



Three-phase Built-in Variable Transformers

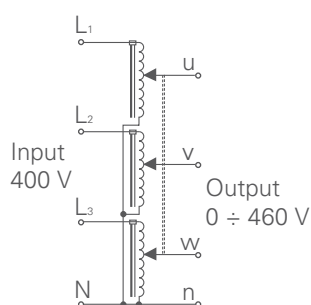
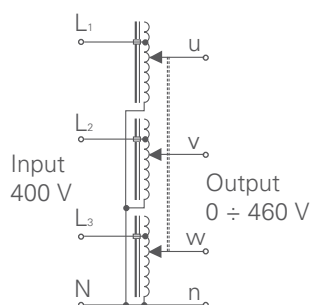
HTG - Autotransformers

3-phase connections

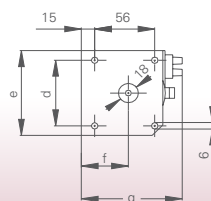
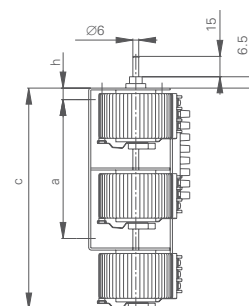
METREL three-phase transformers are suitable for connection to either delta or star connected incoming power sources or loads. They are always star connected and have a neutral connection accessible. A common shaft rotates all output voltage sliders in parallel.

3-phase METREL transformers with 3-wire connection to 3-phase supply system can be used to feed 3-wire, 3-phase balanced loads. In this case the common connection (or "virtual neutral") of the METREL unit should not be used. Less than 10% of rated current of variable transformers flowing into virtual neutral would keep unbalance of three-phase output in reasonable limits.

With a three phase, 4-wire system input, the system neutral should be solidly connected to the common or "neutral" point of the METREL unit. This will prevent neutral shift and possible damage or failure of the unit. Full-range voltage control cannot be obtained from a three-phase METREL unit consisting of three single-phase units connected in closed delta. Outside the factory, it is not practical to convert multiple single-phase models to balanced three-phase applications because of associated mechanical problems.



3/M15



Drawing 1

Technical Specification

HTG type (Input voltage 400 V)

Output voltage 0 ÷ 400 V

Type	I _s (A)	P (VA)
HTG 400/1	1.0	690
HTG 400/1.25	1.25	861
HTG 400/1.6	1.6	1104
HTG 400/2	2.0	1380
HTG 400/2.5	2.5	1725
HTG 400/3	3.0	2070
HTG 400/4	4.0	2760
HTG 400/4.5	4.5	3105
HTG 400/6	6.0	4140
HTG 400/8	8.0	5520
HTG 400/10	10.0	6900
HTG 400/12	12.0	8280
HTG 400/18	18.0	12420
HTG 400/23	23.0	15870
HTG 400/32	32.0	22080

Output voltage 0 ÷ 450 V

Type	I _s (A)	P (VA)	Mass (kg)	Model
HTG 450/0.8	0.8	624	4.85	3/M15
HTG 450/1	1.0	780	4.85	3/M15
HTG 450/1.4	1.4	1092	8.1	3/M30
HTG 450/1.6	1.6	1248	8.1	3/M30
HTG 450/2	2.0	1560	8.1	3/M30
HTG 450/2.5	2.5	1950	11.9	3/M50
HTG 450/3	3.0	2340	11.9	3/M50
HTG 450/3.5	3.5	2730	15.1	3/M100
HTG 450/4.5	4.5	3510	15.1	3/M100
HTG 450/6.3	6.3	4914	23.6	3/M200
HTG 450/8	8.0	6240	23.6	3/M200
HTG 450/10	10.0	7800	29.8	3/M250
HTG 450/15	15.0	11700	13.3	3/M300
HTG 450/20	20.0	15600	14.0	3/M400
HTG 450/30	30.0	23400	20.5	3/M500



3/M100, 3/M50



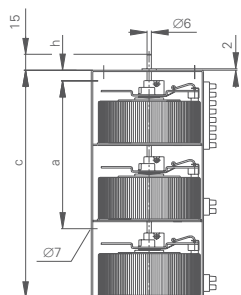
3/M100, 3/M200, 3/M250



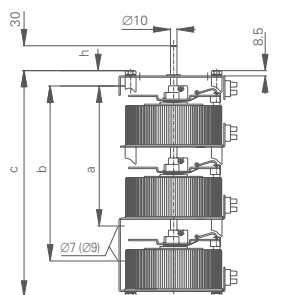
3/M300, 3/M400, 3/M500



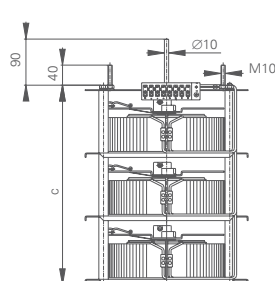
Special version



Drawing 2



Drawing 3



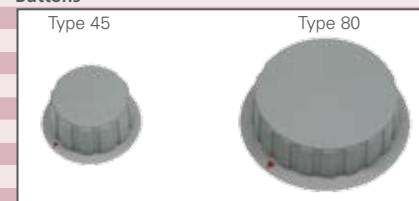
Drawing 4

Dimensions

Model	a	b	c	d	e	f	g	h	Drawing
3/M15	154	-	246	80	100	48	105	15	1
3/M30	234	-	323	80	100	55	110	15	2
3/M50	243	-	323	110	124	64	149	18	3
3/M100	243	284	370	110	130	67	153	21	3
3/M200	243	284	370	160	178	90	200	21	3
3/M250	243	284	370	160	178	90	200	21	3
3/M300	-	-	402	178	275	138	275	-	4
3/M400	-	-	402	249	310	155	310	-	4
3/M500	-	-	466	249	350	175	350	-	4

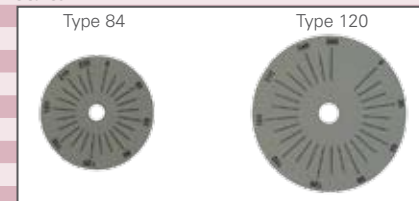
Optional Accessories

Buttons



Type	For model	Dimension (Ø x h)	Code No.
45	M15	45 x 22 mm	90 280 107
45	M30	45 x 22 mm	90 280 107
45	M50	45 x 22 mm	90 280 107
80	M100	80 x 23,5 mm	90 280 108
80	M200	80 x 23,5 mm	90 280 108
80	M205	80 x 23,5 mm	90 280 108
80	M300	80 x 23,5 mm	90 280 108
80	M400	80 x 23,5 mm	90 280 108
80	M500	80 x 23,5 mm	90 280 108
80	HST	80 x 23,5 mm	90 280 096

Scales



Type	U output (V)	Dimension (Ø)	Code No.
84	0 - 48	84 mm	17 285 684
84	0 - 230	84 mm	18 285 023
84	0 - 260	84 mm	18 285 024
84	0 - 400	84 mm	18 285 029
84	0 - 450	84 mm	18 285 030
84	0 - 100 %	84 mm	18 285 027
120	0 - 230	120 mm	18 285 025
120	0 - 260	120 mm	18 285 026
120	0 - 400	120 mm	18 285 031
120	0 - 450	120 mm	18 285 032
120	0 - 100 %	120 mm	18 285 028
120	0 - 100 %	120 mm	18 285 048**

** for HST type