Intelligent Drivesystems

NORDAC VECTOR MC

Compact Sensorless AC Vector Drives

F3021

DRIVESYSTEMS

NORDAC Vector MC

OUR COMPACT, FULL FEATURED AC VECTOR DRIVES

Technology Unit Options

FEATURES

- 1/3 through 3 HP at 230 VAC 1 phase input
- 1 through 3 HP at 460 VAC 3 phase input
- Selectable control modes
  - V/f for multiple motors
  - Sensorless vector control to maximize torque and response
- Programmable standard I/O
  - 1 analog input (selectable 0-10 V or 0/4-20 ma)
  - 4 digital inputs (1 with 1.2 msec response)
  - 1 analog output (0-10 V)
  - 2 relay outputs
  - RS485 interface
- Modular construction with pre-engineered plug-in options
  - Control box mc for programming, display and control
  - Field Bus interface assemblies
  - Bipolar (+/- 10 V) reference board
- Fully programmable for wide range of applications
  - 75 adjustable parameters
  - 19 information parameters
  - 13 diagnostic message groups
  - 2 parameter sets (online switchable)
  - PID controller
  - Optional NORD CON Windows-based software
- Dynamic braking chopper (resistor optional)
- Integrated Class A line filter
- Side-by-side DIN rail or panel mounting
- Field Bus compatibility
- IP-20 construction
- High overload capability (150% - 30 sec)

SK...FCT	250/1	370/1	550/1	750/1	1100/1	1500/1	2200/1	750/3	1100/3	1500/3	2200/3
Input V	A	A	A	A	A	A	A	B	B	B	B
Motor hp	1/3	1/2	3/4	1	1.5	2	3	1	1.5	2	3
Output A	1.9	2.1	2.9	4.0	5.5	6.4	9.5	2.2	3.0	3.7	5.5
Size [in.]	6.06"	6.06"	6.06"	6.06"	7.52"	7.52"	7.52"	7.52"	7.52"	7.52"	7.52"
HxWxD	x 3.39"	x 3.39"	x 3.39"	x 3.39"	x 4.41"	x 4.41"	x 4.41"	x 4.41"	x 4.41"	x 4.41"	x 4.41"
	x 5.28"	x 5.28"	x 5.28"	x 5.28"	x 5.31"	x 5.31"	x 5.31"	x 5.31"	x 5.31"	x 5.31"	x 5.31"
Weight lb	2.9	2.9	2.9	2.9	3.8	3.8	3.8	3.8	3.8	3.8	3.8

A = 200 V, -10%, to 230 V, + 15%, 50/60 Hz, 1 ph • B = 380 V, -20%, to 460 V, +10%, 50/60 Hz, 3 ph

Notes: Data subject to change without notice, Motor hp based on typical 4 pole motor

Options & Accessories

The NORDAC VECTOR MC combines small size with the features and high-performance formerly reserved for more expensive AC Frequency Inverters. Sensorless vector control (ISD) maximizes torque and response at all speeds and extends the useful output frequency range. The many standard features allow direct use in a wide range of applications and plug-in, pre-engineered option modules provide additional flexibility.

PRE ENGINEERED, PLUG-IN TECHNOLOGY UNIT OPTIONS

Plug into front cover of the Frequency Inverter to provide flexible programming, display, control and Field Bus connection choices (choice of 1).

- Control Box mc
  - Local ability to:
    - Set parameters
    - Save and transfer program
    - Operate frequency inverter
    - Display operating data
    - Diagnose faults
  - 4 digit, 7 segment LED display
  - Operation/programming control buttons
  - Indicator LEDs
- Field Bus Interface Modules
  - RS 232
  - DeviceNet
  - CAN Bus
  - CANopen
  - Profibus

BIPOLAR (+/-) 10V) REFERENCE BOARD OPTION

Connects to the control terminal board of the vector mc to permit interface with an external bipolar reference signal of +/- 10 VDC.

NORDAC PARAMETER BOX (P-BOX)

External add-on unit that can be used to program and display parameters and control the operation of the connected Frequency Inverter. Features multi-line plain text display selectable in six languages. Manages and stores up to five unique inverter programs. Connects to any NORDAC inverter via RS485 communication on inverter or plug-in option (adapter cables sometimes required). Available as:

