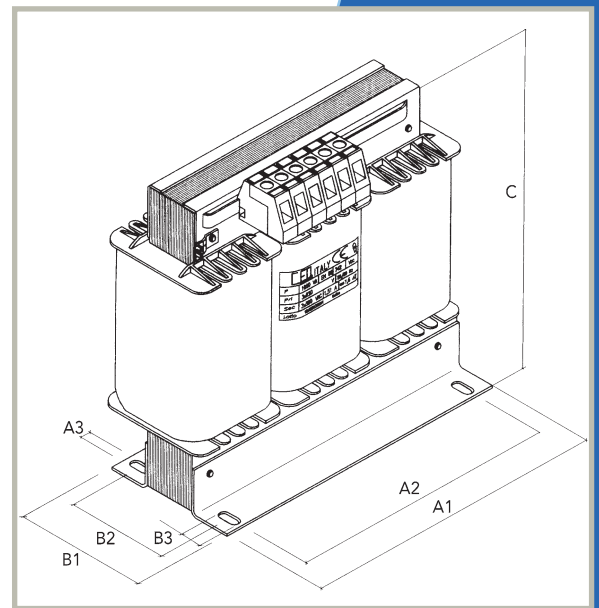


THREE-PHASE AUTOTRANSFORMERS

- Compliant with standard **EN 61558-2-13**
- Standard voltages **230/400 V**
- Other voltages available on request
- Can be reversed
- Protection rating **IPO0**
- Electrical protection rating **I**
- Thermal insulation class **B**
- Fixing brackets compliant with DIN standards
- Connection terminals **IP 20**

KVA	A1	B1	A2	A4	B2	A3	B3	C	KG	W fe	W tot	BOX
0,5	180	90	111	-	60	6	9	162	5	8	25	A
1	180	105	111	-	75	6	9	162	8	12	35	A
1,5	180	120	111	-	90	6	9	162	10,5	16	44	A
2	240	120	200	-	76	10	20	215	14	19	62	B
2,5	240	120	200	-	76	10	20	215	14	19	65	B
3	240	130	200	-	86	10	20	215	16,5	24	89	B
3,5	240	130	200	-	86	10	20	215	16,5	24	92	B
4	240	140	200	-	96	10	20	215	20	28	125	B
5	300	130	250	-	100	10	20	265	26	37	150	C
6	300	130	250	-	100	10	20	265	26,5	37	155	C
7	300	140	250	-	110	10	20	265	30,5	45	175	C
8	300	165	250	-	120	10	20	278	35	52	190	C
10	300	175	250	-	130	10	20	278	40	59	245	C
12	360	165	325	280	113	10	30	325	45	64	310	D
15	360	175	325	280	123	10	30	325	50	75	380	D
20	360	240	325	280	133	10	30	325	60	85	420	D
25	420	240	375	300	125	10	30	375	80	105	510	E
30	420	255	375	300	135	10	30	375	90	115	530	E
40	480	290	430	375	155	12	30	430	120	155	750	F
50	480	300	430	375	165	12	30	430	135	175	820	F
60	480	330	430	375	185	12	30	430	150	195	880	F
80	600	390	510	360	180	12	30	535	215	315	1220	G
100	600	400	510	360	190	12	30	535	260	380	2150	G
120	600	420	510	360	210	12	30	535	275	400	2200	G
175	600	450	510	360	240	12	30	535	340	505	2400	H
220	600	450	510	360	240	12	30	535	340	525	2800	H

