NEW EU ECODESIGN STANDARDS!!

Up to today cast resin transformers were regulated by **CEI EN 50541-1: 2011-04** European Standards and oil transformers by **CEI EN 50464-12007-08**

FROM THE 1ST JULY 2015

The above rules will be replaced by the new European standard **EN 50588-1** according to **EU Regulation 548/2014** issued by the European Commission with the aim of achieving greater energy efficiency and a general environmental compatibility of electrical appliances, with a reduction of CO2 emissions.

The directive will be implemented in two steps: the first from the 1st if July 2015 and the second, which provides stricter standards, is scheduled for 2021.

LET 'S GET TO KNOW IT ...

EN 50588-1 introduces technical innovations for both oil and cast resin transformers from 50 kVA to 40 MVA rated power. The aims are, in fact:

- The reduction induction for no load losses.
- The reduction of density for on-load losses.

It is also introduced the concept of PEI (Peak Efficiency Index) for transformers featuring a rated power greater of 3150 kVA.

OBLIGATIONS FOR MANUFACTURERS!

- From the 1st of July 2015 it will be strictly forbidden to distribute on the European market transformers featuring losses in excess of those required by Ecodesign regulations.
- Data plates and technical and commercial quotations must comply with the regulation.
- strict tests will be conducted on the transformers and there will be sanctions in case of non-compliancy

ELETTROMECCANICA PIOSSASCO WILL PROVIDE HIS CUSTOMERS WITH TRANSFORMERS IN COMPLIANCE WITH THE REGULATION TOGETHER WITH AN IDENTIFICATION LABEL, TEST REPORTS, AND ITS OWN CERTIFICATION OF COMPLIANCY

ADVANTAGES ARISING FROM THE NEW REGULATION.

- Increased protection for the buyer
- Reduction of unfair competition
- Reduction of greenhouse gas emissions
- money savings over time.

THERE ARE SOME EXCEPTIONS.

- This Regulation shall not apply to transformers specifically designed and used for the following applications:
- Transformers to be exported to countries outside the European Economic Area
- Standard losses transformers can be marketed after the 1st of July 2015 as long as there is evidence that they were built before this date (Transport document / Invoice).
- Products already on the market
- instrument transformers, specifically designed to supply measuring instruments, meters, relays and other similar apparatus
- transformers with low-voltage windings specifically designed for use with rectifiers to provide a DC supply
- transformers specifically designed to be directly connected to a furnace,
- transformers specifically designed for offshore applications and floating offshore applications,
- transformers specially designed for emergency installations,
- transformers and auto-transformers specifically designed for railway feeding systems,
- earthing or grounding transformers
- traction transformers mounted on rolling stock
- starting transformers, specifically designed for starting three-phase induction motors so as to eliminate supply voltage dips,
- testing transformers, specifically designed to be used in a circuit to produce a specific voltage or current for the purpose of testing electrical equipment,
- welding transformers, specifically designed for use in arc welding equipment or resistance welding equipment,
- transformers specifically designed for deep water applications,
- transformers specifically designed for explosion-proof and underground mining applications
- medium Voltage (MV) to Medium Voltage (MV) interface transformers up to 5 MVA,
- large power transformers where it is demonstrated that for a particular application, technically feasible alternatives are not available to meet the minimum efficiency requirements set out by the Regulation,
- large power transformers which are like for like replacements in the same physical location/installation for existing large power transformers, where this replacement cannot be achieved without entailing disproportionate costs associated to their transportation and/or installation,

CAST RESIN TRANSFORMERS

LOSSES ACCORDING TO THE REGULATION

Pn	Perdite massime a carico	Peridte massime a vuoto
(kVA)	Pk(W)	P0(W)
≤50	Bk(1700)	A0(200)
100	Bk(2050)	A0(280)
160	Bk(2900)	A0(400)
250	Bk(3800)	A0(520)
400	Bk(5500)	A0(750)
630	Bk(7600)	A0(1100)
800	Ak(8000)	A0(1300)
1000	Ak(9000)	A0(1550)
1250	Ak(11000)	A0(1800)
1600	Ak(13000)	A0(2200)
2000	Ak(16000)	A0(2600)
2500	Ak(19000)	A0(3100)
3150	Ak(22000)	A0(3800)

OIL IMMERSED TRANSFORMERS

LOSSES ACCORDING TO THE REGULATION

Pn	Perdite massime a carico	Perdite massime a vuoto
(kVA)	Pk (W)	P0(W)
≤25	Ck (900)	A0 (70)
50	Ck (1100)	A0 (90)
100	Ck (1750)	A0 (145)
160	Ck (2350)	A0 (210)
250	Ck (3250)	A0 (300)
315	Ck (3900)	A0 (360)
400	Ck (4600)	A0 (430)
500	Ck (5500)	A0 (510)
630	Ck (6500)	A0 (600)
800	Ck (8400)	A0 (650)
1000	Ck (10500)	A0 (770)
1250	Bk (11000)	A0 (950)
1600	Bk (14000)	A0 (1200)
2000	Bk(18000)	A0 (1450)
2500	Bk(22000)	A0 (1750)
3150	Bk(27500)	A0 (2200)

PEI OIL IMMERSED TRANSFORMERS

Pn	Valore minimo dell'indice di efficienza di picco
(kVA)	(W)
3150< Sr≤4000	99,465
5000	99,483
6300	99,510
8000	99,535
10.000	99,560
12500	99,588
16000	99,615
20000	99,639
2500	99,657
31500	99,671
40000	99,684

PEI CAST RESIN TRANSFORMERS

Pn	Valore minimo dell'indice di efficienza di picco
(kVA)	(W)
3150< Sr≤4000	99,348
5000	99,354
6300	99,356
8000	99,357
≥10.000	99,357

Kindest regards

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Marketing & Communications.