

## BRUSHLESS MOTOR

**EX310EAK**

ELECTRONIC DRIVE

**DRIVE 3/6**

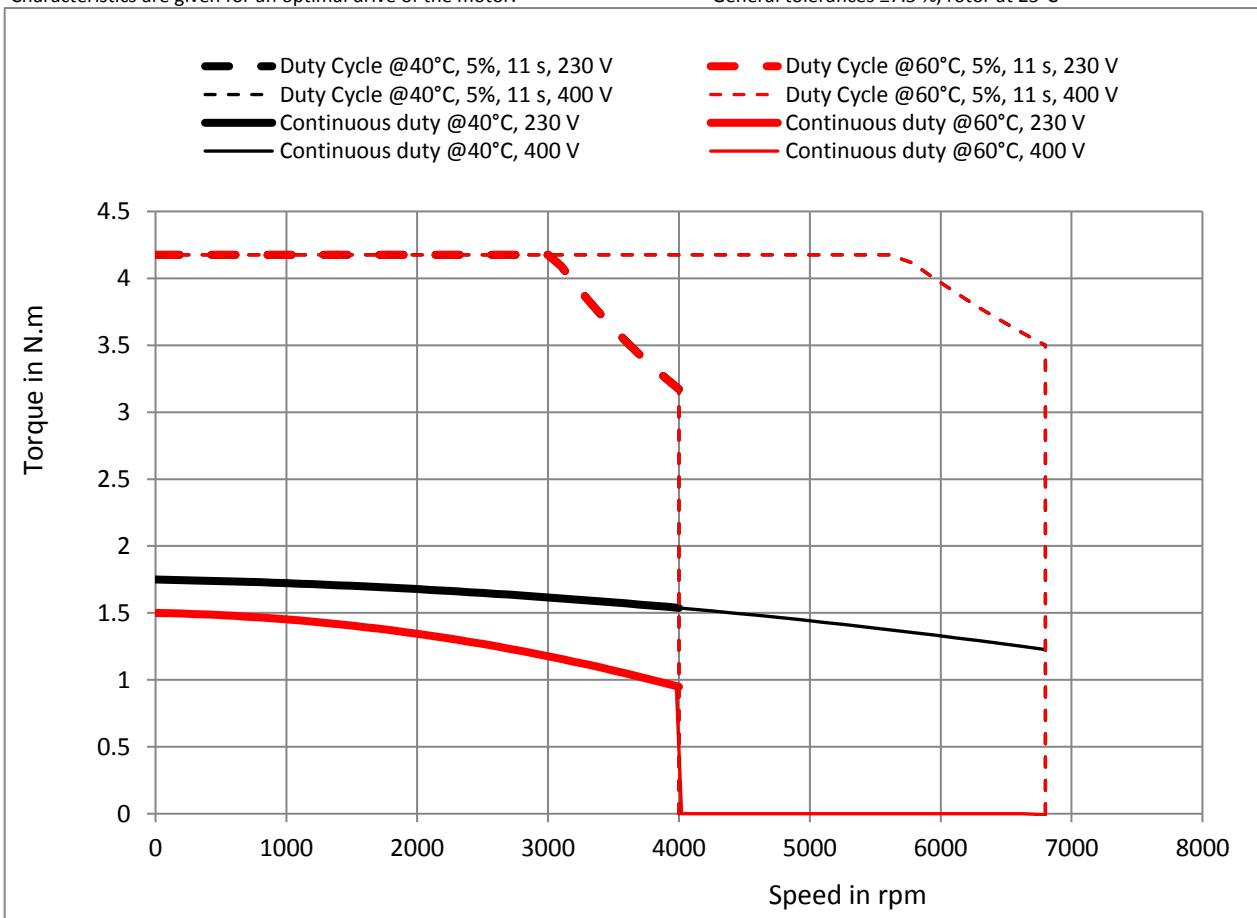
No UL certification

$T_a$	UR	Max ambient temperature: °C	@40°C		@60°C	
			230 VAC	400 VAC	230 VAC	400 VAC
		Voltage of the mains: $V_{rms}$				
$P_n$	<b>Rated power **</b>	$kW$	0.644	0.873	0.397	0.397
$M_n$	<b>Rated torque **</b>	$N.m$	1.54	1.23	0.949	0.949
$N_n$	<b>Rated speed</b>	$/min$	4000	6800	4000	4000
$I_n$	<b>Rated current</b>	$A_{rms}$	1.96	1.62	1.25	1.25
$U_n$	<b>Rated voltage *</b>	$V_{rms}$	220	356	208	208
$U_{bus}$	DC voltage supply when motor is loaded	$V$	310	540	310	540
$M_o$	<b>Low speed torque **</b>	$N.m$	1.75	1.75	1.75	1.75
$I_o$	<b>Permanent current at low speed</b>	$A_{rms}$	2.16	2.16	2.16	2.16
$M_p$	Max. torque **	$N.m$	4.18	4.18	4.18	4.18
$I_p$	Max. current	$A_{rms}$	5.4	5.4	5.4	5.4
$N_{max}$	Max. speed	$/min$	4000	6800	4000	6800
$F_{max}$	Electrical frequency @max. speed:	$Hz$	333	567	333	567
$\eta$	Efficiency at rated torque:	%	89.7	90.9	90.3	90.3
$\eta_{75\%}$	Efficiency at 75% of rated torque:	%	90.5	90.1	89.6	89.6
$2p$	Number of poles:	10	<b>Environment:</b>			
$J$	Rotor inertia	0.8 $kg.cm^2$	Altitude: <1000m			
$K_e$	Back emf constant at 1000 rpm (25°C)*	50.9 $V_{rms}$	Thermal class F (according to IEC 60034-1)			
$K_t$	Torque sensitivity (25°C)	0.81 $Nm/A_{rms}$	Cooling type: Natural Air cooling			
$R_b$	Winding resistance(25°C) *	6.58 $\Omega$	Flange 400*400*12mm(ALU)			
$L$	Winding inductance *	20.3 $mH$	with flange temperature $\leq T_a$			

All data are given in typical values under standard conditions.

\* Phase to Phase

Characteristics are given for an optimal drive of the motor.