W fe = no-load losses
W tot = full-load losses



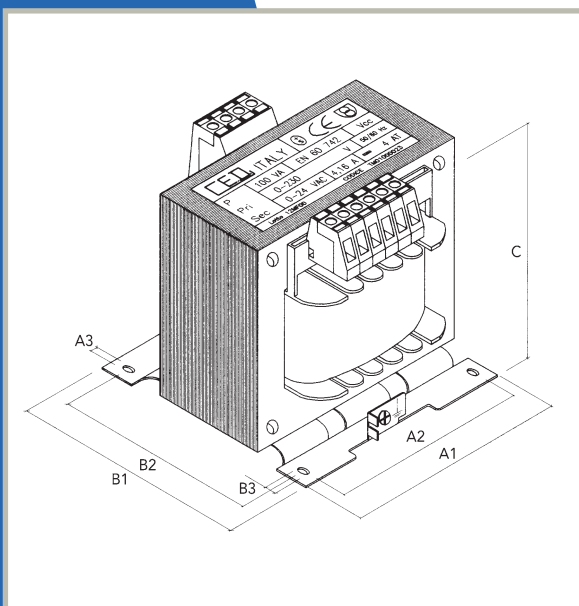
SINGLE-PHASE ISOLATING TRANSFORMERS

for supply of medical rooms

- Compliant with standard **EN 61558-2-15**
- Standard voltages
Input winding **230 V**
Output winding **230 V**
- Electrostatic screen
- Ambient temperature **40 °C**
- Protection rating **IP00**
- Electrical protection rating **I**
- Thermal insulation class **B**
- Connection terminals **IP 20**

KVA	A1	B1	A2	B2	A3	B3	C	KG	W fe	W tot	Vcc %	Dv
0,5	180	134	130	95	8	20	165	13	13	28	2,8	4
1	192	168	140	125	8	20	170	21	20	46	2,8	4
2	240	180	180	120	10	30	215	32	38	96	2,7	3,5
3	240	150	180	105	10	30	365	30	32	95	2,7	3,5
4	240	170	180	125	10	30	365	40	40	120	2,7	3
5	280	200	210	125	12	30	410	50	45	130	2,7	3
7	280	230	210	155	12	30	410	65	70	175	2,7	3
10	320	230	240	150	12	30	465	80	90	210	2,7	3

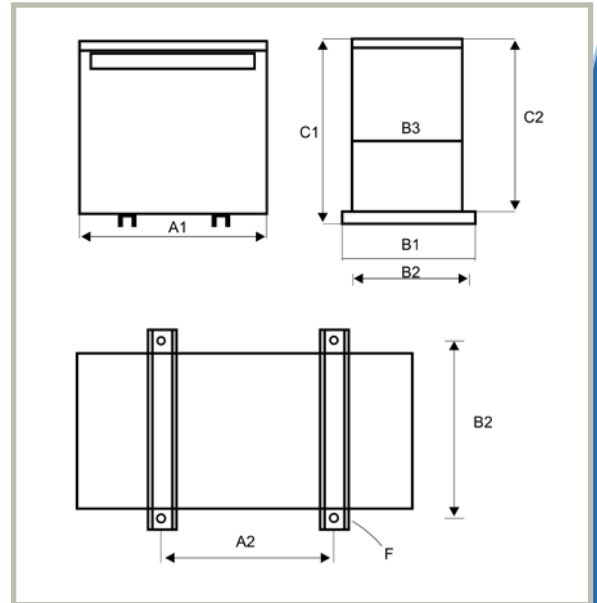
W fe = no-load losses
W tot = full-load losses
Vcc % = short-circuit voltage
 Δv = voltage drop from no-load to full-load



ENCLOSURES FOR THREE-PHASE TRANSFORMERS

- Protection rating: **IP 23**
- Other protection ratings available on request
- Standard colours: **RAL 7032** or **RAL 7035**
- Other colours available on request
- Powder coated
- Stainless steel available on request

MOD	A1	B1	A2	B2	B3	F	C1	C2	KG
A	270	220	135	180	150	8	300	275	4,5
B	310	255	200	215	180	8	345	320	6,5
C	370	320	200	280	250	8	400	375	8,5
D	430	320	300	280	250	8	450	425	11
E	490	380	300	340	310	8	500	475	14
F	530	380	400	350	320	8	550	525	15
G	650	420	400	390	360	8	650	600	20
H	910	615	605	585	590	8	900	840	30



