

Serial No.:
Date (d-m-y):
Customer:

Type-Test Report: Line-Start Permanent-Magnet Synchronous Motor

TYPE:PM4-712-4	UN[V]: 400	IN[A]: 0.61	PN[kW]: 0.37	f[Hz]: 50
Standard: IEC60034-2-1	nN[min^{-1}]: 1500	Conn.: Y	η : 88.00%	$\cos \phi$: 0.99
Ambient Temp: -15°C—40°C	Duty: S1	IS.Class: F	Eff class: IE4	por.class:IP55
Line-Resistance at 20 °C [Ω]: 39.945			Back EMF[V]: 365	

TEMPERATURE-RISE TEST

U [V]	f [Hz]	IN ass IN abs [A]	PN ress PN out [kW]	Lasting [h]	Winding θ	Wind.Res.	Amb. θ	Frame. θ	Wind.Res.	Temperature Rise $\Delta\theta$ [K]	
					Initial			Final			
					[°C]	[Ω]	[°C]	[°C]	[Ω]		
400	50	0.61	0.37	3	20	39.945	20	42	45.898	38	

LOAD TEST

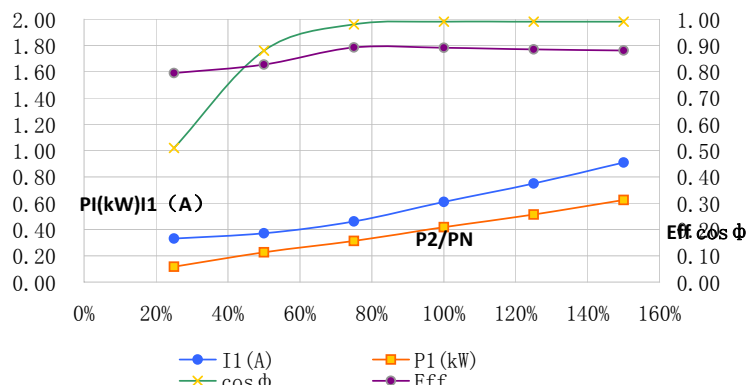
Load	U [V]	f [Hz]	n [min^{-1}]	I [A]	input [kW]	out [kW]	η	$\cos\phi$	Tn [N.m]	Notes
25%	400	50	1500	0.33	0.117	0.093	0.795	0.51	0.6	
50%	400	50	1500	0.37	0.226	0.187	0.827	0.88	1.2	
75%	400	50	1500	0.46	0.313	0.280	0.892	0.98	1.8	
100%	400	50	1500	0.61	0.418	0.373	0.891	0.99	2.4	
125%	400	50	1500	0.75	0.514	0.455	0.885	0.99	2.9	
150%	400	50	1500	0.91	0.624	0.550	0.881	0.99	3.5	

LOCKED ROTOR TEST					BREAKDOWN TORQUE TEST			RATIO		
U [V]	f [Hz]	Ts [N.m]	IIsss,abs. [A]	Pass,abs [kW]	Tmax[N.m]:			Is/IN	Ts/TN	Tmax/TN
400	50	5.462	3.2	0.9	6.6			5.30	2.3	2.8
NO-LOAD TEST						LWA[dBA]		INSUL.RES.		
U [V]	f [Hz]	n [min^{-1}]	IIsss,abs. [A]	Pass,abs [W]	$\cos \phi$	No Load		amb.T [°C]	U [V]	[M Ω]
400	50	1500	0.413	37.2	0.27	57		20	400	500
Machine loss[w]:3.59			Core loss[w]: 13.7			DIELECTRIC TEST (Between Windings and the Frame)				
Degrees of unbalance in a three phase system(current):0.5%						U[V]			I[mA]	
Vibration[mm/s]: 0.5						2150			12	

NOTE:No oil seal

Ref: MANUFACTUR

Load Curve



Serial No.:
Date (d-m-y):
Customer:

Type-Test Report: Line-Start Permanent-Magnet Synchronous Motor

TYPE:PM4-801-4	UN[V]: 400	IN[A]: 0.96	PN[kW]: 0.55	f[Hz]: 50
Standard: IEC60034-2-1	n _N [min-1] 1500	Conn.: Y	η: 84.50%	cos φ: 0.98
Ambient Temp: -15°C—40°C	Duty: S1	IS.Class: F	Eff class: IE4	por.class:IP55
Line-Resistance at 20 °C[Ω]: 27.36			Back EMF[V]: 340	

TEMPERATURE-RISE TEST

U	f	IN ass IN abs	PN ress PN out	Lasting	Winding θ	Wind.Res.	Amb.θ	Frame.θ	Wind.Res.	Temperature Rise
					Initial	Final			△θ	
[V]	[Hz]	[A]	[kW]	[h]	[°C]	[Ω]	[°C]	[°C]	[Ω]	[K]
400	50	0.98	0.55	3	20	27.360	20	46	31.330	37