\*\* General tolerances  $\pm 7.5\%$ , rotor at 25°C

## BRUSHLESS MOTOR

**EX310EAP**

ELECTRONIC DRIVE

**DRIVE 2/4**

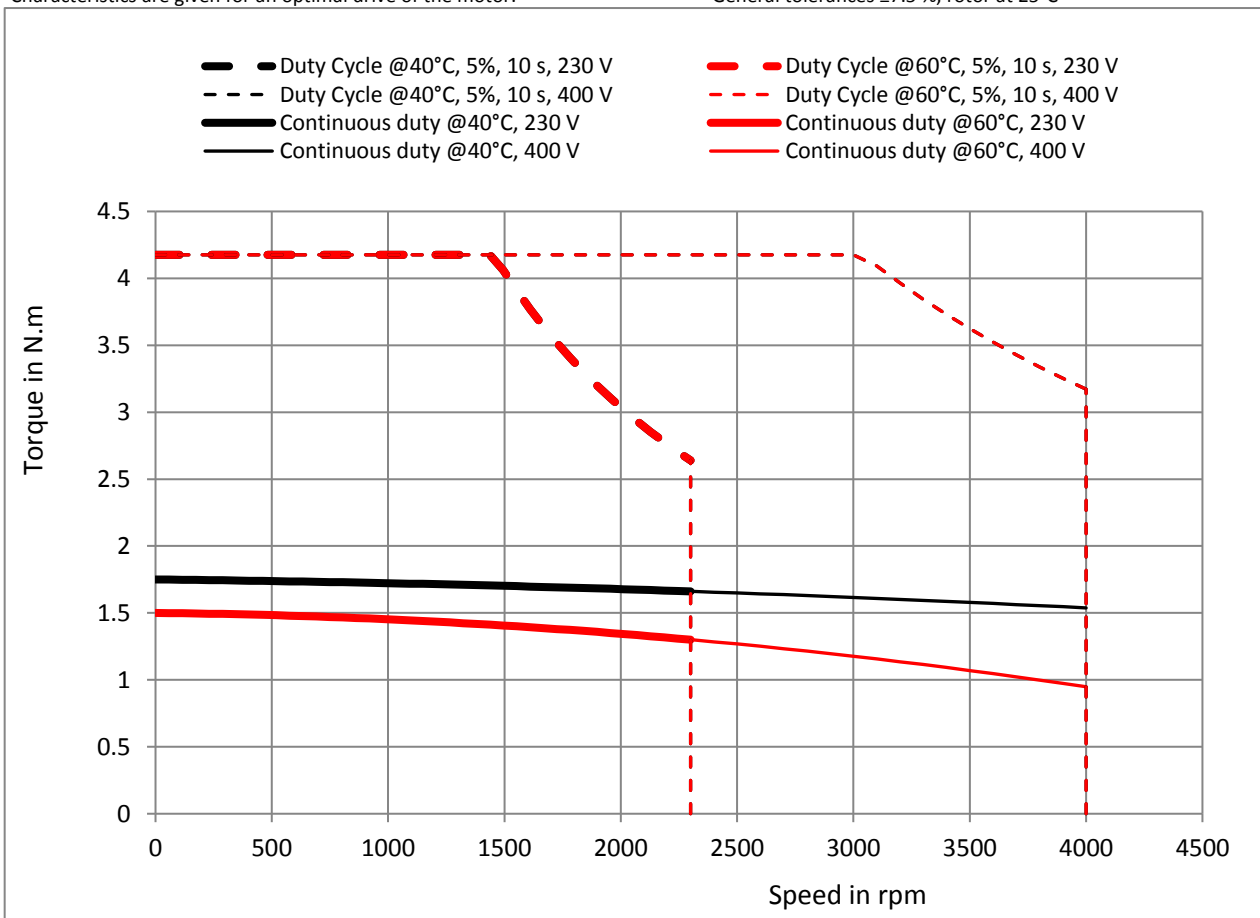
No UL certification

$T_a$	UR	Max ambient temperature: °C	@40°C		@60°C	
			230 VAC	400 VAC	230 VAC	400 VAC
		Voltage of the mains: $V_{rms}$				
$P_n$	<b>Rated power **</b>	$kW$	0.4	0.644	0.313	0.397
$M_n$	<b>Rated torque **</b>	$N.m$	1.66	1.54	1.3	0.949
$N_n$	<b>Rated speed</b>	$/min$	2300	4000	2300	4000
$I_n$	<b>Rated current</b>	$A_{rms}$	1.19	1.12	0.944	0.715
$U_n$	<b>Rated voltage *</b>	$V_{rms}$	236	386	225	364
$U_{bus}$	DC voltage supply when motor is loaded	$V$	310	540	310	540
$M_o$	<b>Low speed torque **</b>	$N.m$	1.75	1.75	1.75	1.75
$I_o$	<b>Permanent current at low speed</b>	$A_{rms}$	1.24	1.24	1.24	1.24
$M_p$	Max. torque **	$N.m$	4.18	4.18	4.18	4.18
$I_p$	Max. current	$A_{rms}$	3.09	3.09	3.09	3.09
$N_{max}$	Max. speed	$/min$	2300	4000	2300	4000
$F_{max}$	Electrical frequency @max. speed:	$Hz$	192	333	192	333
$\eta$	Efficiency at rated torque:	%	85	89.4	86.9	90.2
$\eta_{75\%}$	Efficiency at 75% of rated torque:	%	87.7	90.3	88.4	89.5
$2p$	Number of poles:	10	<b>Environment:</b>			
$J$	Rotor inertia	0.8 $kg.cm^2$	Altitude: <1000m			
$K_e$	Back emf constant at 1000 rpm (25°C)*	88.9 $V_{rms}$	Thermal class F (according to IEC 60034-1)			
$K_t$	Torque sensitivity (25°C)	1.42 $Nm/A_{rms}$	Cooling type: Natural Air cooling			
$R_b$	Winding resistance(25°C) *	20.7 $\Omega$	Flange 400*400*12mm(ALU)			
$L$	Winding inductance *	62 $mH$	with flange temperature $\leq T_a$			

All data are given in typical values under standard conditions.

\* Phase to Phase

Characteristics are given for an optimal drive of the motor.

\*\* General tolerances  $\pm 7.5\%$ , rotor at 25°C

## BRUSHLESS MOTOR

**EX420EAJ**

ELECTRONIC DRIVE

**DRIVE 5/11**

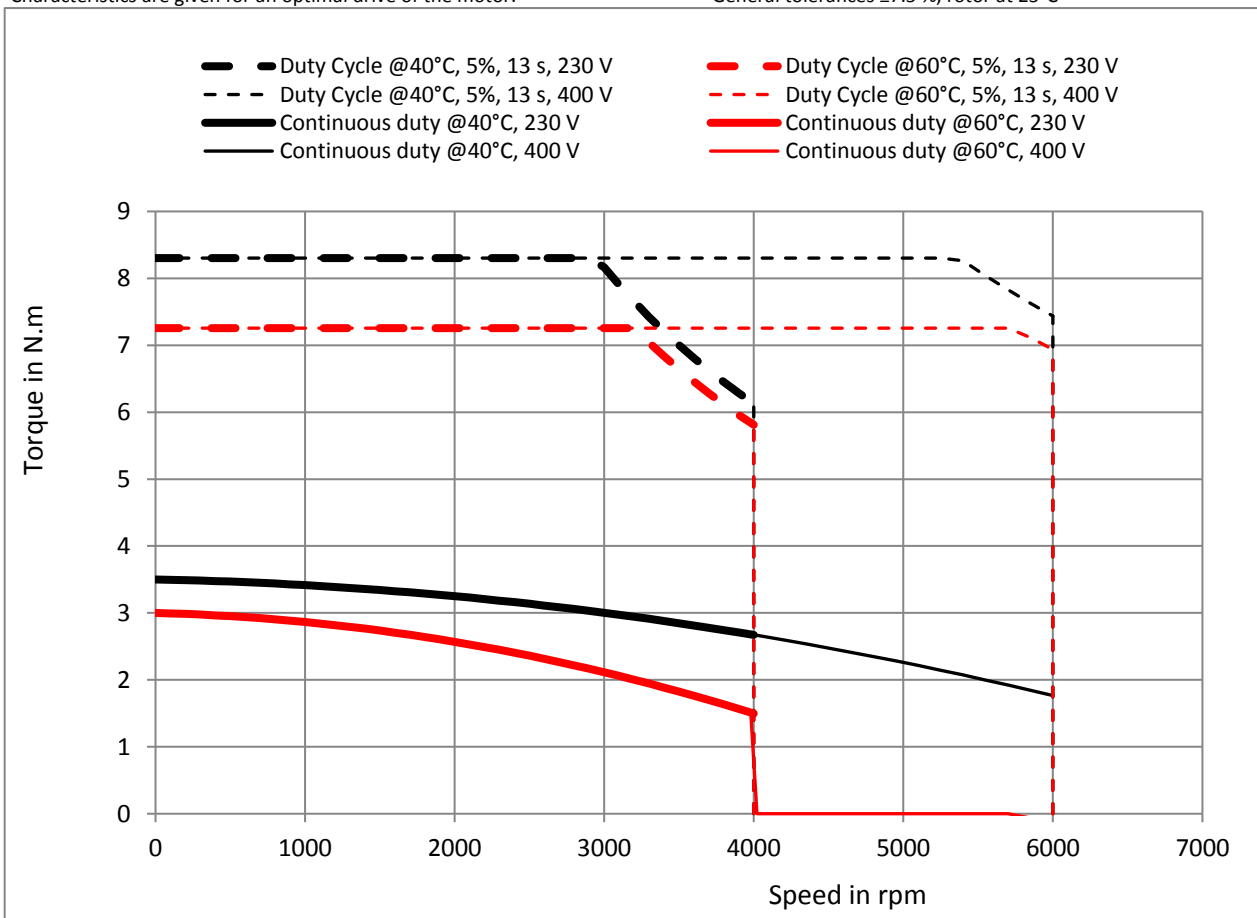
No UL certification

$T_a$	UR	Max ambient temperature: °C	@40°C		@60°C	
			230 VAC	400 VAC	230 VAC	400 VAC
		Voltage of the mains: $V_{rms}$				
$P_n$	<b>Rated power **</b>	$kW$	1.12	1.11	0.627	0.627
$M_n$	<b>Rated torque **</b>	$N.m$	2.67	1.77	1.5	1.5
$N_n$	<b>Rated speed</b>	$/min$	4000	6000	4000	4000
$I_n$	<b>Rated current</b>	$A_{rms}$	3.33	2.27	1.92	1.92
$U_n$	<b>Rated voltage *</b>	$V_{rms}$	216	311	207	207
$U_{bus}$	DC voltage supply when motor is loaded	$V$	310	540	310	540
$M_o$	<b>Low speed torque **</b>	$N.m$	3.5	3.5	3	3
$I_o$	<b>Permanent current at low speed</b>	$A_{rms}$	4.26	4.26	3.66	3.66
$M_p$	Max. torque **	$N.m$	8.3	8.3	7.26	7.26
$I_p$	Max. current	$A_{rms}$	10.7	10.7	9.14	9.14
$N_{max}$	Max. speed	$/min$	4000	6000	4000	6000
$F_{max}$	Electrical frequency @max. speed:	$Hz$	333	500	333	500
$\eta$	Efficiency at rated torque:	%	92.1	91	91	91
$\eta_{75\%}$	Efficiency at 75% of rated torque:	%	92	89.3	89.5	89.5
$2p$	Number of poles:	10	<b>Environment:</b>			
$J$	Rotor inertia	0.00029 $kg.m^2$	Altitude: <1000m			
$K_e$	Back emf constant at 1000 rpm (25°C)*	51.4 $V_{rms}$	Thermal class F (according to IEC 60034-1)			
$K_t$	Torque sensitivity (25°C)	0.821 $Nm/A_{rms}$	Cooling type: Natural Air cooling			
$R_b$	Winding resistance(25°C) *	2.31 $\Omega$	Flange 400*400*12mm(ALU)			
$L$	Winding inductance *	11 $mH$	with flange temperature $\leq T_a$			

All data are given in typical values under standard conditions.

\* Phase to Phase

Characteristics are given for an optimal drive of the motor.

