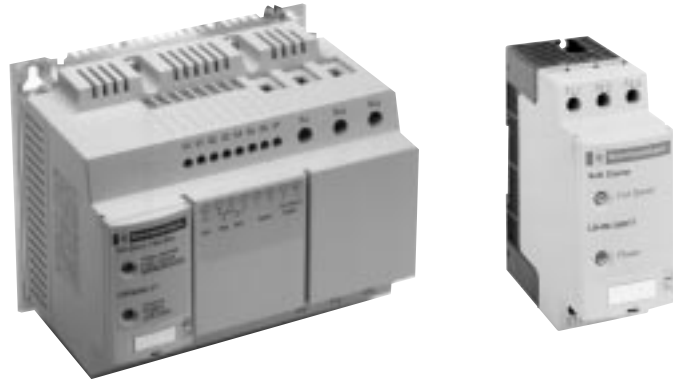


# LH4N

## Modular Soft Starts



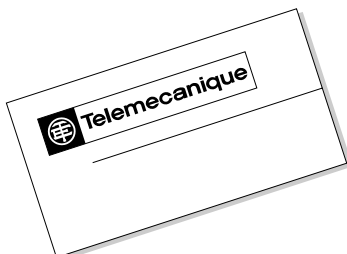
The LH4N modular soft start provides reduced voltage and starting torque in a simple compact package that is ideal for OEM applications or for retrofit of full voltage starters. When the LH4N is combined with Telemecanique or Square D brand contactors and starters, you have a simple, reliable solution from the world's leading supplier of motor starters.

### Features

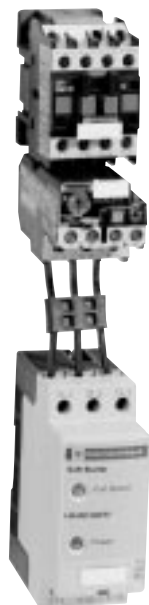
- Affordable solid state reduced voltage starting
  - Reduced starting torque for smooth acceleration
  - Reduced starting current (LH4-N2) to reduce capacity requirements
  - Basic features for simple, low HP applications
- Simple installation
  - LH4-N1 requires no control wiring – 3 wires in / 3 wires out to the motor
  - Front panel potentiometers for quick ramp adjustment
  - DIN rail mountable (up to 25 amps)
  - Internal bypass after start up minimizes heat loss
- Compact package
- Ideal for high density control panels
- Status indication
  - LED indication of power on and up to speed
  - Seal in / fault relay for isolation contactor integration
  - Add on auxiliary contacts on devices above 30 amps
- Global acceptance and availability
  - Designed to meet international standards
  - UL listed, CSA approved, carries CE mark
  - Available in over 160 countries through Groupe Schneider's global distribution

### Product Range

- LH4-N1 Soft start only
  - 6 to 25 amps - 15HP at 480 Vac
  - Single or three phase motor control
- LH4-N2 Soft start / soft stop
  - 6 to 85 amps - 60 HP at 480 Vac
  - Three phase motor control only



**SQUARE D**  
GROUPE SCHNEIDER



LH4N soft starts provide gradual, smooth starting of single phase and three phase squirrel cage motors. Its modular design is intended for use downstream of an electromechanical start for reduction of the mechanical jolts, which may occur when started across the line.

Designed for simple installation and compact packaging, the LH4N soft start is available in two configurations:

- **LH4-N1** can be used with single or three phase motors where a simple voltage ramp is required to reduce mechanical wear and increase process performance. The compact package (45mm x 110 mm) is a snap to install. No time consuming control wiring is required. The initial torque and start time are adjustable via two potentiometers located behind a sealable front cover. Typical applications include conveyors, sorting machinery, overhead doors or small belt driven machinery.
- **LH4-N2** is a higher performance version for use with three phase motors. In addition to reducing the starting torque, inrush current is reduced and a soft stop can also be provided. It requires from two to seven control connections depending on the size and mode of operation. A third potentiometer, behind the sealable front cover, is used to complete the set up for the optional soft stop deceleration ramp time. For devices rated 25 amps and below, control power is supplied internally. For devices rated 30 amps and above, 115 Vac external control power is required. Typical applications include conveyors, pumps, compressors and fans.

