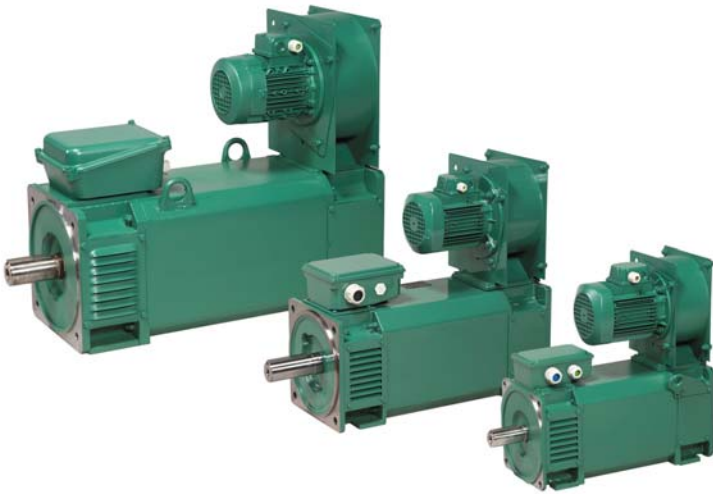


CPLS

Three-phase asynchronous motor
Technical catalogue

CPLS ASYNCHRONOUS MOTOR



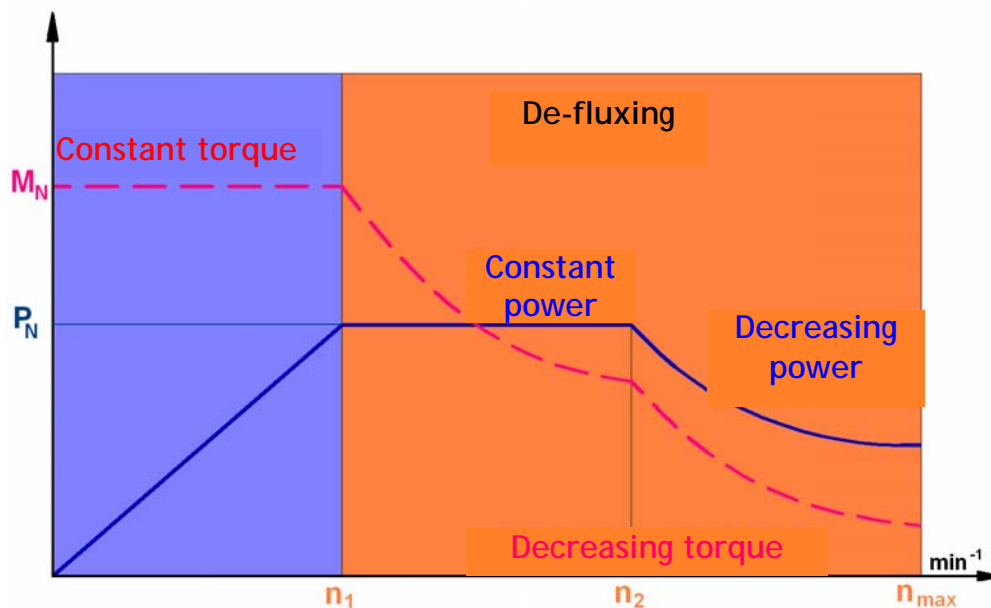
The **CPLS** asynchronous motor range with **IP23** protection has been developed for variable speed applications, or fixed applications when available space is reduced or (and) when the speed variation range is large.

Supplied by frequency inverters, the motors operate in open or closed loop. They deliver, as standard, their defined nominal torques (M_N) up to their designed speed (n_1) then supply a constant power P_N from the n_1 speed to the n_2 speed.

Squirrel cage asynchronous motors are well adapted for de-fluxed operating, and over a range as large as the mechanical structure will allow.

Each machine is defined by its **dimensioning torque**; this torque is available under **continuous service** below the design speed due to efficient radial ventilation.

The performances of these machines can be compared to those of DC machines and certain brushless motor characteristics. **The inertias are reduced**, hence offering good **dynamic performances**.



1 – General description:

CPLS ASYNCHRONOUS MOTOR

Asynchronous motors from the CPLS series, shaft height from 112 to 160 mm. For size above, please contact the factory.

Protection: IP23.

Supply: in standard 3 wire, supplied by a frequency inverter.

Windings: class F standard.

Magnetic shell: it has been designed to offer good characteristics within their utilisation range, including defluxing mode.

Following the machines utilisation speeds, using low loss shells enables the optimisation of the electrical characteristics of the motor/speed controller assembly.

Rotor: in aluminium or copper depending on frame size.
Half-key balancing.

Housing: steel.

End Shields: in cast iron secured by tie rods. The mounting feet are fitted to the front and rear end shields.

Terminal box: in aluminium. It can be rotated every 90 degrees, on either the front or rear end shields sides. Only three connecting cables are available in the terminal box.

CAUTION: the terminal box cover must be re-closed once the connecting of the cables is terminated.

Ball Bearings: set of C3 fit bearings, greased for life as standard.

Lifting rings:

Following the types, they are fixed with screws to the bearings of the machine, or welded to the housing.

Fan: a three-phase auxiliary fan, 230/400V 50Hz ensures good cooling for all speeds of the machine. The cooling method conforms to the IEC 34-6 standard is IC06.

Unless specified, the temperature of the cooling air should be between +5°C and +40°C with humidity less than 80% HR.

The power of the motor fan varies with the size of the machine.

CPLS 112:	0,25 kW
CPLS 132:	0,37 kW
CPLS 160:	1,10 kW

Finish: paint RAL 6000 (green)

Identification on the nameplate fixed on the housing.

Available options:

- Front roller bearings
- Greased bearings
- Special shaft ends
- Flanges different from standard by shaft height.
- Filter on radial VF
- Ventilation by duct
- Second shaft end
- Probes PTC, PTO, PTF
- Encoder, absolute encoder
- 6 terminal connection
- Increase of the operating range at constant power with our CONSTANT POWER SYSTEM device

Other options on requirements:

- VF axial
- Brake

The fan can be orientated in all directions, to either of the rear or front bearing sides.

CPLS ASYNCHRONOUS MOTOR

2 – Choice of machine:

In order to help you quickly determine your motor and inverter assembly, we have developed dimension information charts for speed variation. These can be found at the end of this document.

a – First of all, determine the nominal useful torque for your required application. The necessary torque (M_N) at the rated point (n_1) defines the size of the machine in the range.

The network of iso-power curves below will be a first step towards choosing the size of the machine.

