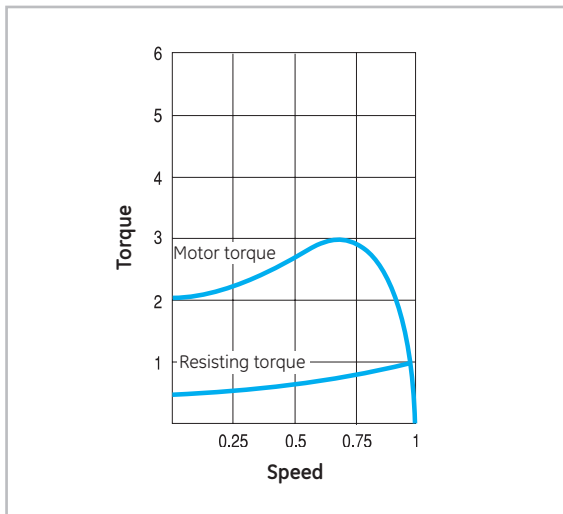


Direct-on-line starters

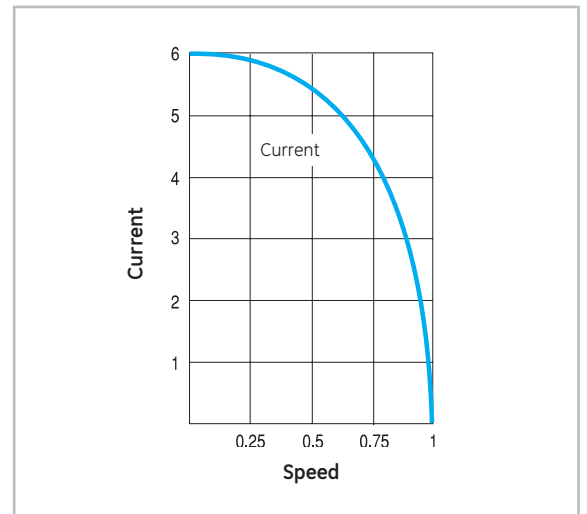
- Motors connected directly on-line with a contactor and a thermal overload relay.
- Simple installation with high starting torque and current.
- For use with motors of medium power that do not need a progressive star

AC-3	Switching off motors during running	$I_c = I_e$
AC-4	Switching off motors during starting	$I_c = 6 I_e$

