

# Single phase control transformers IP-20



Single phase control, safety and isolation transformer intended for control, switching and signaling elements supply, in electrical cabinets at machines and processes.

Separated windings by galvanic isolation between primary and secondary. Wounds totally protected against mechanical chocks and adverse environments.

DIN Rail mounting (for ratings up to 100 VA) and screw fixing (for all ratings).



Up to 630 VA, magnetic core covered of an elastomeric with rubber neoprene that protects against external agents, at the same time as it provides a comfortable and safe manipulation of the transformer. From 1000 VA, epoxy varnish painted core.

Up to 1600 VA, enclosure is a self- V-0 technical polyamide; halogens and phosphorus free. From 2000 VA, cast resin encapsulated transformers.

Connections by screws with self-lifting supporting washers.

Transparent protective cover for the terminals that avoids the risk of accident by direct contact.

## Technical characteristics

Power rating	25 ÷ 5000 VA
Input voltage (Ratings 25 ÷ 1600 VA)	230 – 400 V
Input voltage (Ratings 2000 ÷ 5000 VA)	230 – 400 – 460 V
Output voltage	12 – 24 V 24 – 48 V 115 – 230 V
Frequency	50/60 Hz
Ambient temperature	40 °C
Insulation class	F (155 °C)
Protection degree	IP-20
Safety class (Ratings 25 - 630 VA)	Class II 
Safety class (Ratings 1000 - 5000 VA)	Class I 
Test voltage	4 kV

Standard IEC/UNE-EN 61558-1



IEC/UNE-EN 61558-2-2

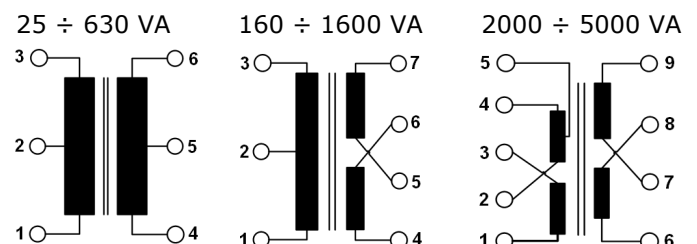


Output voltage < 50 V:  
IEC/UNE-EN 61558-2-6



Output voltage > 50 V:  
IEC/UNE-EN 61558-2-4

## Electrical diagram



- For general applications, select output rating according to the load and power factor:

$$VA = W / \text{Cos } \varphi$$

- To be used as control transformer for relays, contactors, timers, electro-valves, etc:

1° Sum all maintenance powers of elements.

2° Multiply value by 4.

Nominal power rating **VA** is obtained.

Check that instantaneous power of the selected transformer (see table below) is higher than the simultaneous powers of the control elements.

It is recommended a protection against short circuits via fuse, installed in series at the primary circuit.

Inrush current of a transformer can reach about 20-30 times I nominal during 5-10 ms. For this reason, fuses selected must be slow-blow or time-delay types.

It is recommended a fuse at the secondary side of the transformer according to the load to protect it against overload. Its size must be next lower than I nominal of the transformer label.

Power Rating <b>VA</b>		Reference			Dimensions <b>mm</b>						Weight <b>kg</b>	Type	Primary Protection <b>T, aM, D</b>		
Nominal	(Inst.)	Sec. 12-24 V	Sec. 24-48 V	Sec. 115-230 V	A	B	C	D	E	Ø			230 V	400 V	460 V
25	(65)	CSE0025-1	CSE0025-2	CSE0025-3	82	90	92	58	79	5,5x12	1,0	I	125 mA	80 mA	
40	(80)	CSE0040-1	CSE0040-2	CSE0040-3	82	90	92	58	79	5,5x12	1,3	I	200 mA	125 mA	
63	(135)	CSE0063-1	CSE0063-2	CSE0063-3	82	90	96	58	79	5,5x12	1,4	I	315 mA	200 mA	
100	(210)	CSE0100-1	CSE0100-2	CSE0100-3	82	90	106	58	79	5,5x12	1,6	I	500 mA	315 mA	
160	(370)	CSE0160-1	CSE0160-2	CSE0160-3	94	106	117	58	90	7x14	2,5	II	800 mA	500 mA	
200	(460)	CSE0200-1	CSE0200-2	CSE0200-3	105	115	116	70	99	7x14	2,9	II	1 A	600 mA	
250	(650)	CSE0250-1	CSE0250-2	CSE0250-3	105	115	127	70	99	7x14	3,6	II	1,25 A	800 mA	
315	(875)	CSE0315-1	CSE0315-2	CSE0315-3	115	123	134	80	108	7x14	4,5	II	1,6 A	1 A	
400	(1250)	CSE0400-1	CSE0400-2	CSE0400-3	115	123	148	80	108	7x14	5,5	II	2 A	1,25 A	
500	(1400)	CSE0500-1	CSE0500-2	CSE0500-3	135	145	148	101	130	7X15	6,5	II	2,5 A	1,6 A	
630	(1800)	CSE0630-1	CSE0630-2	CSE0630-3	135	145	170	101	130	7X15	8,4	II	3,15 A	2 A	
1000	(3200)	CSE1000-1	CSE1000-2	CSE1000-3	155	158	190	124	143	7X15	12,7	III	5 A	3,15 A	
1600	(5350)		CSE1600-2	CSE1600-3	155	158	228	124	143	7X15	17,8	III	8 A	5 A	
2000	(5600)		CSE2000-2	CSE2000-3	192	212	210	165	195	7X16	24,6	IV	10 A	6,3 A	5 A
2500	(7800)		CSE2500-2	CSE2500-3	192	212	210	165	195	7X16	30,0	IV	12 A	8 A	6 A
3150	(10100)			CSE3150-3	192	212	250	165	195	7X16	39,5	IV	15 A	8 A	8 A
4000	(12500)			CSE4000-3	240	255	235	205	235	9X18	47,5	IV	20 A	12 A	10 A
5000	(15000)			CSE5000-3	240	255	255	205	235	9x18	52,5	IV	25 A	15 A	12 A

\* Other features, power, voltage, etc., on request.

\* Torytrans reserves the right to modify the information in any time and without prior notice.