\*\* General tolerances  $\pm 7.5\%$ , rotor at 25°C

## BRUSHLESS MOTOR

**EX420EAP**

ELECTRONIC DRIVE

**DRIVE 3/7**

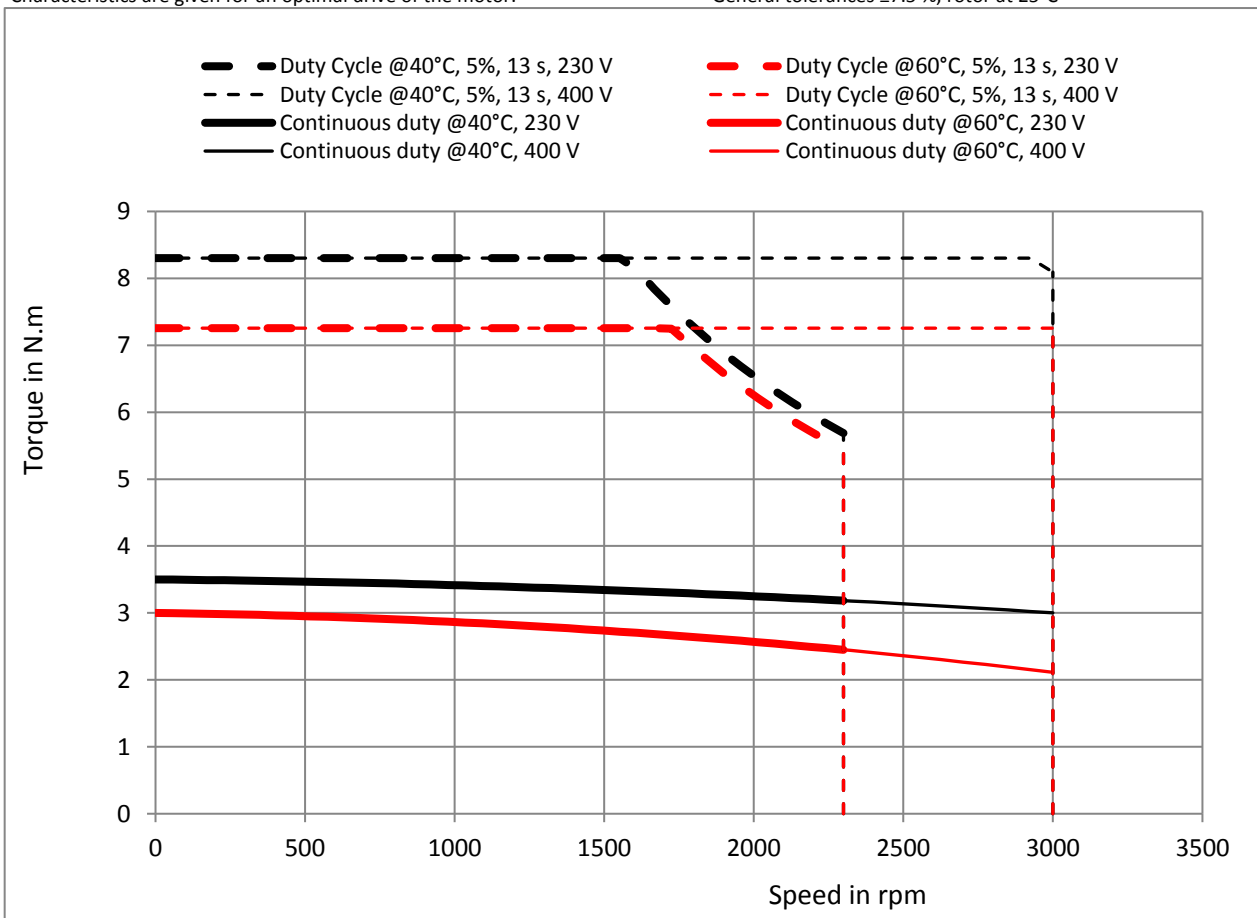
No UL certification

$T_a$	UR	Max ambient temperature: °C	@40°C		@60°C	
			230 VAC	400 VAC	230 VAC	400 VAC
		Voltage of the mains: $V_{rms}$				
$P_n$	<b>Rated power **</b>	$kW$	0.767	0.943	0.59	0.664
$M_n$	<b>Rated torque **</b>	$N.m$	3.18	3	2.45	2.11
$N_n$	<b>Rated speed</b>	$/min$	2300	3000	2300	3000
$I_n$	<b>Rated current</b>	$A_{rms}$	2.26	2.14	1.75	1.52
$U_n$	<b>Rated voltage *</b>	$V_{rms}$	227	288	219	278
$U_{bus}$	DC voltage supply when motor is loaded	$V$	310	540	310	540
$M_o$	<b>Low speed torque **</b>	$N.m$	3.5	3.5	3	3
$I_o$	<b>Permanent current at low speed</b>	$A_{rms}$	2.46	2.46	2.11	2.11
$M_p$	Max. torque **	$N.m$	8.3	8.3	7.26	7.26
$I_p$	Max. current	$A_{rms}$	6.16	6.16	5.28	5.28
$N_{max}$	Max. speed	$/min$	2300	3000	2300	3000
$F_{max}$	Electrical frequency @max. speed:	$Hz$	192	250	192	250
$\eta$	Efficiency at rated torque:	%	89.1	90.8	90.3	91.4
$\eta_{75\%}$	Efficiency at 75% of rated torque:	%	90.7	91.6	90.9	91.2
$2p$	Number of poles:	10	<b>Environment:</b>			
$J$	Rotor inertia	0.00029 $kg.m^2$	Altitude: <1000m			
$K_e$	Back emf constant at 1000 rpm (25°C)*	89.0 $V_{rms}$	Thermal class F (according to IEC 60034-1)			
$K_t$	Torque sensitivity (25°C)	1.42 $Nm/A_{rms}$	Cooling type: Natural Air cooling			
$R_b$	Winding resistance(25°C) *	7.2 $\Omega$	Flange 400*400*12mm(ALU)			
$L$	Winding inductance *	33 $mH$	with flange temperature $\leq T_a$			

All data are given in typical values under standard conditions.

\* Phase to Phase

Characteristics are given for an optimal drive of the motor.