LOAD TEST

Load	U	f	n	I	input	out	η	cosφ	Tn	Notes
	[V]	[Hz]	[min-1]	[A]	[kW]	[kW]			[N.m]	
25%	400	50	1500	0.65	0.225	0.135	0.600	0.50	0.9	
50%	400	50	1500	0.66	0.360	0.275	0.764	0.79	1.8	
75%	400	50	1500	0.81	0.510	0.419	0.822	0.91	2.7	
100%	400	50	1500	0.98	0.655	0.551	0.841	0.96	3.5	
125%	400	50	1500	1.20	0.804	0.682	0.848	0.97	4.3	
150%	400	50	1500	1.44	0.981	0.834	0.850	0.98	5.3	

LOCKED ROTOR TEST

BREAKDOWN TORQUE TEST

RATIO

U	f	Ts	I _{lss,abs}	Pass,abs	Tmax[N.m]:	Is/IN	Ts/TN	Tmax/TN
[V]	[Hz]	[N.m]	[A]	[kW]				
400	50	7.648	4.5	1.2	10.2	4.60	2.2	2.9

NO-LOAD TEST

LWA[dBA]

INSUL.RES.

U	f	n	I _{lss,abs}	Pass,abs	cos φ	No Load	amb.T	U	
[V]	[Hz]	[min-1]	[A]	[W]			[°C]	[V]	[MΩ]
400	50	1500	0.7	100.1	0.18	60	20	400	500

Machine loss[w]:8.5 Core loss[w]: 17 DIELECTRIC TEST (Between Windings and the Frame)

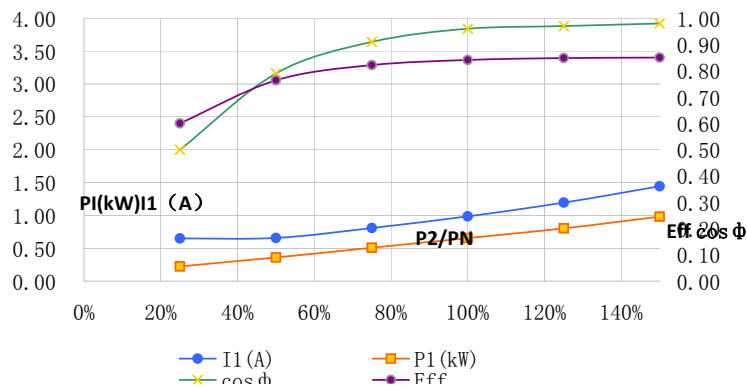
Degrees of unbalance in a three phase system(current):0.5%

Vibration[mm/s]: 1.1 U[V] 2150 I[mA] 1.6

NOTE:No oil seal

Ref: MANUFACTUR

Load Curve



Serial No.:
Date (d-m-y):
Customer:

Type-Test Report: Line-Start Permanent-Magnet Synchronous Motor

TYPE:PM4-802-4	UN[V]: 400	IN[A]: 1.28	PN[kW]: 0.75	f[Hz]: 50
Standard: IEC60034-2-1	nN[min^{-1}]: 1500	Conn.: Y	η : 85.60%	cos ϕ : 0.98
Ambient Temp: -15°C—40°C	Duty: S1	IS.Class: F	Eff class: IE4	por.class:IP55
Line-Resistance at 20 °C[Ω]: 20.455			Back EMF[V]: 345	

TEMPERATURE-RISE TEST

U	f	IN ass IN abs	PN ress PN out	Lasting	Winding θ	Wind.Res.	Amb. θ	Frame. θ	Wind.Res.	Temperature Rise
					Initial	Final			$\Delta\theta$	
[V]	[Hz]	[A]	[kW]	[h]	[°C]	[Ω]	[°C]	[°C]	[Ω]	[K]
400	50	1.28	0.75	3	10	19.637	10	46	22.602	37

LOAD TEST

Load	U	f	n	I	input	out	η	cos ϕ	Tn	Notes
	[V]	[Hz]	[min^{-1}]	[A]	[kW]	[kW]			[N.m]	
25%	400	50	1500	0.64	0.312	0.184	0.590	0.70	1.2	
50%	400	50	1500	0.81	0.515	0.375	0.728	0.92	2.4	
75%	400	50	1500	0.98	0.679	0.572	0.842	0.98	3.6	
100%	400	50	1500	1.30	0.880	0.755	0.858	0.98	4.8	
125%	400	50	1500	1.63	1.105	0.937	0.848	0.98	6.0	
150%	400	50	1500	1.96	1.331	1.125	0.845	0.98	7.2	

LOCKED ROTOR TEST

BREAKDOWN TORQUE TEST

RATIO

U	f	Ts	IIss,abs.	Pass,abs	Tmax[N.m]:		Is/IN	Ts/TN	Tmax/TN
[V]	[Hz]	[N.m]	[A]	[kW]					
400	50	10.77	6.3	1.7	13.9		4.84	2.2	2.9

NO-LOAD TEST

LWA[dBA]

INSUL.RES.

