

CİHAZ TİPİ: LS ELECTRIC, İS7- HIZLI DEVREYE ALMA PARAMETRELERİ			
Par. No	Değeri	Birim	Açıklama
CNF-40	1		Parametreleri sıfırlama
Ana ekranda MODE tuşuna 2 kere basınca CNF grubuna gelinir			
DRV-03	20-60	sn.	Rampa 1 Hızlanma süresi (Motor gücüne göre rampalar artırılmalıdır)
DRV-04	20-60	sn.	Rampa 1 Yavaşlama süresi (Motor gücüne göre rampalar artırılmalıdır)
DRV-06			Kumanda Kaynağı 0=Keypad, 1=Terminal, 3=Haberleşme
DRV-07			Frekans Kaynağı 0= Keypad, 2= V1, 3=I1, 6= Haberleşme
Mode tuşuna basınca parametre grubu açılır , grup içerisinde yukarı aşağı ok tuşlarıyla,grup başlıkları için sağ sol ok tuşlarıyla			
bA-7			0= Lineer Eğri 1= Parabolik Eğri
bA-10			0= 60 Hz Nominal Motor Frekansı 1= 50 Hz Nominal Motor Frekansı
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 kontrolü için ölçüm sonucunu yazınız)
bA-20			1= Otomatik Motor Tanıma (Döndürerek) 2= Otomatik Motor Tanıma (Döndürmeden)
dr 14		Kw.	Nominal motor gücü
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
Ad-08			0= Rampalı duruş, 2= Serbest duruş
Ad-09	2		1= İleri dönüş engelleme, 2= Geri dönüş engelleme
Ad-10	1		Enerji kesintisinden sonra otomatik çalışma, 0=kapalı, 1=açık
Ad-24	1		Frekans limitleme , 0= Kapalı, 1= Açık (Min-Maks frekans belirlemek için açık olmalıdır)
Ad-25	20	Hz.	Minimum frekans (Asenkron motorlarda düşük devir çalışmak zararlıdır.Min 20Hz önlr.)
Ad-26	50	Hz.	Maksimum frekans
Ad-50	2		Otomatik Enerji Tasarrufu, 0=kapalı, 2=otomatik (SERVİSE DANIŞMADAN AÇMAYINIZ)
Ad-64	2		Sürücü soğutma fanı çalışma durumu 0=start komutu gelince, 1= her zaman, 2= sıcaklığa göre
Pr-4	0		0= Normal şart, 1=Ağır şart
Pr-5	01		Faz kaybı hatası (Soldaki bit giriş, sağdaki bit çıkış faz kaybını temsil eder)
Pr-8	1		Otomatik Hata Resetleme Fonksiyonu 00=Kapalı, 11=Açık
Pr-9	0-10	5	Otomatik Hata Resetleme Deneme Sayısı (0-10 arası değer girilebilir)
Pr-10	0.0 - 60.0	5.0sn.	Otomatik Hata Resetleme Denemeleri Arasındaki Süre (Önerilen 5.0 sn.)
Pr-50	0111		Aşırı akımı engellemek için rampa uzatma fonksiyonu (Çizgi yukarda ise 1, aşağıda ise 0 durumunu temsil eder. Belirtilen 0100 bit durumunu seçiniz)
Cn-70	1		Flying start (dönen motoru yakalama) çalışma modu.
Cn-71	b1111		Flying start (dönen motoru yakalama) aktif (Bit durumlarıdır.)
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-23	4	mA	I1 nolu Analog Giriş; minimum akım 4 mA
In-25			I1 nolu Analog Giriş; maksimum akım 20 mA
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: 5 Acil Stop (NC bekler)
In-68			Terminal P4 Dijital Giriş: 3 Hata Reset
In-69			Terminal P5 Dijital Giriş: 46 İleri JOG Komutu
Röle İşlevleri			
OU-31	Röle-1 İşlevi		29= Sürücü Hata (Röle-1 Fabrika Değeri)
OU-33	Röle-2 İşlevi		14= Çalışıyor (Röle-2 Fabrika Değeri)
			7= Düşük yük
			22= Sürücü hazır
			38= Yangın Modu (Fire Mod)
			35= Mek. Fren Kontrol

Haberleşme	COM-1	İstasyon No	İstasyon No
	COM-2	Protokol	0=Modbus , 1= ModbusASCII 2=LS INV 485
	COM-3	Haberleşme Hızı	0= 1200, 1= 2400, 2= 4800 ,3= 9600, 19200, 5=38400,6=56kbps,7=115kbps 4=
	COM-4	Parite	0= 8None1, 1=8None2 , 2=8Even1, 3=8Odd1

