CONTROL TECHNIQUES

Digitax ST NEW

Intelligent Servo Technology

Meeting the demands of modern, lean manufacturing requires smaller more flexible machinery. Digitax ST is the first drive designed to help machine designers and system integrators meet these challenges, the ultimate compact servo drive with an unmatched range of flexible integration features.

Digitax ST is optimized for servo applications requiring high peak torque, dynamic response, ease of use and flexible integration features. Four product variants ensure that the drive's personality perfectly matches your servo applications. Solution Modules (SM) provide zero-space fieldbus and I/O connectivity to other automation components.

Digitax ST

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CONTROL TECHNIQUES

Digitax ST

- **Internal Motion Processor**
  does not consume an external slot
- **Flexible voltages 200-230 VAC or 380-460 VAC**
- **1 to 109 lb-in continuous torque**
  up to 3X peak torque
- **Supports 14 types of encoders, SM-Resolver option**
- **Easy install, setup and operation**
    - **Compact, space saving design**
    - **Pluggable connectors, standard D-Shell and screw terminals**
    - **Safe Torque Off**
    - **Programmable, optically-isolated I/O**
    - **RS485 serial communication interface using Modbus protocol**
- **Many industrial communications protocols supported**
- **Field programmable flash memory firmware (upgrades are free)**
- **Wide variety of motor combinations**
- **Auto-Tune support for any servo motor with encoder feedback**
- **24 VDC on-board logic power supply**

MODBUS TCP/IP

PROFI BUS

EtherNet/IP

MODBUS

EtherCAT®

DeviceNet

EnDat

HIPERFACE®

SSI

2 YEAR Digital Drive Warranty   5 YEAR Extended Warranty

FEATURE
Performance Advantage

Four Configurations Available
Digitax ST-B Base drive
Digitax ST-I Indexer
Digitax ST-Z EZMotion
Digitax ST-P Plus

Digitax ST Base Drive – Multiple Operating Modes
Optimized for centralized control, to operate with motion controllers, motion PLC's, and PC-based motion systems using a wide range of digital or analog interface technologies.

Digitax ST Indexer – Simple & Powerful Capabilities
Internal SM-Applications Lite V2. Designed for simple stand alone positioning applications using an onboard position controller using Sequential Function Flowchart software.

Digitax ST EZMotion – Drag-and-Drop Programming
Internal SM-EZMotion. Easy Motion simplifies programming with built-in motion functionality – jogging, indexing, camming, can be done in minutes with PowerTools Pro software and its point-and-click, drag-and-drop motion programming environment. It's "Motion Made Easy"™.

Digitax ST Plus – Provides Advanced Capabilities
Internal SM-Applications Plus. Features a full functionality motion controller, optimized for high performance machine cells requiring drive-to-drive networking and precision synchronization. The motion and communications are configured within a flexible IEC61131-3 software development environment SyPTPro.

Compatible Solution Modules provide Communication, I/O and Feedback expansion options
Communication: Ethernet IP, Modbus TCP/IP, Profibus, DeviceNet, CAN and EtherCAT.

I/O: SM-I/O Plus, SM-I/O Lite, SM-I/O 32, SM-I/O Timer, SM-I/O 120V, SM-I/O PELV and SM-I/O 24V.

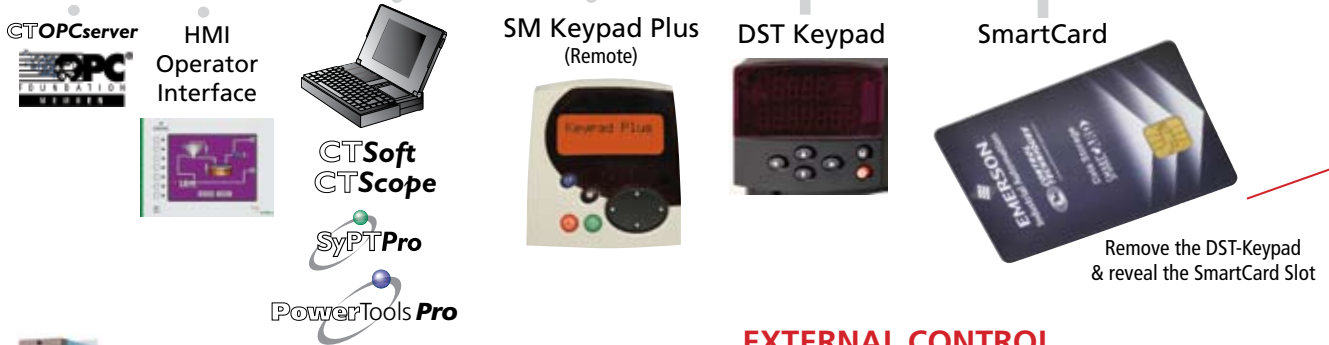Feedback: SM-Universal Encoder, SM-Encoder Plus, SM-Encoder Output Plus and SM-Resolver.
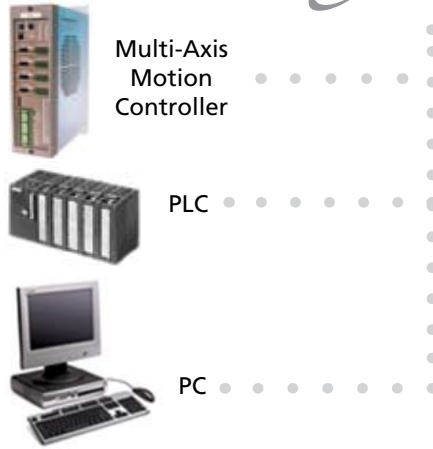
UL US   CE   RoHS Compliant

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Digitax ST Overview
Integration Flexibility with Digitax ST

Digitax ST

OPERATOR INTERFACE

CT*OPCserver*

HMI Operator Interface

CT*Soft*
CT*Scope*

SyPT*Pro*

PowerTools *Pro*

SM Keypad Plus
(Remote)

DST Keypad

SmartCard

Remove the DST-Keypad
& reveal the SmartCard Slot

EXTERNAL CONTROL

INPUT/OUTPUT

Multi-Axis Motion Controller

PLC

PC

SERVO MODE

Servo

Linear Motors

Options

Standard

Remote I/O

SM-I/O Plus

SM-I/O 120V

SM-I/O 24V

5 Analog I/O
6 Digital I/O
1 Safe Torque Off
1 Relay Out

SM-I/O 32

SM-I/O Timer

SM-I/O Lite

SM-PELV

SM-Register
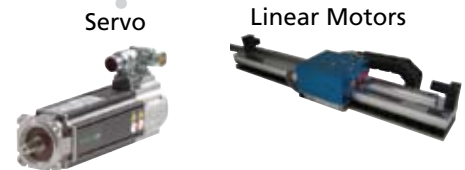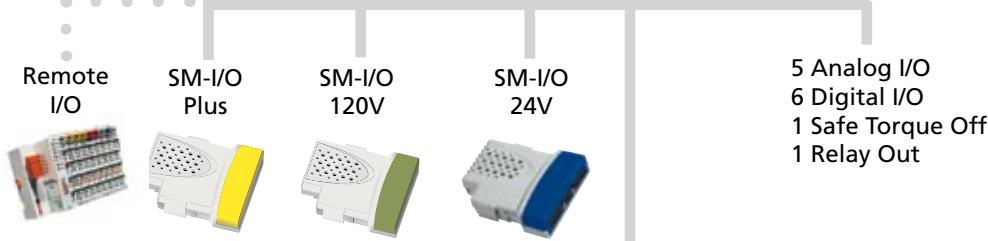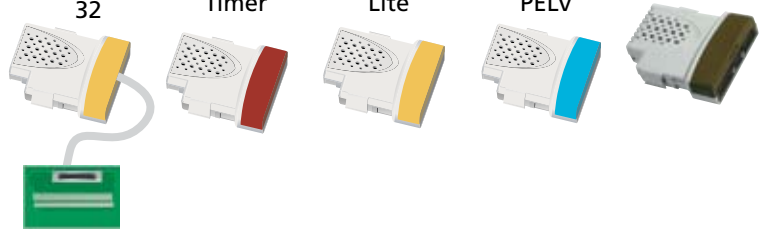
FILTERS

