

Digistart D3



Electronic starters
power from 23 to 1600 A



LEROY-SOMER™

Nidec
All for dreams

DIGISTART D3

high-performance !

Range : 23 - 1600 A / 400 V or 690 V

Immediate access to information

- Settings, values & units
- Operating data
- Trips and diagnostics
- Multilingual (English, French, German, Spanish, Italian)

Quick and easy to use

- Keys for intuitive browsing
- Local controls
- Customisable function keys

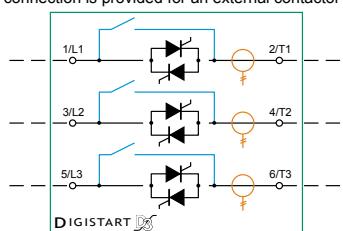
Integrated by-pass*

Up to 60 % space saving:

- Elimination of external power components
- Simplified remote control wiring
- Energy saving

* Available up to 1000A.

Higher ratings: a connection is provided for an external contactor (not supplied)



RoHS
Compliant





Maximum service!

Advanced control

- Starting and stopping adapt to the load automatically
- Automatic parameter optimisation by gradually learning the types of start

High flexibility

- Able to operate with only two power components operational
- Protection devices can be disabled to implement emergency run mode (smoke extraction, fire pump, etc.). Function validated by an European body

Total protection

- Continuous thermal modelling for maximum motor protection (even in the event of a power cut)
- Trips on configurable power thresholds
- Control of phase current imbalance
- Monitoring of motor temperatures and the environment with PTC or PT 100

Optional

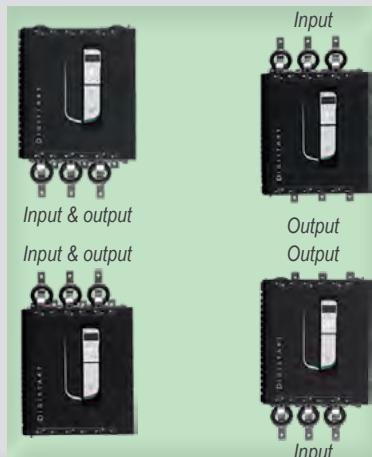
- Installation trips in the event of an earth fault
- Power connection protection kit for 145 to 1000 A models with integrated by-pass



Flexible, ergonomic wiring

Power

Examples of configurations
360 A to 1600 A



Control



Removable terminal blocks

DIGISTART D3

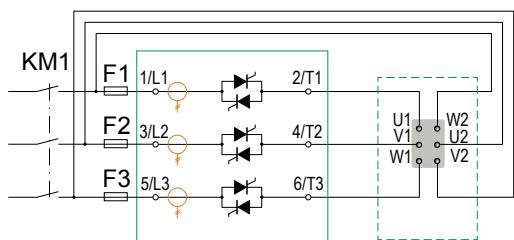
simple and economical!





Connection to «Δ» motor (6-wire)

- Starter size at least one rating lower
- Automatic detection of motor connection
- Ideal for replacing Y / Δ starters



User-friendly

Communication

- Modbus RTU, DeviceNet, Profibus, USB
- Ethernet/IP, Modbus TCP, Profinet

Simplicity of setup

- 3 parameter-setting levels
 - Preset configurations for pumps, fans, compressors, etc.
 - Standard: acces to the main parameters
 - Advanced menu: acces to all data
- Storage
 - Time-stamped log of trips
 - Energy consumption and operating conditions
 - Latest modifications
- Simulate operation by forcing control
- Display the state of the inputs/outputs
- Counters: running time, number of starts, etc.

DIGISTART D3

compact!

