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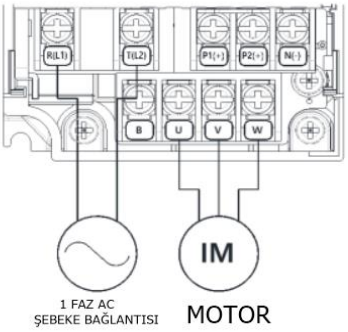
LS ELECTRIC

CİHAZ TİPİ: LS ELECTRIC, S100 - HIZLI DEVREYE ALMA PARAMETRELERİ

	Par. No	Değeri	Birim	Açıklama
	dr 93	1		Parametreleri sıfırla
	dr 92	1		Parametreleri panele kaydet
BASİT FONKSİYONLAR	dr 3	20-60	sn.	Rampa 1 Hızlanma süresi (Motor gücüne göre rampalar artırılmalıdır)
	dr 4	20-60	sn.	Rampa 1 Yavaşlama süresi (Motor gücüne göre rampalar artırılmalıdır)
	dr 6			Kumanda Kaynağı 0=Keypad, 1=Terminal, 2=Haberleşme
	dr 7			Frekans Kaynağı 0= Keypad, 2= V1 Terminal, 4= V2 Terminal, 5= I2 Terminal, 6= Haberleşme, 13= V3 Terminal, 15= V4 Terminal, 16= I4 Terminal
	dr 11	.....	Hz.	JOG frekansı
	dr 12		sn.	JOG hızlanma süresi
	dr 13		sn.	JOG yavaşlama süresi
	dr 18	50	Hz.	Besleme (Base) frekansı
	dr 20	.....	Hz.	Maksimum frekans
	dr 21			Hız gösterge birimi 0= Hz, 1= rpm
	Ad 24			Frekans limitleme , 0= Kapalı, 1= Açık (Min-Maks frekans belirlemek için açık olmalıdır)
	Ad 25		Hz.	Minimum frekans (Asenkron motorlarda düşük devir çalışmak zararlıdır.Min 20Hz önrlr.)
	Ad 26		Hz.	Maksimum frekans
	Ad 50	2		Otomatik Enerji Tasarrufu
	Ad 64			Sürücü soğutma fanı çalışma durumu 0=start komutu gelince, 1= her zaman, 2= sıcaklığa göre
	Pr 4			Yük tipi 0= normal yük, 1= ağır yük
	Pr 5	11		Faz kaybı hatası (Soldaki bit giriş, sağdaki bit çıkış faz kaybını temsil eder)
	Pr 6	10	V.	Faz kaybı hatası vermesi için algılanan voltaj farkı
	Pr 8	1		Otomatik Hata Resetleme Fonksiyonu 0=Kapalı, 1=Açık
	Pr 9	0-10		Otomatik Hata Resetleme Deneme Sayısı (0-10 arası değer girilebilir)
	Pr 10	0.0 - 60.0	sn.	Otomatik Hata Resetleme Denemeleri Arasındaki Süre (Önerilen 5.0 sn.)
	Pr 50	0100		Aşırı akımı engellemek için rampa uzatma fonksiyonu (Çizgi yukarda ise 1, aşağıda ise 0 durumunu temsil eder. Belirtilen 0100 bit durumunu seçiniz)
	Cn 71	b1111		Flying start (dönen motoru yakalama) aktif (Bit durumlarıdır.)
	Cn 72	100	%	Flying start (dönen motoru yakalama) frekans arama akım değeri
ANALOG GİRİŞ	In 8	0	V.	V1 nolu Analog Giriş; minimum voltaj 0V
	In 10	10	V.	V1 nolu Analog Giriş; maksimum voltaj 10V
	In 38	0	V.	V2 nolu Analog Giriş; minimum voltaj 0V
	In 40	10	V.	V2 nolu Analog Giriş; maksimum voltaj 10V
	In 53	4	mA	I2 nolu Analog Giriş; minimum akım
	In 55	20	mA	I2 nolu Analog Giriş; maksimum akım
MOTOR PARAMETRELERİ	bA 7			0= Lineer Eğri
				1= Parabolik Eğri
	bA 10			0= 60 Hz Nominal Motor Frekansı
				1= 50 Hz Nominal Motor Frekansı
	dr 14		Kw.	Nominal motor gücü
	bA 11			Motor Kutup Sayısı
	bA 13	.....	A.	Nominal motor akımı
	bA 15	.....	V.	Nominal Motor Voltajı
	bA 19	.....	V.	Sürücü Besleme Voltajı (Daha doğru motor kontrolu için ölçüm sonucunu yazınız)
	bA 20			1= Otomatik Motor Tanıma (Döndürerek)
				2= Otomatik Motor Tanıma (Döndürmeden)
DİJİTAL GİRİŞ	In 65			Terminal P1 Dijital Giriş: 1 İleri Yön Start
	In 66			Terminal P2 Dijital Giriş: 2 Geri Yön Start
	In 67			Terminal P3 Dijital Giriş: 13 Acil Stop
	In 68			Terminal P4 Dijital Giriş: 3 Hata Reset
	In 69			Terminal P5 Dijital Giriş: 7 Düşük Hız (Speed-L)
	In 70			Terminal P6 Dijital Giriş: 8 Orta Hız (Speed-M)
	In 71			Terminal P7 Dijital Giriş: 9 Yüksek Hız (Speed-H)
				4= Dış Hata
				6= JOG Start
				5= Acil durdurma
				46= İleri JOG
				47= Geri JOG
				51= Yangın Modu (Fire Mod)
Röle İşlevleri	OU 31	Röle-1 İşlevi		14= Çalışıyor (Röle-2 Fabrika Değeri)
	OU 31	Röle-2 İşlevi		15= Duruyor
				22= Sürücü Hazır
				29= Sürücü Hata (Röle-1 Fabrika Değeri)