\*\* General tolerances  $\pm 7.5\%$ , rotor at 25°C

## BRUSHLESS MOTOR

**EX430EAF**

ELECTRONIC DRIVE

**DRIVE 6/15**

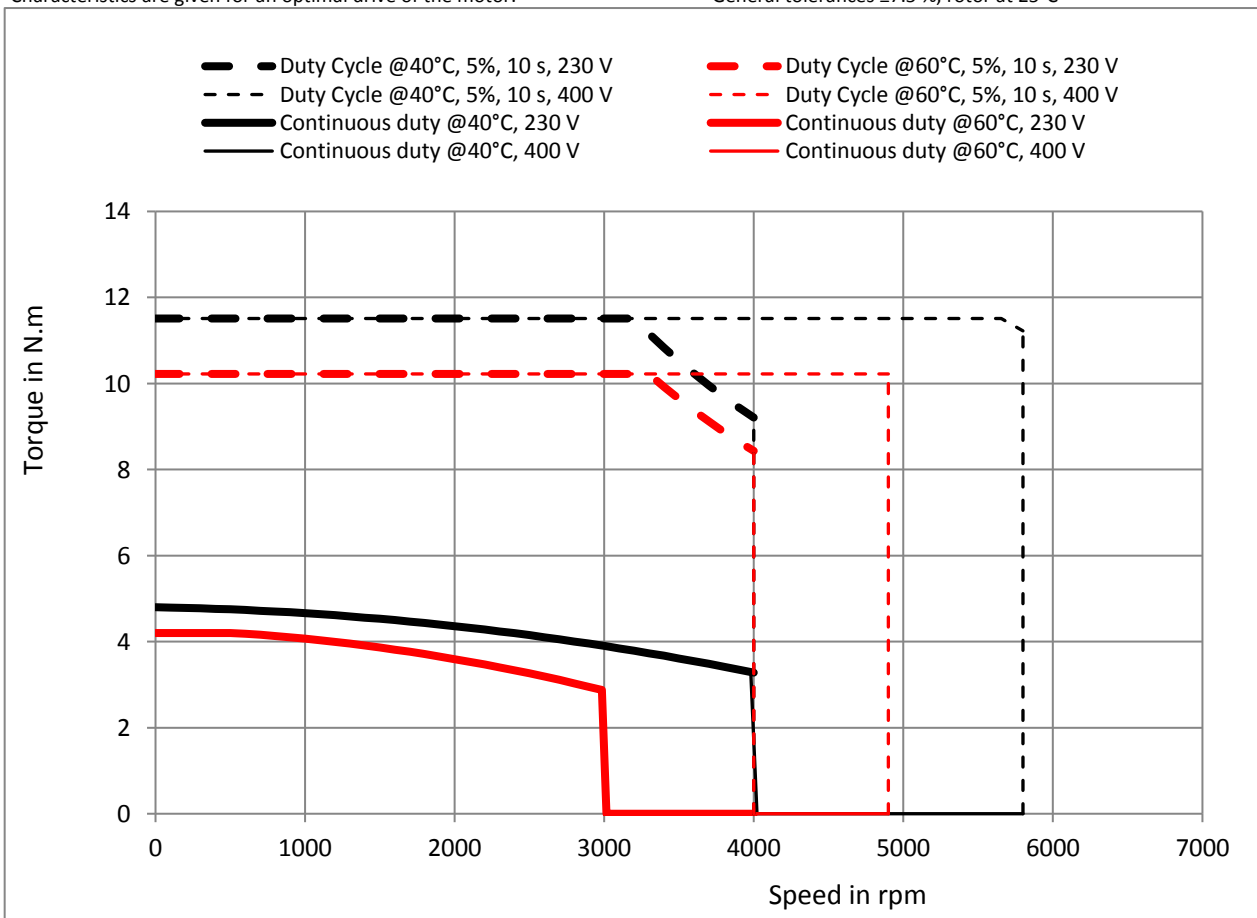
No UL certification

$T_a$	Max ambient temperature: °C	@40°C				@60°C			
		Voltage of the mains: $V_{rms}$		230 VAC	400 VAC	230 VAC	400 VAC		
$P_n$	<b>Rated power **</b>	$kW$	1.37	1.37	0.9	0.9			
$M_n$	<b>Rated torque **</b>	$N.m$	3.28	3.28	2.87	2.87			
$N_n$	<b>Rated speed</b>	$/min$	4000	4000	3000	3000			
$I_n$	<b>Rated current</b>	$A_{rms}$	4.07	4.07	3.56	3.56			
$U_n$	<b>Rated voltage *</b>	$V_{rms}$	212	212	159	159			
$U_{bus}$	DC voltage supply when motor is loaded	$V$	310	540	310	540			
$M_o$	<b>Low speed torque **</b>	$N.m$	4.8	4.8	4.2	4.2			
$I_o$	<b>Permanent current at low speed</b>	$A_{rms}$	5.79	5.79	5.08	5.08			
$M_p$	Max. torque **	$N.m$	11.5	11.5	10.2	10.2			
$I_p$	Max. current	$A_{rms}$	14.5	14.5	12.7	12.7			
$N_{max}$	Max. speed	$/min$	4000	5800	4000	4900			
$F_{max}$	Electrical frequency @max. speed:	$Hz$	333	483	333	408			
$\eta$	Efficiency at rated torque:	%	92.3	92.3	91.9	91.9			
$\eta_{75\%}$	Efficiency at 75% of rated torque:	%	91.7	91.7	91.3	91.3			
$2p$	Number of poles:	10	<b>Environment:</b>						
$J$	Rotor inertia	0.00043 $kg.m^2$	Altitude: <1000m						
$K_e$	Back emf constant at 1000 rpm (25°C)*	51.8 $V_{rms}$	Thermal class F (according to IEC 60034-1)						
$K_t$	Torque sensitivity (25°C)	0.828 $Nm/A_{rms}$	Cooling type: Natural Air cooling						
$R_b$	Winding resistance(25°C) *	1.38 $\Omega$	Flange 400*400*12mm(ALU)						
$L$	Winding inductance *	6.8 $mH$	with flange temperature $\leq T_a$						

All data are given in typical values under standard conditions.

\* Phase to Phase

Characteristics are given for an optimal drive of the motor.

\*\* General tolerances  $\pm 7.5\%$ , rotor at 25°C

## BRUSHLESS MOTOR

**EX430EAL**

ELECTRONIC DRIVE

**DRIVE 4/9**

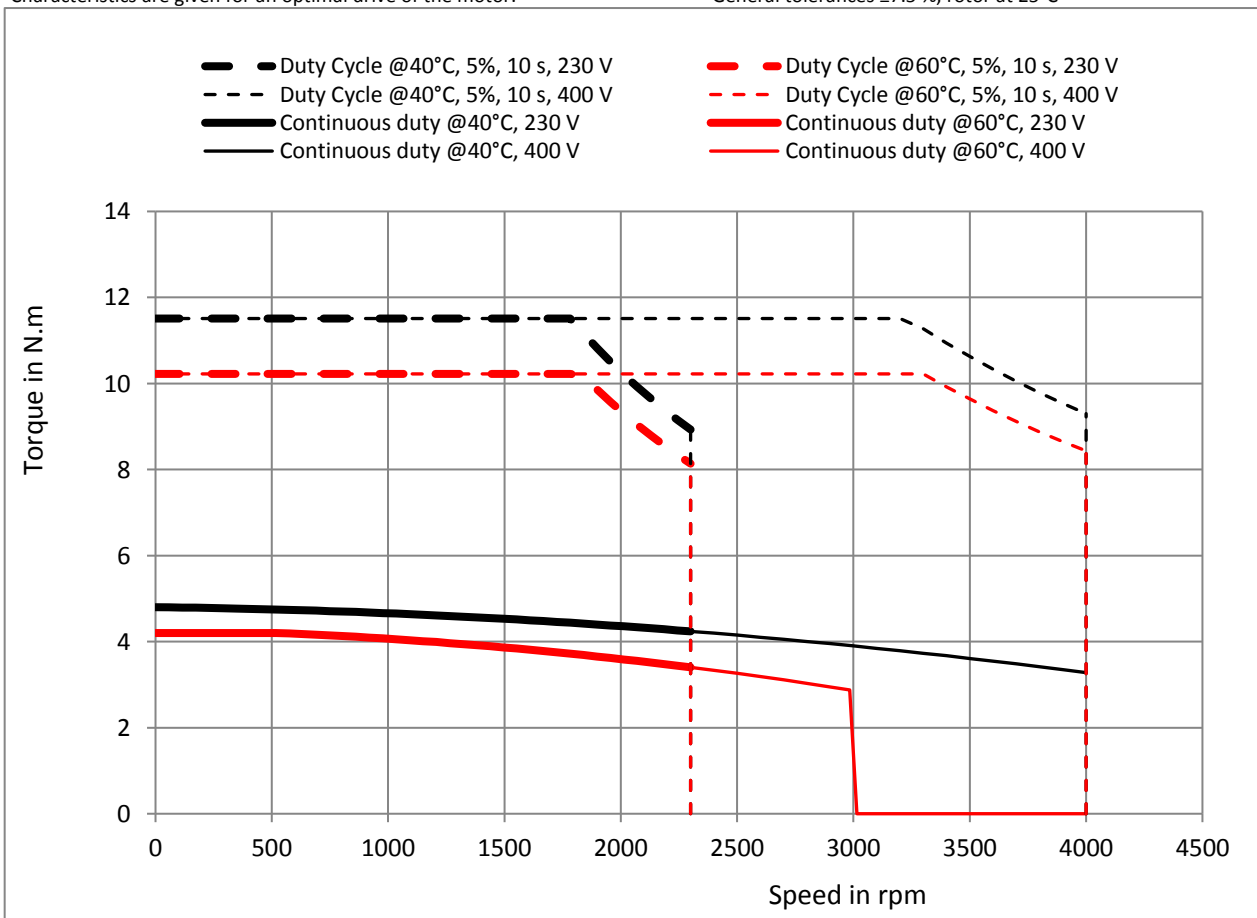
No UL certification

$T_a$	Max ambient temperature: °C	UR	Voltage of the mains: $V_{rms}$	@40°C		@60°C	
				230 VAC	400 VAC	230 VAC	400 VAC
$P_n$	<b>Rated power **</b>		$kW$	1.02	1.37	0.82	0.9
$M_n$	<b>Rated torque **</b>		$N.m$	4.24	3.28	3.4	2.87
$N_n$	<b>Rated speed</b>		$/min$	2300	4000	2300	3000
$I_n$	<b>Rated current</b>		$A_{rms}$	2.95	2.32	2.38	2.03
$U_n$	<b>Rated voltage *</b>		$V_{rms}$	224	372	219	279
$U_{bus}$	DC voltage supply when motor is loaded		$V$	310	540	310	540
$M_o$	<b>Low speed torque **</b>		$N.m$	4.8	4.8	4.2	4.2
$I_o$	<b>Permanent current at low speed</b>		$A_{rms}$	3.3	3.3	2.89	2.89
$M_p$	Max. torque **		$N.m$	11.5	11.5	10.2	10.2
$I_p$	Max. current		$A_{rms}$	8.25	8.25	7.23	7.23
$N_{max}$	Max. speed		$/min$	2300	4000	2300	4000
$F_{max}$	Electrical frequency @max. speed:		$Hz$	192	333	192	333
$\eta$	Efficiency at rated torque:		%	90.8	92.4	91.3	91.9
$\eta_{75\%}$	Efficiency at 75% of rated torque:		%	91.7	91.7	91.5	91.3
$2p$	Number of poles:	10		<b>Environment:</b>			
$J$	Rotor inertia	0.00043	$kg.m^2$	Altitude: <1000m			
$K_e$	Back emf constant at 1000 rpm (25°C)*	90.9	$V_{rms}$	Thermal class F (according to IEC 60034-1)			
$K_t$	Torque sensitivity (25°C)	1.45	$Nm/A_{rms}$	Cooling type: Natural Air cooling			
$R_b$	Winding resistance(25°C) *	4.22	$\Omega$	Flange 400*400*12mm(ALU)			
$L$	Winding inductance *	21	$mH$	with flange temperature $\leq T_a$			

All data are given in typical values under standard conditions.

\* Phase to Phase

Characteristics are given for an optimal drive of the motor.