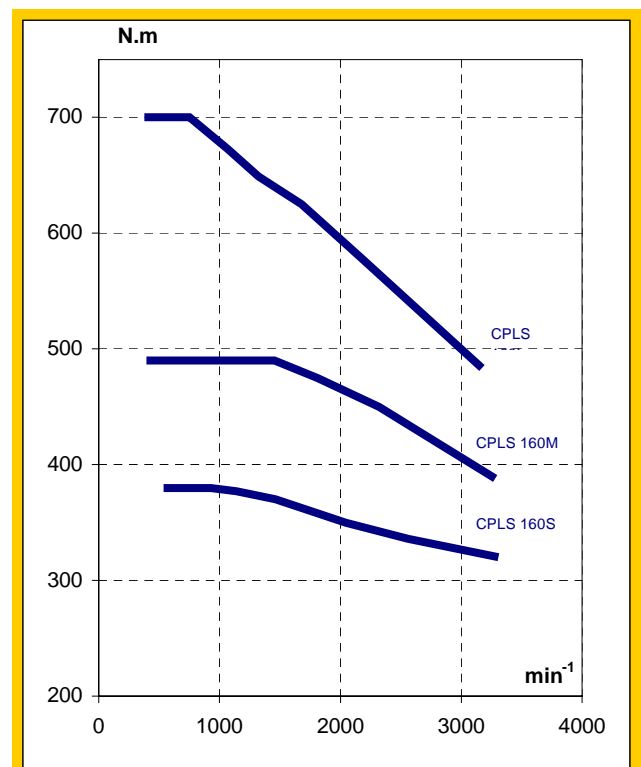
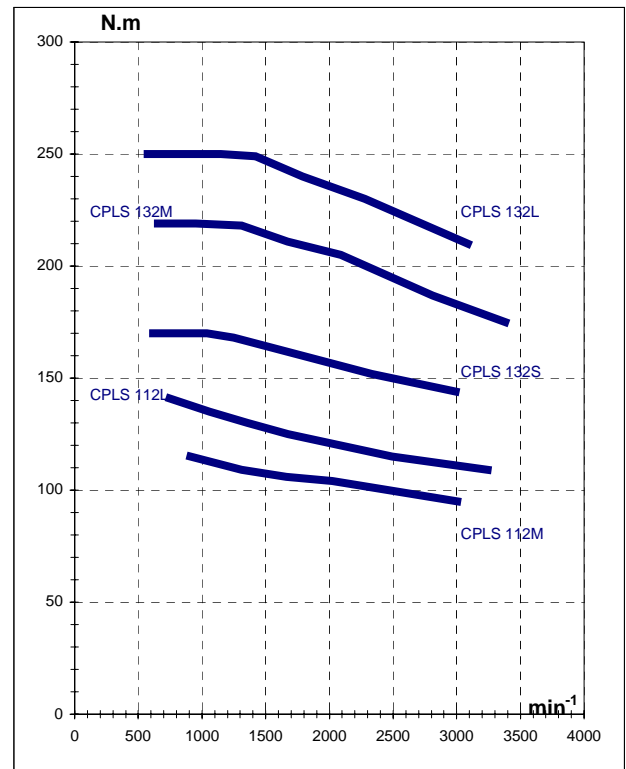
b – Choose the speed closest to the one desired, using the information chart corresponding to the retained motor torque, according to the available current on the inverters output.

The choice determines the type of machine, and indicates the most adapted winding enabling the use of the inverter size closest to your needs. This information can be found in the determination chart.

This selection method enables the dimensioning of the motor/inverter assembly to the real application requirements.

A determination example is given in paragraph 7.

Our machines are tested on test stands supplied by inverters from **LEROY-SOMER**. When available, the characteristics can be requested at the factory.



CPLS ASYNCHRONOUS MOTOR

3 – Choice of inverter frequency:

According to the desired utilisation, the choice of the machine and the rating of the machine's inverter will be different.

If it is desired to work from zero speed to its rated speed the inverter rating can be adapted corresponding to the nominal voltage of the machine.

If, on the contrary, you wish to use a machine above its designed speed, and benefit from a large work range, while conserving the constant power, you can sometimes:

- Choose the next inverter rating above.
- Adopt a torque reserve at the base point.
- Combine the two possibilities.

Our range of machines offer, as standard, a constant power range twice the rated speed, (n_1) without derating the **UNIDRIVE SP** or **POWERDRIVE** inverter size. Above this speed, the power available is reduced due to the rapid reduction in the maximum motor torque.

Full documentation on the electronic inverters of the **DIGIDRIVE-SK**, **UNIDRIVE-SP**, and **POWERDRIVE** ranges are available on request.

CONSTANT POWER SYSTEM:

A patented device, fitted in the terminal box, the **CONSTANT POWER SYSTEM** enables running over a wider speed range without derating the inverter.



4 – Normal running conditions and correction factors.

According to the IEC 34-1 standard, standard motors can operate under the following normal conditions:

- ambient temperature between +5°C and +40°C.
- altitude less than 1000m.
- atmospheric pressure 1050 mbar.
- Operating zone 2 (absolute humidity between 5 and 23 g/cm³).
- Ambient air free from chemicals and dust.

Corrections relative to altitude.

For different kinds of use, the power correcting coefficient indicated in the chart below will be applied.

P1/P	amb (°C) ≤ 40°C	amb (°C) ≤ 50°C	amb (°C) ≤ 60°C
Altitude ≤ 1000m	1	0,93	0,85
Altitude ≤ 2000m	0,93	0,85	0,75

The factor P1/P gives the correction coefficient.

- P1: corrected power.
P : catalogue power.

A more detailed abacus is available in the three-phase asynchronous motors catalogue in LS series of LEROY SOMER.

Corrections according to service.

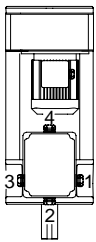
Service type	Operating time		
	10 min	30min	60min
S2	1,6	1,3	1,1
Service type	Operating factor		
	25%	40%	60%
S3	1,4	1,2	1,1
S6	1,4	1,3	1,2

CPLS ASYNCHRONOUS MOTOR

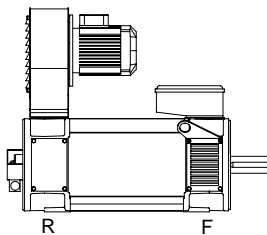
5 – Acceptable radial load on shaft end.

In the case of coupling by pulleys and belts, the setting must conform to good practice, to avoid reducing the lifespan of the bearings. The data is available at the factory

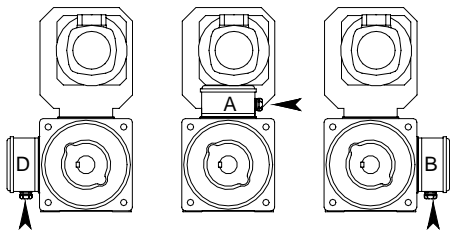
6 - Position of the terminal box and the forced ventilation:



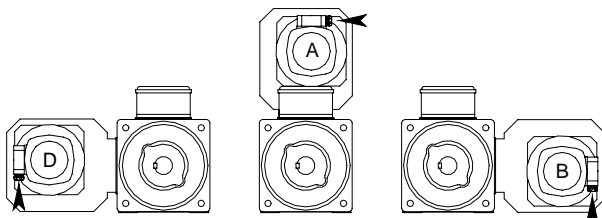
Position of the cable gland output, in relation to the shaft end.



Position of the terminal box and fan in relation to the motor bearing
F: on front bearing
R: on rear bearing



Position of the terminal box



Position of the fan

Example:

Terminal box in position A1 on the front bearing, fan in position B mounted on the rear bearing.

Designation: A1 F–B R.

7 – Selection example.

The determination method requires the torque demanded by the application. If the torque is available, go directly to step n°3.

Example: I want to motorise a drive which requires 16 kW at 1200 min⁻¹ in S1 service.

The ambient temperature will be 20°C when operating, altitude less than 1000m.

The terminal box needs to be on the right hand side, and the fan on the top when looking at the shaft end.

Step n°1: correction factors.

- Correction according to the temperature and altitude (paragraph 4).
- Correction according to service (paragraph 4).

Example: it is not necessary to de-rate to take into account service or environmental conditions.

Step n° 2: rated torque calculation.

You know the power and the speed; you can calculate the torque using the following formula:

$$C = P \times 9550/n$$

C: torque in N.m

P: power in kW

n: speed in min⁻¹

Example: the torque necessary for my application is: 127 N.m.

Step n° 3: determination of the shaft height.

The diagram in paragraph 2 enables rapid determination of the size of the machine in relation to torque and speed.

Example: on the abacus paragraph 4 I choose the machine CPLS112 L.

Step n° 4: determination of the machine.

On the chart for the machine you select the closest speed to your needs, or just above according to the available inverter output voltage.

On the retained line, you obtain the main mechanical and electrical parameters, which define your operating point, as well as the size of the inverter and product code for the machine.

CPLS ASYNCHRONOUS MOTOR

Example:

See chart for CPLS112L motor.

The output voltage of the inverter will be 360V.

The closest speed just above the one needed is 1215 min⁻¹.

Step n° 5: control.

The torque of the machine which figures on the line, is the one obtained in S1 service. I check to see if it is equal or higher than my needs.

If it is not the case, I pass to the size of machine immediately above.

Example:

The torque of the motor in S1 service is 130N.m for a requirement of 127N.m, the machine is well dimensioned.

