

## UP (SM6443; SM6444)

Dimensions (mm)	∅ 64 x 34
Voltage (V)	12–230
Speed (rpm)	50 Hz 250/375 (SM6443); 375 (SM6444) 60 Hz 300/450 (SM6443); 450 (SM6444)
Pole number	24/16 (SM6443); 16 (SM6444)
Running torque (cNm)	50 Hz 10,3–18,5 (SM6443); 28–35 (SM6444) 60 Hz 8,5–17 (SM6443); 21–30 (SM6444)
Power output (W)	50 Hz 3,5–7,3 (SM6443); 11–13,8 (SM6444) 60 Hz 3,9–8,0 (SM6443); 9,9–14,2 (SM6444)
Gear combination	O, P, R



## Standard Data

Climatic class	wide-spread according to DIN IEC 60721-2-1
Ambient temperature operation	°C -15 ... +40
Ambient temperature storage	°C -20 ... +100
Thermal class	B (SM6443) ; A (SM6444) according to DIN EN 60085
Approval	standard
Mounting	any position
Electrical connection	cable
Protection	IP 30 according to DIN EN 60529
Weight	500 g (SM6443); 550 g (SM6444)
Rotor stalling	motor can be stopped when voltage is applied, without being overheated
Bearings	Sintered bronze, self- lubricating

## Order Reference

Type	Synchronous Motor	SM6443 R / SM6444	250	24 V	50 Hz
rpm	250 (SM6443 R) 375 (SM6443 R / SM6444 R)				
Voltage	24 V 110 V 230 V				
Frequency	50 Hz 60 Hz 50/60 Hz				

## Technical Data

Motor type (SM6443)		R-250/1	R-250/1	R-375/1	R-375/1	R-375/2	R-375/2	R-375/S2/1	R-375/S2/1
Rated frequency	Hz	50	60	50	60	50	60	50	60
Speed	rpm	250	300	375	450	375	450	375	450
Running torque $M_n$	cNm	13.5	12.5	12	10.5	10.5	8.5	18.5	17
Power output	W	3.54	3.94	4.7	4.95	4.13	4	7.3	8
Power consumption	VA	10.3	11.3	11.7	12.65	9.55	9.7	18	21
Nominal current at 230 V	mA	44.5	49	51	55	41.5	42	78.2	91.3
Max. permissible ext. inertia	gcm <sup>2</sup>	200	130	100	50	80	40	130	60
Detent torque $M_s$	cNm	2.5	2.5	1.8	1.8	1.8	1.8	2	2
Winding temperature increase	K	85	90	95	100	80	80	90 (S2 60 min.)	
Weight	g	500	500	500	500	500	500	500	500

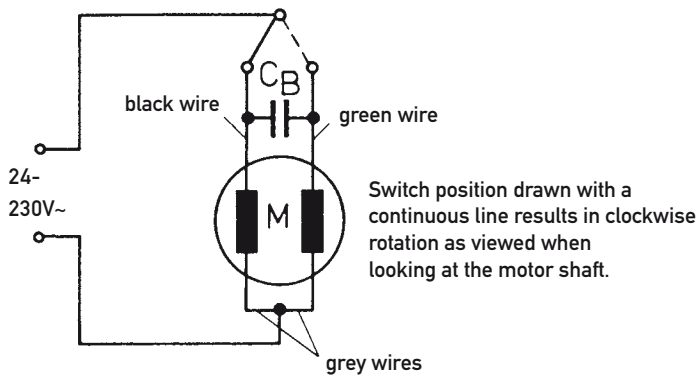
Capacitors	at $U_N$ : 24 V	$\mu\text{F}/\text{V}\sim$	25.8/63	25.8/63	30/63	30/63	25.8/63	25.8/63	47/63	47/63
	at $U_N$ : 110 V	$\mu\text{F}/\text{V}\sim$	1.3/250	1.3/250	1.3/250	1.3/250	1.3/250	1.3/250	2.2/250	2.2/250
	at $U_N$ : 230 V	$\mu\text{F}/\text{V}\sim$	0.27/500	0.27/500	0.33/500	0.33/500	0.27/500	0.27/500	0.47/500	0.47/500

Motor type (SM6444)		R-375/S2/1	R-375/S2/1	R-375/S2/2	R-375/S2/2
Rated frequency	Hz	50	60	50	60
Speed	rpm	375	450	375	450
Running torque $M_n$	cNm	28	21	35	30
Power output	W	11	9.9	13.8	14.2
Power consumption	VA	26	28	31	33.5
Nominal current at 230 V	mA	113	122	135	145
Max. permissible external inertia	gcm <sup>2</sup>	500	350	600	400
Detent torque $M_s$	cNm	7	7	7	7
Winding temperature increase	K	85 (S2 6.5 min)	85 (S2 6.5 min)	95 (S2 5 min.)	95 (S2 5 min.)
Weight	g	550	550	550	550