CE



SINGLE-PHASE AND THREE-PHASE REACTORS

- Compliant with standard **EN 61558-2-20**
- Protection rating **IP00**
- Electrical protection rating **I**
- Thermal insulation class **B**

CE



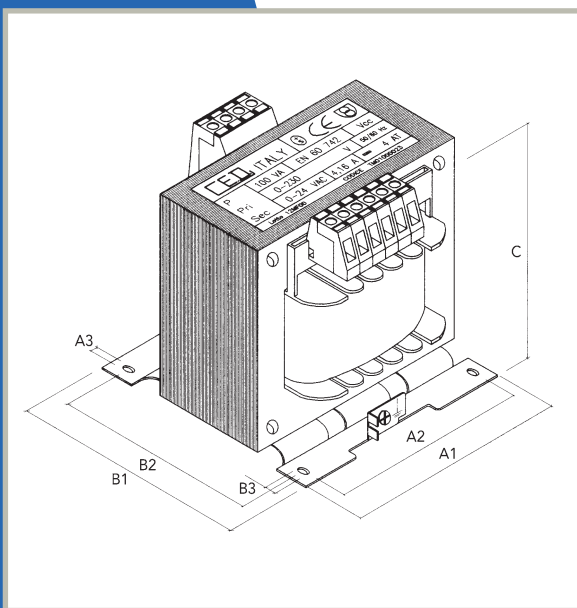
E.D.

CLASS II SINGLE-PHASE ISOLATING TRANSFORMERS for DIN rail mounting

- Compliant with standard EN 61558-2-4
- Standard voltages
Input winding 230/400 V
Output winding 230 V or 115 V
- Other voltages available on request
- For DIN rail mounting
- Protection rating IP20
- Electrical protection rating II
- Thermal insulation class F

VA	A1	B1	A2	B2	A3	B3	C	KG	W fe	W tot	Vcc %	Δv
75	90	106	68	90	5	8	101	1,8	4,5	11	8	8
100	90	106	68	90	5	8	106	2	5,5	14	7	6
150	90	106	68	90	5	8	116	2,5	7	18	6,5	6
250	126	131	96	121	6	10	115	4	9	2	6	5,5
300	126	131	96	121	6	10	125	4,6	10	27	5,5	5

W fe = no-load losses
W tot = full-load losses
Vcc % = short-circuit voltage
 Δv = voltage drop from no-load to full-load



CLASS II SINGLE-PHASE SAFETY ISOLATING TRANSFORMERS for DIN rail mounting

- Compliant with standard **EN 61558-2-6**
- Standard voltages
Input winding **230/400 V**
Output winding **12, 24, 48 V**
- Other voltages available on request
- For DIN rail mounting
- Protection rating **IP20**
- Electrical protection rating **II**
- Thermal insulation class **F**

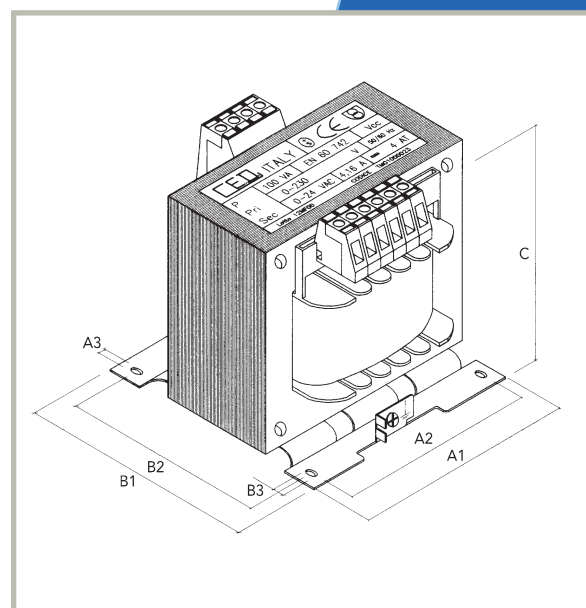
VA	A1	B1	A2	B2	A3	B3	C	KG	W _{fe}	W _{tot}	V _{cc} %	Δv
75	90	106	68	90	5	8	101	1,8	4,5	11	8	8
100	90	106	68	90	5	8	106	2	5,5	14	7	6
150	90	106	68	90	5	8	116	2,5	7	18	6,5	6
250	126	131	96	121	6	10	115	4	9	23	6	5,5
300	126	131	96	121	6	10	125	4,6	10	27	5,5	5