\*\* General tolerances  $\pm 7.5\%$ , rotor at 25°C



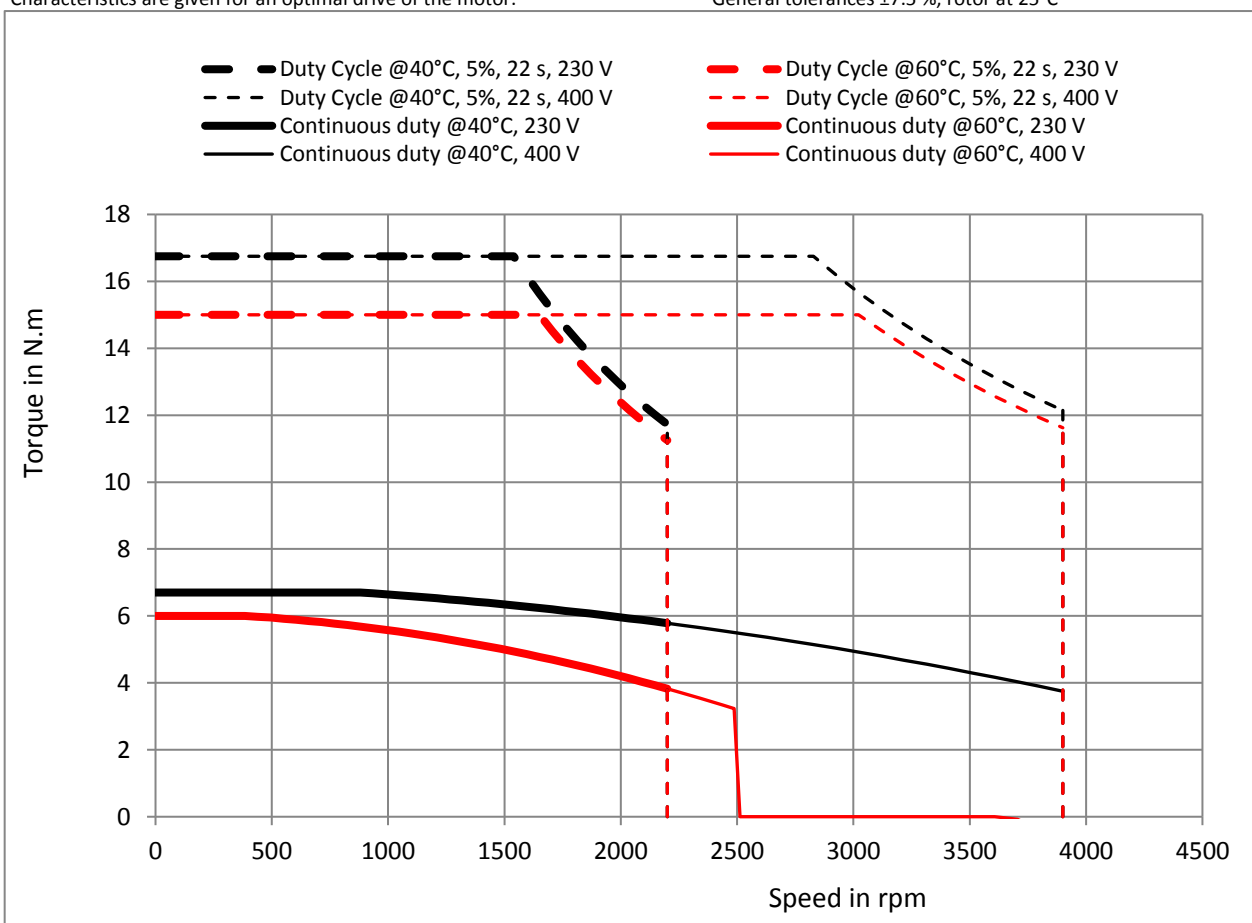
No UL certification

$T_a$	UR	Max ambient temperature: °C	@40°C		@60°C	
			230 VAC	400 VAC	230 VAC	400 VAC
$P_n$	Rated power **	$kW$	1.33	1.53	0.881	0.838
$M_n$	Rated torque **	$N.m$	5.78	3.75	3.83	3.2
$N_n$	Rated speed	$/min$	2200	3900	2200	2500
$I_n$	Rated current	$A_{rms}$	3.99	2.74	2.75	2.35
$U_n$	Rated voltage *	$V_{rms}$	217	356	204	226
$U_{bus}$	DC voltage supply when motor is loaded	$V$	310	540	310	540
$M_o$	Low speed torque **	$N.m$	6.7	6.7	6	6
$I_o$	Permanent current at low speed	$A_{rms}$	4.52	4.52	4.08	4.08
$M_p$	Max. torque **	$N.m$	16.7	16.7	15	15
$I_p$	Max. current	$A_{rms}$	11.2	11.2	9.92	9.92
$N_{max}$	Max. speed	$/min$	2200	3900	2200	3900
$F_{max}$	Electrical frequency @max. speed:	$Hz$	183	325	183	325
$\eta$	Efficiency at rated torque:	%	92.9	93.7	93.2	93.2
$\eta_{75\%}$	Efficiency at 75% of rated torque:	%	93.3	92.8	92.8	92.4
$2p$	Number of poles:	10	<b>Environment:</b>			
$J$	Rotor inertia	0.00098 $kg.m^2$	Altitude: <1000m			
$K_e$	Back emf constant at 1000 rpm (25°C)*	95.7 $V_{rms}$	Thermal class F (according to IEC 60034-1)			
$K_t$	Torque sensitivity (25°C)	1.48 $Nm/A_{rms}$	Cooling type: Natural Air cooling			
$R_b$	Winding resistance(25°C) *	2.24 $\Omega$	Flange 400*400*12mm(ALU)			
$L$	Winding inductance *	19.2 $mH$	with flange temperature $\leq T_a$			

All data are given in typical values under standard conditions.

\* Phase to Phase

Characteristics are given for an optimal drive of the motor.