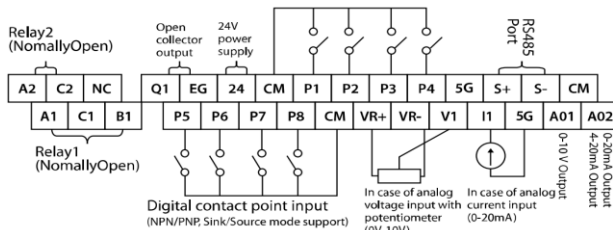
LS ELECTRIC İS7 GÜÇ VE KUMANDA BAĞLANTISI

Parametre Gruplarının Dijital Gösterimi

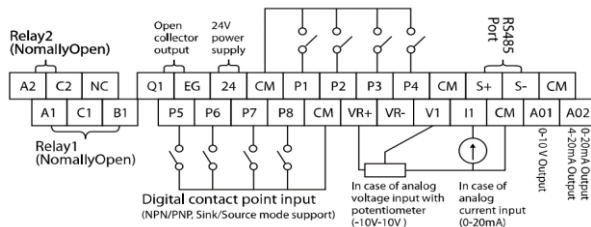
Grup	Keypad Display
Drive (DRV)	<i>dr</i>
Basit (BAS)	<i>BR</i>
Gelişmiş (ADV)	<i>Rd</i>
Kontrol (CON)	<i>cn</i>
Giriş Terminal (IN)	<i>in</i>
Çıkış Terminal (OUT)	<i>ou</i>
Haberleşme (COM)	<i>cn</i>
Uygulama (APP)	<i>RP</i>
Koruma (PRT)	<i>Pr</i>
Motor 2 (M2)	<i>M2</i>

0.75–22 kW (Basic I/O)

Wiring Examples



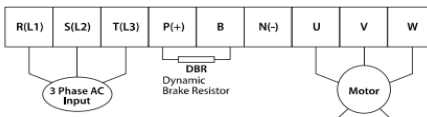
30–375 kW (control terminal block)



0.75–22 kW (200 V/400 V)

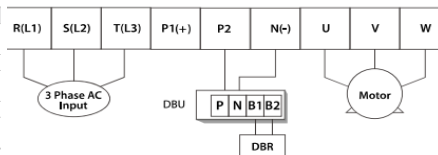
Terminal Symbol	Terminal Name	Description
R (L1), S (L2), T (L3)	AC power supply input terminals	AC input terminals
P (+)	(+) DC voltage terminal	(+) DC link voltage terminal
N (-)	(-) DC voltage terminal	(-) DC link voltage terminal.
P (+), B	Dynamic brake resistor terminals	Dynamic brake resistor terminals
U, V, W	Inverter output terminals	Output terminals to a 3-phase induction motor

Cable connection for utilizing the built-in dynamic braking unit



30–75 kW (200 V/400 V)

Terminal Symbol	Terminal Name	Description
R (L1), S (L2), T (L3)	AC power supply input terminals	AC input terminals
P1 (+)	(+) DC voltage terminal	(+) DC link voltage terminal
P2, N (-)	Dynamic brake resistor terminal / DC common*	Dynamic brake resistor terminals
N (-)	(-) DC voltage terminal	(-) DC link voltage terminal
U, V, W	Inverter output terminals	Output terminals to a 3-phase induction motor