W_{fe} = no-load losses

W_{tot} = full-load losses

V_{cc} % = short-circuit voltage

Δv = voltage drop from no-load to full-load

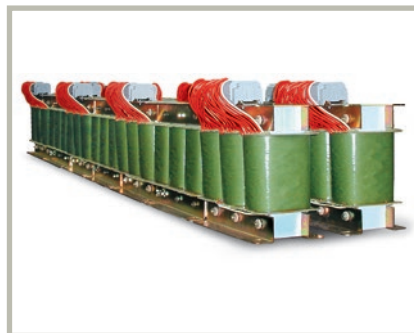
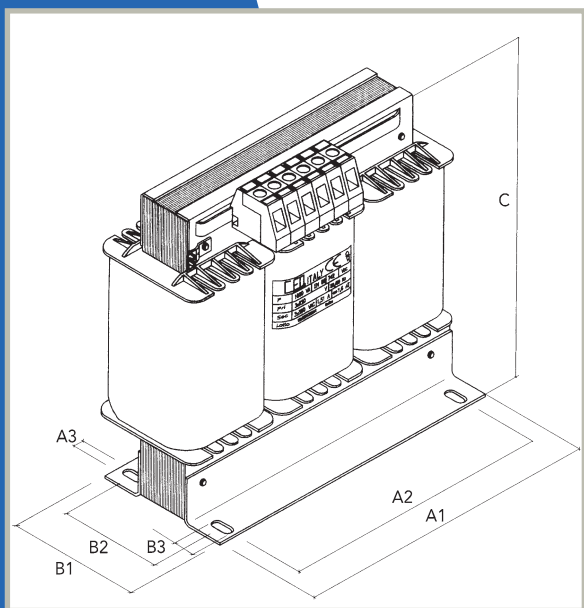


THREE-PHASE POWER TRANSFORMERS

- Compliant with standard **IEC 726**
- Standard voltages
Input winding **230 V** or **400 V**
Output winding **230 V** or **400 V**
- Other voltages available on request
- Electrostatic screen available on request
- Ambient temperature **40 °C**
- Protection rating **IP00**
- Electrical protection rating **I**
- Thermal insulation class **F** or **H**

KVA	A1	B1	A2	B2	A3	B3	C	KG	W _{fe}	W _{tot}	V _{cc} %	Δv
50	600	400	510	350	12	30	600	220	350	1750	3	3
75	600	450	510	400	12	30	600	300	350	1950	3	3
100	900	400	810	350	12	30	680	500	300	2400	5	3
150	1000	400	910	350	12	30	730	700	540	2840	5	3
200	1100	500	1010	400	12	30	1000	800	650	4350	4	3
250	1100	500	1010	400	12	30	1000	900	730	4730	4	3
300	1200	500	1110	400	12	30	1000	1000	1000	5500	4	3
350	1250	500	1115	400	12	30	1100	1200	1150	5950	4	3

W_{fe} = no-load losses
W_{tot} = full-load losses
V_{cc}% = short-circuit voltage
Δv = voltage drop from no-load to full-load