Standard **Options**

Internal EMC Filter

External EMC Filter

100

CONTROL TECHNIQUES

Digitax ST

DYNAMIC BRAKING

Options

Zero Space Internal
Brake Resistor
E-Stop Duty

External Dynamic
Brake Resistor

MOTION CONTROLLER & SOFTWARE

Base	Indexer	EZMotion Programmable	IEC-61131 Programmable
ST-B **B**	ST-I **I**	ST-Z **Z**	ST-P **P**
CT*Soft*	CT*Soft*	Power*Tools* **Pro**	SyPT**Pro** CT*Soft*

EMERSON
Industrial Automation

Digitax *ST*

FEEDBACK

Standard

Sin/Cos
Quadrature
Frequency/Direction
Clockwise/Counter Clockwise

EnDat   HIPER*FACE*®   SSI

Options

SM-Universal
Encoder Plus*

SM-Encoder
Output Plus*

SM-Encoder Plus

SM-Resolver

Quadrature

*Accepts or replicates
all standard feedback types

COMMUNICATIONS

Standard

Modbus RTU

Options

PROFIBUS   INTERBUS Certified No. 197   CAN   DeviceNet   EtherNet/IP Modbus TCP/IP   CAN open   CTNET CTSYNC Modbus RTU Master/Follower   SERCOS   EtherCAT

DC BACK UP POWER SUPPLY

24V Control   48-96V Power

24VDC
Power Supply

101

Digitax ST
Smart, Compact, Ergonomic Design

Digitax ST

Quick and Easy
Mounting Brackets

Cable Management

AC Input Power,
48 VDC & Dynamic
Brake Terminals

Optional
Removable
Keypad

Solution Module
Slot 2 shown
with Optional
SM-Universal
Encoder Plus

Programming
Port (RS485)

Analog I/O

Solution Module
Slot 1 shown
with Optional
SM-Profibus DP

Digital I/O
& 24 VDC

Safe Torque Off

Relay Output

Cable Management

Quick and easy mounting
arrangement with DIN rail clip

Motor Output
& DC Bus

Digitax ST

Value Your Time

More Compact Machinery

Digitax ST is an extremely compact servo drive that can be mounted flush against another Digitax ST, resulting in a smaller multiple axis footprint. Onboard features such as synchronized motion control and Safe Torque Off reduce the need for external components further reducing panel size and cost.

Quicker Installation

Innovative mechanical design reduces the installation time considerably. The mounting arrangements enable the bottom of the drive to be quickly clipped onto standard DIN rail and the cable management system features rigid mounting and earthing brackets. Pluggable control terminals enable cables to be easily prepared. Snap-in option modules mean the drive can be customized to your needs at the point of installation without specialized tools and gives the flexibility to customize the functionality at a future time.
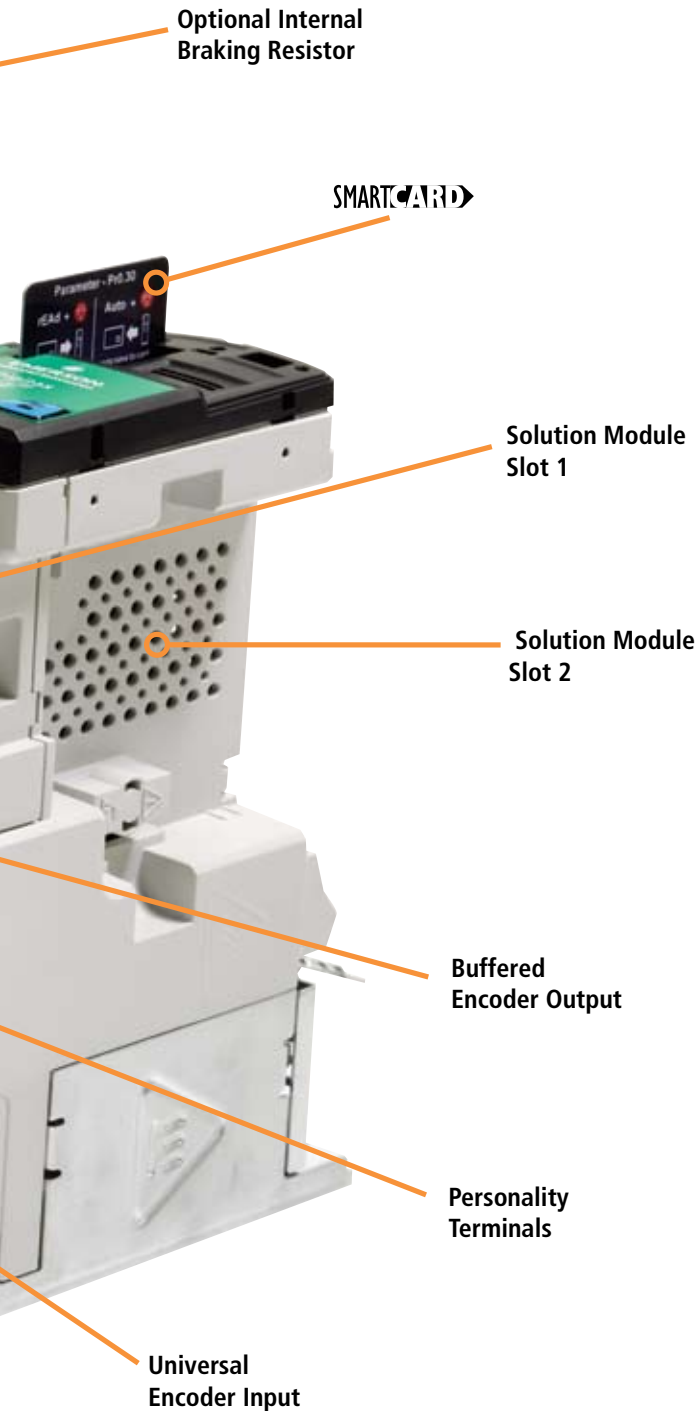
Reduced Commissioning Time

FREE Software

Digitax ST is quick and easy to set-up. The drives may be configured using the removable keypad, SmartCard or the supplied commissioning software to guide the user through the configuration process. Auto-tune features help you to get the best performance by measuring the machine dynamics and automatically optimizing the control loop gains. PowerTools Pro and CTScope software tools provide users with real-time, software oscilloscopes for tuning the drive and monitoring performance.

Smarter Thinking

The SmartCard, included with every drive, enables parameters to be safely stored and copied quickly from one drive to another. This feature significantly reduces the commissioning time when installing multiple servo systems with similar configurations.

SMARTCARD

Optional Internal Braking Resistor

SMARTCARD

Solution Module Slot 1

Solution Module Slot 2

Buffered Encoder Output

Personality Terminals

Universal Encoder Input

Digitax ST-B

NEW

Flexible Base Drive

Digitax ST

The Digitax ST-B (base) drive is a compact drive that is ideal for use with single and multi-axis controllers, PLCs and host controllers. The analog torque or velocity modes can be used with classic position controllers using analog outputs and encoder inputs. The pulse mode is ideal for use with low-cost PLC stepper controllers.