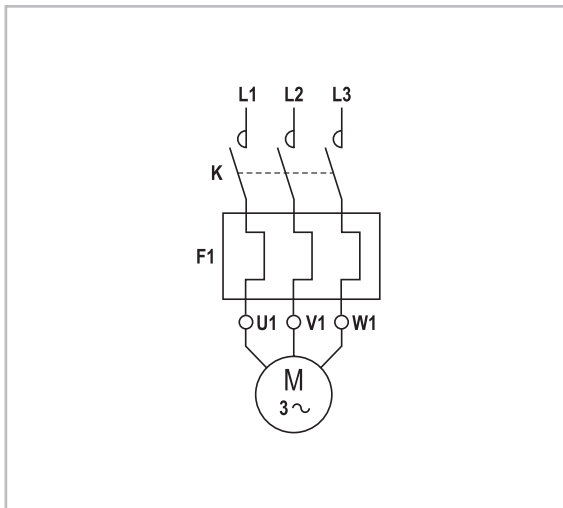
Torque-speed curve



Current-speed curve



Diagram



Selection table

Motor												Contactor	Thermal relay	Fuse	
230/200V		400/380V		440/415V		500V		690/660V		1000V				aM	gG-gL
kW	A	kW	A	kW	A	kW	A	kW	A	kW	A	A	A		
-	-	-	-	-	-	-	-	0.06	0.13	-	-	MC0	MT03A	0.5	1
-	-	0.06	0.23	0.06	0.21	0.06	0.17	0.09	0.2	-	-		MT03B	0.5	1
-	-	-	-	-	-	-	-	0.12	0.25	-	-		MT03B	0.5	1
0.06	0.39	0.09	0.34	0.09	0.31	0.09	0.26	0.18	0.35	-	-		MT03C	1	2
-	-	-	-	0.12	0.4	0.12	0.33	-	-	-	-		MT03C	1	2
0.09	0.58	0.12	0.44	-	-	0.18	0.46	0.25	0.46	-	-		MT03D	1	2
-	-	0.18	0.61	0.18	0.56	0.25	0.6	-	-	-	-		MT03D	1	2
-	-	-	-	-	-	-	-	0.37	0.7	-	-		MT03E	2	4
0.12	0.76	0.25	0.78	0.25	0.7	0.37	0.9	0.55	0.9	-	-		MT03E	2	4
0.18	1.05	0.37	1.13	0.37	1.1	0.55	1.2	0.75	1.1	-	-		MT03F	2	4
0.25	1.4	-	-	-	-	-	-	-	-	-	-		MT03G	2	4
-	-	0.55	1.6	0.55	1.5	0.75	1.5	1.1	1.5	-	-		MT03H	4	6
0.37	2	0.75	2	0.75	2	1.1	2	1.5	2	-	-		MT03I	4	6
-	-	1.1	2.6	1.1	2.5	1.5	2.6	-	-	-	-		MT03J	4	6
0.56	2.75	-	-	-	-	-	-	2.2	2.9	-	-		MT03J	4	6
0.75	3.5	1.5	3.5	1.5	3.4	2.2	3.8	3	3.5	-	-		MT03K	6	10
1.1	5	2.2	5	2.2	4.5	3	5	-	-	-	-		MT03L	10	16
1.5	7	-	-	-	-	-	-	-	-	-	-		MT03M	10	16
-	-	-	-	-	-	-	-	3.7	4.6	-	-	MC1	MT03L	10	16
-	-	-	-	-	-	-	-	4	5	-	-		MT03L	10	16
-	-	3	7	3	6.5	3.7	6	-	-	-	-		MT03M	10	16
-	-	-	-	3.7	7.3	4	6.5	-	-	-	-		MT03M	10	16
-	-	3.7	8	4	8	-	-	-	-	-	-		MT03N	12	20
2.2	9	4	9	-	-	-	-	-	-	-	-		MT03N	12	20
-	-	-	-	-	-	-	-	5.5	6.7	-	-	MC2	MT03M	12	20
-	-	-	-	-	-	5.5	9	-	-	-	-		MT03N	16	20
3	12	5.5	12	5.5	11	-	-	-	-	-	-		MT03P	16	20
-	-	0.06	0.23	0.06	0.21	0.06	0.17	0.09	0.2	-	-	CL00	RT1B	2	4
-	-	-	-	-	-	0.09	0.26	0.12	0.25	-	-		RT1C	2	4
0.06	0.39	0.09	0.34	0.09	0.31	0.12	0.33	0.18	0.35	-	-		RT1C	2	4
0.09	0.58	0.12	0.44	0.12	0.4	0.18	0.46	0.25	0.46	-	-		RT1D	2	4
-	-	0.18	0.61	0.18	0.56	0.25	0.6	-	-	-	-		RT1D	2	4
-	-	-	-	-	-	-	-	0.37	0.7	-	-		RT1F	2	4
0.12	0.76	0.25	0.78	0.25	0.7	0.37	0.9	0.55	0.9	-	-		RT1F	2	4
0.18	1.05	0.37	1.13	0.37	1.1	0.55	1.2	0.75	1.1	-	-		RT1G	2	4
0.25	1.4	0.55	1.6	0.55	1.5	0.75	1.5	1.1	1.5	-	-		RT1H	2	6
0.37	2	0.75	2	0.75	2	1.1	2	1.5	2	-	-		RT1J	4	6
0.55	2.75	1.1	2.6	1.1	2.5	1.5	2.6	2.2	2.9	-	-		RT1K	4	6
0.75	3.5	1.5	3.5	1.5	3.4	2.2	3.8	-	-	-	-		RT1K	6	10
-	-	-	-	-	-	-	-	3.7	4.6	-	-		RT1L	6	16
1.1	5	2.2	5	2.2	4.5	-	-	-	-	-	-		RT1L	6	16
1.5	7	-	-	3.7	7.3	3.7	6	5.5	7	-	-		RT1M	10	20
-	-	3.7	8	-	-	-	-	-	-	-	-		RT1M	12	25
2.2	9	4	9	4	9	5.5	9	-	-	-	-		RT1N	16	25
-	-	-	-	-	-	-	-	7.5	9	-	-	CL01	RT1N	16	25
3	12	5.5	12	5.5	11	7.5	12	-	-	-	-		RT1P	16	35
3.7	14	-	-	7.5	14	-	-	-	-	-	-	CL02	RT1P	20	40
4	16	7.5	16	-	-	10	15.5	-	-	-	-		RT1S	20	40
-	-	-	-	-	-	-	-	11	13	-	-	CL25	RT1P	20	40
-	-	-	-	-	-	11	17	13	16	-	-		RT1S	20	40
5.5	21	-	-	11	21	13	20	-	-	-	-		RT1T	32	50
-	-	11	22.5	-	-	15	23	-	-	-	-		RT1U	32	50

