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0.75 ~ 18.5 kW [200V] / 0.75~90kW [400V]

AC Variable Speed Drive

H100 Disconnect Switch Option Installation Guide

Safety Instructions

Read this manual carefully before installing, wiring, operating, servicing or inspecting this equipr Keep this manual within easy reach for guick

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shock. ① Caution

Do not modify the interior workings of the inverter. Doing so will void the warranty. • The inverter is designed for 3-phase motor operation. Do not use the inverter to operate a single phase motor.

· Do not place heavy objects on top of electric cables. Doing so may damage the cable and result in an electric shock.

2. Introduction

2.1 Purpose of the Manual • This instruction manual provides information for safe installation, and commissioning of the Disconnect Switch Option.

• Read and follow the instruction manual in order to use the Disconnect Switch Option safely and professionally, and pay particular attention to the safety instructions and general warnings. Keep this instruction manual available with the Disconnect Switch Option Series at all times.

Detailed informations for each parameter is on technical manual.

2.2 Product Identification

 This instruction Product name and specifications are detailed on the rating plate. Check the rating plate before installing the product and make sure that the product meets your requirements. For more detailed product specifications.

Note

Check the product name, open the packaging, and then confirm that the product is free from defects. Contact your supplier if you have any issues or questions about your product.

2.3 Part Names

• The illustration below displays part names.

POWER SWITCH GROUND TERMINAL

2.4 Block Diagram



3. Installation Instruction

3.1 Installation Considerations

• The table below details the ideal operation and installation conditions for the

li iverter.	
Items	Description
Ambient Temperature	-10°C–40°C (14°F –104°F)
Ambient Humidity	90% relative humidity (no condensation)
Storage Temperature	-20°C–65°C (-4°F –149°F)
Environmental	An environment free from corrosive or flammable
Factors	gases, oil residue or dust
Altitude/Vibration	Lower than 3,280 ft (1,000 m) above sea level/less than 0.6 G (5.9 m/ sec ²)





Inite	•	mm
UTILS	•	

Voltage	kW	W 1	W2	W3	H1	H2	H3	H4	H5	D1	D2	Ф
	DISCONNECT MODULE 0.75kW-2	160	137	110	232	477	216.5	460.5	10.5	181	206.8	5
	DISCONNECT MODULE 1.5kW-2	160	137	110	232	477	216.5	460.5	10.5	181	206.8	5
	DISCONNECT MODULE 2.2kW-2	160	137	110	232	477	216.5	460.5	10.5	181	206.8	5
	DISCONNECT MODULE 3.7kW-2	160	137	110	232	477	216.5	460.5	10.5	181	206.8	5
3-phase	DISCONNECT MODULE 5.5kW-2	160	137	110	232	477	216.5	460.5	10.5	181	206.8	5
200 V	DISCONNECT MODULE 7.5kW-2	160	137	110	232	477	216.5	460.5	10.5	181	206.8	5
	DISCONNECT MODULE 11kW-2	160	137	110	232	477	216.5	460.5	10.5	181	206.8	5
	DISCONNECT MODULE 15kW-2	180	157	157	290	585	273.7	567.7	11.3	205.3	233.2	5
	DISCONNECT MODULE 18.5kW-2	220	193.8	193.8	350	663	331	644	13	223.2	233.2	6
	DISCONNECT MODULE 0.75kW-4	160	137	110	232	567	216.5	550.5	10.5	181	233.2	5
	DISCONNECT MODULE 1.5kW-4	160	137	110	232	567	216.5	550.5	10.5	181	233.2	5
	DISCONNECT MODULE 2.2kW-4	160	137	110	232	567	216.5	550.5	10.5	181	233.2	5
	DISCONNECT MODULE 3.7kW-4	160	137	110	232	567	216.5	550.5	10.5	181	233.2	5
	DISCONNECT MODULE 5.5kW-4	160	137	110	232	567	216.5	550.5	10.5	181	233.2	5
	DISCONNECT MODULE 7.5kW-4	160	137	110	232	567	216.5	550.5	10.5	181	233.2	5
	DISCONNECT MODULE 11kW-4	160	137	110	232	567	216.5	550.5	10.5	181	233.2	5
3-phase	DISCONNECT MODULE 15kW-4	180	157	157	290	625	273.7	607.7	11.3	205.3	233.2	5
400 V	DISCONNECT MODULE 18.5kW-4	180	157	157	290	625	273.7	607.7	11.3	205.3	233.2	5
	DISCONNECT MODULE 22kW-4	220	193.8	193.8	350	718	331	699	13	223.2	233.2	6
	DISCONNECT MODULE 30kW-4	220	193.8	193.8	350	718	331	699	13	223.2	233.2	6
	DISCONNECT MODULE 37kW-4	275	232	232	450	830.5	428.5	809	14	284	284	7
	DISCONNECT MODULE 45kW-4	325	282	282	510	910.5	486.5	887	16	284	284	7
	DISCONNECT MODULE 55kW-4	325	282	282	510	910.5	486.5	887	16	284	284	7
	DISCONNECT MODULE 75kW-4	325	275	275	550	980	524.5	954.5	16	309	309	9
	DISCONNECT MODULE 90kW-4	325	275	275	550	980	524.5	954.5	16	309	309	9