Many control systems use SERCOS fiber optic or EtherCAT for real-time drive control and feedback. Both technologies offer high bandwidth command and control signals over a digital network, greatly simplifying cabling and reducing potential electrical noise issues. Simply snap-in the appropriate SM module and the base drive is SERCOS or EtherCAT compliant.

The drive is configurable for several flexible modes of operation, and the parameters for each mode can be adjusted to tailor the drive to the specific application using CTSoft configuration software or the optional keypad.
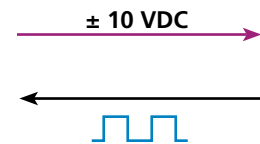
- **200-230 VAC or 380-460 VAC input voltage**
- **2 Solution Module (SM) slots for optional Feedback, Comunications or I/O modules**
- **Safe Torque Off / Drive Enable Input**
- **3 Bi-Directional Input/Outputs**
- **3 Dedicated Inputs**
- **1 Relay Output**
- **1 High Resolution Analog Input, 16 bit + sign**
- **2 Standard Analog Inputs, 10 bit + sign**
- **2 Analog Outputs ±10 VDC, 10 bit**
- **Buffered Encoder Output**
- **Universal Encoder Input, supports 14 feedback types**
- **Optional Resolver Input with SM Resolver module**
- **Optional Keypad**
- **CTSoft configuration software**
- **RS485 Serial Port, Modbus RTU**

FREE Software

STANDARD CONTROL MODES

Analog Velocity/Torque Mode

- MC206X, MC224
- Position Controller

± 10 VDC

Digital Velocity Preset

- PLC
- User Logic

Digital I/O

Pulse Mode

- PLC
- Master Axis
- Synchronized Encoder

Digital I/O

EtherCAT

- PLC
- PC

Real-Time Ethernet command and feedback   EtherCAT.

SERCOS

- PLC
- PC

Real-Time fiber optic command and feedback

CONTROL TECHNIQUES
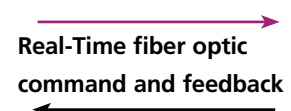
Digitax ST-I
Intelligent Indexing Drive

NEW

The Digitax ST-I (Indexer) drive offers sequential flow chart programming for indexing, homing and jogging, in a package that is the same compact size as the base Digitax ST-B drive. Operating information is setup using CTSoft programming and commissioning software. The drive parameter setup can be downloaded, stored on disk, or saved to the SmartCard for drive cloning. The SmartCard saves time and money during installation and makes long term support simple by having all the drive parameters stored on the SmartCard for easy drive cloning. No PC or software is necessary to save or load data on the SmartCard.

Digitax ST

WIZARD SETUP!

Using the new CTSoft drive setup wizard makes the Indexer setup quick and simple. The Wizard guides you through setup for the drive setup, motor, encoder, I/O and Sequential Function Chart programming.

- **200-230 VAC or 380-460 VAC input voltage**
- **Internal motion controller programs with free Sequential Function Chart software**
- **2 Solution Module (SM) slots for optional Feedback, Comunications or I/O modules**
- **Safe Torque Off / Drive Enable Input**
- **3 Bi-Directional Input/Outputs**
- **3 Dedicated Inputs**
- **1 Relay Output**
- **1 High Resolution Analog Input, 16 bit + sign**
- **2 Standard Analog Inputs, 10 bit + sign**
- **2 Analog Outputs ±10 VDC, 10 bit**
- **Buffered Encoder Output**
- **Universal Encoder Input, supports 14 feedback types**
- **Optional Resolver Input with SM Resolver module**
- **Optional Keypad**
- **CTSoft configuration software**
- **RS485 Serial Port, Modbus RTU**

FREE Software

## INDEXING

The Digitax ST-I drive is easily programmed to meet a wide variety of indexing and I/O control requirements. Sequential Function Chart programming is straightforward to use and interpret. Pre and Post operations at each step allow flexible I/O control.

- Incremental, Absolute, Registration, Rotary Plus, and Rotary Minus index types
- Parameters for Distance, Velocity, Accel/Decel, Dwell and Registration to Sensor or Torque Levels
- Chaining Options – Counts, Repeat Counts, Repeat Forever, Stop ability

Sequential Function Chart

CONTROL TECHNIQUES
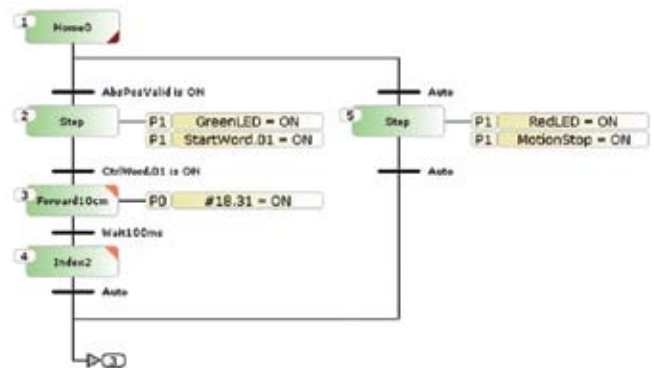
Digitax ST-Z
Internal EZMotion Module

NEW

The Digitax ST-Z (EZMotion) drive provides a very high level of control by allowing the user to create complete user programs to sequence the motion control along with other machine functionality. The Digitax ST-Z can be used to solve the most complex motion applications and still be easy-to-use because of the PowerTools Pro configuration software. PowerTools Pro uses simple point-and-click, drag-and-drop and fill-in-the-blank views that make setup a snap.

User programs are created using a text based motion language that is as easy to read as it is to program. If you don't know the command, just drag it in from the drop down box and PowerTools Pro will assist you with the syntax. With intuitive software and plenty of online help, programming this servo drive is easy; in fact it's **"Motion Made Easy!"™**

See PowerTools Pro in the Software section for examples of this easy to use program. The examples provided range from simple to advanced applications.

- **200-230 VAC or 380-460 VAC input voltage**
- **Internal SM-EZMotion module**
- **PowerTools Pro configuration software**   *FREE Software*
- **2 Solution Module (SM) slots for optional Feedback, Comunications or I/O modules**
- **Safe Torque Off / Drive Enable Input**
- **3 Bi-Directional Input/Outputs**
- **7 Dedicated Inputs**
- **2 Dedicated Outputs**
- **1 Relay Output**
- **1 High Resolution Analog Input, 16 bit + sign**
- **2 Standard Analog Inputs, 10 bit + sign**
- **2 Analog Outputs ±10 VDC, 10 bit**
- **Buffered Encoder Output**
- **Universal Encoder Input, supports 14 feedback types**
- **Optional Resolver Input with SM Resolver module**
- **Optional Keypad**
- **RS485 Serial Port, Modbus RTU**

POWERFUL SOFTWARE FEATURES!

Digitax ST-Z has many powerful software features to meet the most demanding servo application while maintaining ease of use. Complete machine control is now possible with the drive's motion, I/O and communications capabilities.
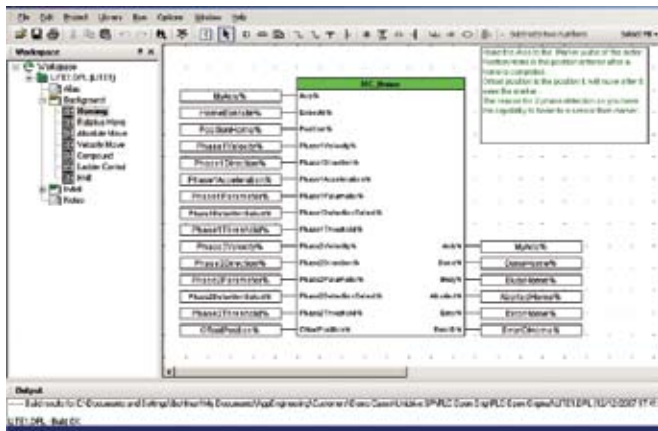
- **Virtual Master** - Provides a programmable clock signal for many drives to follow, eliminating mechanical jitter from following a physical axis.
- **Modbus Master** - Provides drive-to-drive and expanded I/O control with the built in master. The drive is not limited to onboard I/O. Communications to other Modbus slave devices is possible.
    - Multiple drives can share I/O over the networks
    - Stop/Start control such as VFD driven conveyors
    - Use low cost slice I/O to add digital and analog I/O
- **Real-Time Programs** - Provides deterministic program cycle times for controlling I/O and scheduling program tasks.
- **Torque Mode** - Switch seamlessly from position or velocity mode into torque mode and back for unlimited flexibility and control for nut running and torque controlled clamps or grippers or any other controlled torque application.
- **Electronic Camming -** Electronic cams provide unlimited motion profiles to accomplish servo replacement of rigid mechanical cams. Use the internal time base to create a motion profile for custom indexing.

