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टिप्पणी: मूल अधिसूचना भारत के राजपत्र, असाधारण, भाग II, खण्ड 3, उप-खण्ड (ii) में अधिसूचना संख्या का.आ. 185(अ), तारीख 12 जनवरी, 2009 द्वारा प्रकाशित की गई थी और अधिसूचना संख्या का.आ. 4062(अ), तारीख 16 दिसम्बर, 2016 द्वारा अंतिम संशोधन किया गया था।

MINISTRY OF POWER
NOTIFICATION

New Delhi, the 17th February, 2017.

S.O. 513(E).—In exercise of the powers conferred by clause (a) of section 14 of the Energy Conservation Act, 2001 (52 of 2001), the Central Government, in consultation with the Bureau of Energy Efficiency, hereby makes the following further amendments in the notification of the Government of India in the Ministry of Power number S.O.185(E), dated the 12th January, 2009, namely:-

In the said notification,-

(A) in paragraph 1, in sub-paragraph (a), for item (v), the following shall be substituted:-

“(v) short-circuit test as per IS 2026 (part I), wherever applicable, as specified in IS 1180 (part I), with all amendments”;

(B) in paragraph 2, in sub-paragraph (2), for the words, figures, brackets and letters “Table 1 (Valid up to 31st December, 2016)”, “Table 2 (Effective from 1st January, 2017 onwards)” and “Table 3 (Effective from 1st January, 2017 onwards)”, the words, figures, brackets and letters “Table 1 (Valid up to 30th June, 2017)”, “Table 2 (Effective from 1st July, 2017 onwards)” and “Table 3 (Effective from 1st July, 2017 onwards)” shall respectively be substituted;

(C) in paragraph 3, sub-paragraph (2) shall be omitted.

[F. No.13/28/2015-EC]

RAJ PAL, Economic Adviser

Note: The principal notification was published in the Gazette of India, Extraordinary, Part-II, Section 3, Sub-section (ii), *vide* Notification number S.O.185(E), dated the 12th January, 2009, and last amended *vide* notification number S.O. 4062(E), dated the 16th December, 2016.

**MINISTRY OF POWER
NOTIFICATION**

New Delhi, the 16th December, 2016

S.O. 4062(E).— In exercise of the powers conferred by clause (a) of section 14 of the Energy Conservation Act, 2001 (52 of 2001), the Central Government, in consultation with the Bureau of Energy Efficiency, hereby makes the following amendments in the notification of the Government of India in the Ministry of Power number S.O.185 (E), dated the 12th January, 2009, namely:-

In the said notification,-

(A) for paragraph 1, the following paragraph shall be substituted, namely:-

“(1) Every distribution transformer being manufactured, commercially purchased or sold in India shall –

(a) meet the compliance requirements of the type test parameters, namely:-

- (i) measurement of winding resistance as per IS 2026 (part I):1977;
- (ii) measurement of impedance voltage or short circuit impedance and load loss as per IS 2026 (part I):1977;
- (iii) measurement of no-load loss and current as per IS 2026 (part I):1977;
- (iv) temperature-rise test as per IS 2026 (part 2):1977;
- (v) short-circuit test as per IS 2026 (part I):1977;

(b) carry Bureau of Indian Standards certification mark.”;

(B) in paragraph 2, in sub-paragraph (2), for the existing Table, the following Tables shall be substituted, namely:-

“Table 1 (Valid up to 31st December, 2016)

Rating	1 Star		2 Star		3 Star		4 Star		5 Star	
	Max Losses at 50 Per cent. (Watts)	Max Losses at 100 Per cent. (Watts)	Max Losses at 50 Per cent. (Watts)	Max Losses at 100 Per cent. (Watts)	Max Losses at 50 Per cent. (Watts)	Max Losses at 100 Per cent. (Watts)	Max Losses at 50 Per cent. (Watts)	Max Losses at 100 Per cent. (Watts)	Max Losses at 50 Per cent. (Watts)	Max Losses at 100 Per cent. (Watts)
16	200	555	165	520	150	480	135	440	120	400
25	290	785	235	740	210	695	190	635	175	595
63	490	1415	430	1335	380	1250	340	1140	300	1050
100	700	2020	610	1910	520	1800	475	1650	435	1500
160	1000	2800	880	2550	770	2200	670	1950	570	1700
200	1130	3300	1010	3000	890	2700	780	2300	670	2100

Table 2 (Effective from 1st January, 2017 onwards)