U	f	n	IIss,abs.	Pass,abs	cos ϕ	No Load	amb.T	U	
[V]	[Hz]	[min^{-1}]	[A]	[W]			[°C]	[V]	[M Ω]
400	50	1500	0.61	117		60	10	400	500

Machine loss[w]:11.25 Core loss[w]: 23.05 DIELECTRIC TEST (Between Windings and the Frame)

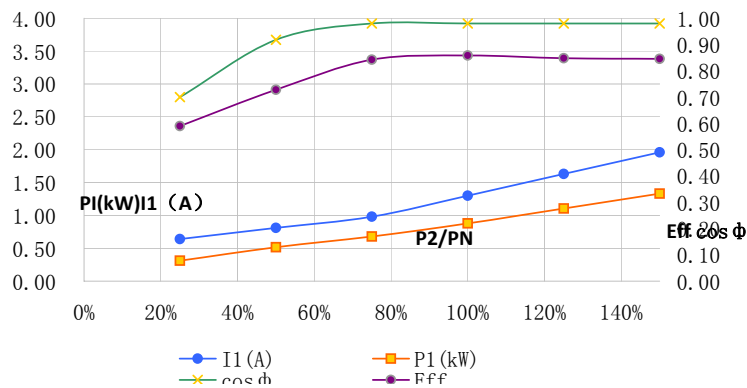
Degrees of unbalance in a three phase system(current):0.5%

Vibration[mm/s]: 1.1 U[V] 2150 I[mA] 12

NOTE:No oil seal

Ref: MANUFACTUR

Load Curve



Serial No.:
Date (d-m-y):
Customer:

Type-Test Report: Line-Start Permanent-Magnet Synchronous Motor

TYPE:PM4-90S-4	UN[V]: 400	IN[A]: 1.85	PN[kW]: 1.1	f[Hz]: 50
Standard: IEC60034-2-1	nN[min^{-1}]: 1500	Conn.: Y	η : 87.40%	cos ϕ : 0.98
Ambient Temp: -15°C—40°C	Duty: S1	IS.Class: F	Eff class: IE4	por.class:IP55
Line-Resistance at 20 °C[Ω]: 17.538			Back EMF[V]: 381	

TEMPERATURE-RISE TEST

U	f	IN ass IN abs	PN ress PN out	Lasting	Winding θ	Wind.Res.	Amb. θ	Frame. θ	Wind.Res.	Temperature Rise
					Initial	Final			$\Delta\theta$	
[V]	[Hz]	[A]	[kW]	[h]	[°C]	[Ω]	[°C]	[°C]	[Ω]	[K]
400	50	1.85	1.1	3	20	17.538	20	51	20.564	44

LOAD TEST

Load	U	f	n	I	input	out	η	cos ϕ	Tn	Notes
	[V]	[Hz]	[min^{-1}]	[A]	[kW]	[kW]			[N.m]	
25%	400	50	1500	0.81	0.366	0.275	0.752	0.65	1.8	
50%	400	50	1500	1.11	0.661	0.550	0.832	0.86	3.5	
75%	400	50	1500	1.45	0.954	0.825	0.865	0.95	5.3	
100%	400	50	1500	1.86	1.266	1.100	0.869	0.98	7.0	
125%	400	50	1500	2.36	1.601	1.375	0.859	0.98	8.8	
150%	400	50	1500	2.88	1.955	1.650	0.844	0.98	10.5	

LOCKED ROTOR TEST

BREAKDOWN TORQUE TEST

RATIO

U	f	Ts	I _{lss,abs}	Pass,abs	Tmax[N.m]:	Is/IN	Ts/TN	Tmax/TN
[V]	[Hz]	[N.m]	[A]	[kW]				
400	50	14.15	7.8	2.2	17.5	4.20	2.0	2.5

NO-LOAD TEST

LWA[dBA]

INSUL.RES.

U	f	n	I _{lss,abs}	Pass,abs	cos ϕ	No Load	amb.T	U	
[V]	[Hz]	[min^{-1}]	[A]	[W]			[°C]	[V]	[M Ω]
400	50	1500	0.64	94	0.23	63	20	400	500

Machine loss[w]:11 Core loss[w]: 20 DIELECTRIC TEST (Between Windings and the Frame)

Degrees of unbalance in a three phase system(current):0.5%

U[V] I[mA]

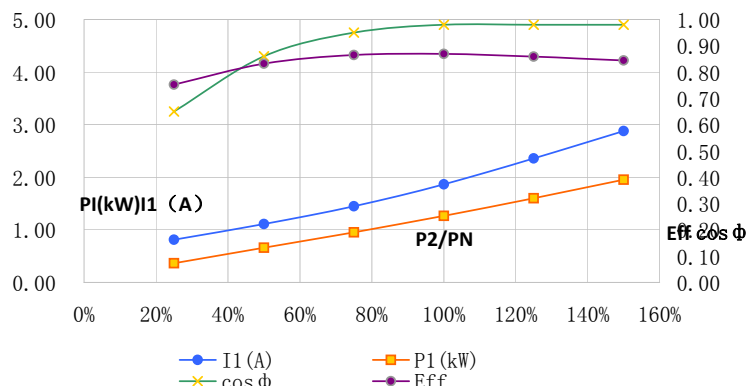
Vibration[mm/s]: 0.8

2150 12

NOTE:No oil seal

Ref: MANUFACTUR

Load Curve



Serial No.:
Date (d-m-y):
Customer:

Type-Test Report: Line-Start Permanent-Magnet Synchronous Motor

TYPE:PM4-90L-4	UN[V]: 400	IN[A]: 2.51	PN[kW]: 1.5kw	f[Hz]: 50
Standard: IEC60034-2-1	nN[min^{-1}]: 1500	Conn.: Y	η : 88.10%	$\cos \phi$: 0.98
Ambient Temp: -15°C—40°C	Duty: S1	IS.Class: F	Eff class: IE4	por.class:IP55
Line-Resistance at 20 °C[Ω]: 8.501			Back EMF[V]: 351	

TEMPERATURE-RISE TEST

U	f	IN ass IN abs	PN ress PN out	Lasting	Winding θ	Wind.Res.	Amb. θ	Frame. θ	Wind.Res.	Temperature Rise
					Initial	Final			$\Delta \theta$	
[V]	[Hz]	[A]	[kW]	[h]	[°C]	[Ω]	[°C]	[°C]	[Ω]	[K]
400	50	2.51	1.5	3	20	8.501	20	48	10.001	45

LOAD TEST

Load	U	f	n	I	input	out	η	$\cos \phi$	Tn	Notes
	[V]	[Hz]	[min^{-1}]	[A]	[kW]	[kW]			[N.m]	
25%	400	50	1500	1.20	0.600	0.375	0.625	0.72	2.4	
50%	400	50	1500	1.49	0.951	0.750	0.789	0.92	4.8	
75%	400	50	1500	1.96	1.320	1.125	0.852	0.97	7.2	
100%	400	50	1500	2.51	1.703	1.500	0.881	0.98	9.6	
125%	400	50	1500	3.13	2.104	1.875	0.891	0.97	11.9	
150%	400	50	1500	3.90	2.592	2.250	0.868	0.96	14.3	

LOCKED ROTOR TEST

BREAKDOWN TORQUE TEST

RATIO

U	f	Ts	IIsss,abs.	Pass,abs	Tmax[N.m]:			Is/IN	Ts/TN	Tmax/TN
[V]	[Hz]	[N.m]	[A]	[kW]						
400	50	21.87	11.6	3.4	25.1			4.64	2.3	2.63

NO-LOAD TEST

LWA[dBA]

INSUL.RES.

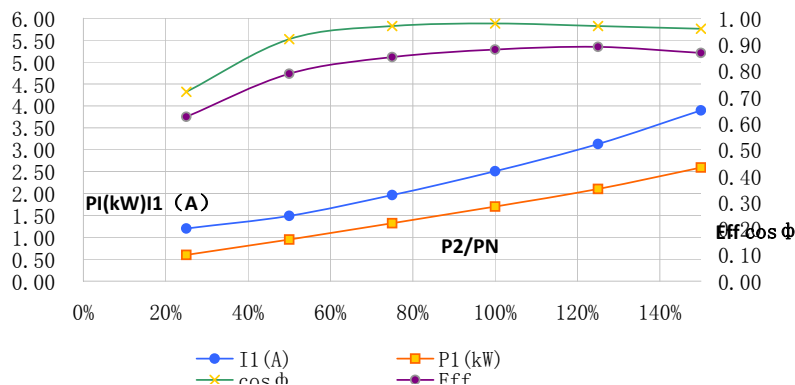
U	f	n	IIsss,abs.	Pass,abs	$\cos \phi$	No Load	amb.T	U	
[V]	[Hz]	[min^{-1}]	[A]	[W]			[°C]	[V]	[M Ω]
400	50	1500	1.27	150	0.23	61	10	400	500

Machine loss[w]: 15	Core loss[w]: 40.9	DIELECTRIC TEST (Between Windings and the Frame)	
Degrees of unbalance in a three phase system(current):0.5%		U[V]	I[mA]
Vibration[mm/s]: 1.7		2150	12

NOTE:No oil seal

Ref: MANUFACTUR

Load Curve



Serial No.:
Date (d-m-y):
Customer:

Type-Test Report: Line-Start Permanent-Magnet Synchronous Motor

TYPE:PM4-100L1-4	UN[V]: 400	IN[A]: 3.61	PN[kW]: 2.2	f[Hz]: 50
Standard: IEC60034-2-1	nN[min^{-1}]: 1500	Conn.: Y	η : 89.70%	cos ϕ : 0.98
Ambient Temp: -15°C—40°C	Duty: S1	IS.Class: F	Eff class: IE4	por.class:IP55
Line-Resistance at 20 °C[Ω]: 5.985			Back EMF[V]: 375	

TEMPERATURE-RISE TEST

U	f	IN ass IN abs	PN ress PN out	Lasting	Winding θ	Wind.Res.	Amb. θ	Frame. θ	Wind.Res.	Temperature Rise
					Initial	Final			$\Delta\theta$	
[V]	[Hz]	[A]	[kW]	[h]	[°C]	[Ω]	[°C]	[°C]	[Ω]	[K]
400	50	3.61	2.2	3	20	5.985	20	55	7.112	48