LS ELECTRIC İS7 HATA MESAJLARI

Type	Category	Details	Type	Category	Details
Over Load	Latch	Displayed when the motor overload trip is activated and the actual load level exceeds the set level. Operates when PRT-20 is set to any value other than "0".	Fuse Open	Latch	Displayed when the inverter DC fuse is exposed to an overcurrent above 30 kW.
			Over Heat	Latch	Displayed when the temperature of the inverter heat sink exceeds the specified value.
Under Load	Latch	Displayed when the motor underload trip is activated and the actual load level is less than the set level. Operates when PRT-27 is set to any value other than "0".	Over Current2	Latch	Displayed when the DC circuit in the inverter detects a specified level of excessive, short circuit current.
Over Current1	Latch	Displayed when the inverter output current exceeds 200% of the rated current.	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-65-72 to "3 (External Trip)" to enable external trip.
Over Voltage	Latch	Displayed when the internal DC circuit voltage exceeds the specified value.		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 "4 (BX)" to enable the input block function.
Low Voltage	Level	Displayed when the internal DC circuit voltage is less than the specified value.	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 a keypad or memory (EEPROM) fault.
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 the inverter capacity.			
E-Thermal	Latch	Displayed based on inverse time limit thermal characteristics to prevent motor overheating. Operates when PRT-40 is set to any value other than "0".	Type	Category	Details
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 PRT-05 is set to "1".	ADC Off Set	Latch	An error in the current sensing circuit (U/V/W terminal, current sensor, etc.).
In Phase	Latch	Displayed when a 3-phase inverter input has one or more phases in an open circuit condition. Operates only when bit 2 of PRT-05 is set to "1".	Gate Pwr Loss	Latch	An interruption in the supply of power to the IGBT Gate of a product rated 30 kW or higher (when a fault occurs in a 22 kW-rated product, the capacity settings should be checked).
Open	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 the inverter rated capacity, and may vary depending on the device's capacity.	NTC Open	Latch	Displayed when an error is detected in the temperature sensor of the Insulated Gate Bipolar Transistor (IGBT).
			IP54 FAN Trip	Latch	Displayed when the IP54 product detects an internal circulation at the cooling fan.
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 the inverter rated capacity, and may vary depending on the device's capacity.	Thermal Trip	Latch	Displayed when the resistance value exceeds the prescribed value after the external temperature sensor is connected to the terminal block. Operates when PRT-34 is set to any value other than "0".
			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.
Low Voltage2	Latch	Displayed when the internal DC circuit voltage is less than the specified value during inverter operation.	Over Speed Trip	Latch	Displayed when the motor speed exceeds the overspeed detection level. Set the detection level at PRT-70.
Safety Opt Err	Latch	Displayed when a safety feature is activated to block the inverter output during an emergency.	Dev Speed Trip	Latch	Displayed when the speed that received feedback from the encoder exceeds the set variation value. Operates when PRT-73 is set to "1".
			Encoder Trip	Latch	Displayed when PRT-77 Enc Wire Check is set to "1" and an abnormality is detected for the set period of time.
Lost Keypad	Level	Displayed when operating commands come from the keypad or there is any problem with the communication between the keypad and inverter's main body in Keypad JOG mode. Operates when PRT-11 is set to any value other than "0" (occurs 2 seconds after the communication is interrupted).	Pre-PID Fail	Latch	Displayed when pre-PID is operating with functions set at APP-34-36. 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.
			Ext-Brake	Latch	When Control Mode (DRV-09) is V/F or Sensorless1 or Sensorless2: The trip occurs when OUT-31-32 is set to BR control and the output current is lower than ADV-41 value (% for BAS-13) for about 10 seconds.
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). Set PRT-12 to any value other than "0".	Type	Category	Details
			Remarks	When Control Mode (DRV-09) is Vector: The trip occurs when OUT-31-32 is set to BR Control and the current is lower than half of the BAS-14 value.	
Option Trip-1	Latch	Displayed when the extension module is removed from option slot No. 1 after it was installed while the inverter was turned on, or when communication is not available with the inverter.			
Option Trip-2	Latch	Displayed when the extension module is removed from option slot No. 2 after it was installed during power supply, or when communication is not available with the inverter.			
Option Trip-3	Latch	Displayed when the extension module is removed from option slot No. 3 after it was installed during power supply, or when communication is not available with the inverter.			
I/O Board Trip	Latch	Displayed when the basic and insulated I/O boards are disconnected or have a connection fault.			
Type	Description				
Over Load	Displayed when the motor is overloaded. Operates when PRT-17 is set to "1". To operate, select "4 (Over Load)". Set the digital output terminal or relay (OUT31-33) to "4 (Over Load)" to receive overload warning output signals.				
Under Load	Displayed when the motor is underloaded. Operates when PRT-25 is set to "1". Set the digital output terminal or relay (OUT31-33) to "6 (Under Load)" to receive underload warning output signals.				
Inv Over Load	Displayed when the accumulated overload time is equivalent to 60% of the inverter overheat protection (inverter IOLT) level. Set the digital output terminal or relay (OUT31-33) to "5 (IOL)" to receive inverter overload warning output signals.				
Lost Command	The Lost Command warning alarm occurs even when PRT-12 is set to "0". The warning alarm occurs based on the condition set at PRT-13-15. Set the digital output terminal or relay (OUT31-33) to "12 (Lost Command)" to receive lost command warning output signals.				
Fan Warning	Displayed when an error is detected from the cooling fan while PRT-79 is set to "1". Set the digital output terminal or relay (OUT31-33) to "8 (Fan Warning)" to receive fan warning output signals.				
DB Warn %ED	Displayed when the DB resistor usage rate exceeds the set value. Set the detection level at PRT-66.				
Enc Conn Check	Displayed when "3 (Enc Test)" is set at BAS-20 (Auto Tuning) and no signal is input during the encoder test. Set the ENC Tune at OUT31-33 to release a signal.				
Enc Dir Check	Displayed when "3 (Enc Test)" is set at BAS-20 (Auto Tuning) and the settings for A and B encoder phases are changed or are the opposite during the encoder test. Set the ENC Dir at OUT31-33 to release a signal.				