CONTROL TECHNIQUES

Digitax ST-P
Programmable Motion

NEW

The Digitax ST–P (Plus) features a full functionality motion controller, optimized for high performance machine cells requiring drive-to-drive networking and precision synchronization. The motion and communications are configured within a flexible IEC61131-3 software development environment using PLCopen function blocks. Fieldbus, Ethernet and I/O connectivity enable interfacing with other automation components and Intellectual Property protection ensures that your valuable knowledge remains secure.

Digitax ST

- **200-230 VAC or 380-460 VAC input voltage**
- **Internal SM Applications Plus module**
- **SyPTPro motion programming software**
- **2 Solution Module (SM) slots for optional Feedback, Comunications or I/O modules**
- **Safe Torque Off / Drive Enable Input**
- **3 Bi-Directional Input/Outputs**
- **5 Dedicated Inputs**
- **2 Dedicated Outputs**
- **1 Relay Output**
- **1 High Resolution Analog Input, 16 bit + sign**
- **2 Standard Analog Inputs, 10 bit + sign**
- **2 Analog Outputs ±10 VDC, 10 bit**
- **Buffered Encoder Output**
- **Universal Encoder Input, supports 14 feedback types**
- **Optional Resolver Input with SM Resolver module**
- **Optional Keypad**
- **CTSoft configuration software**
- **RS485 Serial Port, Modbus RTU**

POWERFUL SOFTWARE FEATURES!

Digitax ST-P (Plus) offers all of the features available on the indexing drive together with more advanced motion functionality including cam profiling and synchronized motion. Onboard drive-to-drive networking links multiple axes and enables true distributed control. The drive is commissioned using CTSoft, an intuitive drive configuration software that is included free with every drive. The advanced motion features are configured using PLCopen motion function blocks within Control Techniques SyPTPro automation development environment.

On-board position controller ensures superior performance and reduced panel space. Digitax ST-P is configured using Control Techniques market leading development environment, SyPTPro. Standard IEC61131-3 languages, multi-tasking and PLCopen motion function blocks increase familiarity and reduce the development time. SyPTPro can protect your Intellectual Property by downloading only the compiled binary version of your software (not the source code) therefore preventing your customers and competitors from accessing your work. Many machinery users have different site standards for PLCs. This presents you with the challenge of designing standard machine sections that are independent of your customers PLC preference. With on-board intelligence, drive-to-drive synchronization and a wide range of network communication options, Digitax ST makes it easy for you to standardize your designs while retaining full connectivity to any PLC.

I07

Digitax ST
Software

CTSoft for Digitax ST Base and Digitax ST Indexer

Digitax ST Base and Indexing drives use CTSoft, the Control Techniques drive configuration tool used to commission, optimize and monitor most Control Techniques AC and DC drives.

CTSoft uses wizards to simplify commissioning, manages data stored on the SmartCard, and has robust and graphical tools for monitoring and trouble shooting.

CTSoft also incorporates the industry-standard Sequential Function Chart language for configuring the Digitax Indexer.

PowerTools Pro "Motion Made Easy"™ software for Digitax ST EZMotion

Developing servo applications with Control Techniques "Motion Made Easy" PowerTools Pro is a simple "five step, top-down process," all displayed within an intuitive Windows™ explorer-like environment—Setup (hardware), I/O Setup, Motion, Programs, and Network.

Although not every step may be needed to create a motion program, each step is configured using simple check boxes, drop down menus, and point-and-click, drag-and-drop operations. A straight-forward text programming language can also be used for custom motion and machine control sequences.

SyPTPro for Digitax ST Plus

SyPTPro is a full-featured, IEC-61131-3-compliant automation development environment that can be used for developing solutions for single or multiple axis applications.

The programming environment supports four industry standard languages: PLC Open, Function Block, Ladder and Structured Text.

CTNet, a high-speed, drive-to-drive network links the drives, SCADA and I/O together form an intelligent networked system, eliminating the need for a PLC and its additional overhead.
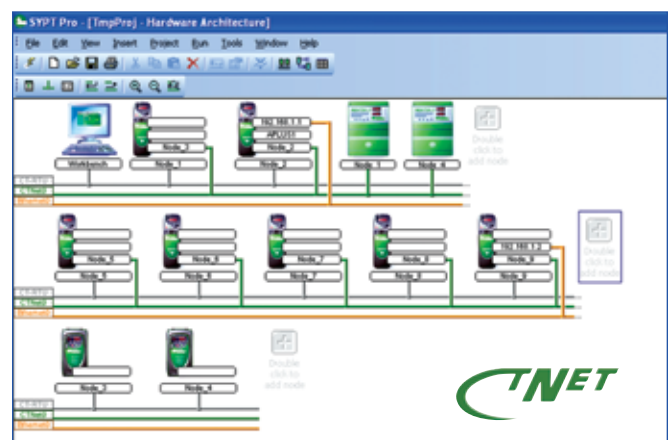
See the Software Section of the catalog for complete software details.
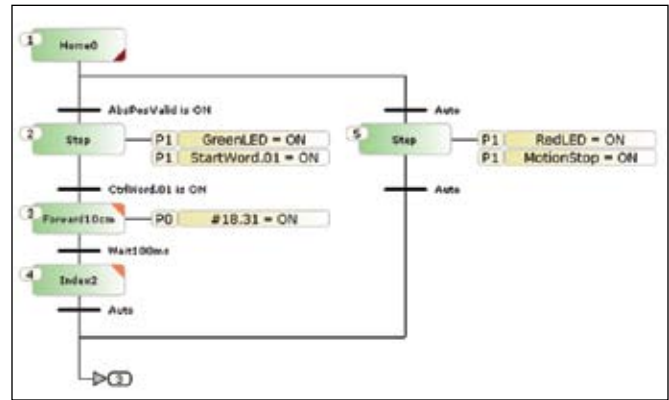
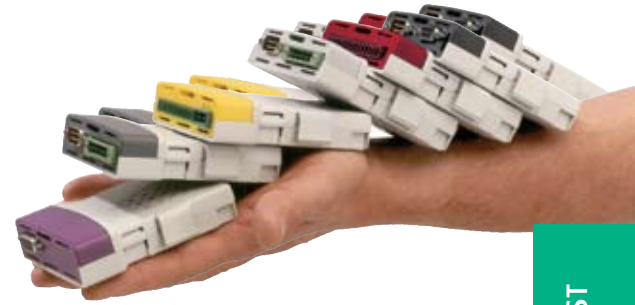*CTSoft Sequential Function Chart with Digitax ST-B and Digitax ST-I*
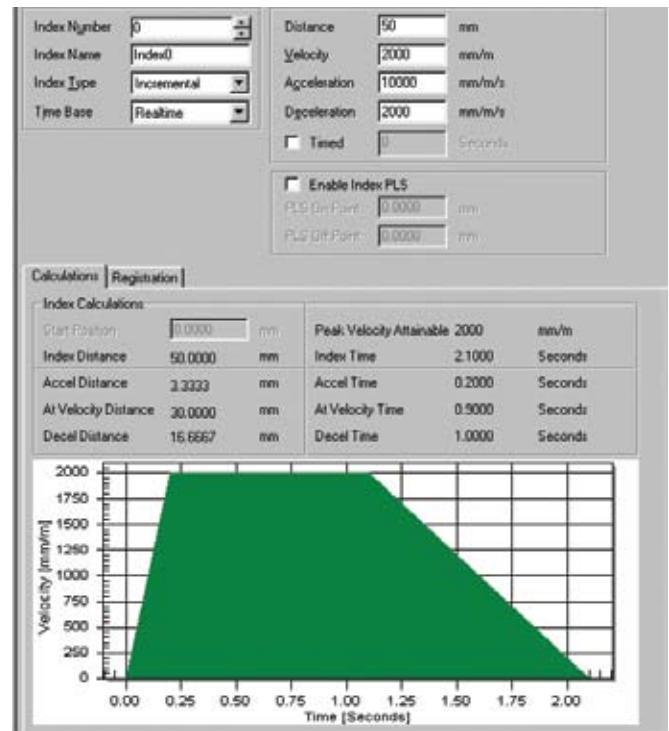
PowerTools Pro with Digitax ST-Z