\*\* General tolerances  $\pm 7.5\%$ , rotor at 25°C

## BRUSHLESS MOTOR

**EX620EAV**

ELECTRONIC DRIVE

**DRIVE 3/6**

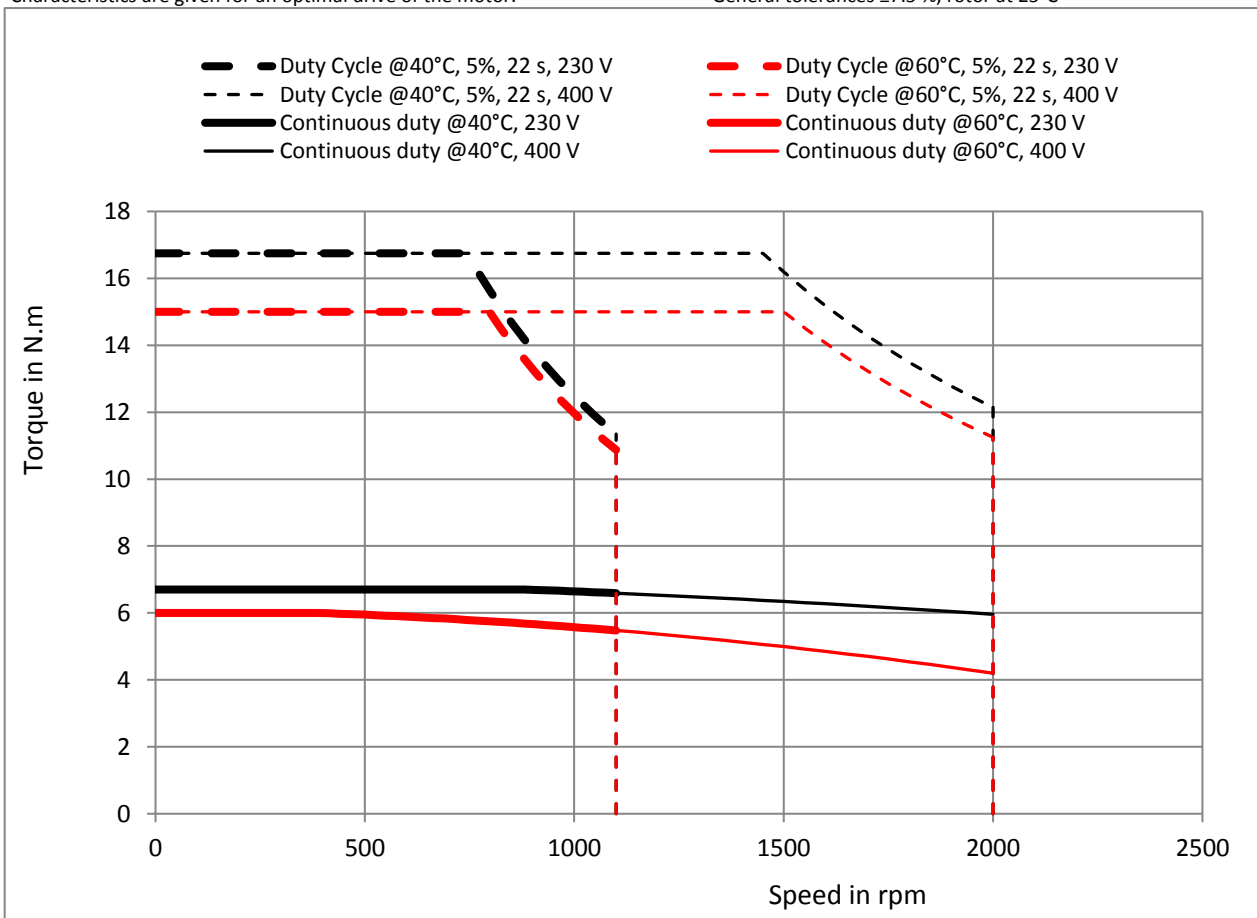
No UL certification

$T_a$	Max ambient temperature: °C	@40°C				@60°C			
		230 VAC	400 VAC	230 VAC	400 VAC				
UR	Voltage of the mains: $V_{rms}$								
$P_n$	<b>Rated power **</b>	<i>kW</i>	0.759	1.25	0.631	0.88			
$M_n$	<b>Rated torque **</b>	<i>N.m</i>	6.59	5.96	5.48	4.2			
$N_n$	<b>Rated speed</b>	<i>/min</i>	1100	2000	1100	2000			
$I_n$	<b>Rated current</b>	<i>A<sub>rms</sub></i>	2.38	2.18	2.01	1.59			
$U_n$	<b>Rated voltage *</b>	<i>V<sub>rms</sub></i>	219	374	210	353			
$U_{bus}$	DC voltage supply when motor is loaded	<i>V</i>	310	540	310	540			
$M_o$	<b>Low speed torque **</b>	<i>N.m</i>	6.7	6.7	6	6			
$I_o$	<b>Permanent current at low speed</b>	<i>A<sub>rms</sub></i>	2.41	2.41	2.17	2.17			
$M_p$	Max. torque **	<i>N.m</i>	16.7	16.7	15	15			
$I_p$	Max. current	<i>A<sub>rms</sub></i>	5.98	5.98	5.28	5.28			
$N_{max}$	Max. speed	<i>/min</i>	1100	2000	1100	2000			
$F_{max}$	Electrical frequency @max. speed:	<i>Hz</i>	92	167	92	167			
$\eta$	Efficiency at rated torque:	<i>%</i>	88.1	92.4	89.1	92.9			
$\eta_{75\%}$	Efficiency at 75% of rated torque:	<i>%</i>	90.2	93.1	90.6	92.9			
$2p$	Number of poles:	10	<b>Environment:</b>						
$J$	Rotor inertia	0.00098 <i>kg.m<sup>2</sup></i>	Altitude: <1000m						
$K_e$	Back emf constant at 1000 rpm (25°C)*	180.0 <i>V<sub>rms</sub></i>	Thermal class F (according to IEC 60034-1)						
$K_t$	Torque sensitivity (25°C)	2.78 <i>Nm/A<sub>rms</sub></i>	Cooling type: Natural Air cooling						
$R_b$	Winding resistance(25°C) *	7.9 $\Omega$	Flange 400*400*12mm(ALU)						
$L$	Winding inductance *	67.6 <i>mH</i>	with flange temperature $\leq T_a$						

All data are given in typical values under standard conditions.

\* Phase to Phase

Characteristics are given for an optimal drive of the motor.

\*\* General tolerances  $\pm 7.5\%$ , rotor at 25°C



## BRUSHLESS MOTOR

**EX630EAN**

ELECTRONIC DRIVE

**DRIVE 7/18**

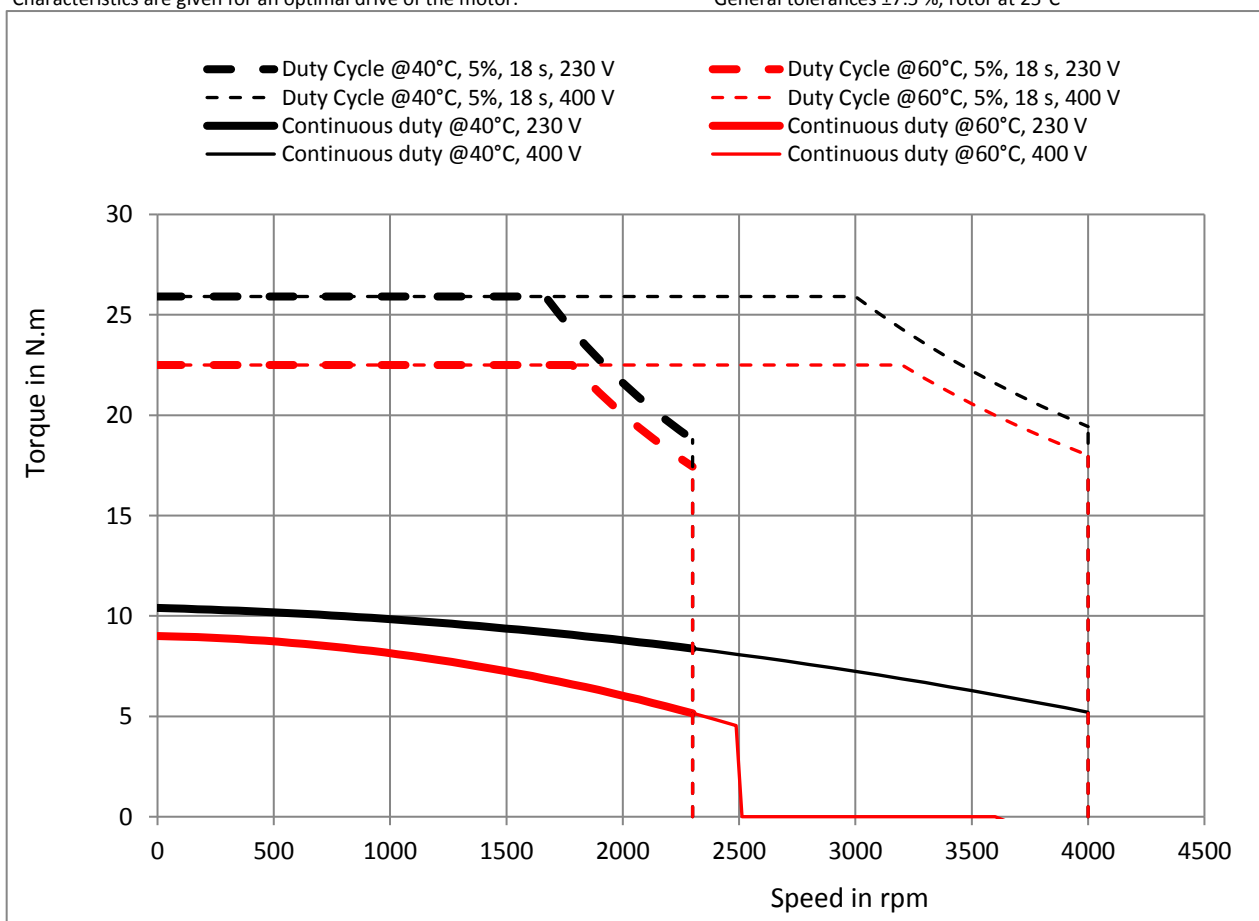
No UL certification

$T_a$	UR	Max ambient temperature: °C	@40°C		@60°C	
			230 VAC	400 VAC	230 VAC	400 VAC
P <sub>n</sub>	<b>Rated power **</b>	$kW$	2.02	2.18	1.24	1.18
M <sub>n</sub>	<b>Rated torque **</b>	$N.m$	8.37	5.2	5.15	4.5
N <sub>n</sub>	<b>Rated speed</b>	$/min$	2300	4000	2300	2500
I <sub>n</sub>	<b>Rated current</b>	$A_{rms}$	5.72	3.76	3.68	3.27
U <sub>n</sub>	<b>Rated voltage *</b>	$V_{rms}$	222	362	210	225
U <sub>bus</sub>	DC voltage supply when motor is loaded	$V$	310	540	310	540
M <sub>o</sub>	<b>Low speed torque **</b>	$N.m$	10.4	10.4	9	9
I <sub>o</sub>	<b>Permanent current at low speed</b>	$A_{rms}$	6.92	6.92	6.05	6.05
M <sub>p</sub>	Max. torque **	$N.m$	25.9	25.9	22.5	22.5
I <sub>p</sub>	Max. current	$A_{rms}$	17.3	17.3	14.7	14.7
N <sub>max</sub>	Max. speed	$/min$	2300	4000	2300	4000
F <sub>max</sub>	Electrical frequency @max. speed:	$Hz$	192	333	192	333
$\eta$	Efficiency at rated torque:	%	93.9	93.3	93.4	93.1
$\eta_{75\%}$	Efficiency at 75% of rated torque:	%	93.9	92	92.5	91.9
2p	Number of poles:	10	<b>Environment:</b>			
J	Rotor inertia	0.00147 $kg.m^2$	Altitude: <1000m			
K <sub>e</sub>	Back emf constant at 1000 rpm (25°C)*	91.6 $V_{rms}$	Thermal class F (according to IEC 60034-1)			
K <sub>t</sub>	Torque sensitivity (25°C)	1.5 $Nm/A_{rms}$	Cooling type: Natural Air cooling			
R <sub>b</sub>	Winding resistance(25°C) *	1.12 $\Omega$	Flange 400*400*12mm(ALU)			
L	Winding inductance *	10.9 $mH$	with flange temperature $\leq T_a$			

All data are given in typical values under standard conditions.

\* Phase to Phase

Characteristics are given for an optimal drive of the motor.