3.3 Selecting and Preparing a Site for Installation

• The Disconnect Switch Option must be installed on a wall that can support weight.

• The location must be free from vibration. Vibration can adversely affect the operation of the Disconnect Switch Option.

• The Disconnect Switch Option can become very hot during operation. Install the

This operation manual is intended for users with basic knowledge of electricity and electric devices 1. Safety Information

1 1 Safety symbols in this manual

A Danger	Indicates an imminently hazardous situation which, if no avoided, will result in severe injury or death.				
A Warning	Indicates a potentially hazardous situation which, if no avoided, could result in injury or death.				
① Caution	Indicates a potentially hazardous situation that, if not avoided could result in minor injury or property damage.				

1.2 Safety information

A Danger

• Do not open the cover of the equipment while it is on or operating. Likewise, do not operate the Disconnect Option while the cover is open. Exposure of high voltage terminals or charging area to the external environment may result in an electric shock. Do not remove any covers or touch the electrical contacts on the product when the power is on or during operation. Doing so may result in serious injury, death, or serious property damage.

• Do not open the cover of the equipment even when the power supply to the inverter has been turned off unless it is necessary for maintenance or regular inspection. Opening the cover may result in an electric shock even when the power supply is off.

• The equipment may hold charge long after the power supply has been turned off. Use a multi-meter to make sure that there is no voltage before working on the inverter, Disconnect Option.

\land Warning

This equipment must be grounded for safe and proper operation.

• Do not supply power to a faulty Disconnect Option. If you find that the Disconnect Option is faulty, disconnect the power supply and have the Disconnect Option professionally repaired.

• The Disconnect Option becomes hot during operation. Avoid touching the Disconnect Option until it has cooled to avoid burns.

• Do not allow foreign objects, such as screws, metal chips, debris, water, or oil to get inside the equipment. Allowing foreign objects inside the inverter may cause the inverter to malfunction or result in a fire.

• Do not operate the equipment with wet hands. Doing so may result in electric

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Disconnect Switch Option on a surface that is fire-resistant or flame-retardant and with sufficient clearance around the Disconnect Switch Option to allow air to circulate. The illustrations below detail the required installation clearances. · Ensure sufficient air circulation is provided around the Disconnect Switch Option when it is installed. If the Disconnect Switch Option is to be installed inside a panel, enclosure, or cabinet rack, carefully consider the position of the inverter's cooling fan and the ventilation louver. The cooling fan must be positioned to efficiently transfer the heat generated by the operation of the Disconnect Switch Option

3.4 Cable Selection and Cable Wiring

· Ensure When you install power and signal cables in the terminal blocks, only use cables that meet the required specification for the safe and reliable operation of the product. Refer to the following information to assist you with cable selection.

Note

 Class 3 grounding is required. Resistance to ground must be < 100Ω. ▲ Warning

· Install ground connections for the inverter and the motor by following the correct specifications to ensure safe and accurate operation. Using the inverter and the motor without the specified grounding connections may result in electric shock.

① Caution

• Tighten terminal screws to their specified torque. Loose terminal screws may allow the cables to disconnect and cause short circuit or inverter failure. Over tightening terminal screws may damage the terminals and cause short circuits and malfunctions.

Use copper cables rated for 600V, 75°C for power terminal wiring.

Use copper cables rated for 300V. 75°C for control terminal wiring.

·When making wiring connections at the power terminals, do not make a bi-wired connection to a single terminal.