SyPTPro with Digitax ST-P

See page 381 for complete CTNet integration details.

Digitax ST Options

DIGITAX ST OPTIONS AT-A-GLANCE

Options & Accessories	Description	Order Code
Drive Configuration, Programming and Indexing For details see the AC Drives Options & Accessories section	Cloning and Parameter Storage	SMARTCARD-64
	Configuration Software & Indexing	CTSOFT
	Motion Made Easy Programming	POWERTOOLSPRO
	Ladder and Function Blocks	SYPTLITE
	IEC 61131-3 (Ladder, FB, and Text Based)	SYPTPRO
	Communications Cable - RS232/485	CT-COMMS-CABLE
	Communications Cable - USB	CT-USB-CABLE
	Keypad to Drive Cable	SP-LCD-485-XXX
Operator Interfaces	LED Keypad	DST-KEYPAD See page 394 for keypad details
	LCD Keypad	SM-KEYPAD-PLUS (remote mounted only)
	Programmable HMI Panels	See the Options & Accessories section
Power Accessories	Zero-Space Brake Resistor	SM-HEATSINK-DBR0
	E-Stop Duty Braking Resistor	See the Options & Accessories section
	Cyclic Duty Braking Resistor	See the Options & Accessories section
Environmental Protection	Internal EMC Filter	Standard
	External EMC Filters	See the Options & Accessories section
Feedback Solution Modules For details see the Unidrive SP Options section	Universal Encoder Feedback SM-UNIVERSAL ENCODER PLUS	SM-UNI-ENCODER
	Incremental Encoder Input SM-ENCODER PLUS	SM-ENCODER-PLUS
	Incremental Encoder Input & Output SM-ENCODER OUTPUT PLUS	SM-ENCODER-OUT
	Resolver Feedback	SM-RESOLVER
	Screw Terminal Connector	SM-ETC
I/O Solution Modules For details see the AC Drives Options & Accessories section	Extended Analog and Digital I/O	SM-I/O-PLUS
	Extra I/O with Encoder Reference	SM-I/O-LITE
	32 Point Digital I/O	SM-I/O-32
	Extra I/O with RealTime Clock/Calendar	SM-I/O-TIMER
	120/240 Volt AC I/O	SM-I/O-120V
	Double Insulated Extended I/O	SM-I/O-PELV
	Remote Network I/O	See the Options & Accessories section
	24 Volt Protected I/O	SM-I/O-24V
	High Speed Capture & Registration	SM-REGISTER
Communications Solution Modules For details see the Connectivity section	Modbus RTU Follower	Standard
	Modbus RTU Master	Standard (Digitax ST Plus)
	DeviceNet	SM-DEVICENET
	PROFIBUS DP	SM-PROFIBUS-DP
	Ethernet (Modbus TCP/IP, Ethernet IP)	SM-ETHERNET
	Interbus-S	SM-INTERBUS
	CANopen	SM-CANOPEN
	CAN Interface	SM-CAN
	Ethernet (EtherCAT)	SM-ETHERCAT
	SERCOS	SM-SERCOS
	CTNet	Standard (Digitax ST Plus)
	CTSync	Standard (Digitax ST Plus)

DIGITAX ST TERMINALS AND PINOUTS

Digitax ST

RS485

Pin Number	Signal
1	120Ω Termination resistor
2	RX TX
3	Isolated 0V
4	+24V (100mA)
5	Isolated 0V
6	TX Enable
7	RX/ TX/
8	RX/ TX/ (if termination resistors are required, link to pin 1)
9	Isolated 0V

Terminal 1

Pin Number	Signal
1	0V common
2	External 24 VDC
3	0V common
4	10 VDC source
5	Analog 1 +
6	Analog 1 -
7	Analog 2
8	Analog 3
9	Analog Out 1
10	Analog Out 2
11	0V common

Terminal 2

Pin Number	Signal
21	0V common
22	24 VDC Output, selectable
23	0V common
24	I/O 1
25	I/O 2
26	I/O 3
27	Input 4
28	Input 5
29	Input 6
30	0V common
31	Safe Torque Off, Drive enable

Terminal 3

Pin Number	Signal
41	Status Relay
42	Drive OK

Buffer Encoder Output

Pin Number	Signal		
	Quadrature	Freq/Dir	FWD REV
1	A	F	F
2	A/	F/	F/
3	B	D	R
4	B/	D/	R/
5	Z*		
6	Z/*		
7	n/c		
8	n/c		
9	n/c		
10	n/c		
11	n/c		
12	n/c		
13	n/c		
14	0V		

(Bottom View)

Power

Pin Number	Signal
1	Brake
2	Brake
3	48 VDC+
4	48 VDC-
5	L1
6	L2
7	L3

Z Personality Terminals

Pin Number	Signal	
1	0V Common	
2	Input 1	} High Speed Capture Inputs
3	Input 2	
4	Input 3	
5	Input 4	
6	Output 1	
7	Output 2	

P Personality Terminals

Pin Number		Signal
TB1	1	OV RS485
	2	RX/
	3	RX
	4	TX/
	5	TX
TB2	6	A
	7	Shield
	8	B
TB3	9	OV Digital I/O
	10	Input 0 - Freeze Input
	11	Input 1
	12	Output 0
	13	Output 1

Encoder Input

Pin Number	INC	ABS	PULSE
1	A	Cos	F
2	A/	Cosref	F/
3	B	Sin	D,R
4	B/	Sinref	D/,R/
5	Z	Data	Z
6	Z/	Data	Z/
7	U	n/c	U
8	U/	n/c	U/
9	V	n/c	V
10	V/	n/c	V/
11	W	Clock	W
12	W/	Clock	W/
13	+V	+V	+V
14	0V	0V	0V
15	thermister	thermister	thermister

Encoder pin out function is controlled by Pr3.38 see manual for details.

Motor Power

Pin Number	Signal
1	U
2	V
3	W
4	DC Bus +
5	DC Bus -

CONTROL TECHNIQUES

DIGITAX ST SPECIFICATIONS AND DIMENSIONS

226 mm (8.9 in)
220 mm (8.66 in)
7.5 mm (0.3 in)
47 mm (1.85 in)

322 mm (12.68 in)
249.7 mm (9.83 in)
292 mm (11.49 in) | 304 mm (11.96 in)

226 mm (8.9 in)
229 mm (9.02 in)

62mm (2.44in)

⌀5.4 mm (0.21 in) M5
6 mm (0.24 in)

*When mounting Digitax ST drives side by side, leave 2mm between drives to allow for mechanical tolerances.

