



PTU SERIES

Ultra-isolation · Input 230 V · Output 230 V

Definition and applications

The PTA ultra-isolation transformers series is designed for high-noise environments where shielding is required to ensure good signal quality.

This series has two types:

- With 1 electrostatic shield (PTU1P) for minor perturbations between primary and secondary
- With 3 electrostatic shields (PTU3P) for high perturbations at the start of the winding between primary and secondary, and at the end of the winding.



Up to 2500 VA

- Technical polymer box.
- UL 94 V-0 flame retardant material up to 2500 VA (PTU1P) or 2000 VA (PTU3P).
- Protective terminal cover to prevent direct contact.
- Ventilation ducts at the top and along the perimeter.
- Feature label with all the connection and protection instructions.

Manufacturing characteristics

All the versions have the following features in common:

- Anti-flash dip varnishing. Ensures greater compaction, isolation and noise elimination.
- Connection terminals made of copper, welded and inserted in blocks to prevent hazards caused by expansion that may lead to poor connection.
- Noise and parasite attenuation depending on whether there are 1 or 3 electrostatic shields.
- All the transformers are checked automatically one by one and the compliance test report is created in accordance with the corresponding standard.



From 2500 VA

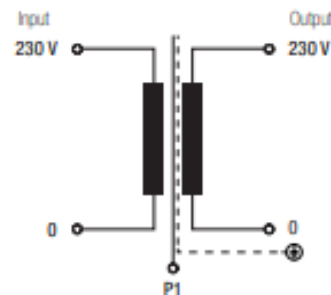
- Epoxy painted metal box resistant to all types of damp and corrosive environments from 3150 VA (PTU1P) or 2500 VA (PTU3P).
- Protective terminal cover to prevent direct contact.
- Ventilation ducts along the box perimeter.
- Feature label with all the connection and protection instructions.

Technical features - standard model

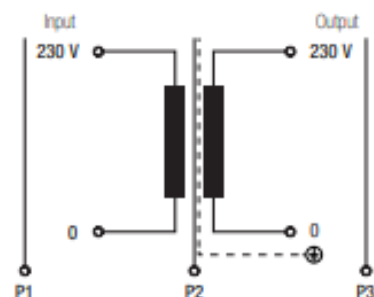
Power	40 VA to 5000 VA
Insulators	Class B - 130 °C
Winding	Class HC - 200 °C
Room temperature	45 °C
Frequency	50-60 Hz
Noise	≤ 65 dB (PTU1P), ≤ 80 dB (PTU3P)
Protection rating	IP20
Cooling	ANAN
Includes	LED indicator lamp 1 (PTU1P) or 3 (PTU3P) electrostatic shields
Mounting	With screws (for all powers) Mounting on DIN 46277/3 rail up to 250 VA (PTU1P) or up to 200 VA (PTU3P)
Standards	IEC/EN/UNE-EN 61558, CE
Protection	Convertible from Class I to Class II up to 2500 VA (PTU1P) or 2000 VA (PTU3P)
Operation	Continuous
Test voltage	4 kV (1 min., 50 Hz)

Electrical diagrams

- With 1 electrostatic shield (PTU1P)



- With 3 electrostatic shield (PTU3P)





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Electrical connection



≤ 100 VA PTU1P

≤ 63 VA PTU3P

Input:

- 230 V | Connection: 2-3

Output:

- 230 V | Connection: 7-8

Electrostatic shield connection:

- PTU1P | Connection: 10
- PTU3P | Connection: 5 / 9 / 10



From 160 VA to 1000 VA PTU1P

From 100 VA to 800 VA PTU3P

Input:

- 230 V | Connection: 2-3

Output:

- 230 V | Connection: 8-9

Electrostatic shield connection:

- PTU1P | Connection: 11
- PTU3P | Connection: 6 / 11 / 12



≥ 1250 VA PTU1P

≥ 1000 VA PTU3P

Input:

- 230 V | Connection: 2-3

Output:

- 230 V | Connection: 7-8

Electrostatic shield connection:

- PTU1P | Connection: 10
- PTU3P | Connection: 5 / 9 / 10

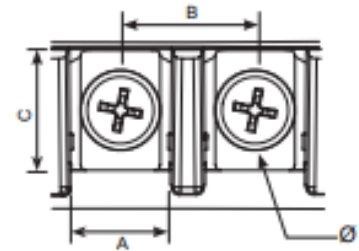


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Terminal types

Terminal blocks	Dimensions mm				Maximum tightening torque N·m	Primary		Secondary	
	A	B	C	Ø		Power VA		Power VA	
						From	To	From	To
Terminal M3	8	11	9	M3	0.5	40	100	40	100
Terminal M4	10	13.5	12	M4	1.1	160	1000	160	250
Terminal M5	15	18.5	14	M5	2.5	1250	4000	315	1000
Terminal M6	15.5	20.4	13	M6	4	-	-	1250	4000



Terminal blocks	Dimensions mm				Maximum tightening torque N·m	Primary		Secondary	
	A	B	C	Ø		Power VA		Power VA	
						From	To	From	To
Terminal M3	8	11	9	M3	0.5	40	63	40	63
Terminal M4	10	13.5	12	M4	1.1	100	800	100	200
Terminal M5	15	18.5	14	M5	2.5	1000	4000	315	1000
Terminal M6	15.5	20.4	13	M6	4	-	-	1000	4000

Theoretical data - standard model

Power VA	Reference	Input current A	Output current A	Maximum cross-section conductor (mm ²)		Input protections (A) (MCB -> D / Fuse -> aM)	Output protections (A) (MCB -> C / Fuse -> gG)
				Flexible	Rigid		
PTU1P							
40	PTU1P40	0.17	0.17	0.5	0.5	0.4 (-/T)	0.16 (-/T)
63	PTU1P63	0.27	0.27	0.5	0.5	0.63 (-/T)	0.25 (-/T)
100	PTU1P100	0.43	0.43	0.5	0.5	1 (-/T)	0.4 (-/T)
160	PTU1P160	0.70	0.70	0.5	0.5	1.6	0.63 (-/T)
200	PTU1P200	0.87	0.87	0.5	0.5	2	0.8 (-/T)
250	PTU1P250	1.09	1.09	0.5	0.5	2.5	1
315	PTU1P315	1.37	1.37	0.5	0.5	3.15	1.25
400	PTU1P400	1.74	1.74	0.5	0.5	4	1.6
500	PTU1P500	2.17	2.17	0.5	1	5	2
630	PTU1P630	2.74	2.74	1	1	6	2.5
800	PTU1P800	3.48	3.48	1	1	8	4
1000	PTU1P1000	4.35	4.35	1	1.5	10	4
1250	PTU1P1250	5.43	5.43	1.5	1.5	10	5
1600	PTU1P1600	6.96	6.96	1.5	2.5	16	6
2000	PTU1P2000	8.70	8.70	2.5	2.5	20	8
2500	PTU1P2500	10.87	10.87	2.5	4	25	10
3150	PTU1P3150	13.70	13.70	4	4	32	12.5
4000	PTU1P4000	17.39	17.39	4	-	40	16
PTU3P							
40	PTU3P40	0.17	0.17	0.5	0.5	0.4 (-/T)	0.16 (-/T)
63	PTU3P63	0.27	0.27	0.5	0.5	0.63 (-/T)	0.25 (-/T)
100	PTU3P100	0.43	0.43	0.5	0.5	1 (-/T)	0.4 (-/T)
160	PTU3P160	0.70	0.70	0.5	0.5	1.6	0.63 (-/T)
200	PTU3P200	0.87	0.87	0.5	0.5	2	0.8 (-/T)
250	PTU3P250	1.09	1.09	0.5	0.5	2.5	1
315	PTU3P315	1.37	1.37	0.5	0.5	3.15	1.25
400	PTU3P400	1.74	1.74	0.5	0.5	4	1.6
500	PTU3P500	2.17	2.17	0.5	1	5	2
630	PTU3P630	2.74	2.74	1	1	6	2.5
800	PTU3P800	3.48	3.48	1	1	8	4
1000	PTU3P1000	4.35	4.35	1	1.5	10	4
1250	PTU3P1250	5.43	5.43	1.5	1.5	10	5
1600	PTU3P1600	6.96	6.96	1.5	2.5	16	6
2000	PTU3P2000	8.70	8.70	2.5	2.5	20	8
2500	PTU3P2500	10.87	10.87	2.5	4	25	10
3150	PTU3P3150	13.70	13.70	4	4	32	12.5
4000	PTU3P4000	17.39	17.39	4	-	40	16