LOAD TEST

Load	U	f	n	I	input	out	η	cos ϕ	Tn	Notes
	[V]	[Hz]	[min^{-1}]	[A]	[kW]	[kW]			[N.m]	
25%	400	50	1500	1.66	0.772	0.550	0.712	0.67	3.5	
50%	400	50	1500	2.27	1.335	1.100	0.824	0.85	7.0	
75%	400	50	1500	2.89	1.862	1.650	0.886	0.93	10.5	
100%	400	50	1500	3.63	2.442	2.200	0.901	0.97	14.0	
125%	400	50	1500	4.57	3.073	2.750	0.895	0.97	17.5	
150%	400	50	1500	5.68	3.776	3.300	0.874	0.96	21.0	

LOCKED ROTOR TEST

BREAKDOWN TORQUE TEST

RATIO

U	f	Ts	IIss,abs.	Pass,abs	Tmax[N.m]:		Is/IN	Ts/TN	Tmax/TN
[V]	[Hz]	[N.m]	[A]	[kW]					
400	50	40.62	22.9	6.4	36.4		6.30	2.9	2.6

NO-LOAD TEST

LWA[dBA]

INSUL.RES.

U	f	n	IIss,abs.	Pass,abs	cos ϕ	No Load	amb.T	U	
[V]	[Hz]	[min^{-1}]	[A]	[W]			[°C]	[V]	[M Ω]
400	50	1500	1.3	220	0.24	63	20	400	500

Machine loss[w]:23 Core loss[w]: 65 DIELECTRIC TEST (Between Windings and the Frame)

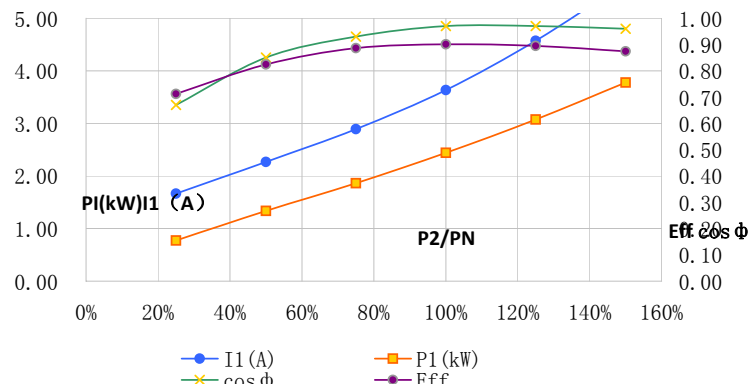
Degrees of unbalance in a three phase system(current):0.5%

Vibration[mm/s]: 0.8 U[V]: 2150 I[mA]: 12

NOTE:No oil seal

Ref: MANUFACTUR

Load Curve



Serial No.:
Date (d-m-y):
Customer:

Type-Test Report: Line-Start Permanent-Magnet Synchronous Motor

TYPE:PM4-100L2-4	UN[V]: 400	IN[A]: 4.85	PN[kW]: 3.0kw	f[Hz]: 50
Standard: IEC60034-2-1	nN[min^{-1}]: 1500	Conn.: Y	η : 90.30%	cos ϕ : 0.98
Ambient Temp: -15°C—40°C	Duty: S1	IS.Class: F	Eff class: IE4	por.class:IP55
Line-Resistance at 20 °C[Ω]: 4.01			Back EMF[V]: 365	

TEMPERATURE-RISE TEST

U	f	IN ass IN abs	PN ress PN out	Lasting	Winding θ	Wind.Res.	Amb. θ	Frame. θ	Wind.Res.	Temperature Rise
					Initial	Final			$\Delta\theta$	
[V]	[Hz]	[A]	[kW]	[h]	[°C]	[Ω]	[°C]	[°C]	[Ω]	[K]
400	50	4.85	3.0	3	10	3.852	10	51	4.622	49

LOAD TEST

Load	U	f	n	I	input	out	η	cos ϕ	Tn	Notes
	[V]	[Hz]	[min^{-1}]	[A]	[kW]	[kW]			[N.m]	
25%	400	50	1500	1.78	1.013	0.751	0.741	0.82	4.8	
50%	400	50	1500	2.74	1.777	1.510	0.850	0.94	9.6	
75%	400	50	1500	3.70	2.489	2.251	0.904	0.97	14.3	
100%	400	50	1500	4.95	3.332	3.004	0.902	0.97	19.1	
125%	400	50	1500	6.24	4.197	3.753	0.894	0.97	23.9	
150%	400	50	1500	7.60	5.110	4.510	0.883	0.94	28.7	

LOCKED ROTOR TEST

BREAKDOWN TORQUE TEST

RATIO

U	f	Ts	IIsss,abs.	Pass,abs	Tmax[N.m]:		Is/IN	Ts/TN	Tmax/TN
[V]	[Hz]	[N.m]	[A]	[kW]					
400	50	56.23	31.2	8.8	44.8		6.31	2.9	2.34

NO-LOAD TEST

LWA[dBA]

INSUL.RES.