THREE-PHASE POWER AUTOTRANSFORMERS

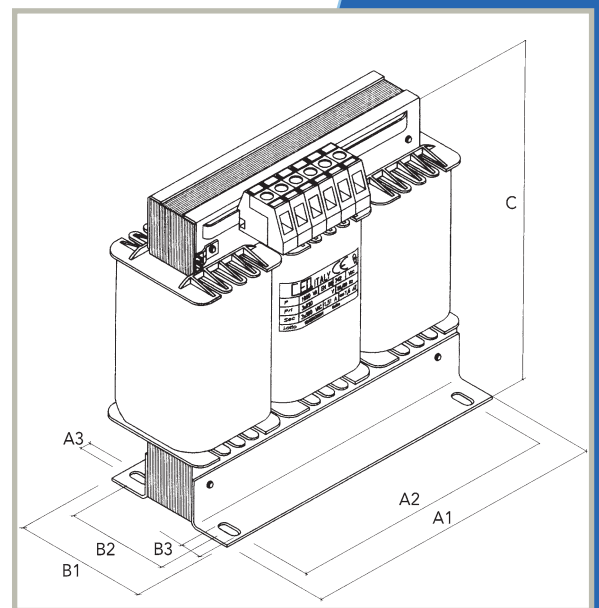
- Compliant with standard **IEC 726**
- Standard voltages **230/400 V**
- Other voltages available on request
- Can be reversed
- Ambient temperature **40 °C**
- Protection rating **IP00**
- Electrical protection rating **I**
- Thermal insulation class **F** or **H**

KVA	A1	B1	A2	B2	A3	B3	C	KG	W fe	W tot	Δv
100	600	400	510	350	12	30	600	200	350	2350	3
150	700	400	610	350	12	30	700	280	350	3050	3
200	900	400	810	350	12	30	700	440	500	3800	3
250	950	450	860	400	12	30	700	500	540	4440	3
300	1000	450	910	400	12	30	750	600	690	5090	3
400	1000	500	910	450	12	30	850	650	700	6400	3
500	1100	500	1010	450	12	30	1000	800	800	7300	3

W fe = no-load losses

W tot = full-load losses

Δv = voltage drop from no-load to full-load

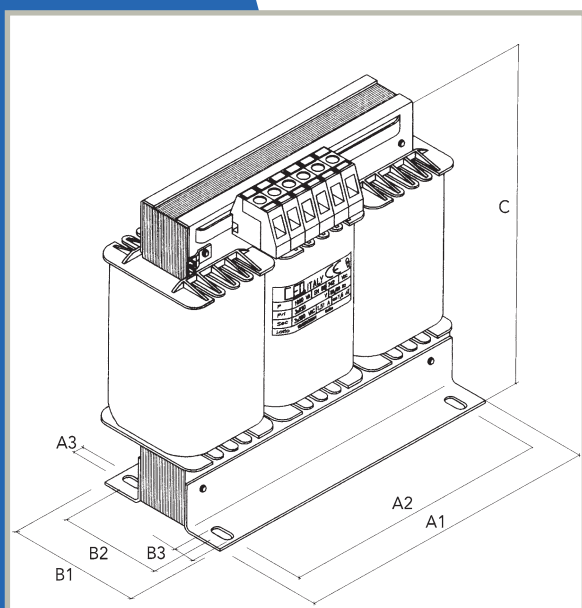


THREE-PHASE TRANSFORMERS POTTED IN RESIN

- Compliant with standard **IEC 726**
- Standard voltages
Input winding **230 V** or **400 V**
Output winding **230 V** or **400 V**
- Other voltages available on request
- Electrostatic screen available on request
- Ambient temperature **40 °C**
- Protection rating **IP00**
- Electrical protection rating **I**
- Thermal insulation class **F** or **H**

KVA	A1	B1	A2	B2	A3	B3	C	KG	W fe	W tot	Vcc %	Δv
30	750	400	650	350	12	30	600	190	150	830	4	3
50	850	500	750	450	12	30	700	250	230	1180	5	3
75	850	500	750	450	12	30	750	300	300	1300	4	3
100	900	500	800	450	12	30	800	450	480	1980	4	3
150	950	500	850	450	12	30	800	650	600	2200	4	3
200	1000	500	900	450	12	30	1000	790	800	2800	4	3
250	1300	700	1200	650	12	30	900	900	850	3350	4	3
300	1400	700	1300	650	12	30	900	1200	1000	4000	4	3