Retained motorisation :

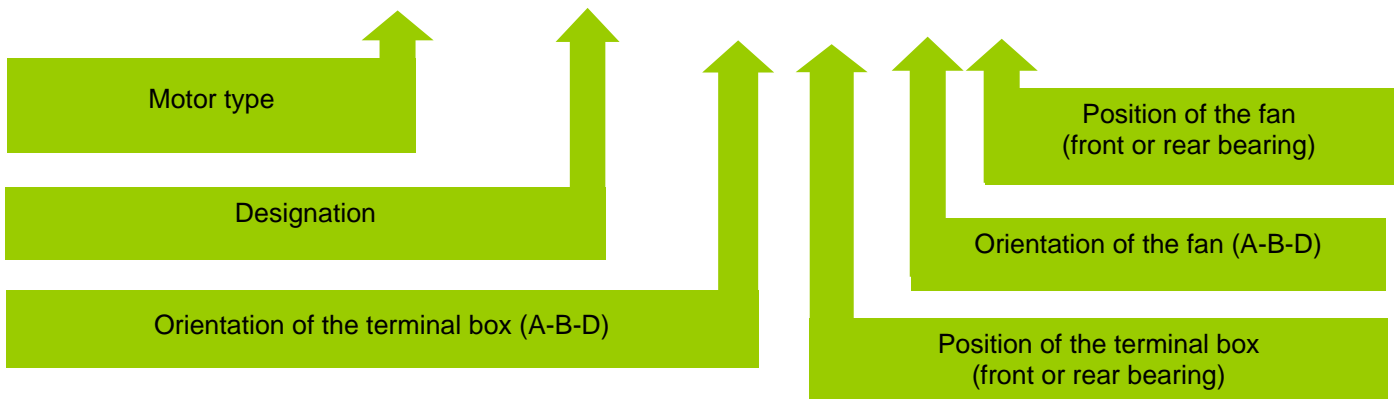
Machine: CPLS 112L 0606 B1F AR

Inverter: UNIDRIVE SP 27T.

8 – Full designation.



CPLS - 112L0606 - B1 - F - B - R

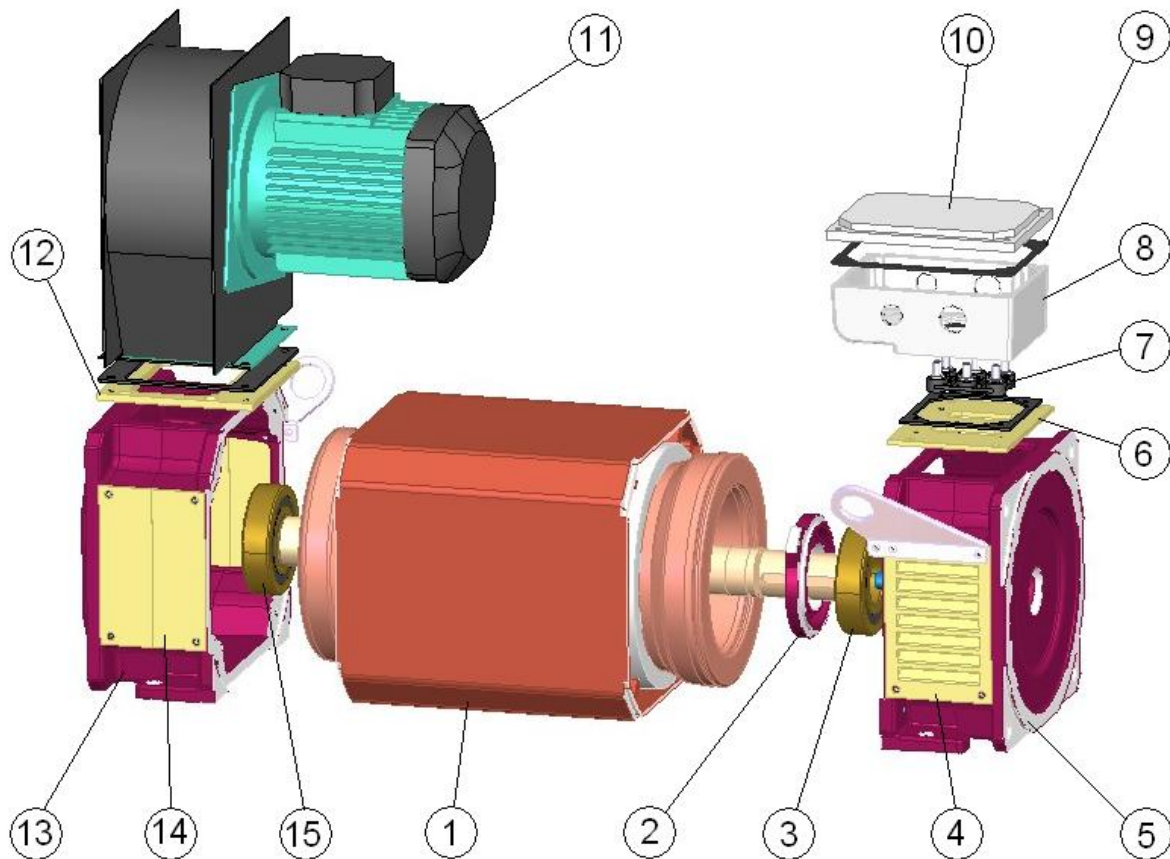


CPLS ASYNCHRONOUS MOTOR

9 - Constitution

Rep	Designation
1	Stator in its housing
2	Flange bearing (following mounting)
3	Bearing
4	Ventilation grill
5	Front bearing
6	Support plate for terminal box
7	Terminal plate
8	Terminal box body

Rep	Designation
9	Terminal box
10	Terminal box cover
11	Forced ventilation
12	Fan joint
13	Rear bearing
14	Blanking plate
15	Rear bearing



CPLS ASYNCHRONOUS MOTOR

CPLS 112M 95 – 110N.m

IP23 Motor– IC06 Fan– Class F
 S1 Service – Ambient temperature 40°C – Total weight : 87 Kg
 Inertia: 0,039 kg.m² - Maximum speed: 8000 min⁻¹
 Forced ventilation of 0,25 kW – 230/400V 50Hz.

P (kW)	U (V)*	F(Hz)	n ₁ (min ⁻¹)	T (N.m)	I (A)	cos φ	η (%)	R (Ω)	n ₂ (min ⁻¹)	Product code	Unidrive SP rating
8,5	320	25,9	714	114	22,7	0,87	77	1,39	1365	112M0604	16T
9,1	340	27,5	762	114	22,7	0,86	78		1511		
9,7	360	29,1	812	114	22,8	0,86	79		1630		
10,3	380	30,7	860	114	22,8	0,85	80		1697		
11,0	400	32,3	908	115	23,0	0,85	81		1760		
12,0	440	35,5	1006	114	22,7	0,84	82		2083		
12,9	480	38,8	1107	111	22,3	0,83	83		2320		
11,7	320	36,1	1015	109	28,4	0,89	82		2000		
12,5	340	38,3	1081	110	28,7	0,89	83	2122			
13,4	360	40,6	1151	110	28,6	0,89	83	2245			
14,2	380	42,8	1217	111	28,8	0,88	84	2410			
15,0	400	45,1	1312	109	28,5	0,89	85	2600			
16,1	440	49,6	1424	108	27,8	0,87	86	2853			
17,3	480	54,2	1564	106	27,3	0,87	87	3157			
14,6	320	46,1	1316	106	35,6	0,86	85	2851	112M0606	27T	
15,6	340	49,0	1403	106	35,6	0,86	86	3061			
16,5	360	51,8	1488	106	35,5	0,85	87	3240			
17,5	380	54,7	1575	106	35,5	0,85	87	3428			
18,5	400	57,6	1663	106	35,6	0,85	88	3610			
20,4	440	63,4	1837	106	35,5	0,84	89	4170			
22,3	480	69,1	2009	106	35,5	0,84	89	4591			
17,5	320	55,7	1603	104	41,3	0,86	87	3475			112M0607
18,6	340	59,2	1708	104	41,2	0,86	88	3719			
19,7	360	62,6	1811	104	41,1	0,86	89	4016			
20,9	380	66,1	1916	104	41,2	0,86	89	4367			
22,0	400	69,6	2021	104	41,1	0,85	90	4610			
24,3	440	76,6	2232	104	41,1	0,85	90	5092			
26,5	480	83,5	2440	104	41,0	0,85	91	5575			
23,8	320	81,6	2390	95	55,9	0,83	91	5940	112M0608	40T	
25,3	340	86,7	2543	95	55,9	0,83	91	6330			
26,9	360	92,0	2702	95	56,0	0,83	92	6720			
28,4	380	97,0	2852	95	56,0	0,83	92	7110			
30,0	400	102	3002	95	56,2	0,83	92	7470			
32,9	440	117	3450	91	54,1	0,85	93	8000			
36,1	480	138	4075	84	52,3	0,88	93	8000			
29,5	320	88	2582	109	67,8	0,85	92	6415			112M0609
31,2	340	93	2732	109	67,7	0,84	92	6780			
33,3	360	99	2912	109	67,8	0,84	92	7230			
35,0	380	104	3063	109	67,7	0,84	93	7621			
37,0	400	110	3242	109	67,7	0,84	93	8000			
40,8	440	121	3573	109	67,7	0,84	93	8000			
44,6	480	140	4140	103	65,5	0,87	94	8000			