• Power supply cables must be connected to the R and T terminals. Connecting power cables to the U, V, and W terminals will cause internal damage to the inverter. Connect motors to the U, V, and W terminals. Phase sequence arrangement is not necessary

		Groun	d Wire	Power Wire		
	Load (kW)	2		mm ²	AWG	
		mm²	AWG	R/S/T	R/S/T	
	0.75		12	1.5		
	1.5	- 3.5			16	
	2.2					
	3.7			2.5	14	
3-Phase	5.5		10	4	12	
200 V	7.5	10		6	10	
	11			10	8	
	15			16	6	
	18.5	14	0	25	4	
	0.75	2	14	1.5	16	
	1.5					
	2.2					
	3.7					
	5.5		12	2.5	14	
	7.5	4		4	12	
	11			4	12	
3-Phase	15	16	0	6	10	
400 V	18.5	10	9	16	6	
	22	14	6	16	6	
	30	14	0	25	4	
	37			25	4	
	45	25	4	25	4	
	55			50	1/0	
	75	20	0	70	1/0	
	90	30	2	70	1/0	

3.5 Peripheral Devices Compatible Circuit Breaker Models (manufactured by LSIS)

Load (kW)		Model	Rated Current		
	0.75	MMS-32H,8A,LSIS	8A		
3-Phase	1.5	MMS-32H,13A,LSIS	13A		
	2.2	MMS-32H,17A,LSIS	17A		
	3.7	MMS-32H,22A,LSIS	22A		
	5.5	MMS-32H,32A,LSIS	32A		
200 V	7.5	MMS-32H,40A,LSIS	40A		
	11	MMS-63H,50A,LSIS	50A		
	15	MMS-100H,75A,LSIS	75A		
	18.5	MMS-100H,90A,LSIS	90A		
	0.75				
	1.5		40A		
	2.2				
	3.7				
	5.5	UTS150LI FTU 40A 3P LL UL			
	7.5				
	11				
3-Phase	15				
400 V	18.5	UTS150LT FTU 50A 3P LL UL	50A		
	22	UTS150LT FTU 60A 3P LL UL	60A		
	30	UTS150LT FTU 80A 3P LL UL	80A		
	37	UTS150LT ATU 100A 3P LL UL	100A		
	45	UTS150LT ATU 125A 3P LL UL	125A		
	55	UTS150LT ATU 150A 3P LL UL	L 150A		
	75	UTS250LT FTU 175A 3P LL UL	175A		
	90	UTS250LT FTU 225A 3P LL UL	225A		

• Maximum allowed prospective short-circuit current at the input power connection is defined in IEC 60439-1 as 100 kA. LSLV-H100 is suitable for use in a circuit capable of delivering not more than 100kA RMS at the drive's maximum rated voltage, depending on the selected MCCB.

3.6 Installation and Cable Wiring

Maximum Refer to "2.3 Cable Wiring"in the LSLV-H100 User Manual. All requirements are same as LSLV-H100 products.

1 Prepare H100 products of the same capacity for installation of Disconnect Option



2 Remove the front cover and bracket of the H100. Remove screw on the ground bar.(screw 2ea)



3 Remove the screw from the Disconnect Switch option.(screw 2ea) Put the product in front of H100.



4 Open the cover for the Disconnect Switch option. Connect the cable and connection screws between the Disconnect Switch option and H100. The cable is included with the Disconnect Switch option. Determine the lug size of the input cable connecting to the MCCB and MMS by referring to the MCCB and MMS manual enclosed with the product.



5

6 Reassemble the Disconnect Switch Option.(Screw 2ea)



7 Operate the switch to apply power to the inverter.





4. Product Warranty

Warranty Information Fill in this warranty information form and keep this page for future reference or when warranty service may be required.

Product Name	LSIS Standard	Date of Installation
Model Name	Disconnect Switch Option	Warranty Period
	Name (or company)	
Customer Info	Address	
	Contact Info.	
	Name	
Retailer Info	Address	
	Contact info.	

Warranty Period

The product warranty covers product malfunctions, under normal operating conditions, for 12 months from the date of installation. If the date of installation is unknown, the product warranty is valid for 18 months from the date of manufacturing. Please note that the product warranty terms may vary depending on purchase or installation contracts.

Warranty Service Information

During the product warranty period, warranty service (free of charge) is provided for product malfunctions caused under normal operating conditions. For warranty service, contact an official LSIS agent or service center.

Non-Warranty Service

A service fee will be incurred for malfunctions in the following cases:

- intentional abuse or negligence
- power supply problems or from other appliances being connected to the product
- acts of nature (fire, flood, earthquake, gas accidents, etc.)
- modifications or repair by unauthorized persons
- missing authentic LSIS rating plates

expired warranty period Visit Our Website

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