Rating (kVA)	Standard Losses in watts up to 11 KV Class									
	Star 1		Star 2		Star 3		Star 4		Star 5	
	50 Per cent. Load	100 Per cent. Load	50 Per cent. Load	100 Per cent. Load	50 Per cent. Load	100 Per cent. Load	50 Per cent. Load	100 Per cent. Load	50 Per cent. Load	100 Per cent. Load
16	135	440	120	400	108	364	97	331	87	301
25	190	635	175	595	158	541	142	493	128	448
63	340	1140	300	1050	270	956	243	870	219	791
100	475	1650	435	1500	392	1365	352	1242	317	1130
160	670	1950	570	1700	513	1547	462	1408	416	1281
200	780	2300	670	2100	603	1911	543	1739	488	1582

Table 3 (Effective from 1st January, 2017 onwards)

Standard losses in watts up to 11 KV Class (For ratings above 200 kVA)											
Rating (kVA)	Per Cent. Impedance	Star 1		Star 2		Star 3		Star 4		Star 5	
		50 Per Cent. Load	100 Per Cent. Load	50 Per Cent. Load	100 Per Cent. Load	50 Per Cent. Load	100 Per Cent. Load	50 Per Cent. Load	100 Per Cent. Load	50 Per Cent. Load	100 Per Cent. Load
250	4.5	980	2930	920	2700	864	2488	811	2293	761	2113
315	4.5	1025	3100	955	2750	890	2440	829	2164	772	1920
400	4.5	1225	3450	1150	3330	1080	3214	1013	3102	951	2994
500	4.5	1510	4300	1430	4100	1354	3909	1282	3727	1215	3554
630	4.5	1860	5300	1745	4850	1637	4438	1536	4061	1441	3717
1000	5	2790	7700	2620	7000	2460	6364	2310	5785	2170	5259
1250	5	3300	9200	3220	8400	3142	7670	3066	7003	2991	6394
1600	6.25	4200	11800	3970	11300	3753	10821	3547	10363	3353	9924
2000	6.25	5050	15000	4790	14100	4543	13254	4309	12459	4088	11711
2500	6.25	6150	18500	5900	17500	5660	16554	5430	15659	5209	14813

(C) in paragraph 3,-

- (i) in sub-paragraph (1), for the letters, figures, brackets and word "IS 1180 (Part 1):1989", the letters, figures, brackets and word "IS 1180 (Part 1):2014" shall be substituted; and
- (ii) in sub-paragraph (2), for the letters, figures, brackets and word "IS 1180 (Part 1):1989", the letters, figures, brackets and word "IS 1180 (Part 1):2014" shall be substituted;

(D) in paragraph 4, for sub-paragraph (1), the following sub-paragraph shall be substituted, namely:-

"(1) Sampling for verification and challenge shall be carried out after the deliveries are made to the utilities, who shall forthwith provide the transformer on random selection basis to the Bureau for check testing on returnable basis."

(E) for Annexure A (referred to in paragraph 5), the following shall be substituted, namely:-

**"Annexure A
Form for reporting the results of tests**

3. Details of distribution transformer

- (i) Brand/Make:
- (ii) Model name:
- (iii) Type:
- (iv) Rated voltage:
- (v) Rated frequency:
- (vi) Rated capacity:
- (vii) Rated Total Losses at 50 per cent. loading:
- (viii) Rated Total Losses at 100 per cent. loading:

4. Test summary

- (i) Complete a separate copy of this page for each test type, as applicable
- (ii) Date of test:
- (iii) Test officer:
- (iv) Test type: all applicable tests as follows :

(a) Measurement of winding resistance as per IS 2026 (part I):1977.

Quantity Measured	
H.V. winding resistance	
L.V. winding resistance	

(b) Measurement of impedance voltage or short circuit impedance and load loss as per IS 2026 (part I):1977.

Quantity Measured	
percentage of Impedance at 75°C	
Load Loss at 75°C	

(c) Measurement of no-load loss and current as per IS 2026 (part I):1977.

	Voltage(V)	Frequency(Hz)	No-Load Current(A)	No-Load Loss(W)
Before Short Circuit				
After Short Circuit				

(d) Temperature-rise test as per IS 2026 (part 2):1977.

*The graph of resistance vs time in seconds (time of shut down) for H.V. and L.V. winding.

Top oil temperature rise	
H.V. winding temperature rise	
L.V. winding temperature rise	

(e) Short-circuit test as per IS 2026 (part I):1977.

* The Dynamic ability of the transformer to withstand the short circuit to be shown and its effect on the other routine tests.

The total losses at 50 per cent. and 100 per cent. Loading

Rated/Declared Values (W)	Measured Values (W)
Total losses at 50 Per cent. loading	Total losses at 50 Per cent. loading
Total losses at 100 Per cent. loading	Total losses at 100 Per cent. loading

(v) Supply voltage: V

(vi) Supply frequency : Hz.”

[F.No.13/28/2015-EC]

RAJ PAL, Economic Adviser

Note: The principal notification was published in the Gazette of India, Extraordinary, Part-II, Section 3, Sub-section (ii), vide Notification number S.O. 185(E), dated the 12th January, 2009.