* voltage available at inverter output

Indicative & non contractual values that can be modified at any moment by the manufacturer



CPLS ASYNCHRONOUS MOTOR

CPLS 112L 105 – 145N.m

IP23 Motor– IC06 Fan– Class F
 S1 Service – Ambient temperature 40°C – Total weight: 97 Kg
 Inertia: 0,046 kg.m² - Maximum speed: 8000 min⁻¹
 Forced ventilation of 0,25 kW – 230/400V 50Hz

P (kW)	U (V)*	F(Hz)	n ₁ (min ⁻¹)	T (N.m)	I (A)	cos φ	η (%)	R (Ω)	n ₂ (min ⁻¹)	Product code	Unidrive SP rating
8,4	320	21,5	581	138	23,1	0,88	74	1,39	990	112L0604	16T
9,1	340	22,9	623	139	23,2	0,87	76		1130		
9,7	360	24,2	663	140	23,2	0,87	77		1245		
10,4	380	25,6	704	141	23,4	0,86	78		1385		
11,0	400	26,9	745	141	23,4	0,86	78		1480		
12,4	440	30	826	143	23,7	0,85	80		1680		
13,8	480	32,3	907	145	24,0	0,85	81		1905		
11,4	320	30,1	835	130	28,6	0,89	80	0,836	1562	112L0605	22T
12,2	340	32	893	130	28,5	0,89	81		1705		
13,1	360	33,8	947	132	28,7	0,89	82		1825		
14,0	380	35,7	1004	133	28,9	0,89	82		1970		
15,0	400	37,6	1060	135	29,2	0,88	83		2115		
16,6	440	41	1175	135	29,1	0,88	84		2330		
18,2	480	45,1	1287	135	29,1	0,88	85		2625		
14,5	320	37,9	1071	129	35,2	0,88	83	0,540	2132	112L0606	27T
15,6	340	40,3	1143	130	35,4	0,88	84		2302		
16,6	360	42,7	1215	130	35,4	0,88	85		2462		
17,5	380	45	1286	130	35,2	0,88	85		2606		
18,5	400	47,4	1358	130	35,1	0,88	86		2785		
20,4	440	52	1503	129	35,0	0,87	87		3147		
22,2	480	56,9	1645	129	34,8	0,87	88		3670		
17,3	320	46,4	1325	125	41,5	0,86	86	0,388	2715	112L0607	33T
18,5	340	49,3	1412	125	41,6	0,86	87		2978		
19,7	360	52,2	1499	125	41,6	0,86	87		3051		
20,8	380	55,1	1587	125	41,6	0,86	88		3507		
22,0	400	58	1674	125	41,6	0,86	88		3670		
24,2	440	64	1849	125	41,4	0,85	89		4027		
26,9	480	69,6	2022	127	41,9	0,85	90		4550		
23,8	320	68	1982	115	56,5	0,83	90	0,180	4917	112L0608	40T
25,3	340	72,2	2108	115	56,5	0,83	91		5220		
26,9	360	76,5	2237	115	56,5	0,83	91		5550		
28,4	380	80,7	2364	115	56,5	0,83	91		5820		
30,0	400	85	2493	115	56,6	0,83	92		6125		
33,1	440	94	2748	115	56,7	0,82	92		6814		
36,2	480	102	3003	115	56,7	0,82	92		7470		
29,5	320	88	2482	109	67,8	0,85	92	0,114	6415	112L0609	50T
31,2	340	93	2732	109	67,7	0,84	92		6780		
33,3	360	99	2912	109	67,8	0,84	92		7230		
35,0	380	104	3063	109	67,7	0,84	93		7621		
37,0	400	110	3242	109	67,7	0,84	93		8000		
40,8	440	121	3573	109	67,7	0,84	93		8000		
44,6	480	140	4140	103	65,5	0,87	94		8000		

* voltage available at inverter output

Indicative & non contractual values that can be modified at any moment by the manufacturer



CPLS ASYNCHRONOUS MOTOR

CPLS 132S 145 – 170N.m

IP23 Motor– IC06 Fan– Class F
 S1 Service – Ambient temperature 40°C – Total weight: 125 Kg
 Inertia: 0,077 kg.m² -Maximum speed: 8000 min-1
 Forced ventilation of 0,37 kW – 230/400V 50Hz.

P (kW)	U (V)*	F(Hz)	n ₁ (min ⁻¹)	T (N.m)	I (A)	cos φ	η (%)	R (Ω)	n ₂ (min ⁻¹)	Product code	Unidrive SP rating
8,6	320	18,2	480	171	24,2	0,87	74	1,358	671	132S0604	16T
9,2	340	19,4	517	170	24,1	0,86	76		821		
9,8	360	20,5	552	170	24,1	0,85	77		932		
10,4	380	21,7	588	169	24,0	0,85	78		1050		
11,0	400	22,8	617	170	24,3	0,83	79		1159		
12,3	440	25,1	692	170	24,2	0,83	80		1363		
13,5	480	27,4	761	170	24,3	0,82	82		1507		
11,7	320	24,2	657	170	30,6	0,88	79	0,880	1050	132S0605	22T
12,6	340	25,8	705	171	30,7	0,88	80		1190		
13,4	360	27,3	751	170	30,6	0,87	81		1333		
14,2	380	28,8	797	170	30,5	0,87	82		1419		
15,0	400	30,3	842	170	30,5	0,86	82		1568		
16,6	440	33,6	942	168	30,2	0,86	84		1777		
18,2	480	37,2	1050	165	29,8	0,86	85		1986		
14,6	320	29,5	816	171	36,8	0,87	82	0,59	1452	132S0606	27T
15,6	340	31,4	873	170	36,8	0,87	83		1570		
16,5	360	33,2	929	170	36,6	0,86	84		1743		
17,6	380	35,1	985	170	36,7	0,86	84		1862		
18,5	400	36,9	1040	170	36,6	0,86	85		2058		
20,5	440	42,0	1192	164	35,7	0,87	87		2245		
22,4	480	46,7	1333	160	35,1	0,88	88		2491		
17,3	320	35,2	981	168	43,4	0,86	84	0,462	1658	132S0607	33T
18,4	340	37,4	1048	168	43,2	0,85	85		1886		
19,6	360	39,6	1114	168	43,2	0,85	86		2008		
20,6	380	41,2	1165	169	43,4	0,84	86		2193		
22,0	400	44,0	1247	168	43,3	0,84	87		2358		
24,2	440	49,0	1398	165	42,6	0,85	88		2631		
26,7	480	54	1547	165	42,5	0,85	89		2900		
23,8	320	49,6	1416	160	57,1	0,85	88	0,240	2690	132S0608	40T
25,3	340	52,7	1510	160	56,9	0,85	89		2982		
26,9	360	55,8	1603	160	57,0	0,84	90		3163		
28,4	380	58,9	1697	160	56,9	0,84	90		3373		
30,0	400	62,0	1790	160	56,9	0,84	90		3554		
33,1	440	68,2	1976	160	56,9	0,84	91		3945		
36,2	480	75,5	2195	157	56,1	0,84	92		4336		
29,5	320	64	1851	152	68,7	0,85	91	0,151	3675	132S0609	50T
31,4	340	68,0	1971	152	68,6	0,85	91		3916		
33,3	360	72,0	2091	152	68,6	0,85	92		4353		
35,2	380	76,0	2211	152	68,6	0,85	92		4623		
37,0	400	80,0	2332	152	68,4	0,85	92		4866		
40,9	440	89,0	2601	150	67,9	0,85	93		5433		
44,7	480	99,0	2902	145	65,9	0,86	93		6063		
35,9	320	81,6	2378	144	80,6	0,87	92	0,101	4720	132S0610	60T
38,2	340	86,7	2531	144	80,5	0,87	93		5021		
40,5	360	91,8	2684	144	80,5	0,87	93		5578		
42,8	380	96,9	2837	144	80,5	0,87	93		5908		
45,0	400	102,0	2991	144	80,3	0,86	94		6239		
49,7	440	118,0	3468	135	77,4	0,88	94		6903		
51,0	480	128	3773	129	74,0	0,88	95		7519		

