

智慧型馬達緩衝器OL系列



SOFT STARTER OL SERIES OF SMART MOTOR

(WITH OVERLOAD PROTECTION SERIES)



>>> 功能特性 Characteristics

- 可調整啟動時間與扭力，使馬達平順啟動。
- 同一機台可選擇4種啟動模式：全壓啟動、斜率啟動、定電流啟動、轉矩啟動。
- 採用矽控整流體(SCR)控制：無接點、無弧光、無光端磨損，相當於半永久性的使用壽命。
- 配線簡便：三進三出的裝置，節省人工繁瑣配線的花費。
- 本控制器具有三相三線6只SCR閘流體作電力轉換控制。
- 本緩衝器為微處理機型CPU，並具有自動輕重負載校對功能與轉矩控制。
- 本控制器內含CT電子式檢知保護器：具過載、欠相、馬達卡死、馬達低載、控制器過溫保護。
- 馬達過載、馬達卡死皆可由控制器內部指撥開關設定，並提供復歸鍵，可作手動復歸。
- 本控制器提供3組輸出接點：啟動時輸出接點、運轉完成後輸出接點(BY PASS)、系統異常輸出接點。
- The EMC Directive 2014/30/EU。
- Low Voltage Directive : 2014/35/EU。
- 本緩衝啟動器具CE, EN/IEC 60947-1, EN/IEC 60947-4, EN/IEC 61000-6-4 EN/IEC 61000-4-2, EN/IEC 61000-4-4, EN/IEC 61000-4-6, EN/IEC 61000-6-2 認證。
- Start time and torsion can be adjusted for starting motor smoothly.
- The soft start can choose 4 starting models : total pressure starting, gradient starting, constant current starting, torque starting.
- It's controlled by SCR without access point, arc, and abrasion of light end, as semi-permanent use-life.
- Easy wiring : the equipment of 3 in and 3 out, it can save the cost of labor wiring tedious.
- This controller is 3 phases, 3 wires, 6 SCR thyristors for controlling by power.
- This starter is micro-treater with auto revising of light/heavy loading and the control of torque.
- This controller has CT electronic inspection protector : the OL series have the protection of overload, loss phase, motor block, motor low load, over heating high sensitivity.
- Motor overload and motor stuck can be setting by controller's internal DIP switch. and also can be hand reset by reset button.
- This controller offers 3 sets output connection : output connection of starting, output connection after running (BY PASS), output connection of system exception.
- The EMC Directive 2014/30/EU.
- Low Voltage Directive : 2014/35/EU.
- This starter meets the standard of CE Certificate, EN/IEC 60947-1, EN/IEC 60947-4, EN/IEC 61000-6-4, EN/IEC 61000-4-2, EN/IEC 61000-4-4, EN/IEC 61000-4-6, EN/IEC 61000-6-2 approved.

>>> 保護功能 Protection Function

- 馬達過載
- 欠相
- 馬達卡死
- 馬達低載
- 閘流體過溫
- Motor overload
- Less phase
- Motor block
- Motor low load
- Overheat of thyristors

>>> 啟動模式 Starting Mode

- 斜率啟動
- 定電流啟動
- 全壓啟動
- 轉矩啟動
- Gradient starting
- Constant current starting
- Total pressure starting
- Torque starting

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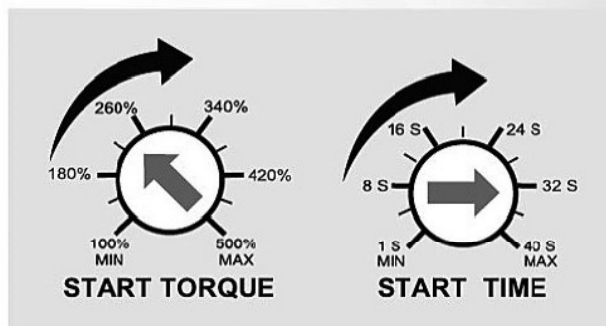
>>> 一般特性

