



Date of test:	23.03.2018	Report Number:	18005	Date of issue	25.05.2018
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Motor description						
Rated output power	kW	1,5		Manufacturer	ARÇELİK	
Rated voltage	V	400		Model Nr.	Q3H90L2C40	
Rated current	A	3,0		Serial Nr.	19659 VS	
Rated speed	min ⁻¹	2935		Duty type IEC 60034-1	S1	
Supply frequency	Hz	50		Design	-	
Number of Phases	-	3		Insulation class IEC 60085	F	
IEC 60034-30-1 (Rated)	IE-Code	IE3-84,2%		Max. Ambient temperature	°C	40

Initial motor conditions			
Test resistance	R_1	Ω	2,7633
Winding temperature	θ_0	°C	23,6
Ambient temperature	θ_a	°C	23,6

6.1.3.2.1 Rated load test			
Test resistance	R_N	Ω	3,153
Winding temperature	θ_N	°C	58,3
Ambient temperature	θ_a	°C	25,8

6.1.3.2.3 Load curve test			Test resistance before load test				R	Ω	3,153
Rated Output Power		%	125%	115%	100%	75%	50%	25%	
Torque	T	N m	6,12	5,65	4,89	3,66	2,45	1,19	
Input Power	P_i	W	2208,2	2034,7	1765,3	1340,7	935,5	522,6	
Line Current	I	A	3,64	3,40	3,02	2,47	1,99	1,63	
Operating Speed	n	min ⁻¹	2915	2920	2933	2950	2968	2983	
Terminal Voltage	U	V	399,3	399,4	399,5	399,8	399,1	400,1	
Frequency	f	Hz	50	50	50	50	50	50	
Winding Temperature	θ_w	°C	40,9	41,2	41,45	41,3	41,05	40,75	
			Test resistance after load test				R	Ω	3,121

6.1.3.2.4 No-load test				Test resistance before no-load test				R	Ω	0
Rated Voltage		%	115%	110%	95%	90%	60%	50%	40%	30%
Input Power	P_0	W	170,8	141,7	130,9	114,3	77,9	68,2	63,6	59,3
Line Current	I_0	A	1,94	1,46	1,30	1,17	0,69	0,57	0,52	0,47
Terminal Voltage	U_0	V	440	400	381	360	240	201	177	155
Frequency	f_0	Hz	50,0	50,0	50,0	50,0	50,0	50,0	50,0	50,0
Power Factor	$\cos j$	$\cos j$	0,116	0,140	0,153	0,156	0,271	0,342	0,402	0,410
Winding Temperature	θ_w	°C	38,90	38,70	38,50	38,25	38,05	37,85	37,55	37,30
			Test resistance after no-load test				R	Ω	3,121	

6.1.3.3 Efficiency determination									
Rated output power corrected	$P_{z,\theta}$	%	125%	115%	100%	75%	50%	25%	
Output power corrected	$P_{z,\theta}$	W	1863	1720	1494	1124	757	366	
Slip corrected	$s_{,\theta}$	p.u.	0,0283	0,0266	0,0223	0,0166	0,0106	0,0057	
Input power corrected	$P_{i,\theta}$	W	2208	2034	1765	1341	935	523	
Iron losses	P_{fe}	W	76	77	77	78	79	80	
Frict. And wind.losses corrected	$P_{fw,\theta}$	W	45,09	45,28	45,78	46,45	47,16	47,75	
Additional - losees corrected	P_{LL}	W	40,95	34,80	26,07	14,59	6,56	1,54	
Stator losses corrected	$P_{s,\theta}$	W	125	109	86	57	37	25	
Rotor losses correctedd	$P_{r,\theta}$	W	57	49	36	20	9	2	
Power factor	$\cos \phi$	%	0,876	0,866	0,845	0,785	0,680	0,463	
Efficiency	η	%	84,4	84,5	84,7	83,8	80,9	70,0	

Tested by:	Ünal GÜL	Approved by:	Volkan KURT
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