* voltage available at inverter output

Indicative & non contractual values that can be modified at any moment by the manufacturer



CPLS ASYNCHRONOUS MOTOR

CPLS 132M 175 – 220N.m

IP23 Motor– IC06 Fan– Class F
 S1 Service – Ambient temperature 40°C – Total weight: 143 Kg
 Inertia: 0,098 kg.m² - Maximum speed: 8000 min⁻¹
 Forced ventilation of 0,37 kW – 230/400V 50Hz.

P (kW)	U (V)*	F(Hz)	n ₁ (min ⁻¹)	T (N.m)	I (A)	cos φ	η (%)	R (Ω)	n ₂ (min ⁻¹)	Product code	Unidrive SP rating
11,7	320	19,1	507	220	31,5	0,88	76	0,904	777	132M0605	22T
12,6	340	20,3	544	221	31,6	0,87	78		889		
13,4	360	21,5	581	220	31,5	0,87	79		1002		
14,2	380	22,7	618	219	31,4	0,86	80		1101		
15,0	400	23,9	654	219	31,3	0,86	81		1166		
16,7	440	26,3	727	219	31,4	0,85	82		1369		
18,4	480	28,7	800	219	31,5	0,84	83		1505		
14,5	320	23,1	630	220	38,0	0,86	80		1123		
15,6	340	24,6	675	220	38,1	0,86	81	1266			
16,6	360	26,0	717	220	38,1	0,85	82	1417			
17,5	380	27,5	763	219	37,9	0,85	83	1509			
18,5	400	28,9	806	219	37,9	0,84	84	1596			
20,6	440	31,8	893	220	38,1	0,84	85	1771			
22,6	480	34,7	981	220	38,1	0,83	86	1947			
16,6	320	26,0	720	220	43,6	0,83	82	1424	132M0607	33T	
18,4	340	28,7	796	221	43,6	0,86	83	1495			
19,6	360	30,4	848	221	43,6	0,86	84	1674			
20,8	380	32,1	899	221	43,6	0,86	85	1778			
22,0	400	33,8	950	221	43,6	0,85	85	1881			
24,3	440	37,2	1053	220	43,5	0,85	86	2088			
26,3	480	41,0	1168	215	42,6	0,85	87	2319			
22,6	320	36,8	1036	218	59,3	0,83	86	2050			132M0608
25,2	340	39,1	1105	218	59,4	0,83	87	2189			
26,8	360	41,4	1175	218	59,4	0,83	87	2439			
28,4	380	43,7	1244	218	59,5	0,82	88	2587			
30,0	400	46,0	1313	218	59,5	0,82	89	2745			
33,1	440	50,6	1452	218	59,5	0,82	89	3045			
36,2	480	56,0	1614	214	58,6	0,82	90	3208			
29,3	320	46,4	1324	211	71,1	0,84	89	2632	132M0609	50T	
31,2	340	49,3	1412	211	71,1	0,84	89	2813			
33,1	360	52,2	1499	211	71,0	0,83	90	3131			
35,0	380	55,1	1587	211	71,0	0,83	90	3313			
37,0	400	58,0	1673	211	71,1	0,83	91	3549			
40,8	440	65,0	1883	207	69,9	0,84	91	3744			
44,6	480	72,3	2101	203	68,7	0,85	92	4190			
35,6	320	57,6	1657	205	82,4	0,86	90	3280			132M0610
37,9	340	61,2	1765	205	82,3	0,86	91	3503			
40,2	360	64,8	1874	205	82,2	0,86	91	3731			
42,5	380	68,4	1982	205	82,2	0,86	92	4109			
45,0	400	72,0	2090	205	82,5	0,86	92	4347			
49,5	440	81,7	2380	198	80,5	0,87	93	4745			
54,1	480	93,5	2730	189	78,6	0,89	93	5422			
43,8	320	76,8	2234	187	97,2	0,88	93	4449	132M0611	75T	
46,6	340	81,6	2378	187	97,1	0,88	93	4749			
49,4	360	86,4	2522	187	97,1	0,87	93	5021			
52,2	380	91,2	2667	187	97,0	0,87	93	5577			
55,0	400	96,0	2811	187	97,0	0,87	94	5878			
60,7	440	114,0	3345	173	94,5	0,90	94	6650			
62,0	480	118,0	3475	171	89,9	0,88	95	6851			
49,3	320	92,0	2690	175	107,2	0,89	94	5349			132M0612
52,5	340	97,8	2864	175	107,2	0,89	94	5964			
55,6	360	103,5	3036	175	107,1	0,89	94	6325			
58,8	380	109,3	3210	175	107,0	0,89	94	6715			
62,0	400	115,0	3380	175	107,0	0,88	94	7075			
64,0	440	131,0	3864	158	99,5	0,89	95	7700			
66,0	480	143,0	4228	149	94,1	0,89	95	8000			

* voltage available at inverter output

Indicative & non contractual values that can be modified at any moment by the manufacturer



CPLS ASYNCHRONOUS MOTOR

CPLS 132L 220 – 250N.m

IP23 Motor– IC06 Fan– Class F
 S1 Service – Ambient temperature 40°C – Total weight: 174 Kg
 Inertia: 0,129 kg.m² - Maximum speed: 8000 min⁻¹
 Forced ventilation of 0,37 kW – 230/400V 50Hz.