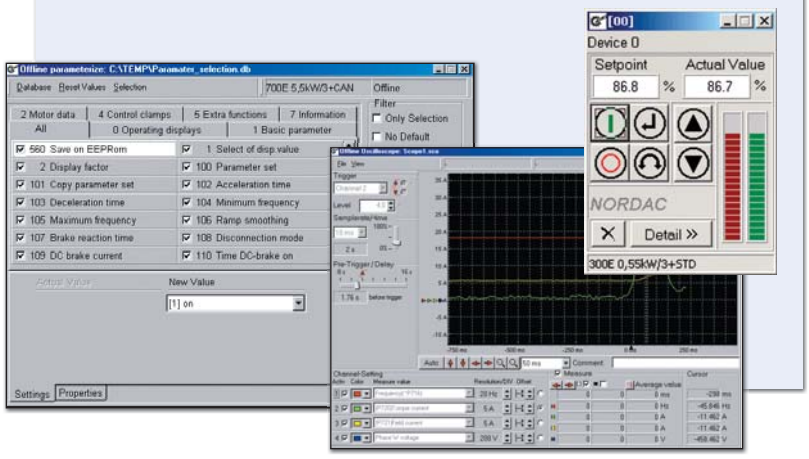
- SK PAR-2H Handheld version with 10 foot cable
- SK PAR-2E Panel Mount version

NORD CON SOFTWARE

NORD CON Software is a Windows-based PC program that enables the control and programming of NORDAC Frequency Inverters. It provides for accessing up to 31 Frequency Inverters simultaneously via the RS485 interface. It features both off-line and on-line programming and data management modes.

NORD CON allows user to:

- Program inverters and upload/download parameter files
- Control connected inverters for test/troubleshooting
- Monitor connected inverters and examine up to four variables versus time with built-in oscilloscope feature
- Produce macros to test process sequences
- Display parameter information in six languages



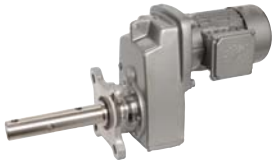
Product Overview

UNICASE™ SPEED REDUCERS

HELICAL IN-LINE
- Foot or Flange Mount
- Torque up to 205,000 lb-in
- Gear ratios – 1.82:1 to over 300,000:1

NORDBLOC®.1 HELICAL IN-LINE
- Foot or Flange Mount
- Torque up to 26,550 lb-in
- Gear ratios – 1.88:1 to over 370:1

PARALLEL HELICAL CLINCHER™
- Shaft, Flange or Foot Mount
- Torque up to 797,000 lb-in
- Gear ratios – 4.26:1 to over 300,000:1



SCP SCREW CONVEYOR PACKAGE
- Shaft, or Flange Mount
- Torque up to 53,100 lb-in
- Gear ratios – 4.32:1 to over 1500:1

RIGHT ANGLE HELICAL-BEVEL 2-STAGE
- Foot, Flange or Shaft Mount
- Torque up to 5,840 lb-in
- Gear ratios – 4.1:1 to 72:1

RIGHT ANGLE HELICAL-BEVEL
- Foot, Flange or Shaft Mount
- Torque up to 283,000 lb-in
- Gear ratios – 8.04:1 to over 300,000:1

RIGHT ANGLE HELICAL-WORM
- Foot, Flange or Shaft Mount
- Torque up to 27,585 lb-in
- Gear ratios – 4.40:1 to over 300,000:1

HIGH PERFORMANCE MOTORS & BRAKEMOTORS

INVERTER/VECTOR DUTY
- Standard or Energy Efficient
- Integral, NEMA or Metric IEC
- 1/6 to 250 hp

UNICASE™ SPEED REDUCERS

MINICASE™ RIGHT ANGLE WORM
- Foot, Flange or Shaft Mount
- Torque up to 3,540 lb-in
- Gear ratios – 5:1 to 500:1

FLEXBLOC™ WORM
- Modular bolt-on options
- Torque up to 4,683 lb-in
- Gear ratios – 5:1 to 3,000:1

MAXXDRIVE™ LARGE INDUSTRIAL GEAR UNITS PARALLEL HELICAL
- Modular bolt-on options
- Torque up to 2,027,000 lb-in
- Gear ratios – 5:1 to 1,600:1

MAXXDRIVE™ LARGE INDUSTRIAL GEAR UNITS HELICAL-BEVEL
- Modular bolt-on options
- Torque up to 2,027,000 lb-in
- Gear ratios – 5:1 to 1,600:1

NORDAC AC VECTOR DRIVES

SK200E FAMILY
- Decentralized, high performance
- 380-480V, 3-phase to 10 hp
- 200-240V, 3-phase to 5 hp
- 200-240V, 1-phase to 1.5 hp
- 100-120V, 1-phase to 1 hp

SK500E FAMILY
- Compact, high performance
- 380-480V, 3-phase, to 50hp
- 200-240V, 3-phase, to 15hp
- 200-240V, 1-phase, to 3hp
- 110-120V, 1-phase, to 1.5hp

SK700E FAMILY
- Flexible high performance
- 380-460V, 3-phase, to 200hp

NORD DRIVESYSTEMS

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