## Selection table

LH4N		Motor Voltage / Rating					Dimensions		
Catalog Number	Rated Current	208V HP	230 V HP	380V kW	460 V HP	575 V HP	Height	(inches) Width	Depth
Soft start modules									
LH4N106LU7	6	1.5	1.5				4.3	1.7	4.1
LH4N106QN7				3		-			
LH4N106RT7					3				
LH4N112LU7	12	3	3				4.3	1.7	4.1
LH4N112QN7				5.5		-			
LH4N112RT7					7.5				
LH4N125LU7	25	7.5	7.5				4.3	1.7	4.1
LH4N125QN7				11		-			
LH4N125RT7					15				
Soft start / soft stop modules									
LH4N206LU7	6	1.5	1.5				4.3	3.5	4.1
LH4N206QN7				3		-			
LH4N206RT7					3				
LH4N212LU7	12	3	3				4.3	3.5	4.1
LH4N212QN7				5.5		-			
LH4N212RT7					7.5				
LH4N225LU7	25	7.5	7.5				4.3	3.5	4.1
LH4N225QN7				11		-			
LH4N225RT7					15				
LH4N230LY7	32	-	10	15	20	30	5.7	7	4.9
LH4N244LY7	44	10	15	22	30	40	5.7	7	4.9
LH4N272LY7	72	20	25	37	50	60	9.9	7	4.9
LH4N285LY7	85	25	30	45	60	75	9.9	7	4.9

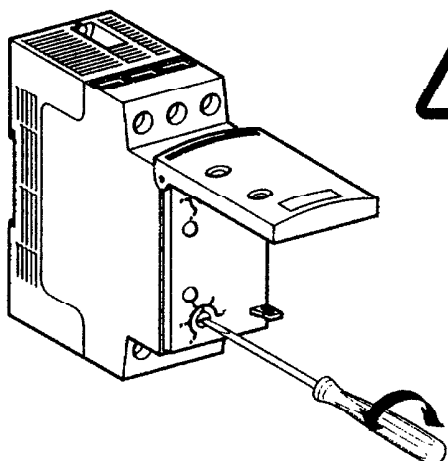
## Specifications

	LH4N1	LH4N2	
	Soft start only	Soft start / soft stop	
Amp ratings	6 - 12 - 25	6 - 12 - 25	32 - 44 - 72 - 85
Motor ratings 50/60Hz V -15...+10%	Single or three phase 208-240V 380-415V 440-460V	Three phase only 208-240V 380-415V 440-460V	Three phase only 200-600 V
Control power	Internal	Internal	115 Vac external
Voltage ramp time	0.5 to 5 seconds	0.5 to 5 seconds	0.5 to 25 seconds
Ambient air temp	-10...+40C with 1.2% current derating to 60C		-10 to 55C
Max relative humidity	93% without condensation or dripping water		
Max ambient pollution	Degree 3, conforming to IEC 664		
Max operating altitude	2000m with 0.5% current derating per 100m		
Max. ambient pollution	Degree 3 conforming to UL840 and IEC 664-1		
Duty cycle	10% maximum duty cycle - De-rate by one size if more than 360 seconds of start/stop ramp time per hour is required		
Conformity to standards	UL listed and CSA approved, carries CE marking and conforms to IEC 947-4-2		



**SQUARE D**  
GROUPE SCHNEIDER

# LH4-N1..



Attention!

Commencer la mise en service avec les potentiomètres en position C.

Attention!

Start your test with potentiometers in position C.

Achtung!

Bei Inbetriebnahme müssen sich die Potentiometer in C Position befinden

Atención!

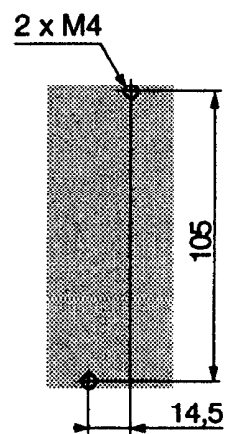
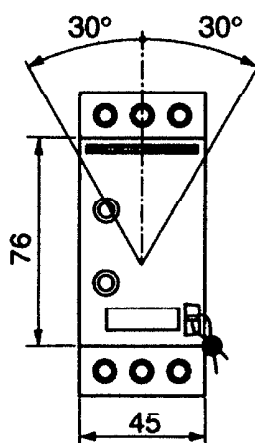
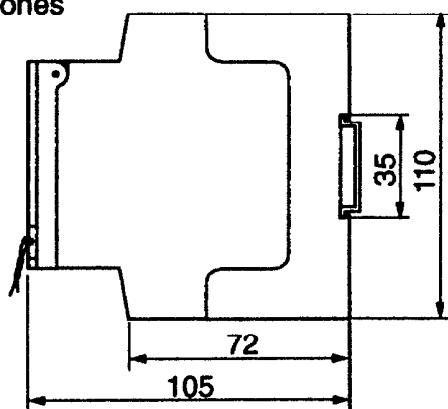
Comenzar la puesta en servicio con los potenciómetros en posición C.