U	f	n	IIsss,abs.	Pass,abs	cos ϕ	No Load	amb.T	U	
[V]	[Hz]	[min^{-1}]	[A]	[W]			[°C]	[V]	[M Ω]
400	50	1500	1.65	256		63	10	400	500

Machine loss[w]: 30 Core loss[w]: 79.7 DIELECTRIC TEST (Between Windings and the Frame)

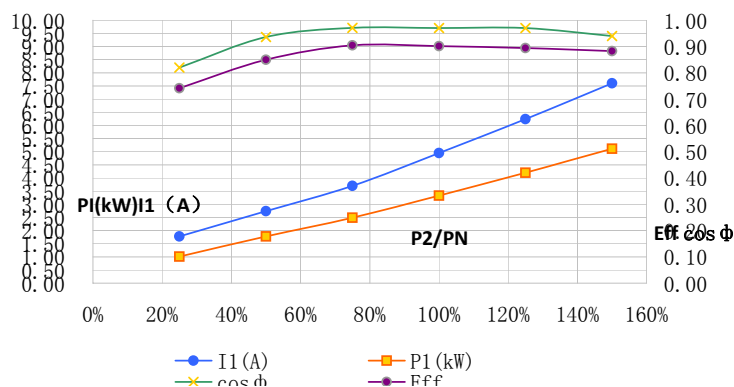
Degrees of unbalance in a three phase system(current):0.5%

Vibration[mm/s]: 0.8 U[V]: 2150 I[mA]: 12

NOTE:No oil seal

Ref: MANUFACTUR

Load Curve



Serial No.:
Date (d-m-y):
Customer:

Type-Test Report: Line-Start Permanent-Magnet Synchronous Motor

TYPE:PM4-112M-4	UN[V]: 400	IN[A]: 6.46	PN[kW]: 4	f[Hz]: 50
Standard: IEC60034-2-1	nN[min^{-1}]: 1500	Conn.: Y	η : 90.90%	cos ϕ : 0.98
Ambient Temp: -15°C—40°C	Duty: S1	IS.Class: F	Eff class: IE4	por.class:IP55
Line-Resistance at 20 °C[Ω]: 3.112			Back EMF[V]: 367	

TEMPERATURE-RISE TEST

U	f	IN ass IN abs	PN ress PN out	Lasting	Winding θ	Wind.Res.	Amb. θ	Frame. θ	Wind.Res.	Temperature Rise
					Initial	Final			$\Delta\theta$	
[V]	[Hz]	[A]	[kW]	[h]	[°C]	[Ω]	[°C]	[°C]	[Ω]	[K]
400	50	6.46	4	3	15	3.04976	15	48	3.648	49

LOAD TEST

Load	U	f	n	I	input	out	η	cos ϕ	Tn	Notes
	[V]	[Hz]	[min^{-1}]	[A]	[kW]	[kW]			[N.m]	
25%	400	50	1500	2.1	1.201	1.010	0.740	0.82	6.4	
50%	400	50	1500	3.5	2.314	2.001	0.849	0.95	12.7	
75%	400	50	1500	5.0	3.360	3.000	0.885	0.97	19.1	
100%	400	50	1500	6.6	4.441	4.020	0.905	0.97	25.6	
125%	400	50	1500	8.4	5.612	5.001	0.894	0.97	31.8	
150%	400	50	1500	10.1	6.790	5.998	0.882	0.97	38.2	

LOCKED ROTOR TEST

BREAKDOWN TORQUE TEST

RATIO

U	f	Ts	II _{ss,abs}	Pass,abs	Tmax[N.m]:	Is/IN	Ts/TN	Tmax/TN
[V]	[Hz]	[N.m]	[A]	[kW]				
400	50	48.63	37.2	8.0	51.2	5.63	1.9	2

NO-LOAD TEST

LWA[dBA]

INSUL.RES.

U	f	n	II _{ss,abs}	Pass,abs	cos ϕ	No Load	amb.T	U	
[V]	[Hz]	[min^{-1}]	[A]	[W]			[°C]	[V]	[M Ω]
400	50	1500	1.8	260		65	15	400	500

Machine loss[w]: 40 Core loss[w]: 86 DIELECTRIC TEST (Between Windings and the Frame)

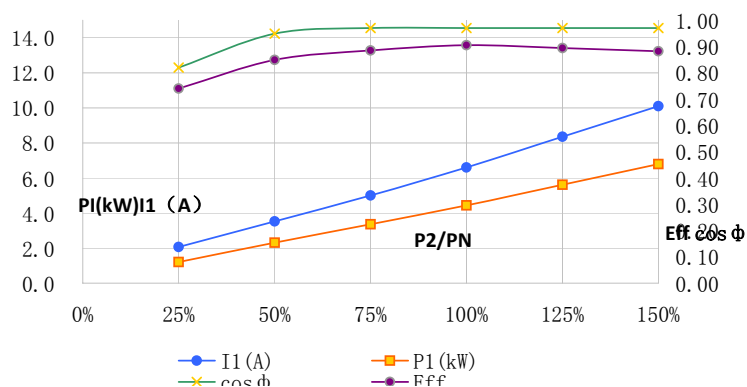
Degrees of unbalance in a three phase system(current):0.5%

Vibration[mm/s]: 0.5 U[V]: 2150 I[mA]: 30

NOTE:No oil seal

Ref: MANUFACTUR

Load Curve



Serial No.:
Date (d-m-y):
Customer:

Type-Test Report: Line-Start Permanent-Magnet Synchronous Motor

TYPE:PM4-132S-4	UN[V]: 400	IN[A]: 8.86	PN[kW]: 5.5	f[Hz]: 50
Standard: IEC60034-2-1	nN[min^{-1}]: 1500	Conn.: Y	η : 90.90%	cos ϕ : 0.99
Ambient Temp: -15°C—40°C	Duty: S1	IS.Class: F	Eff class: IE4	por.class:IP55
Line-Resistance at 20 °C[Ω]: 1.58			Back EMF[V]: 350	

TEMPERATURE-RISE TEST

U	f	IN ass IN abs	PN ress PN out	Lasting	Winding θ	Wind.Res.	Amb. θ	Frame. θ	Wind.Res.	Temperature Rise
					Initial	Final			$\Delta\theta$	
[V]	[Hz]	[A]	[kW]	[h]	[°C]	[Ω]	[°C]	[°C]	[Ω]	[K]
400	50	8.86	5.5	3	15	1.549	15	51	1.902	57

LOAD TEST

Load	U	f	n	I	input	out	η	cos ϕ	Tn	Notes
	[V]	[Hz]	[min^{-1}]	[A]	[kW]	[kW]			[N.m]	
25%	400	50	1500	3.47	1.902	1.375	0.723	0.79	8.8	
50%	400	50	1500	4.99	3.251	2.750	0.846	0.94	17.5	
75%	400	50	1500	6.80	4.619	4.125	0.893	0.98	26.3	
100%	400	50	1500	8.86	6.077	5.500	0.905	0.99	35.0	
125%	400	50	1500	11.16	7.656	6.875	0.898	0.99	43.8	
150%	400	50	1500	13.73	9.322	8.250	0.885	0.98	52.5	

LOCKED ROTOR TEST

BREAKDOWN TORQUE TEST

RATIO

U	f	Ts	IIsss,abs.	Pass,abs	Tmax[N.m]:		Is/IN	Ts/TN	Tmax/TN
[V]	[Hz]	[N.m]	[A]	[kW]					
400	50	73.54	50.5	11.6	80.5		5.70	2.1	2.3

NO-LOAD TEST

LWA[dBA]

INSUL.RES.

U	f	n	IIsss,abs.	Pass,abs	cos ϕ	No Load	amb.T	U	
[V]	[Hz]	[min^{-1}]	[A]	[W]			[°C]	[V]	[M Ω]
400	50	1500	2.3	289		63	15	400	500

Machine loss[w]:55 Core loss[w]: 129 DIELECTRIC TEST (Between Windings and the Frame)

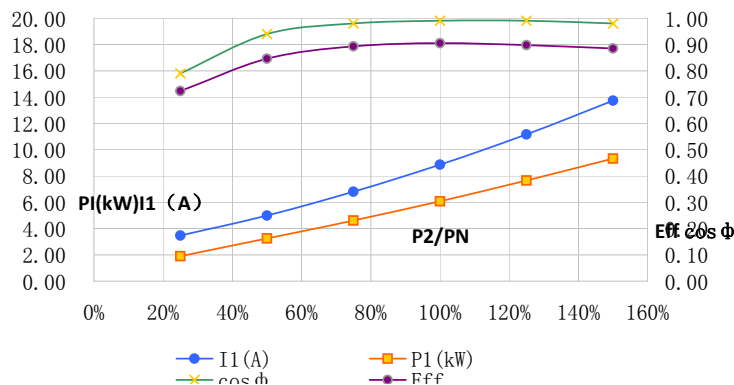
Degrees of unbalance in a three phase system(current):0.5%

Vibration[mm/s]: 0.9 U[V] 2150 I[mA] 12

NOTE:No oil seal

Ref: MANUFACTUR

Load Curve



Serial No.:
Date (d-m-y):
Customer:

Type-Test Report: Line-Start Permanent-Magnet Synchronous Motor

TYPE:PM4-132M-4	UN[V]: 400	IN[A]: 12.3	PN[kW]: 7.5kw	f[Hz]: 50
Standard: IEC60034-2-1	nN[min^{-1}]: 1500	Conn.: Y	η : 92.60%	cos ϕ : 0.98
Ambient Temp: -15°C—40°C	Duty: S1	IS.Class: F	Eff class: IE4	por.class:IP55
Line-Resistance at 20 °C[Ω]: 1.304			Back EMF[V]: 386	

TEMPERATURE-RISE TEST

U	f	IN ass IN abs	PN ress PN out	Lasting	Winding θ	Wind.Res.	Amb. θ	Frame. θ	Wind.Res.	Temperature Rise
					Initial	Final			$\Delta\theta$	
[V]	[Hz]	[A]	[kW]	[h]	[°C]	[Ω]	[°C]	[°C]	[Ω]	[K]
400	50	12.3	4	3	10	1.252	10	55	1.518	52

LOAD TEST

Load	U	f	n	I	input	out	η	cos ϕ	Tn	Notes
	[V]	[Hz]	[min^{-1}]	[A]	[kW]	[kW]			[N.m]	
25%	400	50	1500	4.02	2.427	1.890	0.779	0.87	12.0	
50%	400	50	1500	6.51	4.413	3.750	0.850	0.95	23.9	
75%	400	50	1500	9.04	6.110	5.640	0.923	0.97	35.9	
100%	400	50	1500	11.90	8.079	7.500	0.928	0.97	47.8	
125%	400	50	1500	15.10	10.252	9.390	0.916	0.98	59.8	
150%	400	50	1500	18.20	12.356	11.050	0.894	0.98	70.4	

LOCKED ROTOR TEST

BREAKDOWN TORQUE TEST

RATIO

U	f	Ts	IIsss,abs.	Pass,abs	Tmax[N.m]:	Is/IN	Ts/TN	Tmax/TN
[V]	[Hz]	[N.m]	[A]	[kW]				
400	50	128.9	95.4	20.3	105.1	8.02	2.7	2.2

NO-LOAD TEST

LWA[dBA]

INSUL.RES.