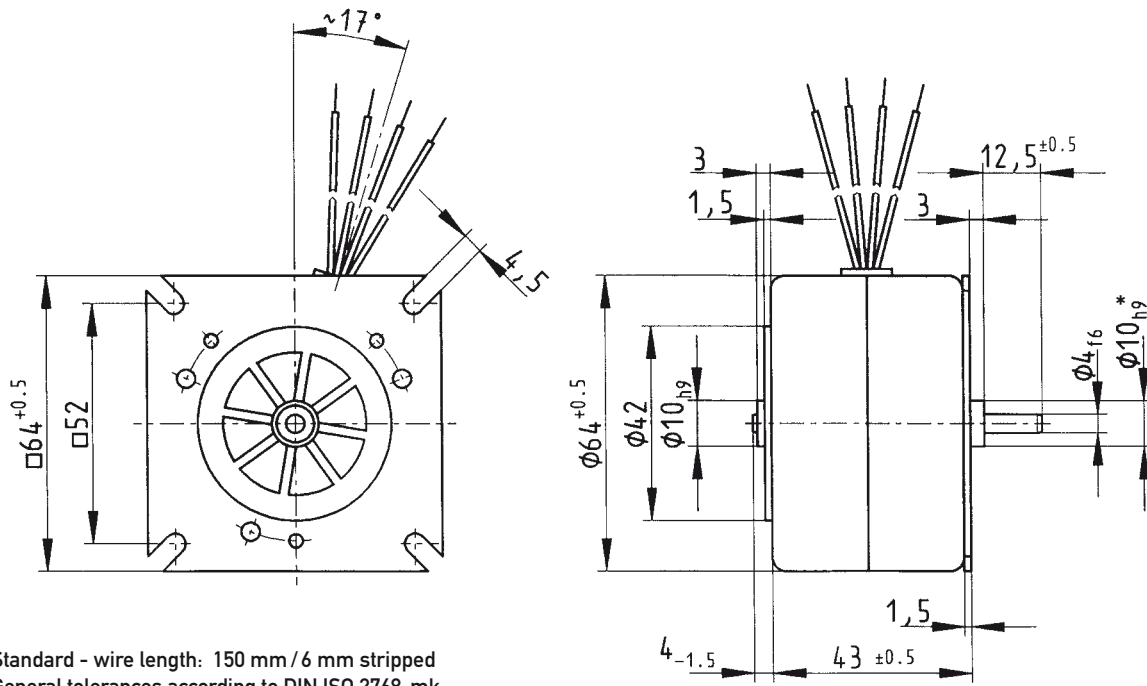
  

Capacitors	at $U_N$ : 24 V	$\mu\text{F}/\text{V}\sim$	68 / 63	68 / 63	82 / 63	82 / 63
	at $U_N$ : 110 V	$\mu\text{F}/\text{V}\sim$	2.7 / 250	2.7 / 250	3.3 / 250	3.3 / 250
	at $U_N$ : 230 V	$\mu\text{F}/\text{V}\sim$	0.68 / 500	0.68 / 500	0.82 / 500	0.82 / 500