Go to Power CD for complete data

Digitax ST

Drive Model Number	Input		Output Current*	
	Voltage Ø	Peak A	Cont. A	Peak A
DST1201	200-230 3Ø	3.5	1.7	5.1
DST1202	200-230 3Ø	7.3	3.8	11.4
DST1203	200-230 3Ø	9.4	5.4	16.2
DST1204	200-230 3Ø	13.4	7.6	22.8
DST1401	380-480 3Ø	2.8	1.5	4.5
DST1402	380-480 3Ø	4.3	2.7	8.1
DST1403	380-480 3Ø	6	4	12
DST1404	380-480 3Ø	8	5.9	17.7
DST1405	380-480 3Ø	9.9	8	24

230/480 VAC @ 6 kHz for rated performance.

*Peak current is duty cycle limited.
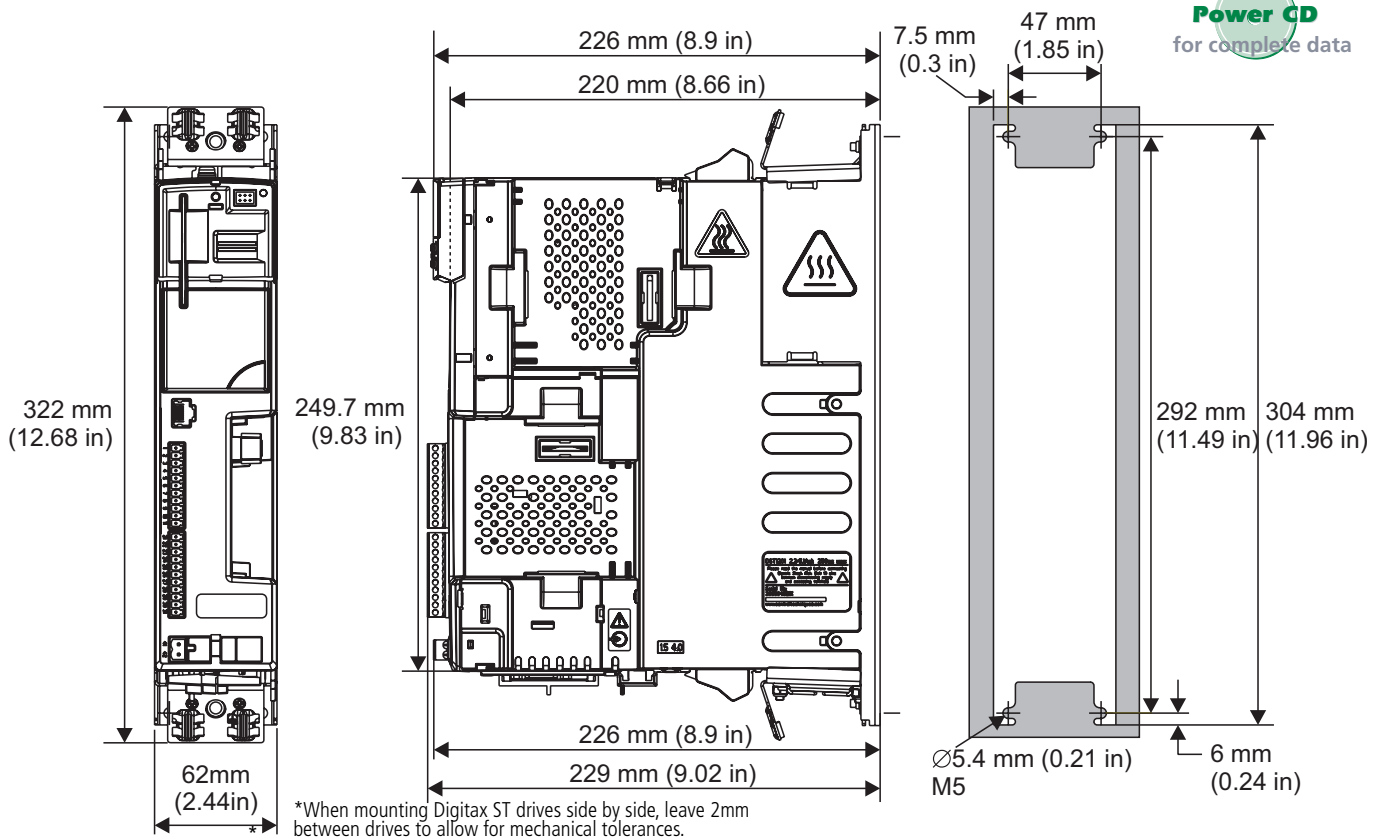
Power Requirements

AC Input Voltage: Model dependent: nominal 200-230 or 380-460 VAC 48-65 Hz, ±10%

Switching Frequency 6-12 kHz

System Efficiency 93%

Cooling Method Internal Fan

Drive Control Inputs

Analog, High Precision (1) +/-10 VDC, 16 bit + sign

Analog, General Purpose (2) +/-10 VDC, 0-20 mA, 4-20 mA, 10 bit + sign

Digital (3-6): Selectable. 10-30 VDC, 6 kOhm, Sinking/Sourcing

Safe Torque Off/Drive Disable: Certified EN954-1 Cat. 3

Digitax Z Additional Inputs

Digital (4): 15-30 VDC, 6 kOhm, Sourcing

Digitax P Additional Inputs

Digital (2): 24 VDC, 6 kOhm, Sourcing

Drive Control Outputs

Analog, General Purpose (2) +/-10 VDC, 0-20 mA, 4-20 mA, 10 bit + sign

Digital (0-3): Selectable, 24 VDC, 200 mA total, Sinking/Sourcing

Relay (1): Drive OK contacts, 2A @240 VAC, 4A @30 VDC Resistive load, 0.5A @24 VDC Inductive load

Digitax Z Additional Outputs

Digital (2): 10-30 VDC, 20 mA, Sourcing

Digitax P Additional Outputs

Digital (2): 24 VDC, 20 mA, Sourcing

I/O Supply: 24 VDC ±10%
200 mA max including all digital I/O. Can be switched on or off to act as a fourth digital output

Encoder Output

Quadrature, Quadrature w/ Marker Pulse/Direction, Pulse/Pulse. EIA485 Differential, 512 kHz max, +/-14 VDC

Serial Interface

1 RS-485 Modus RTU, 9600-19.2 k Baud

Digitax P Additional Communications

CTNet and EIA RS485

Environmental

Rated Ambient Temperature: 32-122° F, Derate output above 104° F

Maximum Altitude: 0-9900 ft. Derate output power by 1% per 330 ft over 3300 ft.

Vibration: Tested in accordance with I EC60068-2-29-6/64

Mechanical Shock: Tested in accordance with IEC60068-2-29

Electromagnetic Immunity: Complies with EN61800-3 (2nd Environment)

Electromagnetic Emissions: Complies with EN61800-3 (2nd Environment) with onboard filter. EN61000-6-3 and EN61000-6-4 with optional footprint EMC filter.

Humidity: 95% non-condensing at 104° F

Ingress Protection: IP-20

Weight: 4.4 lbs

III

HOW TO ORDER

Use one of the next few pages to configure a basic Digitax ST system by selecting one item from each of the four ordering columns, and the fifth column if you are choosing a brake motor. Note that item ❷ motor selection requires additional input as to flange, and on NT systems, connector type. (See the Motor Order String boxes for details.) Items ❸ through ❺ require cable lengths to be provided. The basic systems represented on these pages can be customized with a variety of components depending on your needs. A guide to Digitax ST Options and Accessories can be found at the end of this section.