W fe = no-load losses
W tot = full-load losses
Vcc % = short-circuit voltage
Δv = voltage drop from no-load to full-load

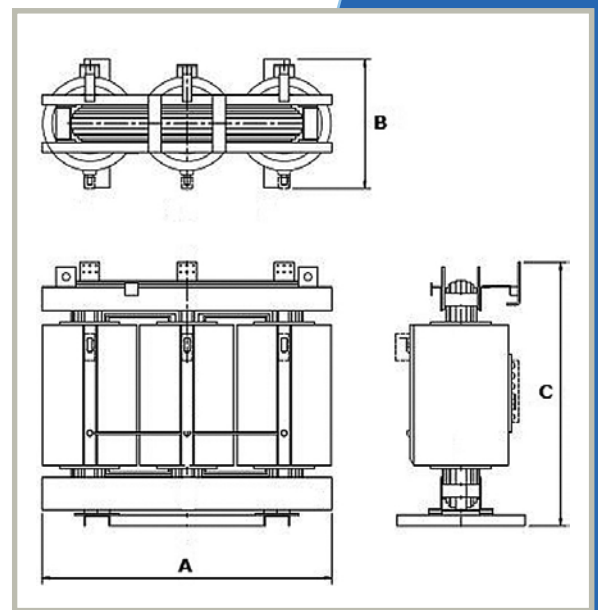


THREE-PHASE MEDIUM VOLTAGE TRANSFORMERS 12 kV CLASS

- Compliant with standard **EN 60076-1 / EN 50541-1 Phase II**
- Standard voltages
Input winding **10 kV**
Output winding **400 V**
- Other voltages available on request
- Isolating level: **12/28/75 kV**
- Electrostatic screen available on request
- Ambient temperature **40 °C**
- Protection rating **IP00**
- Electrical protection rating **I**
- Thermal insulation class **F**
- Ambient class **E2 C2 F1**

kVA	A	B	C	KG	W _{fe}	W _{tot}	V _{cc} %	I ₀
100	1180	650	1200	680	252	2052	6	1,1
160	1200	650	1330	700	360	2960	6	1,1
250	1290	650	1440	1200	468	3868	6	1
400	1450	800	1500	1720	675	5175	6	0,9
630	1460	800	1790	2030	990	8090	6	0,7
800	1540	1000	1800	2450	1170	9170	6	0,7
1000	1620	1000	1900	2900	1395	10395	6	0,6
1250	1690	1000	2000	3750	1620	12620	6	0,6
1600	1750	1200	2100	4200	1980	14980	6	0,5
2000	1860	1400	2270	4780	2340	18340	6	0,5
2500	2000	1400	2350	5700	2790	21790	6	0,4
3150	2100	1400	2420	6500	3420	25420	6	0,4

W_{fe} = no-load losses
W_{tot} = full-load losses
V_{cc} % = short-circuit voltage
I₀ = No load current %