Fixations

Mounting dimensions

Befestigungsmaße

Fijaciones



Raccordement

Connection

Anschlüsse Leistungsteil

Conexión potencia

Puisance Power		Philips N° 2		Ø 6					
[ mm <sup>2</sup> ]	[ mm <sup>2</sup> ]	[ mm <sup>2</sup> ]	[ mm <sup>2</sup> ]	[ mm <sup>2</sup> ]	[ mm <sup>2</sup> ]	Ø1 Ø2 [ mm ]	AWG (60/75°C)	Nm	lb/in
1,5...6	1,5...6	1,5...6	1,5...6	1,5...4	1,5...4	Ø1 4,2 ... Ø2 10	18...8	1,7	15

Pour informations supplémentaires voir catalogue

For further information see catalog

Weitere Informationen siehe Katalog

Para datos informativos complementarios, referirse al catálogo

W9 1512 520 01 11 A 03

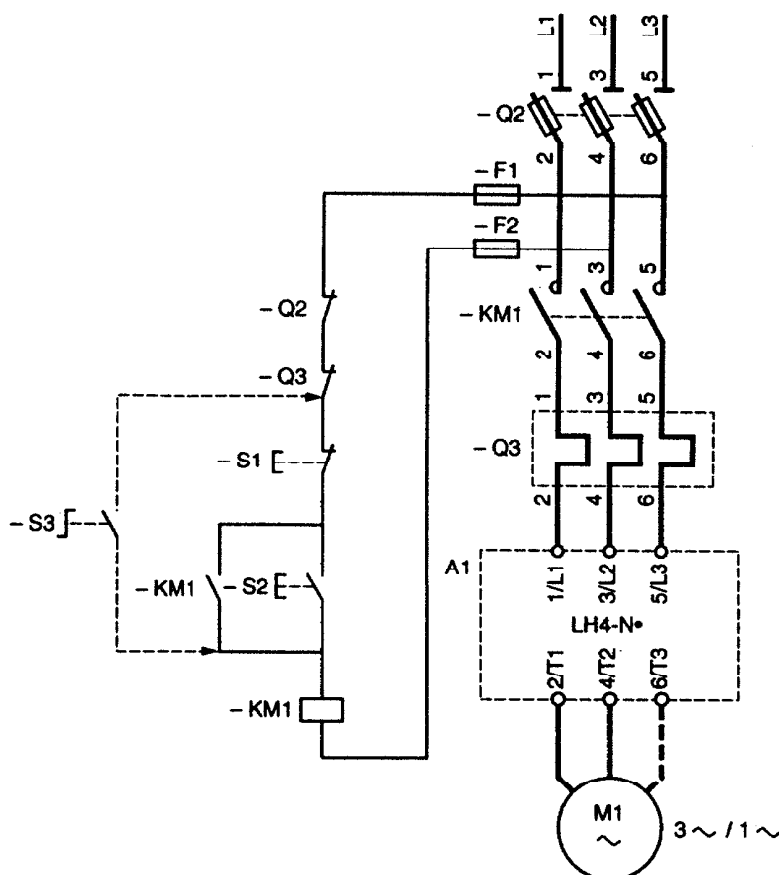
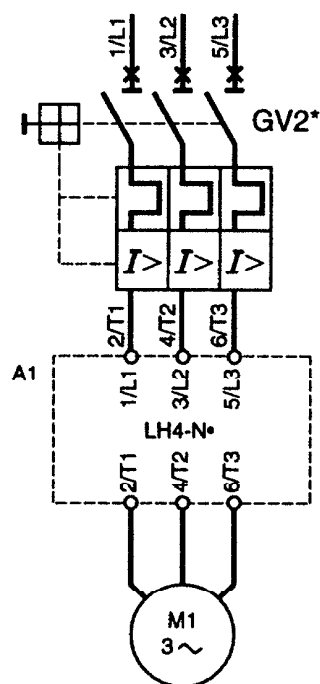



# LH4-N1••

Reference	J Class Fuses
LH4N.06	20 A
LH4N.12	35 A
LH4N.25	80 A

Suitable for a circuit capable of delivering not more than 25000 rms symmetrical amperes 480 V maximum when protected by Time Delay Fuses according to the table.

Schéma de câblage  
Connection diagram  
Anschlußschema  
Esquema de cableado



Reference		Manual Motor Controller
LH4N.06	8	GV2.14
LH4N.12	12	GV2.16
LH4N.25	25	GV2.22

Note : \* For US and Canada, short circuit protection must be provided in accordance with applicable installation code.

Note : For signale phase motor do not use the 3 rd phase 5L3/6T3.