General Characteristic

主電源電壓 main power voltage	3Ø 208~220 / 380~480VAC±10%
輔助電壓 assistance voltage	220V±10% (可訂製 110V±10%) (can be ordered 110V±10%)
啟動方式 start way	乾接點 dry contact point
工作頻率 work frequency	50~60Hz ±5%
啟動時間 (speed time) start time (speed time)	1~40 sec.
啟動扭力 start torque	100%~500%
儲存溫度	-20°C~70°C
周圍工作溫度 ambient operating temperature rang	-10°C~45°C
最大相對溼度 relative humidity	93% RH無凝結成水滴 93% RH without dew
高度 height	標高2000公尺以下 below is under 2000 metres
振動	0.5G以下

>>> 扭力、時間參考下圖解

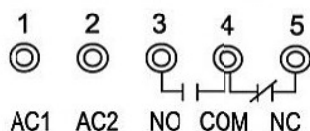
Reference drawing of torque and time



絕緣阻抗 insulation resistance	20MΩ以上 (電源與外殼間) Over 20MΩ (power & external cover) 20MΩ以上 (輸入信號與外殼間) Over 20MΩ (input signal & external cover)
耐壓強度 strength of press-resisted	電源與外殼間 2500VAC/1分鐘 2500VAC/1min between power & external cover 電源與輸入信號 1000VAC/1分鐘 1000VAC/1min between input signal & external cover

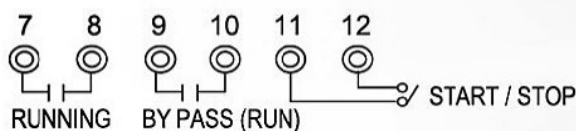
>>> 控制方式

The Control



AC1, AC2 : 輔助電壓 220V±10%
(可訂製 110V±10%)

NO, COM, NC : 異常訊號輸出接點 240V / 5A
提供3A1B之輔助接點



RUNNING : 運轉中輸出接點 240V / 5A

BY PASS (RUN) : 運轉完成後輸出接點

START/STOP : 啟動/停止控制接點

智慧型馬達緩衝器OL系列 Soft Starter OL Series of Smart Motor (With Overload Protection Series) 產品規格選擇 Choice of Specification & Models (無STOP TIME功能)

額定電流 Rated current	額定電壓 Rated voltage					長 L mm	寬 W mm	高 H mm	圖
	208-220VAC	HP	380-440VAC	460-480VAC	HP				
4A			SMC930020-OL	SMC940020-OL	2	145	83	120	圖 (一)
7A	SMC920020-OL	2	SMC930030-OL	SMC940030-OL	3				
10A	SMC920030-OL	3	SMC930050-OL	SMC940050-OL	5				
15A	SMC920050-OL	5	SMC930075-OL	SMC940075-OL	7.5				
22A	SMC920075-OL	7.5	SMC930100-OL	SMC940100-OL	10				
28A	SMC920100-OL	10	SMC930150-OL	SMC940150-OL	15				

上述資料若有變更，恕不另行通知，敬請見諒！All specifications can be modified.

規格選擇注意事項：

- ※ 智慧型緩衝器搭配方式：負載之馬力數及額定電流須在緩衝器涵蓋範圍內。
- ※ 風車、攪拌機、空壓機、鼓風機、粉碎機、輸送機、油壓式工業貨梯、複捲機、萬馬力機、斗升機等產業機械或一小時內啟動次數超過十二次者需升一級使用。
- ※ 球磨機需至少升二級使用。

The choice of Specification :

- ※ Coordination with smart softer : the horsepower and rated current loaded must be in the coverage of softer.
- ※ The level must be upgraded one level to industrial machinery as windmill, mixer, air compressor, blower, grinder, conveyor, hydraulic industrial freight elevator, rewinder, million horsepower machine, bucket elevator, or the machine need to start over 12 times every hour.
- ※ To ball mill, must upgrade 2 levels.



(圖一)



(圖二)