

Data Sheet no. 1.26/2

Regulating Transformers, Types RT

Application

The single-phase regulating transformers are well suited for feeding the HIGHVOLT test transformers and resonant test systems. With the regulating transformers the output voltage of the test system can be varied without significant steps.

Brief description

We use two variants for the electrical isolation of the input and output. One method is the usage of separate input and output windings. The other one, especially for larger transformers, is realized by an intermediate transformer in conjunction with the regulating autotransformer. The transformer input is protected by built-in varistors. The output voltage is controlled by means of an AC motor with a frequency converter. Thus, the regulating time can be adapted to the customer's demands. The regulator is equipped with an upper and lower limiting switch. The control provides a "zero-start".

All parts are installed in a cabinet with lifting lugs for transportation by crane. The regulating transformers (dry type transformers) are built in a switching cubicle. They are designed for stationary indoor operation.

The short-circuit impedance of the regulating transformer depends on the output voltage and varies from approx. 30 % (at 10 % rated output voltage) to approx. 5 % (at 100 % rated output voltage).

The regulating transformers are designed for continuous operation; they can only be overloaded for quite a short time (details on request).

Specification

Type Code

RT **a/b** means a regulating transformer of **a** kVA and an output voltage **0 to b** kV.

Operating frequency	50 / 60	Hz
Rated primary voltage	400	V
Rated secondary voltage Type A	0 ... 400	V
Rated secondary voltage Type B	0 ... 500	V
Max. ambient temperature (operation)	40	°C
Supply voltage for motor drive	400	V (AC); 3-phase
Supply power for motor drive	Approx. 500	VA
Regulating time	50 ... 250	s
Type of cooling	AN	
Type of enclosure	IP 20	

Other primary and secondary voltages (especially 500 V; with different currents) or different regulation times are possible on request.

Types A for output voltage 0 ... 400 V:

Type	Rated power (kVA)	Rated current (A)	Approx. dimensions (L x W x H) (mm ³)	Max. weight (kg)
RT 20/0.4	20	0 ... 50	1150 x 500 x 1900	390
RT 25/0.4	25	0 ... 63	1150 x 500 x 1900	450
RT 30/0.4	30	0 ... 75	1150 x 500 x 1900	470
RT 40/0.4	40	0 ... 100	1150 x 500 x 1900	530
RT 60/0.4	60	0 ... 150	1200 x 750 x 2200	750
RT 75/0.4	75	0 ... 188	1200 x 750 x 2200	800
RT 100/0.4	100	0 ... 250	850 x 1500 x 1500	1200
RT 125/0.4	125	0 ... 312	850 x 1500 x 1700	1250
RT 150/0.4	150	0 ... 375	850 x 1500 x 1700	1300
RT 175/0.4	175	0 ... 437	900 x 1600 x 1900	1500
RT 210/0.4	210	0 ... 525	1200 x 1600 x 1650	1600
RT 250/0.4	250	0 ... 625	1200 x 1600 x 1700 ¹⁾	2200
RT 300/0.4	300	0 ... 750	1800 x 1400 x 1600 ¹⁾	2900
RT 350/0.4	350	0 ... 875	1800 x 1400 x 1600 ¹⁾	3600
RT 400/0.4	400	0 ... 1000	2000 x 1600 x 1600 ¹⁾	4150
RT 500/0.4	500	0 ... 1250	2000 x 1800 x 1900 ¹⁾	5400

¹⁾ Can be divided into two units.

Types B for output voltages 0 ... 500 V:

Type	Rated power (kVA)	Rated current (A)	Approx. dimensions (L x W x H) (mm ³)	Max. weight (kg)
RT 20/0.5	20	0 ... 40	1150 x 500 x 1900	390
RT 25/0.5	25	0 ... 50	1150 x 500 x 1900	450
RT 30/0.5	30	0 ... 60	1150 x 500 x 1900	470
RT 40/0.5	40	0 ... 80	1150 x 500 x 1900	530
RT 60/0.5	60	0 ... 120	1200 x 750 x 2200	750
RT 75/0.5	75	0 ... 150	1200 x 750 x 2200	800
RT 100/0.5	100	0 ... 200	850 x 1500 x 1500	1200
RT 125/0.5	125	0 ... 250	850 x 1500 x 1700	1250
RT 150/0.5	150	0 ... 300	850 x 1500 x 1700	1300
RT 175/0.5	175	0 ... 350	900 x 1600 x 1900	1500
RT 210/0.5	210	0 ... 420	1200 x 1600 x 1650	1600
RT 250/0.5	250	0 ... 500	1200 x 1600 x 1700 ¹⁾	2200
RT 300/0.5	300	0 ... 600	1800 x 1400 x 1600 ¹⁾	2900
RT 350/0.5	350	0 ... 700	1800 x 1400 x 1600 ¹⁾	3600
RT 400/0.5	400	0 ... 800	2000 x 1600 x 1600 ¹⁾	4150
RT 500/0.5	500	0 ... 1000	2000 x 1800 x 1900 ¹⁾	5400

¹⁾ Can be divided into two units.

Please contact HIGHVOLT for any special application or parameter.

For further information please contact:

or our local representative:

HIGHVOLT Prüftechnik Dresden GmbH
Marie-Curie-Strasse 10

D-01139 Dresden / Germany

Tel. +49 351 8425-648
Fax +49 351 8425-679
e-mail dresden@highvolt.de
website <http://www.highvolt.de>