P (kW)	U (V)*	F(Hz)	n ₁ (min ⁻¹)	T (N.m)	I (A)	cos φ	η (%)	R (Ω)	n ₂ (min ⁻¹)	Product code	Unidrive SP rating
11,5	320	16,7	445	247	30,9	0,87	76	0,912	712	132L0605	22T
12,4	340	17,8	478	248	31,0	0,87	78		797		
13,2	360	18,8	509	248	30,9	0,86	79		909		
14,1	380	19,9	542	248	31,0	0,86	80		1021		
15,0	400	20,9	572	250	31,2	0,86	80		1083		
16,6	440	23,0	636	249	31,0	0,85	82		1257		
18,3	480	25,1	700	250	31,1	0,85	83		1385		
14,4	320	20,2	551	250	37,6	0,86	80	0,634	1049	132L0606	27T
15,5	340	21,5	590	250	37,8	0,86	81		1163		
16,5	360	22,8	630	250	37,7	0,86	82		1253		
17,4	380	24,0	666	250	37,7	0,85	82		1380		
18,5	400	25,3	705	250	37,7	0,85	83		1462		
20,4	440	27,8	781	250	37,7	0,84	84		1548		
22,5	480	30,4	860	250	37,6	0,84	85		1706		
17,2	320	23,8	659	249	43,7	0,86	82	0,460	1311	132L0607	33T
18,4	340	25,2	702	250	43,8	0,85	83		1455		
19,6	360	20,7	474	250	43,8	0,85	84		1547		
20,7	380	28,2	792	250	43,9	0,85	85		1718		
22,0	400	29,7	837	250	43,8	0,84	85		1818		
24,3	440	32,7	928	250	43,7	0,84	86		2022		
26,6	480	35,6	1016	250	43,7	0,84	87		2205		
23,7	320	32,0	906	250	58,3	0,85	86	0,249	2040	132L0608	40T
25,3	340	34,0	967	250	58,4	0,84	87		2190		
26,9	360	36,0	1027	250	58,4	0,84	87		2340		
28,5	380	38,0	1087	250	58,5	0,84	88		2463		
30,0	400	40,0	1147	250	58,4	0,84	88		2613		
33,2	440	45,0	1297	244	57,4	0,85	89		2968		
35,8	480	51,0	1476	232	55,3	0,86	90		3466		
29,2	320	39,4	1126	247	72,6	0,82	88	0,175	2572	132L0609	50T
31,2	340	41,8	1199	248	72,7	0,81	89		2725		
33,3	360	44,3	1273	249	73,1	0,81	90		2959		
35,1	380	46,7	1346	249	73,2	0,81	90		3194		
37,0	400	49,2	1421	249	73,1	0,81	90		3376		
40,9	440	54,1	1568	249	73,2	0,80	91		3709		
44,7	480	59,0	1716	249	73,3	0,80	91		4070		
35,7	320	49,2	1419	240	85,6	0,83	90	0,123	3229	132L0610	60T
38,0	340	52,3	1513	240	85,5	0,83	91		3440		
40,3	360	55,3	1603	240	85,6	0,82	91		3652		
42,6	380	58,4	1696	240	85,5	0,82	91		3863		
45,0	400	61,5	1790	240	85,7	0,82	92		4073		
49,6	440	67,6	1973	240	85,7	0,82	92		4692		
53,0	480	75,0	2195	230	82,7	0,83	93		5235		
43,4	320	62,4	1810	229	98,1	0,86	92	0,086	3937	132L0611	75T
46,4	340	66,3	1927	230	98,5	0,86	92		4179		
49,2	360	70,2	2044	230	98,4	0,86	92		4448		
52,0	380	74,1	2161	230	98,5	0,86	93		4718		
55,0	400	78,0	2279	230	98,6	0,86	93		4959		
60,5	440	85,8	2513	230	98,3	0,86	93		5471		
64,0	480	95,0	2790	219	94,7	0,86	94		6363		
54,1	320	84,0	2458	210	118,7	0,87	93	0,053	5314	132L0612	75T
57,6	340	89,3	2617	210	118,8	0,87	93		5702		
61,0	360	94,5	2773	210	118,7	0,87	94		6062		
64,4	380	99,8	2932	210	118,5	0,87	94		6423		
68,0	400	105,0	3088	210	118,7	0,87	94		6754		
70,0	440	115,5	3408	196	111,2	0,87	94		7610		
72,0	480	126,0	3727	185	105,2	0,86	95		8000		

* voltage available at inverter output

Indicative & non contractual values that can be modified at any moment by the manufacturer



CPLS ASYNCHRONOUS MOTOR

CPLS 160S 300 – 380N.m

IP23 Motor– IC06 Fan– Class F
 S1 Service – Ambient temperature 40°C – Total weight: 247 Kg
 Inertia: 0,188 kg.m² - Maximum speed: 8000 min⁻¹
 Forced ventilation of 1,10 kW – 230/400V 50Hz.

P (kW)	U (V)*	F(Hz)	n ₁ (min ⁻¹)	T (N.m)	I (A)	cos φ	η (%)	R (Ω)	n ₂ (min ⁻¹)	Product code	Unidrive SP rating
17,2	320	16,4	444	369	45,0	0,87	78	0,52	1000	160S0602	33T
18,3	340	17,4	475	367	45,0	0,86	80		1100		
19,6	360	18,5	509	368	45,0	0,86	80		1150		
20,8	380	19,5	539	368	45,0	0,86	81		1250		
22,0	400	20,5	572	367	45,0	0,86	82		1300		
24,3	440	22,6	633	367	45,0	0,85	84		1500		
26,7	480	24,6	694	366	45,0	0,84	85		1650		
23,7	320	22,0	613	368	59,0	0,87	83	0,303	1500	160S0603	40T
25,2	340	23,4	655	367	59,0	0,86	84		1600		
26,8	360	24,8	697	367	59,0	0,86	85		1700		
28,4	380	26,1	737	368	59,0	0,86	85		1800		
30,0	400	27,5	779	368	59,0	0,85	86		1900		
33,2	440	30,3	864	367	59,0	0,85	87		2100		
36,4	480	33	945	368	59,0	0,84	88		2350		
29,2	320	26,0	734	380	74,0	0,85	85	0,207	1900	160S0604	50T
31,2	340	27,6	782	381	74,0	0,84	86		2000		
33,1	360	29,0	825	383	74,0	0,83	86		2100		
35,1	380	30,9	881	380	74,0	0,84	87		2250		
37,0	400	32,5	930	380	74,0	0,83	87		2400		
40,8	440	35,8	1030	378	74,0	0,83	88		2650		
44,8	480	39,0	1125	380	74,0	0,82	89		2950		
35,6	320	31,6	903	377	88,0	0,84	87	0,141	2350	160S0605	60T
38,0	340	33,6	963	377	88,0	0,84	88		2500		
40,3	360	35,6	1024	376	88,0	0,83	88		2650		
42,7	380	37,5	1080	377	88,0	0,83	89		2810		
45,0	400	39,5	1140	377	88,0	0,82	89		3100		
49,7	440	43,5	1260	376	88,0	0,82	90		3450		
53,0	480	49,0	1426	355	83,0	0,85	90		4150		
43,7	320	40,2	1159	360	101	0,88	89	0,098	2850	160S0606	75T
46,6	340	42,8	1237	360	101	0,87	90		3050		
49,5	360	45,3	1312	360	101	0,87	90		3250		
52,3	380	47,8	1387	360	101	0,87	91		3450		
55,0	400	50,3	1462	360	101	0,87	91		3700		
57,9	440	55,4	1618	342	96	0,86	91		4200		
61,0	480	60,4	1770	329	94	0,86	92		5000		
59,6	320	55,8	1625	350	140	0,83	92	0,066	4500	160S0607	100T
63,4	340	59,3	1730	350	140	0,83	92		4800		
67,3	360	62,8	1835	350	140	0,83	92		5000		
71,1	380	66,3	1943	350	140	0,83	93		5200		
75,0	400	69,8	2045	350	140	0,83	93		5500		
80,5	440	76,8	2256	341	137	0,82	93		6700		
85,5	480	83,8	2468	331	134	0,82	94		7350		
73,3	320	69,6	2036	344	165	0,86	93	0,038	5050	160S0608	120T
77,9	340	74,0	2168	343	165	0,86	93		5400		
82,7	360	78,3	2297	344	165	0,86	94		5700		
85,5	380	82,7	2428	336	162	0,86	94		6050		
90,0	400	87,0	2560	336	162	0,85	94		6350		
94,0	440	95,7	2824	318	154	0,85	94		7360		
98,0	480	104	3087	303	148	0,84	95		8000		
88,8	320	88,8	2608	325	190	0,89	94	0,026	6450	160S0609	150T
94,3	340	94,3	2773	325	190	0,89	94		6850		
100	360	99,9	2941	325	190	0,89	94		7300		
105	380	105	3095	324	190	0,89	95		7600		
110	400	111	3275	321	188	0,89	95		8000		
115	440	122	3609	305	179	0,89	95		8000		
	480		3727								

* voltage available at inverter output

Indicative & non contractual values that can be modified at any moment by the manufacturer



CPLS ASYNCHRONOUS MOTOR

CPLS 160M 400 – 490N.m

IP23 Motor– IC06 Fan– Class F
 S1 Service – Ambient temperature 40°C – Total weight: 286 Kg
 Inertia: 0,246 kg.m² - Maximum speed: 6000 min⁻¹
 Forced ventilation of 1,10 kW – 230/400V 50Hz.