Circuit diagram Parallel circuit



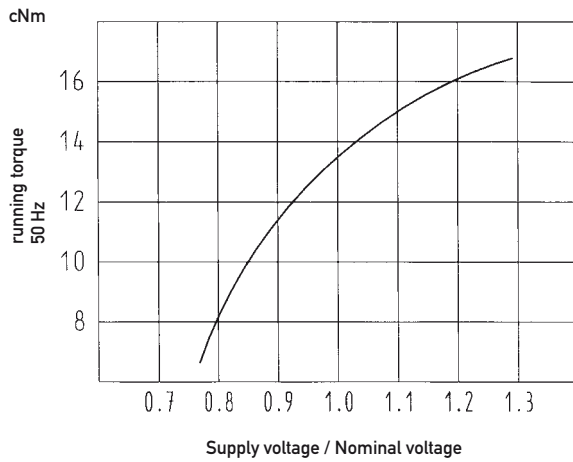
## Dimensions



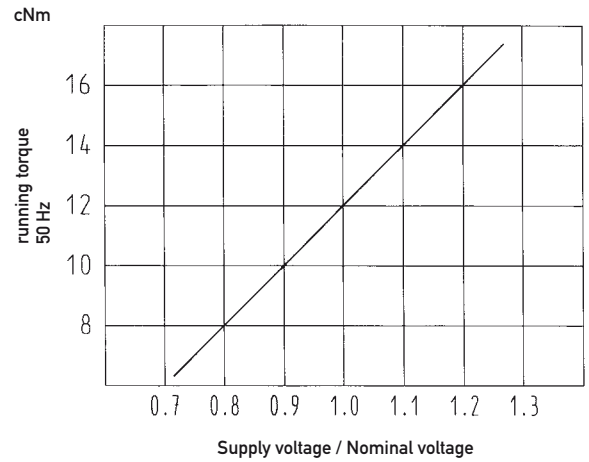
\* on request 14h9

## Chart: Torque versus voltage

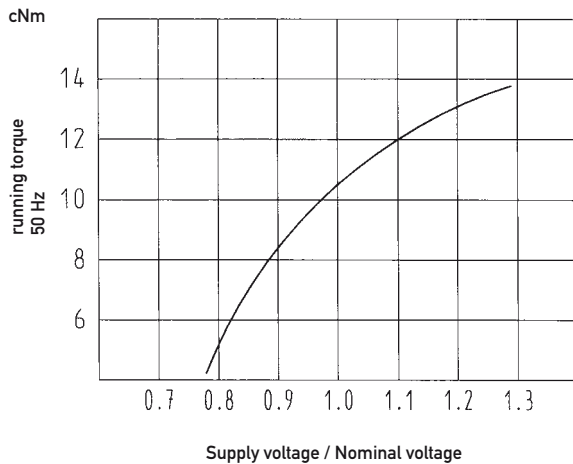
UPM1 (SM 6443 R-250/1)



UPU1 (SM 6443 R-375/1)



UPU1 (SM 6443 R-375/2)



UPU1 (SM 6443 R-375/S2/1)

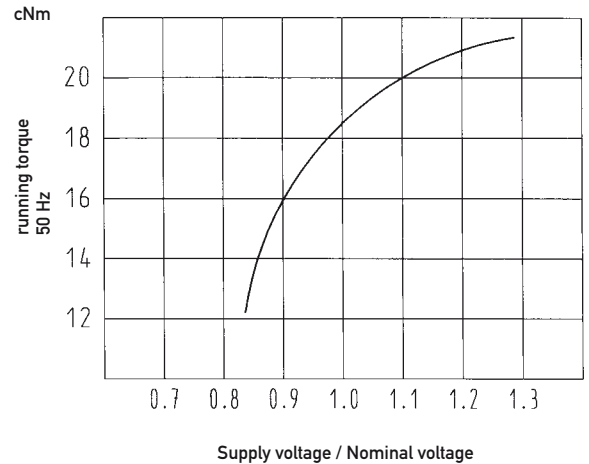
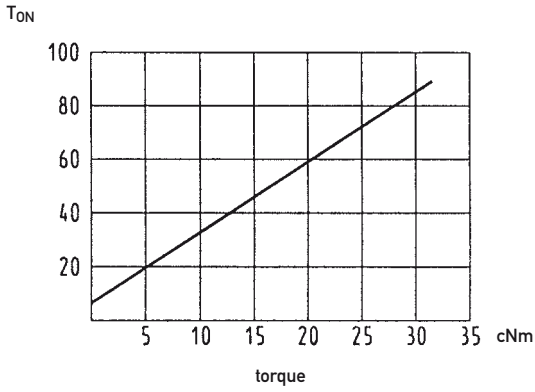


Chart: Possible duty cycle versus torque

UPU5 (SM 6444 R-375/S2/1)



UPU5 (SM 6444 R-375/S2/2)

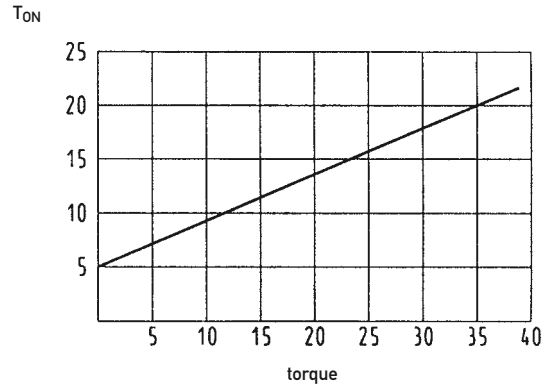
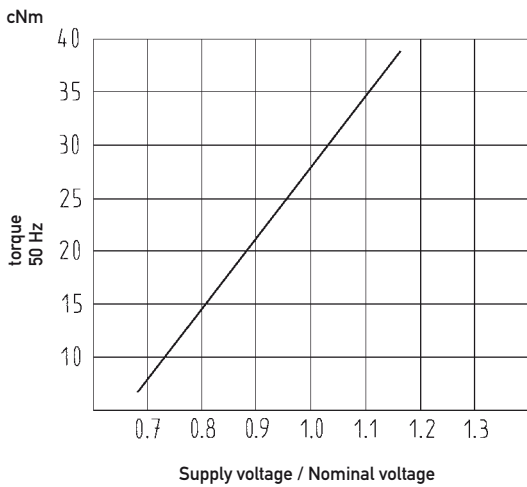


Chart: Torque versus voltage

UPU5 (SM 6444 R-375/S2/1)



UPU5 (SM 6444 R-375/S2/2)