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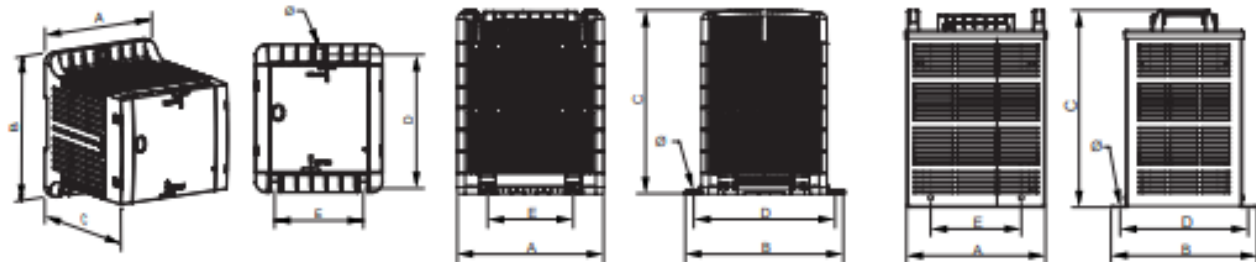
Measurements

Power VA	With 1 electrostatic shield PTU1P								With 3 electrostatic shield PTU3P							
	Ref.	External dimensions mm			Fastening elements mm			Weight kg	Ref.	External dimensions mm			Fastening elements mm			Weight kg
		A	B	C	D	E	∅			A	B	C	D	E	∅	
40	PTU1P40	84	101	98	88	55	5	1.1	PTU3P40	84	101	98	88	55	5	1.3
63	PTU1P63	84	101	98	88	55	5	1.3	PTU3P63	84	101	98	88	55	5	1.6
100	PTU1P100	84	101	98	88	55	5	1.6	PTU3P100	106	123	118	110	74	5	2.3
160	PTU1P160	106	123	118	110	74	5	2.3	PTU3P160	106	123	118	110	74	5	2.8
200	PTU1P200	106	123	118	110	74	5	2.8	PTU3P200	106	123	118	110	74	5	3.6
250	PTU1P250	106	123	118	110	74	5	3.6	PTU3P250	118	138	131	121	88	6	4.1
315	PTU1P315	118	138	131	121	88	6	4.1	PTU3P315	118	138	131	121	88	6	4.8
400	PTU1P400	118	138	131	121	88	6	4.8	PTU3P400	136	162	156	145	104	6	6
500	PTU1P500	136	162	156	145	104	6	6	PTU3P500	136	162	156	145	104	6	7.8
630	PTU1P630	136	162	156	145	104	6	7.8	PTU3P630	136	162	156	145	104	6	8.7
800	PTU1P800	136	162	156	145	104	6	8.7	PTU3P800	136	162	180	145	104	6	9.6
1000	PTU1P1000	136	162	180	145	104	6	9.6	PTU3P1000	214	225	284	195	175	7	16.8
1250	PTU1P1250	214	225	284	195	175	7	16.8	PTU3P1250	214	225	284	195	175	7	20.8
1600	PTU1P1600	214	225	284	195	175	7	20.8	PTU3P1600	214	225	284	195	175	7	25.9
2000	PTU1P2000	214	225	284	195	175	7	25.9	PTU3P2000	214	225	284	195	175	7	28.7
2500	PTU1P2500	214	225	284	195	175	7	28.7	PTU3P2500	247	260	349	233	223	7	36.7
3150	PTU1P3150	247	260	349	233	223	7	36.7	PTU3P3150	247	260	349	233	223	7	43.8
4000	PTU1P4000	247	260	349	233	223	7	43.5	PTU3P4000	247	260	349	233	223	7	56.1

Up to PTU1P1000
Up to PTU3P800

From PTU1P1250 to PTU1P2500
From PTU3P1000 to PTU3P2000

From PTU1P3150
From PTU3P2500



On-request manufacturing options (please see prices)

Power	From 25 VA to 4000 VA
Voltage	From 6 V to 1100 V



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Feature plate structure