P (kW)	U (V)*	F(Hz)	n ₁ (min ⁻¹)	T (N.m)	I (A)	cos φ	η (%)	R (Ω)	n ₂ (min ⁻¹)	Product code	Unidrive SP rating
16,9	320	12,6	332	475	44,0	0,89	76	0,59	620	160M0602	33T
17,8	340	13,3	350	480	44,0	0,88	77		680		
19,2	360	14,1	380	485	45,0	0,88	78		730		
20,8	380	14,9	400	495	45,0	0,88	79		750		
22,0	400	15,7	425	495	45,0	0,88	80		810		
24,5	440	17,3	470	495	45,0	0,87	81		950		
26,8	480	18,8	515	495	45,0	0,86	83		1100		
23,5	320	16,8	457	490	59,0	0,89	80		0,349		
25,2	340	17,9	490	490	59,0	0,88	81	1005			
26,8	360	18,9	520	490	59,0	0,88	82	1070			
28,5	380	20,0	550	490	59,0	0,88	83	1120			
30,0	400	21,0	585	490	59,0	0,87	84	1240			
33,2	440	23,1	648	490	59,0	0,87	85	1405			
36,5	480	25,2	710	490	59,0	0,86	86	1552			
28,9	320	20,3	563	490	71,0	0,88	83	0,240		1240	160M0604
30,9	340	21,6	602	490	71,0	0,87	84		1320		
32,9	360	22,9	641	490	71,0	0,87	85		1390		
34,8	380	24,1	576	490	71,0	0,87	85		1540		
37,0	400	25,4	715	490	71,0	0,87	86		1680		
40,6	440	27,9	790	490	71,0	0,86	87		1950		
44,6	480	30,5	871	490	71,0	0,86	88		2120		
35,2	320	24,4	685	490	85,0	0,86	86		0,167	1580	
37,4	340	25,8	730	490	85,0	0,86	86	1750			
40,0	360	27,5	780	490	85,0	0,86	87	1920			
42,3	380	29,0	820	490	85,0	0,86	87	2090			
45,0	400	30,5	870	490	86,0	0,86	88	2270			
49,3	440	33,5	960	490	86,0	0,85	89	2460			
54,0	480	36,6	1050	490	86,0	0,84	89	2870			
43,2	320	29,6	840	490	103	0,86	88	0,115		2100	160M0606
46,2	340	31,5	900	490	103	0,86	88		2270		
49,0	360	33,3	955	490	103	0,86	89		2480		
51,7	380	35,1	1010	490	102	0,86	89		2710		
55,0	400	37,0	1065	490	103	0,86	89		2970		
59,5	440	40,7	1175	480	101	0,85	90		3170		
62,0	480	44,4	1290	460	97	0,84	91		3750		
59,3	320	40,0	1155	490	145	0,81	90		0,065	3300	
63,1	340	42,5	1230	490	145	0,81	91	3450			
67,0	360	45,0	1305	490	145	0,81	91	3610			
70,8	380	47,5	1380	490	145	0,81	92	3760			
75,0	400	50,0	1455	490	145	0,81	92	4060			
81,0	440	55,0	1605	480	143	0,80	92	4370			
85,0	480	60,0	1760	460	139	0,79	93	5500			
71,8	320	49,6	1442	475	167	0,83	92	0,045		4050	160M0608
76,4	340	52,7	1535	475	167	0,83	92		4350		
81,0	360	55,8	1628	475	167	0,83	93		4650		
85,6	380	58,9	1720	475	167	0,83	93		4940		
90,0	400	62,0	1810	475	168	0,83	93		5100		
97,5	440	68,2	2000	465	164	0,82	94		5850		
103	480	74,4	2189	450	160	0,82	94		6000		

* voltage available at inverter output

Indicative & non contractual values that can be modified at any moment by the manufacturer



CPLS ASYNCHRONOUS MOTOR

CPLS 160M 400 – 490N.m

IP23 Motor– IC06 Fan– Class F
 S1 Service – Ambient temperature 40°C – Total weight: 286 Kg
 Inertia: 0,246 kg.m² - Maximum speed: 6000 min⁻¹
 Forced ventilation of 1,10 kW – 230/400V 50Hz.

P (kW)	U (V)*	F(Hz)	n ₁ (min ⁻¹)	T (N.m)	I (A)	cos φ	η (%)	R (Ω)	n ₂ (min ⁻¹)	Product code	Unidrive SP rating
87,2	320	63,2	1845	450	191	0,88	93	0,031	4650	160M0609	150T
92,8	340	67,1	1960	450	191	0,88	93		4960		
98,4	360	71,1	2083	450	190	0,88	94		5250		
104	380	75,1	2204	450	190	0,88	94		5550		
110	400	79,0	2320	450	192	0,88	94		5800		
116	440	86,9	2560	430	183	0,87	94		6000		
122	480	98,0	2890	405	173	0,88	94		6000		
106	320	88,0	2590	390	224	0,90	95		6000		
113	340	93,5	2755	390	224	0,90	95	6000			
119	360	99,0	2920	390	223	0,89	95	6000			
127	380	105	3100	390	223	0,90	95	6000			
132	400	110	3255	390	223	0,89	95	6000			
	440										
	480										

* voltage available at inverter output

Indicative & non contractual values that can be modified at any moment by the manufacturer



CPLS ASYNCHRONOUS MOTOR

CPLS 160L 620 – 700N.m

IP23 Motor– IC06 Fan– Class F
 S1 Service – Ambient temperature 40°C – Total weight: 362 Kg
 Inertia: 0,409 kg.m² - Maximum speed: 5000 min-1
 Forced ventilation of 1,10 kW – 230/400V 50Hz.

P (kW)	U (V)*	F(Hz)	n ₁ (min ⁻¹)	T (N.m)	I (A)	cos φ	η (%)	R (Ω)	n ₂ (min ⁻¹)	Product code	Unidrive SP rating
23,5	320	11,7	320	702	60,0	0,91	78	0,54	500	160L0603	40T
25,1	340	12,4	341	702	60,0	0,90	79		600		
26,6	360	13,1	363	700	59,0	0,90	80		700		
28,4	380	13,9	387	700	59,0	0,90	81		750		
30,0	400	14,6	409	700	59,0	0,89	82		800		
33,2	440	16,1	454	698	59,0	0,88	83		900		
36,3	480	17,5	496	698	59,0	0,88	84		1000		
29,0	320	14,2	395	700	71,0	0,90	81	0,38	750	160L0604	50T
31,0	340	15,1	422	700	71,0	0,90	82		850		
33,0	360	16,0	450	700	71,0	0,90	83		900		
35,0	380	16,9	477	700	71,0	0,89	83		950		
37,0	400	17,8	504	700	71,0	0,89	84		1050		
40,9	440	19,6	558	700	71,0	0,89	85		1250		
44,9	480	21,4	613	700	71,0	0,88	86		1350		
35,5	320	17,1	485	698	85,0	0,90	84	0,268	1000	160L0605	60T
37,9	340	18,2	516	700	85,0	0,89	85		1100		
40,3	360	19,3	549	700	85,0	0,89	85		1200		
42,5	380	20,3	580	700	85,0	0,89	86		1300		
45,0	400	21,4	613	700	85,0	0,88	87		1400		
49,6	440	23,5	676	700	85,0	0,88	87		1500		
54,0	480	25,7	743	694	84,0	0,88	88		1650		
43,6	320	20,8	595	700	103	0,88	86	0,180	1350	160L0606	75T
46,5	340	22,1	634	700	102	0,88	87		1450		
49,3	360	23,4	673	700	102	0,88	88		1650		
52,0	380	24,7	712	700	102	0,88	88		1750		
55,0	400	26,0	751	699	102	0,88	88		1850		
59,6	440	28,6	830	685	100	0,87	89		2050		
64,0	480	31,2	909	672	99	0,86	90		2250		
60,0	320	29,2	844	679	139	0,87	89	0,103	2000	160L0607	100T
63,6	340	31,0	898	676	139	0,87	90		2100		
67,6	360	32,9	955	676	138	0,86	90		2250		
71,4	380	34,7	1010	675	138	0,86	90		2375		
75,0	400	36,5	1064	673	138	0,86	91		2500		
81,4	440	40,2	1175	661	136	0,85	92		2900		
88,0	480	43,8	1284	654	134	0,85	92		3200		
71,7	320	36,1	1053	650	165	0,86	91	0,069	2650	160L0608	120T
76,2	340	38,3	1119	650	165	0,85	92		2850		
80,9	360	40,6	1188	650	165	0,86	92		3000		
85,4	380	42,8	1254	650	165	0,85	92		3150		
90,0	400	45,1	1323	649	164	0,85	92		3350		
97,0	440	49,6	1459	635	161	0,85	93		3600		
104,0	480	54,1	1595	623	159	0,84	93		3950		
87,6	320	45,6	1338	625	197	0,86	93	0,044	3300	160L0609	150T
93,3	340	48,5	1425	625	197	0,86	93		3500		
98,8	360	51,3	1509	625	197	0,86	93		3700		
104,5	380	54,2	1596	625	197	0,86	93		3900		
110,0	400	57,0	1680	625	197	0,86	93		4150		
117,0	440	62,7	1853	603	191	0,85	94		4700		
125,0	480	68,4	2025	590	188	0,85	94		5000		