SELECT SYSTEM AND MOTOR

❶ Select the Digitax ST drive appropriate to the needs of your application and operating environment, either DST-B (Base), DST-I (Indexer), DST-Z (EZMotion) or DST-P (Plus) and the voltage and current ratings.

❷ Select a motor for your drive. The system selection matrix for FM, NT and XV standard motors can be found on the following pages.

CABLE ORDERING OPTIONS

Motor power, feedback and brake cables are fully shielded with connectors and are available in standard and custom lengths. For more information on these and other cables, *see Options and Accessories section*.

Standard lengths of 5, 15, 25, 50 and 100 feet are available from stock. Non-standard lengths require additional lead time. *Note: Equivalent FM Motor cable lengths are in meters.*

Feet=xxx or meters=yyy with specified lengths. Example: 005 = 5 feet. For applications involving continuous flexing, flexible cables are available. Cable components such as connector kits and raw cable are also available. See Options and Accessories section for details or consult factory for special requirements.

❸ Motor Power Cable Example;
CMDS-xxx 16 AWG for 2-3" motors; connector on motor end, ferrules on drive end

❹ Motor Feedback Cable Example;
UFCS-xxx Connectors on both ends.

❺ Motor Brake Cable Example;
CBMS-xxx Required for motors with brake option; connector on motor end only.

Software

The Control Techniques SM-EZMOTION CD (CT-EZMOTION-CD) is shipped with every product. Software updates are free and can be downloaded from our web site, as are firmware updates.

Note: Digitax (ST-B, ST-I) Base and Indexer drives use CT Soft (free software), Digitax ST-Z EZMotion drive uses PowerTools Pro (free software) and Digitax ST-P Plus drive uses SyPTPro (licensed software).

DIGITAX ST OPTIONS AND ACCESSORIES

Control Techniques provides a complete array of options and accessories to complete your system. For details, see the Options and Accessories section of the catalog.

Brake Relay
BRM-1

Breakout Boards/Cables
SM-ETC

Communications Accessories
ETH-S4, ETH-PATCH-xxx, CT-COMMS-CABLE, CT-USB-CABLE

External Shunt/Resistor
DBR-0

EMC Filters
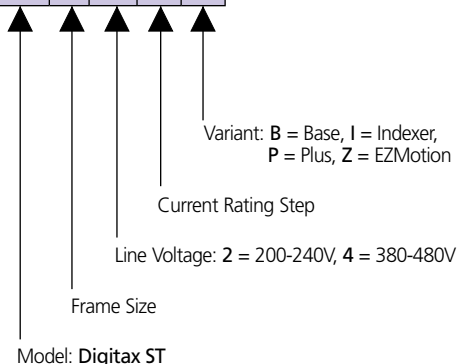230V 1Ø = 4200-6000
230V 3Ø = 4200-6001
460V 3Ø = 4200-6002

Synchronization Encoders
SCSLD-4, SCSLD-4R

Operator Interface
CTVue

Extended Warranty
Extends Two Year Warranty to Five Years

Digitax ST Order String

DST 1 x 01 x

Variant: **B** = Base, **I** = Indexer, **P** = Plus, **Z** = EZMotion
Current Rating Step
Line Voltage: **2** = 200-240V, **4** = 380-480V
Frame Size
Model: **Digitax ST**

CONTROL TECHNIQUES

Digitax ST
230V FM Motor Selection

The FM motor line is a medium inertia servo motor suitable for larger inertial load applications. The FM motor line uses a 4096 line encoder for high precision and is designed with low cogging torque to provide smooth operation and excellent velocity regulation. FM motors are available with or without brakes. The system torque range is from 10.6 lb-in (1.2 Nm) to 62 lb-in (7.1 Nm).
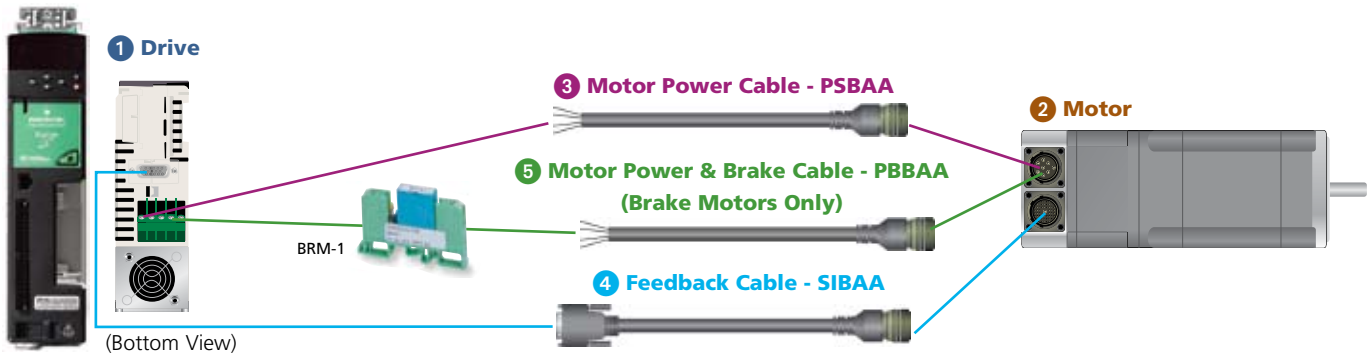
This is a flexible motor line with numerous options available including: feedback, connectors, brake, high inertia and faceplate mounting.

Order String

| xxx | E | 2 | x | xx | x | V | A | CA | A | BCD* | DIA* |

Inertia: **A** = Standard
Feedback Device:
CA = 4096 Incremental Encoder
Shaft Key: **A** = With Key
Connection Type: **V** = Vertical Connectors
Brake: **0** = None, **1** = 24 VDC
Rated Speed: **20** = 2,000 rpm, **30** = 3,000 rpm,
40 = 4,000 rpm, **50** = 5,000 rpm,
60 = 6,000 rpm
Stator Length: **A, B, C, D, E, F, G, H**
Peak Torque: **2** = Standard Peak Torque
Voltage **E** = 230V
Frame Size: **055, 075, 095, 115, 142, 190**

* Bolt Circle & Shaft Diameter are standard dimensions see FM Motor section for additional options.

Digitax ST

① Drive

③ Motor Power Cable - PSBAA

⑤ Motor Power & Brake Cable - PBBAA (Brake Motors Only)