U	f	n	IIsss,abs.	Pass,abs	cos ϕ	No Load	amb.T	U	
[V]	[Hz]	[min^{-1}]	[A]	[W]			[°C]	[V]	[M Ω]
400	50	1500	3.1	654		63	10	400	500

Machine loss[w]:75 Core loss[w]: 175 DIELECTRIC TEST (Between Windings and the Frame)

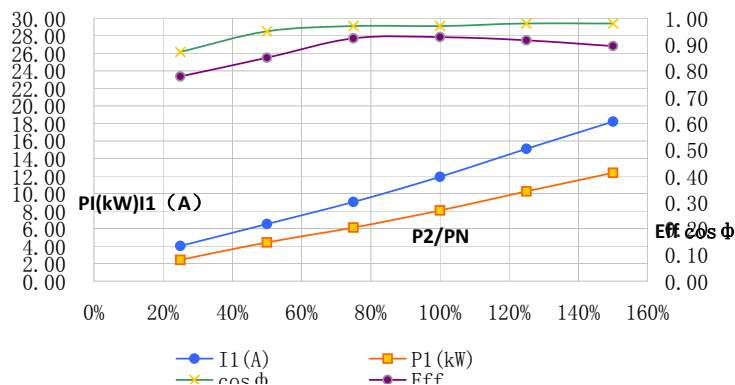
Degrees of unbalance in a three phase system(current):0.5%

Vibration[mm/s]:	1.2	U[V]	I[mA]
		2150	15

NOTE:No oil seal

Ref: MANUFACTUR

Load Curve



Serial No.:
Date (d-m-y):
Customer:

Type-Test Report: Line-Start Permanent-Magnet Synchronous Motor

TYPE:PM4-132M-4	UN[V]: 400	IN[A]: 14.63	PN[kW]: 9.2	f[Hz]: 50
Standard: IEC60034-2-1	nN[min^{-1}]: 1500	Conn.: Y	η : 92.60%	cos ϕ : 0.98
Ambient Temp: -15°C—40°C	Duty: S1	IS.Class: F	Eff class: IE4	por.class:IP55
Line-Resistance at 20 °C[Ω]: 0.93			Back EMF[V]: 350	

TEMPERATURE-RISE TEST

U	f	IN ass IN abs	PN ress PN out	Lasting	Winding θ	Wind.Res.	Amb. θ	Frame. θ	Wind.Res.	Temperature Rise
					Initial	Final			$\Delta\theta$	
[V]	[Hz]	[A]	[kW]	[h]	[°C]	[Ω]	[°C]	[°C]	[Ω]	[K]
400	50	14.88	9.2	3	20	0.930	20	51	1.138	57

LOAD TEST

Load	U	f	n	I	input	out	η	cos ϕ	Tn	Notes
	[V]	[Hz]	[min^{-1}]	[A]	[kW]	[kW]			[N.m]	
25%	400	50	1500	5.81	3.181	2.300	0.723	0.79	14.6	
50%	400	50	1500	8.35	5.437	4.600	0.846	0.94	29.3	
75%	400	50	1500	11.38	7.727	6.900	0.893	0.98	43.9	
100%	400	50	1500	14.63	9.935	9.200	0.926	0.98	58.6	
125%	400	50	1500	19.28	13.090	11.580	0.885	0.98	73.7	
150%	400	50	1500	22.97	15.593	13.800	0.885	0.98	87.9	

LOCKED ROTOR TEST					BREAKDOWN TORQUE TEST			RATIO		
U	f	Ts	IIsss,abs.	Pass,abs	Tmax[N.m]:			Is/IN	Ts/TN	Tmax/TN
[V]	[Hz]	[N.m]	[A]	[kW]						
400	50	123	83.4	19.3	134.7			5.70	2.1	2.3
NO-LOAD TEST					LWA[dBA]		INSUL.RES.			
U	f	n	IIsss,abs.	Pass,abs	cos ϕ	No Load	amb.T	U	[M Ω]	
[V]	[Hz]	[min^{-1}]	[A]	[W]			[°C]	[V]		
400	50	1500	2.3	289		63	15	400	500	
Machine loss[w]:55			Core loss[w]: 129			DIELECTRIC TEST (Between Windings and the Frame)				
Degrees of unbalance in a three phase system(current):0.5%					U[V]			I[mA]		
Vibration[mm/s]: 0.9					2150			12		

NOTE:No oil seal

Ref: MANUFACTUR

Load Curve