* voltage available at inverter output

Indicative & non contractual values that can be modified at any moment by the manufacturer



CPLS ASYNCHRONOUS MOTOR

CPLS 160L 620 – 700N.m

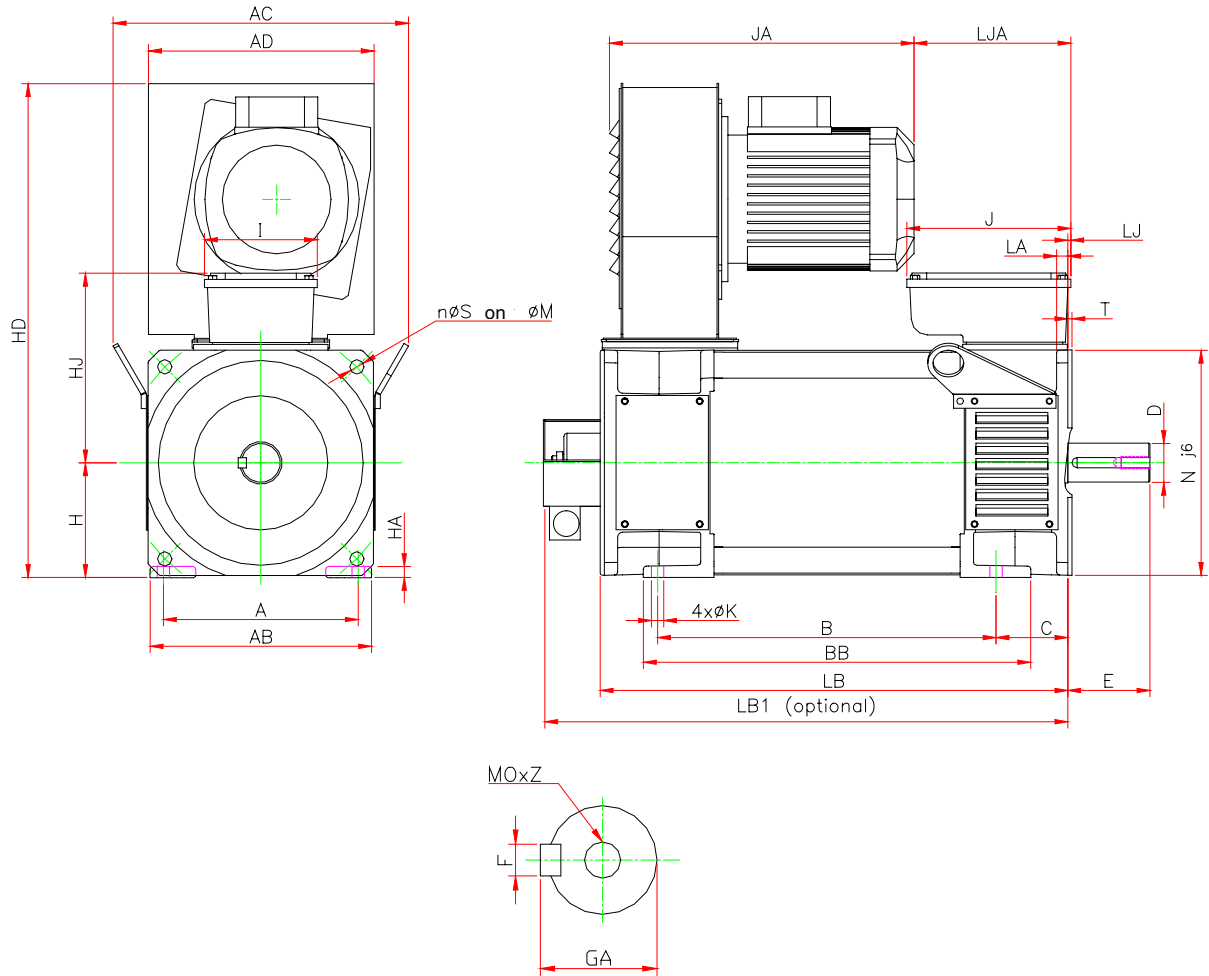
IP23 Motor– IC06 Fan– Class F
 S1 Service – Ambient temperature 40°C – Total weight: 362 Kg
 Inertia: 0,409 kg.m² - Maximum speed: 5000 min⁻¹
 Forced ventilation of 1,10 kW – 230/400V 50Hz.

P (kW)	U (V)*	F(Hz)	n ₁ (min ⁻¹)	T (N.m)	I (A)	cos φ	η (%)	R (Ω)	n ₂ (min ⁻¹)	Product code	Unidrive SP rating
109,9	320	59,2	1741	603	233	0,91	93	0,027	3700	160L0610	180T
115,5	340	62,9	1852	596	230	0,90	94		4000		
121,4	360	66,6	1964	591	228	0,90	94		4300		
126,4	380	70,3	2075	582	225	0,90	94		4600		
132,0	400	74,0	2187	577	223	0,90	94		5000		
139,0	440	81,4	2411	551	213	0,90	95		5000		
148,0	480	88,8	2634	537	208	0,90	95		5000		
138,0	320	84,8	2506	526	285	0,92	94	0,019	5000	160L0611	220T
144,0	340	90,1	2666	516	280	0,92	95		5000		
150,0	360	95,4	2826	507	275	0,92	95		5000		
155,0	380	100,7	2986	496	268	0,92	95		5000		
160,0	400	106,0	3146	486	263	0,91	95		5000		
166,0	440	116,6	3466	458	248	0,91	96		5000		
171,0	480	127,2	3786	432	234	0,91	96		5000	180T	

* voltage available at inverter output

Indicative & non contractual values that can be modified at any moment by the manufacturer

CPLS ASYNCHRONOUS MOTOR



Type	Main dimensions																		
	A	AB	AC	AD	B	BB	C	H	HA	HD	HJ	I	J	JA	K	LB	LB1	LJ	LJA
CPLS112 M	190	216	288	220	290	338	70	112	11	482	185	110	160	297	12	416	472	3	110
CPLS112 L	190	216	288	220	330	378	70	112	11	482	185	110	160	297	12	456	512	3	150
CPLS132 S	216	254	330	260	283	329	89	132	11	573	222	157	194	310	12	444	488	13	125
CPLS132 M	216	254	330	260	338	384	89	132	11	573	222	157	194	310	12	499	543	13	180
CPLS132 L	216	254	330	260	418	464	89	132	11	573	222	157	194	310	12	579	623	13	260
CPLS160S	254	317	370	318	355	397	103	160	16	680	293	248	217	352	14	564	608	1	202
CPLS160 M	254	317	370	318	435	477	103	160	16	680	293	248	217	352	14	644	688	1	282
CPLS160L	254	317	370	318	565	607	103	160	16	680	293	248	217	352	14	774	818	1	412

Type	Shaft ends						Flanges					
	D	E	F	GA	O	Z	LA	M	Nj6	n	S	T
CPLS112	38k6	80	10	41	12	28	11	265	230	4	14	4
CPLS132	48k6	110	14	51,5	16	36	15	300	250	4	18	5
CPLS160	55m6	110	16	59	20	42	18	350	300	4	18	5

Dimensions are in mm and for information only

CPLS ASYNCHRONOUS MOTOR



MOTEURS LEROY SOMER 16015 ANGOULÊME CEDEX – FRA NCE



MOTEURS PATAY 69008 LYON CEDEX – FRA NCE