\*\* General tolerances  $\pm 7.5\%$ , rotor at 25°C

## BRUSHLESS MOTOR

**EX630EAR**

ELECTRONIC DRIVE

**DRIVE 5/12**

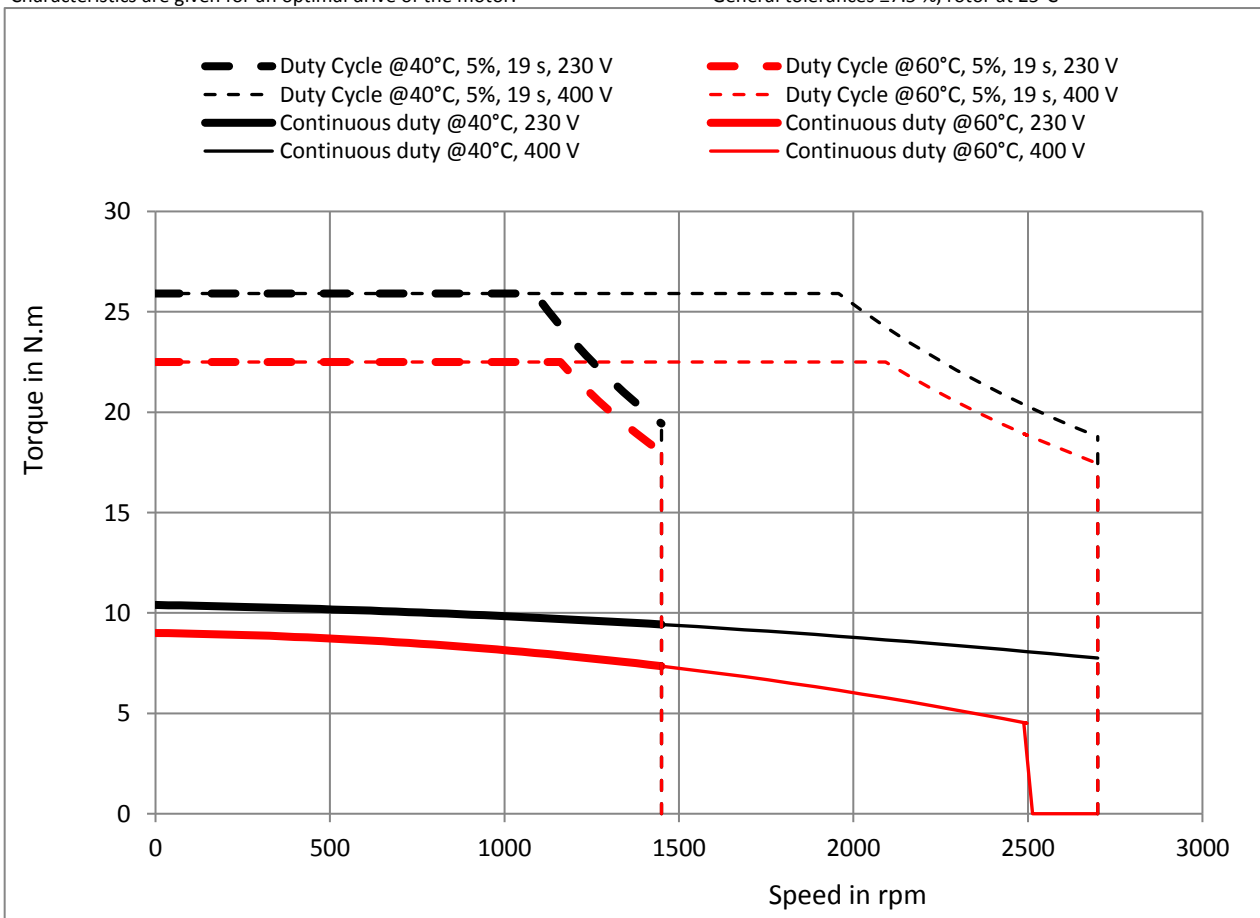
No UL certification

$T_a$	UR	Max ambient temperature: °C	@40°C		@60°C	
			230 VAC	400 VAC	230 VAC	400 VAC
		Voltage of the mains: $V_{rms}$				
$P_n$	<b>Rated power **</b>	$kW$	1.43	2.19	1.12	1.18
$M_n$	<b>Rated torque **</b>	$N.m$	9.43	7.75	7.35	4.5
$N_n$	<b>Rated speed</b>	$/min$	1450	2700	1450	2500
$I_n$	<b>Rated current</b>	$A_{rms}$	4.21	3.54	3.35	2.16
$U_n$	<b>Rated voltage *</b>	$V_{rms}$	218	387	210	339
$U_{bus}$	DC voltage supply when motor is loaded	$V$	310	540	310	540
$M_o$	<b>Low speed torque **</b>	$N.m$	10.4	10.4	9	9
$I_o$	<b>Permanent current at low speed</b>	$A_{rms}$	4.58	4.58	4.01	4.01
$M_p$	Max. torque **	$N.m$	25.9	25.9	22.5	22.5
$I_p$	Max. current	$A_{rms}$	11.5	11.5	9.75	9.75
$N_{max}$	Max. speed	$/min$	1450	2700	1450	2700
$F_{max}$	Electrical frequency @max. speed:	$Hz$	121	225	121	225
$\eta$	Efficiency at rated torque:	%	92.4	94.3	92.8	93.1
$\eta_{75\%}$	Efficiency at 75% of rated torque:	%	93.1	93.9	93	92
$2p$	Number of poles:	10	<b>Environment:</b>			
$J$	Rotor inertia	0.00147 $kg.m^2$	Altitude: <1000m			
$K_e$	Back emf constant at 1000 rpm (25°C)*	138.0 $V_{rms}$	Thermal class F (according to IEC 60034-1)			
$K_t$	Torque sensitivity (25°C)	2.27 $Nm/A_{rms}$	Cooling type: Natural Air cooling			
$R_b$	Winding resistance(25°C) *	2.43 $\Omega$	Flange 400*400*12mm(ALU)			
$L$	Winding inductance *	24.9 $mH$	with flange temperature $\leq T_a$			

All data are given in typical values under standard conditions.

\* Phase to Phase

Characteristics are given for an optimal drive of the motor.

\*\* General tolerances  $\pm 7.5\%$ , rotor at 25°C



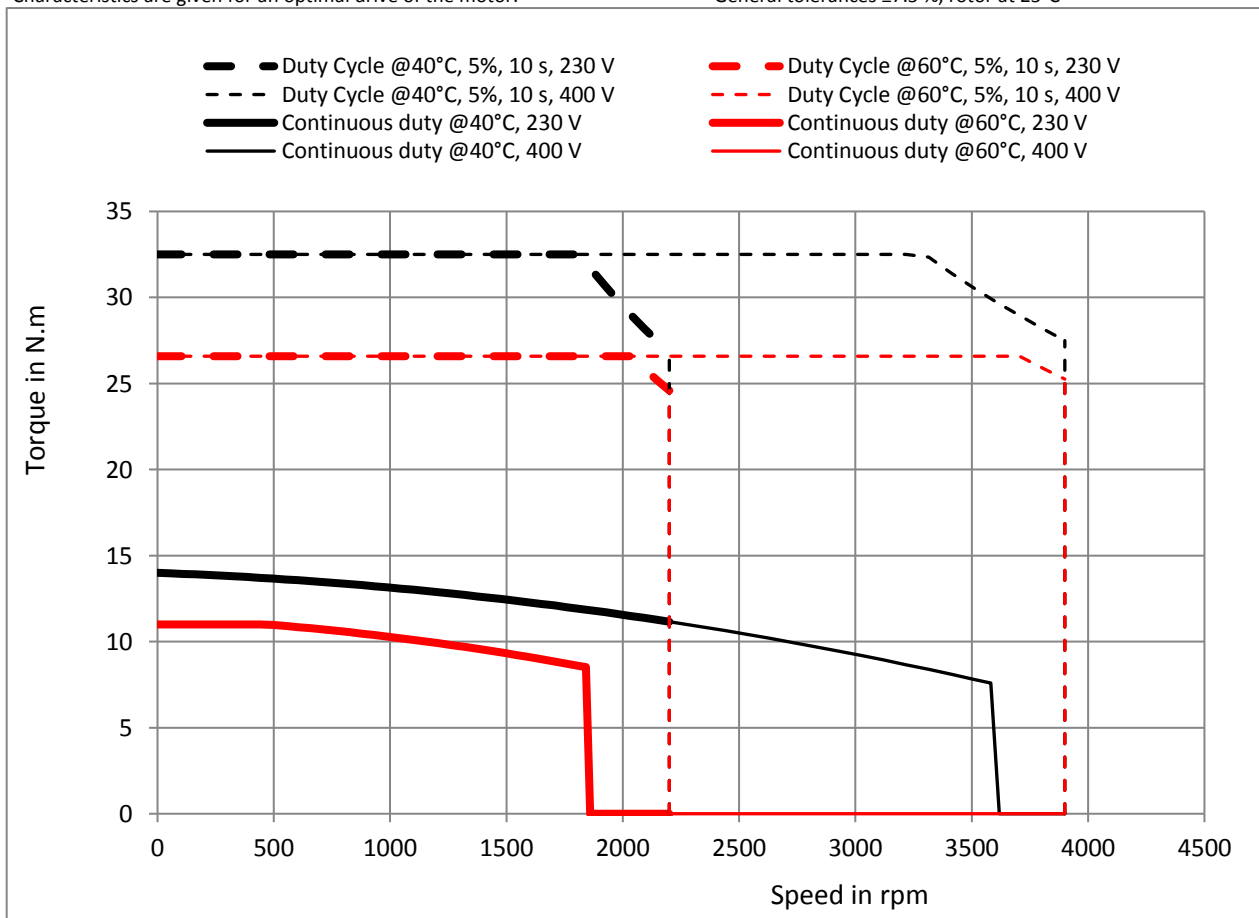
No UL certification

$T_a$	UR	Max ambient temperature: °C	@40°C		@60°C	
			230 VAC	400 VAC	230 VAC	400 VAC
$P_n$	Rated power **	$kW$	2.57	2.84	1.65	1.65
$M_n$	Rated torque **	$N.m$	11.2	7.53	8.49	8.5
$N_n$	Rated speed	$/min$	2200	3600	1850	1850
$I_n$	Rated current	$A_{rms}$	7.49	5.19	5.75	5.75
$U_n$	Rated voltage *	$V_{rms}$	215	341	179	179
$U_{bus}$	DC voltage supply when motor is loaded	$V$	310	540	310	540
$M_o$	Low speed torque **	$N.m$	14	14	11	11
$I_o$	Permanent current at low speed	$A_{rms}$	9.28	9.28	7.31	7.31
$M_p$	Max. torque **	$N.m$	32.5	32.5	26.6	26.6
$I_p$	Max. current	$A_{rms}$	23.2	23.2	18.3	18.3
$N_{max}$	Max. speed	$/min$	2200	3900	2200	3900
$F_{max}$	Electrical frequency @max. speed:	$Hz$	183	325	183	325
$\eta$	Efficiency at rated torque:	%	93	93.2	92.8	92.8
$\eta_{75\%}$	Efficiency at 75% of rated torque:	%	93.2	92.1	92.6	92.6
$2p$	Number of poles:	10	<b>Environment:</b>			
$J$	Rotor inertia	0.0032 $kg.m^2$	Altitude: <1000m			
$K_e$	Back emf constant at 1000 rpm (25°C)*	93.0 $V_{rms}$	Thermal class F (according to IEC 60034-1)			
$K_t$	Torque sensitivity (25°C)	1.51 $Nm/A_{rms}$	Cooling type: Natural Air cooling			
$R_b$	Winding resistance(25°C) *	1.01 $\Omega$	Flange 400*400*12mm(ALU)			
$L$	Winding inductance *	8.57 $mH$	with flange temperature $\leq T_a$			

All data are given in typical values under standard conditions.