LS ELECTRIC S100 GÜÇ VE KUMANDA BAĞLANTISI

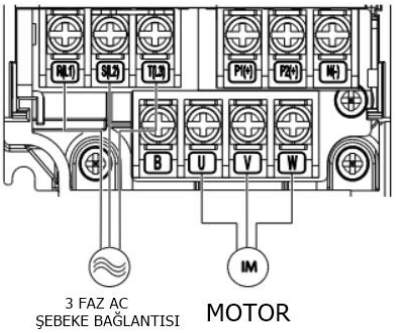
1 FAZ MODEL



1 FAZ AC
ŞEBEKE BAĞLANTISI

MOTOR

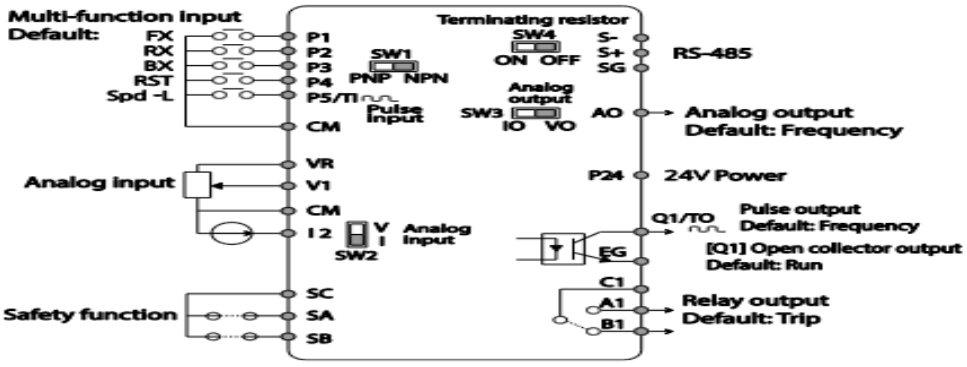
3 FAZ MODEL



3 FAZ AC
ŞEBEKE BAĞLANTISI

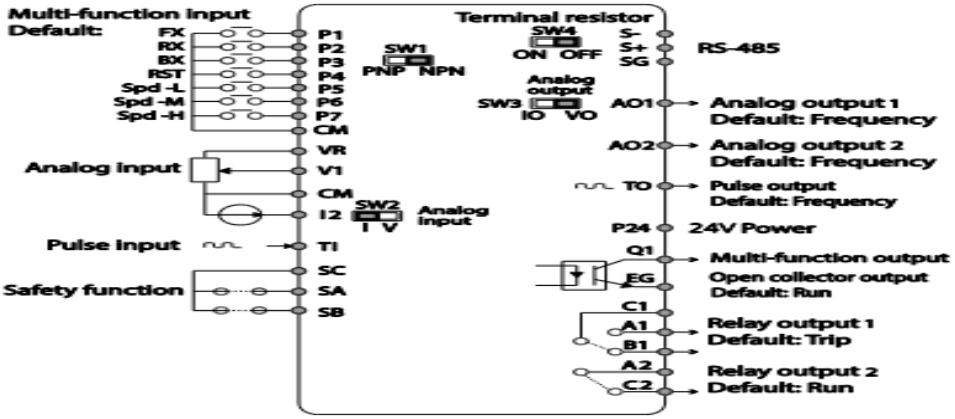
MOTOR

0.4-22kW



<Standard I/O>

30-75kW



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LS ELECTRIC S100 HATA MESAJLARI

9.1.1 Fault Trips

Protection Functions for Output Current and Input Voltage

Keypad Display	LCD Display	Type	Description
OLt	Over Load	Latch	Displayed when the motor overload trip is activated and the actual load level exceeds the set level. Operates when Pr.20 is set to a value other than 0.
ULt	Under Load	Latch	Displayed when the motor underload trip is activated and the actual load level is less than the set level. Operates when Pr.27 is set to a value other than 0.
OCt	Over Current1	Latch	Displayed when inverter output current exceeds 200% of the rated current.

Keypad Display	LCD Display	Type	Description
OuE	Over Voltage	Latch	Displayed when internal DC circuit voltage exceeds the specified value.
LUE	Low Voltage	Level	Displayed when internal DC circuit voltage is less than the specified value.
Lu2	Low Voltage2	Latch	Displayed when internal DC circuit voltage is less than the specified value during inverter operation.
GFt	Ground Trip*	Latch	Displayed when a ground fault trip occurs on the output side of the inverter and causes the current to exceed the specified value. The specified value varies depending on inverter capacity.