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Direct-on-line starters

Selection table (continued 1)

	Motor										Contactor	Thermal relay	Fuse			
	230/200V		400/380V		440/415V		500V		690/660V				1000V		aM	gG-gL
	kW	A	kW	A	kW	A	kW	A	kW	A			kW	A	A	A
	-	-	-	-	-	-	-	-	17	20	-	-	CL04	RT1T	32	50
	7.5	27	15	30	15	28	17.5	26.5	-	-	-	-		RT1V	40	63
	-	-	-	-	-	-	-	-	18.5	23	-	-		RT1U	32	50
	-	-	-	-	-	-	-	-	22	25	-	-	CL45	RT1V	40	63
	-	-	-	-	-	18.5	28.5	-	-	-	-	-		RT1V	40	63
	-	-	18.5	37	18.5	35	22	33	-	-	-	-		RT1W	50	80
	-	-	-	-	-	-	25	37.5	30	35	-	-	RT1W	50	80	
	11	40	-	-	22	40	-	-	-	-	-	-	RT2E (1)	50	80	
	-	-	-	-	-	-	-	-	33	38	-	-	CL06	RT2E	50	80
	-	-	22	44	25	45	-	-	-	-	-	-		RT2G	63	80
	15	50	-	-	-	-	-	-	-	-	-	-		RT2G	63	80
	-	-	-	-	-	-	-	-	37	41	-	-	CL07	RT2E	63	80
	-	-	-	-	-	-	30	45	40	43	-	-		RT2G	63	80
	-	-	30	60	30	55	37	55	-	-	-	-		RT2H	80	125
	18.5	65	-	-	37	66	-	-	-	-	-	-	RT2J	80	125	
	-	-	-	-	-	-	-	-	45	49	-	-	CL08	RT2G	80	125
	-	-	37	72	-	-	45	65	-	-	-	-		RT2J	100	125
	22	75	-	-	-	-	-	-	-	-	-	-		RT2J	100	125
	-	-	-	-	45	80	-	-	-	-	-	-	RT2L	100	160	
	-	-	-	-	-	-	-	-	55	60	-	-	CL09	RT2H	80	125
	-	-	-	-	-	-	50	73	-	-	-	-		RT2J	100	125
	25	84	45	85	50	88	55	80	-	-	-	-		RT2L	100	160
	30	105	55	105	55	100	-	-	-	-	-	-	CL10	RT2M	125	200
	-	-	-	-	-	-	-	-	-	55	40	-	CK75	RT4J	63	80
	-	-	-	-	-	-	-	-	75	80	-	-		RT3C	125	160
	-	-	-	-	-	-	-	-	90	97	-	-		RT3D	125	160
	-	-	-	-	-	-	75	105	-	-	-	-	RT3D	160	200	
	37	126	-	-	-	-	-	-	-	-	-	-	RT3E	160	200	
	-	-	75	138	75	135	90	129	-	-	-	-	RT3E	200	224	
	45	150	-	-	-	-	-	-	-	-	-	-	RT3F	200	224	
	-	-	-	-	-	-	-	-	-	75	54	-	CK08	RT4 K	80	125
	-	-	-	-	-	-	-	-	-	90	64	-		RT3B	100	160
	-	-	-	-	-	-	-	-	110	118	-	-		RT3E	160	200
	-	-	-	-	-	-	-	-	132	141	-	-	RT3F	200	250	
	-	-	90	170	90	165	110	156	-	-	-	-	RT3F	200	250	
	55	182	-	-	100	182	-	-	-	-	-	-	RT3F	200	250	
	-	-	-	-	-	-	-	-	-	110	78	-	CK85	RT4L (1)	100	160
	-	-	-	-	-	-	-	-	150	166	-	-		RT4N (1)	250	315
	-	-	-	-	110	200	132	188	-	-	-	-		RT4P (1)	250	315
	-	-	110	211	-	-	-	-	-	-	-	-	RT4P (1)	250	315	
	-	-	-	-	-	-	-	-	-	132	94	-	CK09	RT4M (1)	125	160
	-	-	-	-	-	-	-	-	-	150	105	-		RT4M (1)	160	200
	-	-	-	-	-	-	-	-	160	170	-	-		RT4N (1)	200	250
	-	-	-	-	-	-	-	-	185	193	-	-	RT4P (1)	250	315	
	-	-	-	-	-	-	-	-	-	160	113	-	CK95	RT4M (1)	160	200
	-	-	-	-	-	-	-	-	-	185	130	-		RT4N (1)	160	200
	-	-	-	-	-	-	-	-	-	200	141	-		RT4N (1)	200	250
	-	-	-	-	-	-	-	-	-	220	155	-	CK10	RT5A (1)	200	250
	-	-	-	-	-	-	-	-	-	250	175	-		RT5A (1)	250	315
	-	-	-	-	-	-	-	-	220	230	-	-	CK95	RT4P (1)	315	400
	-	-	-	-	150	269	185	261	250	262	-	-		RT4R (1)	355	400
	-	-	150	283	160	285	-	-	-	-	-	-		RT4R (1)	400	425
	90	309	160	309	-	-	200	281	-	-	-	-	RT4R (1)	400	425	