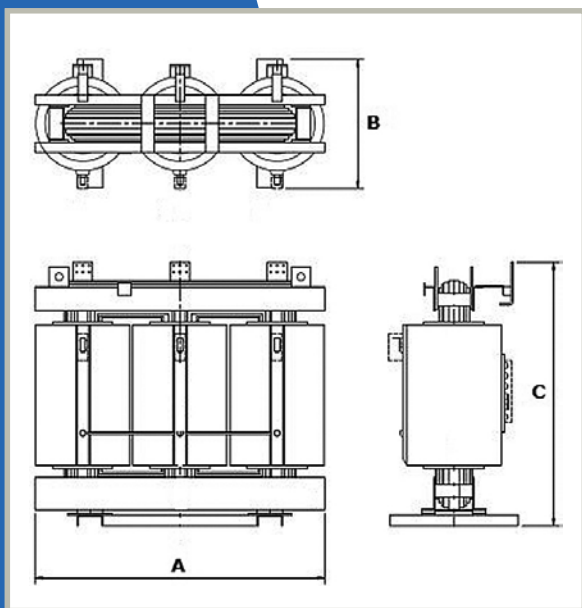


THREE-PHASE MEDIUM VOLTAGE TRANSFORMERS 17.5 kV CLASS

- Compliant with standard **EN 60071-1 / EN 50541-1 Phase II**
- Standard voltages
Input winding **15 kV**
Output winding **400 V**
- Other voltages available on request
- Isolating level: **17.5/38/95 kV**
- Electrostatic screen available on request
- Ambient temperature **40 °C**
- Protection rating **IP00**
- Electrical protection rating **I**
- Thermal insulation class **F**
- Ambient class **E2 C2 F1**

kVA	A	B	C	KG	W fe	W tot	Vcc %	I ₀
100	1140	650	1200	650	252	2052	6	1,1
160	1140	650	1330	700	360	2960	6	1,1
250	1300	650	1440	1200	468	3868	6	1
400	1400	800	1500	1700	675	5175	6	0,9
630	1440	800	1790	2000	990	8090	6	0,7
800	1520	1000	1800	2250	1170	9170	6	0,7
1000	1590	1000	1900	2850	1395	10395	6	0,6
1250	1620	1000	2000	2900	1620	12620	6	0,6
1600	1660	1200	2100	3400	1980	14980	6	0,5
2000	1850	1400	2270	4050	2340	18340	6	0,5
2500	1940	1400	2350	5000	2790	21790	6	0,4
3150	2050	1400	2420	5800	3420	25420	6	0,4

W fe = no-load losses
W tot = full-load losses
Vcc % = short-circuit voltage
I₀ = No load current %

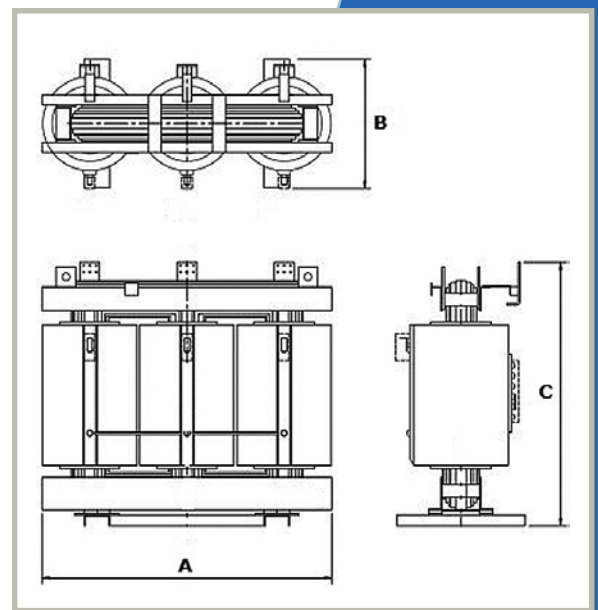


THREE-PHASE MEDIUM VOLTAGE TRANSFORMERS 24 kV CLASS

- Compliant with standard **EN 60076-1 / EN 50541-1 Phase II**
- Standard voltages
Input winding **20 kV** or **10/20 kV**
Output winding **400 V**
- Other voltages available on request
- Isolating level: **24/50/125 kV**
- Electrostatic screen available on request
- Ambient temperature **40 °C**
- Protection rating **IP00**
- Electrical protection rating **I**
- Thermal insulation class **F**
- Ambient class **E2 C2 F1**