EtH	E-Thermal	Latch	Displayed based on inverse time-limit thermal characteristics to prevent motor overheating. Operates when Pr.40 is set to a value other than 0.
POt	Out Phase Open	Latch	Displayed when a 3-phase inverter output has one or more phases in an open circuit condition. Operates when bit 1 of Pr.05 is set to 1.
IPO	In Phase Open	Latch	Displayed when a 3-phase inverter input has one or more phases in an open circuit condition. Operates only when bit 2 of Pr.05 is set to 1.
IOL	Inverter OLT	Latch	Displayed when the inverter has been protected from overload and resultant overheating, based on inverse time-limit thermal characteristics. Allowable overload rates for the inverter are 150% for 1 min and 200% for 4 sec. Protection is based on inverter rated capacity, and may vary depending on the device's capacity.
noH	No Motor Trip	Latch	Displayed when the motor is not connected during inverter operation. Operates when Pr.31 is set to 1.

Keypad Display	LCD Display	Type	Description
OHt	Over Heat	Latch	Displayed when the tempertature of the inverter heat sink exceeds the specified value.
OC2	Over Current2	Latch	Displayed when the DC circuit in the inverter detects a specified level of excessive, short circuit current.
Et	External Trip	Latch	Displayed when an external fault signal is provided by the multi-function terminal. Set one of the multi-function input terminals at In.65-71 to 4 (External Trip) to enable external trip.