Type	Description	
Lost Keypad	Displayed when operating commands come from the keypad or there is any problem with the communication between the keypad and inverter's main body in Keypad JOG mode after setting PRT-11 (Lost KPD Mode) to "0". Set the Lost Keypad (29) at OUT31-33.	
Check Line PLZ	Displayed when there is any problem with communication between the keypad and the iS7 Control CPU (control connection cables).	
Fire Mode	Displayed when the fire function is activated. If a contact signal output is required, set the Fire Mode (37) at OUT31-33.	
PID Sleep	Displayed when the PID Sleep mode is activated. An alarm is generated to distinguish PID sleep mode from operation stop status.	
AUX Power On	Displayed when the AUX Power option is activated. When the inverter main power is Off, a low voltage trip does not occur and an auxiliary power option alarm occurs.	
Type	Problem	Solution
	The mechanical brake of the motor is operating too fast.	Check the mechanical brake.
Over Voltage	The deceleration time is too short for the load inertia (GD2).	Increase the deceleration time.
	A generative load occurs at the inverter output.	Use the braking unit.
	The input voltage is too high.	Check if the input voltage is above the specified value.
	The set value for electronic thermal protection is too low.	Set an appropriate electronic thermal level.
Low Voltage /Low Voltage2	The inverter has been operated at a low speed for an extended period.	Replace the motor with a model that supplies extra power to the cooling fan.
	The input voltage is too low.	Check if the input voltage is below the specified value.
	A load greater than the power capacity is connected to the system (e.g. a welder, direct motor connection, etc.)	Increase the power capacity.
Ground Trip	The magnetic contactor connected to the power source has a faulty connection.	Replace the magnetic contactor.
	A ground fault has occurred in the inverter output wiring.	Check the output wiring.
E-Thermal	The motor insulation is damaged.	Replace the motor.
	The motor has overheated.	Reduce the load or operation frequency.
Out Phase Open	The inverter load is greater than the rated capacity.	Replace the inverter with a model that has increased capacity.
	The magnetic contactor on the output side has a connection fault.	Check the magnetic contactor on the output side.
In Phase Open	The output wiring is faulty.	Check the output wiring.
	The magnetic contactor on the input side has a connection fault.	Check the magnetic contactor on the input side.
	The input wiring is faulty.	Check the input wiring.
	Type	Problem	Solution
Inverter OLT	The DC link capacitor needs to be replaced.	Replace the DC link capacitor. Contact the retailer or the LSELECTRIC Customer Support.
	The load is greater than the rated motor capacity.	Replace the motor and inverter with models that have increased capacity.
	The torque boost level is too high.	Reduce the torque boost level.
Over Heat	There is a problem with the cooling system.	Check if a foreign object is obstructing the air inlet, outlet, or vent.
	The inverter cooling fan has been operating for an extended period.	Replace the cooling fan.
Over Current2	The ambient temperature is too high.	Keep the ambient temperature below 50°C.
	The output wiring has short-circuited.	Check the output wiring.
NTC Open	There is a fault with the electronic semiconductor (IGBT).	Do not operate the inverter. Contact the retailer or the LSELECTRIC Customer Support.
	The ambient temperature is too low.	Keep the ambient temperature above 10°C.
FAN Trip	There is a fault with the internal temperature sensor.	Contact the retailer or the LSELECTRIC Customer Support.
	There is a foreign object in the inverter vent where the fan is located.	Remove the foreign object from the air inlet or outlet.
	The cooling fan needs to be replaced.	Replace the cooling fan.
IP54 FAN Trip	The fan connector is not connected.	Connect the fan connector.
	The power connector for the internal fan PCB board is not connected.	Connect the power connector for the internal fan PCB board.
No Motor Trip	The cooling fan needs to be replaced.	Replace the cooling fan.
	The motor is not connected to the inverter output.	Check the wiring connections.
	The current level for trip detection is not set properly.	Check the values of both BAS-13 (Rated current) and PRT-32 (No Motor Level).