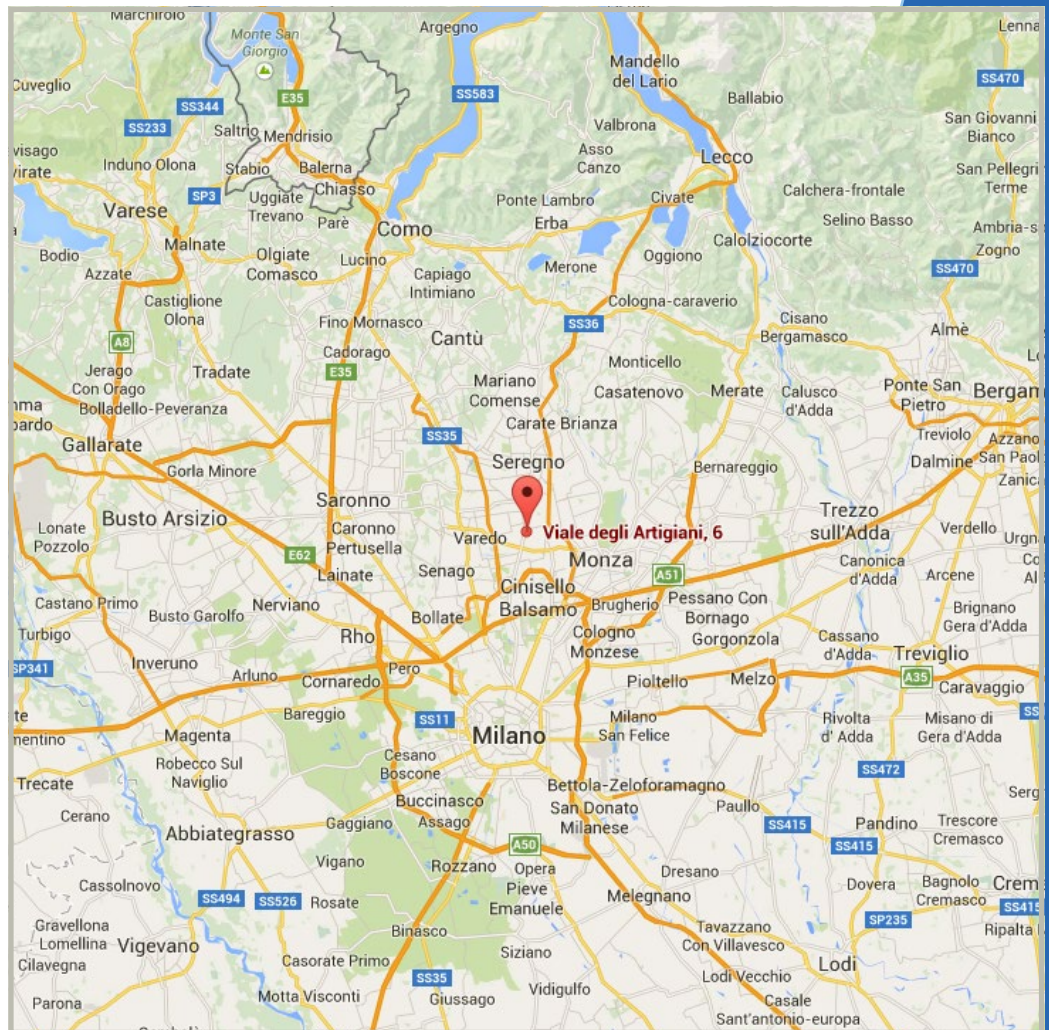
kVA	A	B	C	KG	W _{fe}	W _{tot}	V _{cc} %	I ₀
100	1180	650	1200	680	252	2052	6	1,1
160	1200	650	1330	700	360	2960	6	1,1
250	1290	650	1440	1200	468	3868	6	1
400	1450	800	1500	1720	675	5175	6	0,9
630	1460	800	1790	2030	990	8090	6	0,7
800	1540	1000	1800	2450	1170	9170	6	0,7
1000	1620	1000	1900	2900	1395	10395	6	0,6
1250	1690	1000	2000	3750	1620	12620	6	0,6
1600	1750	1200	2100	4200	1980	14980	6	0,5
2000	1860	1400	2270	4780	2340	18340	6	0,5
2500	2000	1400	2350	5700	2790	21790	6	0,4
3150	2100	1400	2420	6500	3420	25420	6	0,4

W_{fe} = no-load losses
W_{tot} = full-load losses
V_{cc} % = short-circuit voltage
I₀ = No load current %





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