Keypad Display	LCD Display	Type	Description
bA	BX	Level	Displayed when the inverter output is blocked by a signal provided from the multi-function terminal. Set one of the multi-function input terminals at In.65-71 to 5 (BX) to enable input block function.
HWt	H/W-Diag	Fatal	Displayed when an error is detected in the memory (EEPRom), analog-digital converter output (ADC Off Set), or CPU watchdog (Watch Dog-1, Watch Dog-2). EEP Err: An error in reading/writing parameters due to keypad or memory (EEPRom) fault. ADC Off Set: An error in the current sensing circuit (U/V/W terminal, current sensor, etc.).
ntC	NTC Open	Latch	Displayed when an error is detected in the temperature sensor of the Insulated Gate Bipolar Transistor (IGBT).
FAn	Fan Trip	Latch	Displayed when an error is detected in the cooling fan. Set Pr.79 to 0 to activate fan trip (for models below 22kW capacity).
PId	Pre-PID Fail	Latch	Displayed when pre-PID is operating with functions set at AP.34–AP.36. A fault trip occurs when a controlled variable (PID feedback) is measured below the set value and the low feedback continues, as it is treated as a load fault.
bAr	Ext-Brake	Latch	Operates when the external brake signal is provided by the multi-function terminal. Occurs when the inverter output starting current remains below the set value at Ad.41. Set either OU.31 or OU.32 to 35 (BR Control).
SFA SFb	Safety A(B) Err	Latch	Displayed when at least one of the two safety input signals is off.

Keypad Display	LCD Display	Type	Description
LCr	Lost Command	Level	Displayed when a frequency or operation command error is detected during inverter operation by controllers other than the keypad (e.g., using a terminal block and a communication mode). Activate by setting Pr.12 to any value other than 0.
IOt HOLd	IO Board Trip	Latch	Displayed when the I/O board or external communication card is not connected to the inverter or there is a bad connection.

Keypad Display	LCD Display	Type	Description
ErrC			Displayed when the HOLd error code continues for more than 5 sec. ('Errc' -> '-rrc' -> E-rc' -> 'Er-c' -> 'Err-' -> '- -rc' -> 'Er- -' -> '- - - -'-> 'Errc' - > …)
PAr	ParaWrite Trip	Latch	Displayed when communication fails during parameter writing. Occurs when using an LCD keypad due to a control cable fault or a bad connection.
OPt	Option Trip-1	Latch	Displayed when a communication error is detected between the inverter and the communication board. Occurs when the communication option card is installed.

9.1.2 Warning Messages

Keypad Display	LCD Display	Description
OL'	Over Load	Displayed when the motor is overloaded. Operates when Pr.17 is set to 1. To operate, select 5. Set the digital output terminal or relay (OU.31 or OU.33) to 5 (Over Load) to receive overload warning output signals.
UL'	Under Load	Displayed when the motor is underloaded. Operates when Pr.25 is set to 1. Set the digital output terminal or relay (OU.31 or OU.33) to 7 (Under Load) to receive underload warning output signals.
IOL'	INV Over Load	Displayed when the overload time equivalent to 60% of the inverter overheat protection (inverter IOLT) level, is accumulated. Set the digital output terminal or relay (OU.31 or OU.33) to 6 (IOL) to receive inverter overload warning output signals.
LC'	Lost Command	Lost command warning alarm occurs even with Pr.12 set to 0. The warning alarm occurs based on the condition set at Pr.13- 15. Set the digital output terminal or relay (OU.31 or OU.33) to 13 (Lost Command) to receive lost command warning output signals. If the communication settings and status are not suitable for P2P, a Lost Command alarm occurs.
FAn'	Fan Warning	Displayed when an error is detected from the cooling fan while Pr.79 is set to 1. Set the digital output terminal or relay (OU.31 or OU.33) to 8 (Fan Warning) to receive fan warning output signals
ErAn	Fan Exchange	An alarm occurs when the value set at PRT-86 is less than the value set at PRT-87. To receive fan exchange output signals, set the digital output terminal or relay (OUT-31 or OUT-33) to 37 (Fan Exchange).
db'	DB Warn %ED	Displayed when the DB resistor usage rate exceeds the set value. Set the detection level at Pr.66.

Keypad Display	LCD Display	Description
trEr	Retry Tr Tune	Tr tune error warning alarm is activated when Dr.9 is set to 4. The warning alarm occurs when the motor's rotor time constant (Tr) is either too low or too high.
SLP	PID Sleep	When the PID operation enters sleep mode, a warning occurs.