

Three-phase isolation transformer 400 V / 690 V + N

Step-up to industrial 690 V · vector group Dyn11 · 1 to 100 kVA · made in France



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This three-phase isolation transformer steps a 3×400 V supply up to 3×690 V, with the neutral brought out: 690 V between phases, 398 V between phase and neutral. It supplies motors, pumps, variable speed drives and industrial equipment designed for 690 V on a site with 400 V distribution, or serves as a 690 V source for a test bench. Vector group Dyn11, electrostatic shield as standard, 1 to 100 kVA in IP00, IP23 or IP54, and 125 to 1,000 kVA on request: it is wound and tested in our workshop in Gailhan (Gard, southern France).

YOUR SUPPLY
 3×400 V
the site network

TRANSFORMER
Dyn11
steps up and isolates

YOUR EQUIPMENT
 3×690 V + N
690 V between phases ·
398 V phase to neutral

Key points

- **3×400 V $\rightarrow$ 3×690 V + N** — The voltage of high-power industrial motors and drives.
- **Neutral brought out** — 398 V between phase and neutral, for a TN-S or IT system.
- **Vector group Dyn11** — Delta primary, star secondary, neutral brought out to terminal 2N.
- **Galvanic isolation** — The 690 V system is electrically separated from the 400 V supply that feeds it.
- **Electrostatic shield as standard** — Connected to earth, it limits the transfer of disturbances between primary and secondary.
- **Made and tested in Gailhan** — Wound, wired and 100 % tested in our workshop in the Gard, southern France, before dispatch.

General characteristics

Vector group	Dyn11
Frequency	50 Hz
Electrostatic shield	standard, earthed
Insulation class	H (180 °C)
Cooling	dry-type, natural air cooling (AN)
Ambient temperature	40 °C max.
Altitude	3,000 m max.
Standard	EN 61558-2-4

Enclosures

- IP00 · open frame, for cabinet
- IP23 · ventilated enclosure
- IP54 · sealed enclosure

Ratings and references

REFERENCE	RATING	CURRENT primary / secondary	TYPE D MCB	LOSSES NO-LOAD / LOAD	EFFICIENCY	WEIGHT IP00 / 23 / 54	DIMENSIONS IP23 mm	DIMENSIONS IP54 mm
TTI400690N-1000-xx	1 kVA	1.4 / 0.8 A	D 2 A	13 / 54 W	93.8 %	10 / 13 / 20 kg	340 × 310 × 350	595 × 410 × 375
TTI400690N-2000-xx	2 kVA	2.9 / 1.7 A	D 4 A	22 / 107 W	94 %	17 / 20 / 27 kg	340 × 310 × 350	595 × 410 × 375
TTI400690N-2500-xx	2,5 kVA	3.6 / 2.1 A	D 4 A	24 / 122 W	94.5 %	19 / 22 / 29 kg	340 × 310 × 350	595 × 410 × 375
TTI400690N-3150-xx	3,15 kVA	4.5 / 2.6 A	D 6 A	30 / 135 W	95 %	24 / 26 / 34 kg	340 × 310 × 350	595 × 410 × 375
TTI400690N-4000-xx	4 kVA	5.8 / 3.3 A	D 10 A	42 / 238 W	93.5 %	34 / 40 / 44 kg	460 × 320 × 500	642 × 505 × 550
TTI400690N-5000-xx	5 kVA	7.2 / 4.2 A	D 10 A	51 / 252 W	94.3 %	40 / 46 / 50 kg	460 × 320 × 500	642 × 505 × 550
TTI400690N-6300-xx	6,3 kVA	9.1 / 5.3 A	D 10 A	59 / 287 W	94.8 %	46 / 52 / 56 kg	460 × 320 × 500	642 × 505 × 550
TTI400690N-8000-xx	8 kVA	11.5 / 6.7 A	D 16 A	90 / 284 W	95.5 %	65 / 74 / 75 kg	525 × 335 × 550	642 × 505 × 550
TTI400690N-10000-xx	10 kVA	14.4 / 8.4 A	D 16 A	98 / 335 W	95.9 %	72 / 81 / 82 kg	525 × 335 × 550	642 × 505 × 550
TTI400690N-12000-xx	12 kVA	17.3 / 10 A	D 20 A	114 / 370 W	96.1 %	82 / 91 / 92 kg	525 × 335 × 550	642 × 505 × 550
TTI400690N-16000-xx	16 kVA	23.1 / 13.4 A	D 25 A	131 / 424 W	96.6 %	96 / 105 / 106 kg	525 × 335 × 550	642 × 505 × 550
TTI400690N-20000-xx	20 kVA	28.9 / 16.7 A	D 32 A	147 / 484 W	96.9 %	108 / 117 / 118 kg	525 × 335 × 550	642 × 505 × 550
TTI400690N-25000-xx	25 kVA	36.1 / 20.9 A	D 40 A	155 / 579 W	97.1 %	117 / 126 / 127 kg	525 × 335 × 550	642 × 505 × 550
TTI400690N-30000-xx	30 kVA	43.3 / 25.1 A	D 50 A	179 / 672 W	97.2 %	133 / 142 / 143 kg	525 × 335 × 550	642 × 505 × 550
TTI400690N-40000-xx	40 kVA	57.7 / 33.5 A	D 63 A	158 / 829 W	97.6 %	127 / 139 / 150 kg	700 × 480 × 720	822 × 610 × 725
TTI400690N-50000-xx	50 kVA	72.2 / 41.8 A	D 80 A	190 / 980 W	97.7 %	150 / 162 / 172 kg	700 × 480 × 720	822 × 610 × 725
TTI400690N-63000-xx	63 kVA	90.9 / 52.7 A	D 100 A	on request	—	200 / 220 / 223 kg	700 × 480 × 720	822 × 610 × 725
TTI400690N-80000-xx	80 kVA	115.5 / 66.9 A	D 125 A	on request	—	280 / 300 / 303 kg	700 × 480 × 720	822 × 610 × 725
TTI400690N-100000-xx	100 kVA	144.3 / 83.7 A	D 160 A	on request	—	325 / 345 / 348 kg	700 × 480 × 720	822 × 610 × 725

Protection and installation

Upstream protection. A type D circuit breaker or aM fuses, sized for the rated current of the chosen rating: the protection rating for each size is given in the table. At switch-on, the inrush current reaches about twelve times the rated current.

Secondary neutral. Earthed at the transformer, it gives a TN-S system, the most common. Left isolated, it gives an IT system, which requires an insulation monitoring device. The choice is the installer's.

Safety. Connection must be carried out by a qualified person. Earth is connected before switching on. In IP00, the transformer is installed in a cabinet or a closed electrical room.

A question or another voltage? contact@abltransfo.com · +33 4 66 80 14 33 · abltransfo.com