• Designation

DIGISTART type _____ **D3-1x-0425-B**
 Supply voltage: x=4, 200-440 VAC ; x=6, 380-690* VAC
 Rated current (A) _____
 Version: B, with by-pass ; N, without by-pass _____

* In IT regime network, from 600 to 690 V, it is necessary to protect the controller against transient overvoltages

• IEC 60947-4-2 standard coding

255A : AC-53a 3-10 : 50-6
 Rated current (A) _____
 Starting current / full-load current ratio _____
 Starting time (s) _____
 On-load operating factor (%) _____
 Number of starts per hour _____

 145A : AC-53b 3.0-10 : 590
 Rated current (A) _____
 Starting current / full-load current ratio _____
 Starting time (s) _____
 Interval between 2 starts (s) _____

• Environment

Protection :	D3-1x-0023 / 0105	IP 20
	D3-1x-0023 / 0105	IP 00
<i>Optional protection of power connections</i>		
Operating temperature:	-10°C to +60°C	(derating above 40°C)
Storage temperature:	-25°C to +60°C	
Operating altitude :	0 - 1000 m	(derating above 1000 m)
Relative humidity:	5 to 95 %	
Degree of pollution (IEC 60 664-1):	3	
Vibration (D3-1x-0023 / 0220):		IEC 600068-2-6

• General informations

Frequency:	45 to 66 Hz
Power supply separate from the control electronics:	110 to 210 VAC or 220 to 440 VAC
5 remote control inputs:	24 VDC, 8mA
- Run:	NO
- Stop:	NF
- Others:	NO or NF
4 replay outputs:	250 VAC resistive, 10 A
Analogue output:	0-20 mA or 4-20 mA
24 VDC output:	200 mA
7 additional inputs/outputs with add-on module	



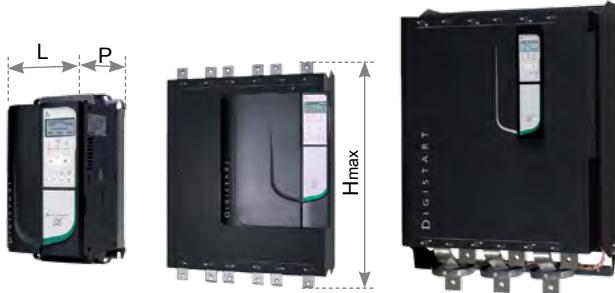
- Examples of DIGISTART/4-p motor combinations

Motor		DIGISTART*	
Power kW	Current A	B (with By-pass)	N (without By-pass)
7.5 - 11	15.2 - 21	AC53b 3.0-10:350	-
15	28,8	D3-1x-0023	-
18.5 - 22	35.2 - 41.7	D3-1x-0043	-
30 - 37	56.3 - 68.7	AC53b 3.0-10:590	AC53a 3-10:50-6
45	83	D3-1x-0076	-
55	101	D3-1x-0105	-
75	137	D3-1x-0145	-
90	164	D3-1x-0170	-
110	203	D3-1x-0220	-
132	249	D3-1x-0255	D3-1x-0255
160	299	D3-1x-0350	D3-1x-0360
200	377	D3-1x-0425	D3-1x-0430
250	428	D3-1x-0500	D3-1x-0430
315	603	D3-1x-0700	D3-1x-0650
355	653	D3-1x-0700	D3-1x-0790
400	698	D3-1x-0820	D3-1x-0790
450	767	D3-1x-0820	D3-1x-0790
500	864	D3-1x-0920	D3-1x-0930
550	940	D3-1x-1000	D3-16-1200
600 - 650	1037 - 1120	-	D3-16-1200
700	1210	-	D3-16-1410
800	1380	-	D3-16-1410

* Selection for operation in by-pass mode, ambient temperature of 40°C, altitude < 1000m.

For other operating conditions: see installation manual or consult Leroy-Somer.

- Dimensions



Type	Dimensions (mm)			Weight kg
	L	Hmax.	P	
D3-1x-0023 / 0043 / 0053B				196.2
D3-1x-0076B	156.4	294.6		3.2
D3-1x-0097 / 0105B				3.5
D3-1x-0145 / 0170 / 0200 / 0220B	282	438	254	4.8
D3-1x-0255B	424	440	303	16
D3-1x-0350 / 0425B				26
D3-1x-0255N	394	460	284	30.2
D3-1x-0500 / 0700B	433	640	300	25
D3-1x-0820 / 0920 / 1000B				49.5
D3-1x-0360 / 0430N	430	898	302	60
D3-1x-0650 / 0790 / 0930N				50.5
D3-16-1200 / 1410 / 1600N	574	1011.5	364	53.5
				140

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