(1) Separate mounting: type RT2XP.

(continued on page D.23)

Direct-on-line starters

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Selection table (continued 2)

Motor										Contactor	Thermal relay	Fuse		
230/200V		400/380V		440/415V		500V		690/660V				1000V		aM
kW	A	kW	A	kW	A	kW	A	kW	A	kW	A	A	A	
-	-	-	-	-	-	220	310	280	292	-	-	RT5C	400	425
-	-	-	-	185	325	-	-	300	307	-	-	RT5C	425	500
-	-	-	-	-	-	-	-	315	322	-	-	RT5C	425	500
110	356	185	355	200	350	250	348	335	344	-	-	RT5D	425	500
-	-	220	370	220	385	-	-	355	366	-	-	RT5D	500	500
-	-	-	-	-	-	280	385	375	390	-	-	RT5D	500	500
-	-	220	408	-	-	300	409	-	-	-	-	RT5D	500	500
-	-	-	-	-	-	-	-	-	-	280	197	RT5B	250	315
-	-	-	-	-	-	-	-	-	-	300	211	RT5B	315	355
-	-	-	-	-	-	-	-	-	-	315	221	RT5B	315	355
-	-	-	-	-	-	-	-	-	-	335	234	RT5B	315	355
-	-	-	-	-	-	-	-	-	-	355	245	RT5B	315	355
-	-	-	-	-	-	-	-	400	412	-	-	RT5D	500	500
132	425	-	-	250	437	315	426	-	-	-	-	RT5D	630	630
-	-	-	-	-	-	335	456	425	442	-	-	RT5D	630	630
-	-	250	475	280	480	355	485	450	462	-	-	RT5E	630	630
150	500	-	-	300	508	375	513	-	-	-	-	RT5E	630	630
160	520	280	530	315	530	400	543	-	-	-	-	RT5E	630	630
-	-	-	-	-	-	-	-	-	-	375	256	RT5B	315	355
-	-	-	-	-	-	-	-	-	-	400	273	RT5C	400	425
-	-	-	-	-	-	-	-	-	-	425	290	RT5C	400	425
-	-	-	-	-	-	-	-	-	-	450	307	RT5C	400	425
-	-	-	-	-	-	-	-	475	488	-	-	RT5E	630	630
-	-	-	-	-	-	-	-	500	514	-	-	RT5E	630	630
-	-	300	563	335	565	-	-	-	-	-	-	RT5E	630	630
185	609	315	580	355	600	-	-	-	-	-	-	RT5E	630	630
200	630	335	630	375	630	450	613	-	-	-	-	RT5E	800	800
220	710	355	650	-	-	475	647	-	-	-	-	RT5E	800	800
-	-	375	680	400	673	-	-	-	-	-	-	RT5E	800	800
-	-	-	-	-	-	-	-	-	-	475	324	RT5C	500	630
-	-	-	-	-	-	-	-	-	-	500	341	RT5C	500	630
-	-	-	-	-	-	500	680	-	-	-	-	RT6A	1000	1000
-	-	400	720	425	714	-	-	-	-	-	-	RT6A	1000	1000
-	-	425	763	450	756	-	-	-	-	-	-	RT6A	1000	1000
250	823	450	800	-	-	-	-	-	-	-	-	RT6A	1000	1000

Direct-on-line starters

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