\* Phase to Phase

Characteristics are given for an optimal drive of the motor.

\*\* General tolerances  $\pm 7.5\%$ , rotor at 25°C

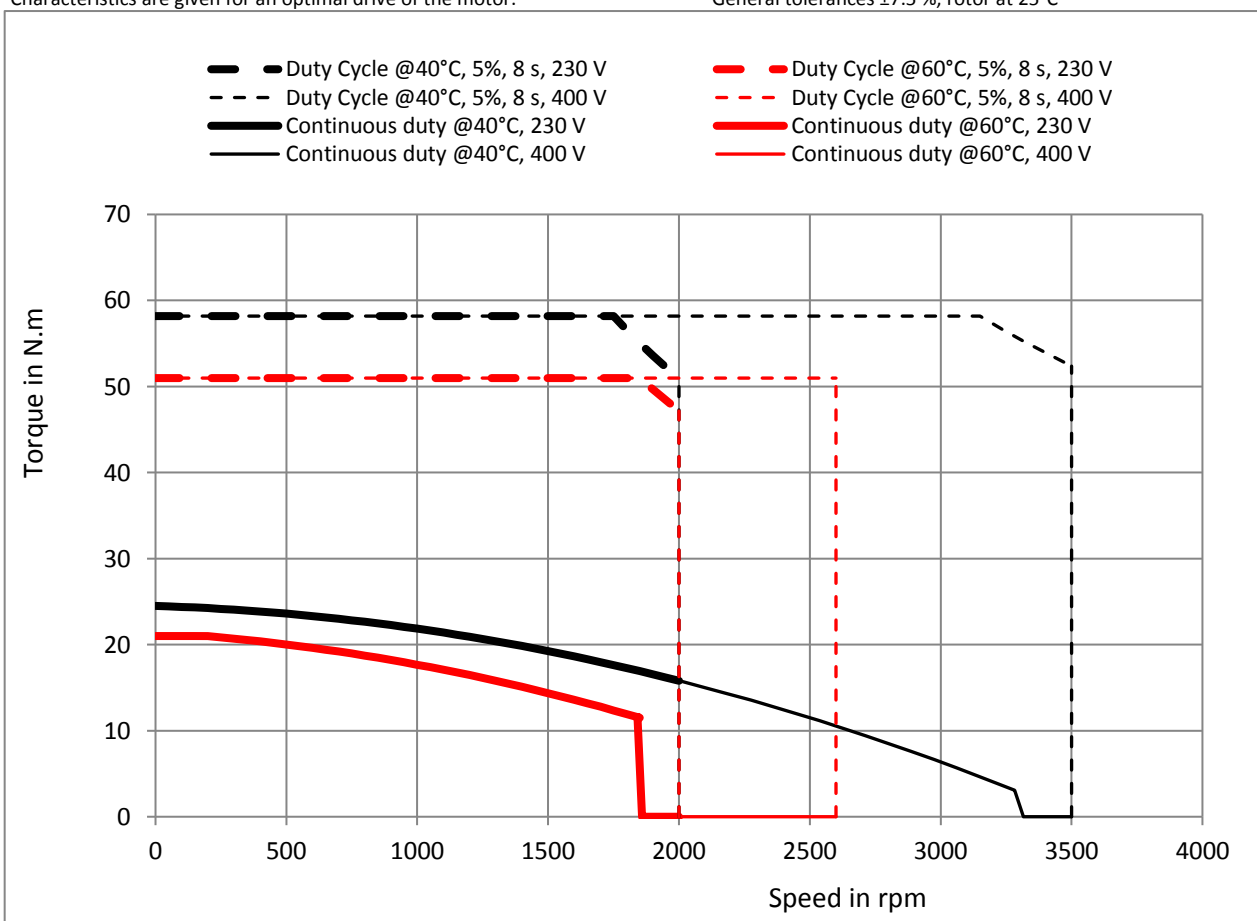


$T_a$	Max ambient temperature: °C	@40°C		@60°C	
		230 VAC	400 VAC	230 VAC	400 VAC
UR	Voltage of the mains: $V_{rms}$				
$P_n$	Rated power **	3.31	0.989	2.23	2.22
$M_n$	Rated torque **	15.8	2.86	11.5	11.5
$N_n$	Rated speed	2000	3300	1850	1850
$I_n$	Rated current	9.39	2.07	6.93	6.92
$U_n$	Rated voltage *	216	347	198	198
$U_{bus}$	DC voltage supply when motor is loaded	310	540	310	540
$M_o$	Low speed torque **	24.5	24.5	21	21
$I_o$	Permanent current at low speed	14.3	14.3	12.2	12.2
$M_p$	Max. torque **	58.2	58.2	51	51
$I_p$	Max. current	35.6	35.6	30.6	30.6
$N_{max}$	Max. speed	2000	3500	2000	2600
$F_{max}$	Electrical frequency @max. speed:	167	292	167	217
$\eta$	Efficiency at rated torque:	93.6	78.9	92.9	92.9
$\eta_{75\%}$	Efficiency at 75% of rated torque:	93.1	73.8	91.7	91.7
$2p$	Number of poles:	10		<b>Environment:</b>	
$J$	Rotor inertia	0.0062 $kg.m^2$		Altitude: <1000m	
$K_e$	Back emf constant at 1000 rpm (25°C)*	106.0 $V_{rms}$		Thermal class F (according to IEC 60034-1)	
$K_t$	Torque sensitivity (25°C)	1.72 $Nm/A_{rms}$		Cooling type: Natural Air cooling	
$R_b$	Winding resistance(25°C) *	0.493 $\Omega$		Flange 400*400*12mm(ALU)	
$L$	Winding inductance *	5.42 $mH$		with flange temperature $\leq T_a$	

All data are given in typical values under standard conditions.

\* Phase to Phase

Characteristics are given for an optimal drive of the motor.

\*\* General tolerances  $\pm 7.5\%$ , rotor at 25°C

## BRUSHLESS MOTOR

**EX860EAJ**

ELECTRONIC DRIVE

**DRIVE 16/40**

No UL certification

$T_a$	UR	Max ambient temperature: °C	@40°C		@60°C	
			230 VAC	400 VAC	230 VAC	400 VAC
$P_n$	<b>Rated power **</b>	$kW$	3.86	2.35	2.74	2.6
$M_n$	<b>Rated torque **</b>	$N.m$	25.4	8.99	18	15.5
$N_n$	<b>Rated speed</b>	$/min$	1450	2500	1450	1600
$I_n$	<b>Rated current</b>	$A_{rms}$	11.5	4.4	8.31	7.21
$U_n$	<b>Rated voltage *</b>	$V_{rms}$	206	342	203	222
$U_{bus}$	DC voltage supply when motor is loaded	$V$	310	540	310	540
$M_o$	<b>Low speed torque **</b>	$N.m$	35	35	31	31
$I_o$	<b>Permanent current at low speed</b>	$A_{rms}$	15.7	15.7	13.9	13.9
$M_p$	Max. torque **	$N.m$	83.3	83.3	75.1	75.1
$I_p$	Max. current	$A_{rms}$	39.2	39.2	34.8	34.8
$N_{max}$	Max. speed	$/min$	1450	2600	1450	2100
$F_{max}$	Electrical frequency @max. speed:	$Hz$	121	217	121	175
$\eta$	Efficiency at rated torque:	%	92.8	88	92.3	91.9
$\eta_{75\%}$	Efficiency at 75% of rated torque:	%	92.6	85	91.3	90.5
$2p$	Number of poles:	10	<b>Environment:</b>			
$J$	Rotor inertia	0.0092 $kg.m^2$	Altitude: <1000m			
$K_e$	Back emf constant at 1000 rpm (25°C)*	140.0 $V_{rms}$	Thermal class F (according to IEC 60034-1)			
$K_t$	Torque sensitivity (25°C)	2.23 $Nm/A_{rms}$	Cooling type: Natural Air cooling			
$R_b$	Winding resistance(25°C) *	0.499 $\Omega$	Flange 400*400*12mm(ALU)			
$L$	Winding inductance *	6.43 $mH$	with flange temperature $\leq T_a$			

All data are given in typical values under standard conditions.

\* Phase to Phase

Characteristics are given for an optimal drive of the motor.

\*\* General tolerances  $\pm 7.5\%$ , rotor at 25°C