② Motor

BRM-1

④ Feedback Cable - SIBAA

(Bottom View)
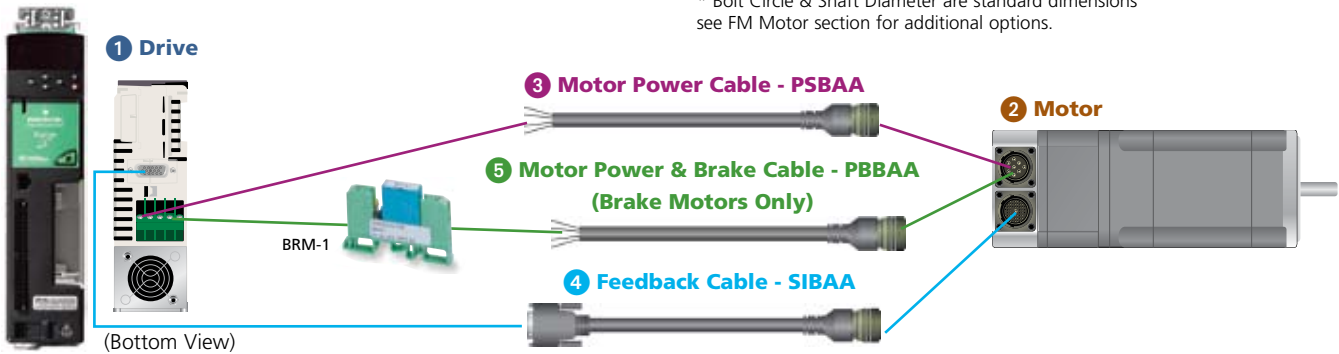
Servo System Order Guide

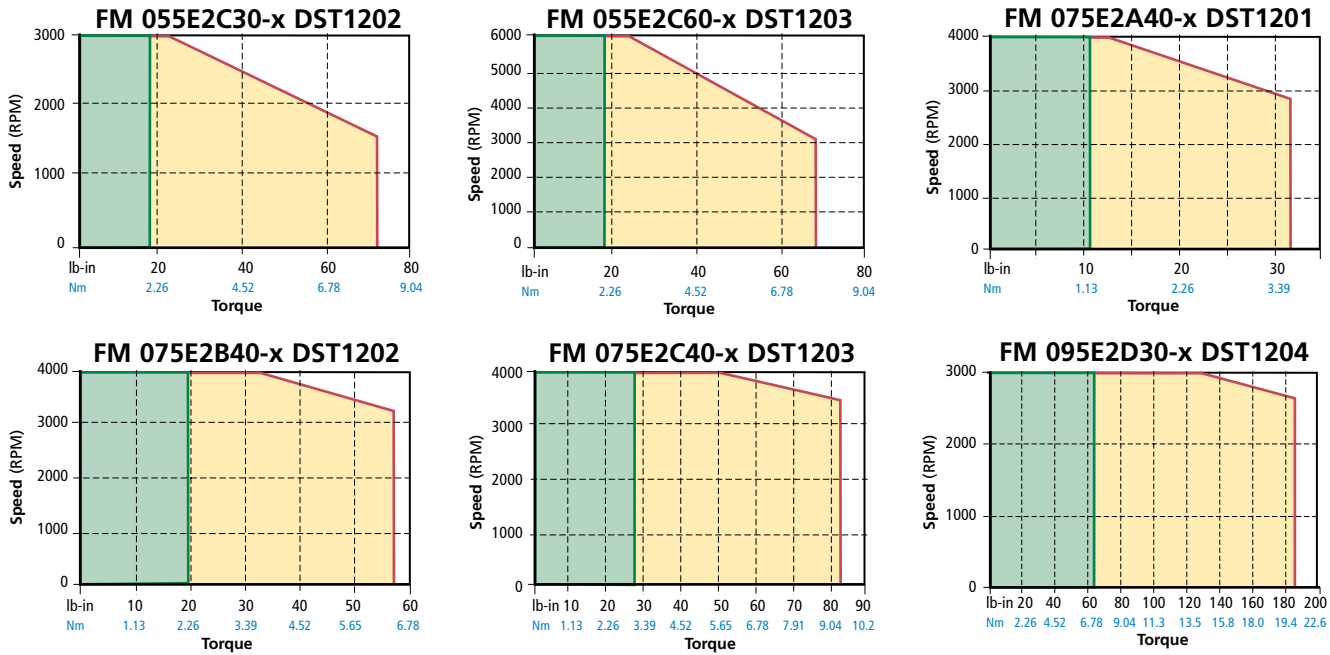| ① Drive Model x=B,I,P,Z	② Motor Model*	③ Motor Power Cable (yyy=meters)	④ Feedback Cable** (yyy=meters)	⑤ Motor Power & Brake Cable (required w/all brake motors) (yyy= meters)
DST1201x	075E2A400 BACAA075110	PSBAA-yyy	SIBAA-yyy	-
	075E2A401 BACAA075110	-	SIBAA-yyy	PBBAA-yyy
DST1202x	055E2C300 BACPA063110	PSBAA-yyy	SIBAA-yyy	-
	055E2C301 BACPA063110	-	SIBAA-yyy	PBBAA-yyy
DST1202x	075E2B400 BACAA075140	PSBAA-yyy	SIBAA-yyy	-
	075E2B401 BACAA075140	-	SIBAA-yyy	PBBAA-yyy
DST1203x	055E2C600 BACPA063110	PSBAA-yyy	SIBAA-yyy	-
	055E2C601 BACPA063110	-	SIBAA-yyy	PBBAA-yyy
DST1203x	075E2C400 BACAA075140	PSBAA-yyy	SIBAA-yyy	-
	075E2C401 BACAA075140	-	SIBAA-yyy	PBBAA-yyy
DST1204x	095E2D300 BACAA100190	PSBAA-yyy	SIBAA-yyy	-
	095E2D301 BACAA100190	-	SIBAA-yyy	PBBAA-yyy

* Standard motor configuration. (Standard peak torque, No brake, 90º rotatable connectors, Keyed shaft, 4096 incremental encoder, standard PCD and Shaft Diameter)
** Standard feedback cable for use with incremental encoder and Digitax drive.

Digitax ST - 230V FM Motor Specifications

Drive Model	Motor Model*	Cont. Stall Torque lb-in Nm	Peak Stall Torque lb-in Nm	Rated Torque @Rated Speed lb-in Nm	Rated Power HP kWatts	Max. Speed RPM	Encoder Resolution lines/rev	Inertia lb-in-sec² kg-cm²	Motor Ke Vrms/krpm	Motor Kt lb-in/Arms Nm/Arms	Motor Weight lb kg
DST1201	075E2A40	10.6 / 1.2	31.9 / 3.6	8.9 / 1.0	0.6 / 0.42	4000	4096	0.00062 / 0.70	44	6.37 / 0.72	7.92 / 3.60
DST1202	055E2C30	18.7 / 2.1	73.0 / 8.3	15.9 / 1.8	0.9 / 0.64	3000	4096	0.00030 / 0.34	53	7.61 / 0.86	3.96 / 1.80
DST1202	075E2B40	19.5 / 2.2	58.4 / 6.6	15.0 / 1.7	0.9 / 0.71	4000	4096	0.00106 / 1.20	44	6.37 / 0.72	9.68 / 4.40
DST1203	055E2C60	18.7 / 2.1	63.1 / 7.1	11.9 / 1.4	1.3 / 0.99	6000	4096	0.00030 / 0.34	27	3.89 / 0.44	3.96 / 1.80
DST1203	075E2C40	27.4 / 3.1	82.3 / 9.3	20.4 / 2.3	1.3 / 0.96	4000	4096	0.00142 / 1.60	44	6.37 / 0.72	11.44 / 5.20
DST1204	095E2D30	62.6 / 7.1	187.7 / 21.2	60.2 / 6.8	2.9 / 2.14	3000	4096	0.00451 / 5.10	57	8.23 / 0.93	19.14 / 8.70

See order guide on previous page for complete motor model number.

Digitax ST - 230V FM Motor Speed Torque Curves

FM 055E2C30-x DST1202

FM 055E2C60-x DST1203

FM 075E2A40-x DST1201

FM 075E2B40-x DST1202

FM 075E2C40-x DST1203

FM 095E2D30-x DST1204

SPECIFICATIONS

Voltage	240 VAC
Drive Frequency	6 kHz
Ambient Temperature	25°C (77°F)
Case Temperature	100°C (212°F)

Legend
- Continuous Torque
- Peak Torque

All performance data listed above has a +/-10% tolerance and is subject to change at any time without notice. For more detailed information on performance data and test conditions please refer to the motor section of the catalog. For brake motor information, complete motor specifications and dimensions please refer to our motor section.

Digitax ST

Digitax ST

Digitax ST - 460V FM Motor Specifications

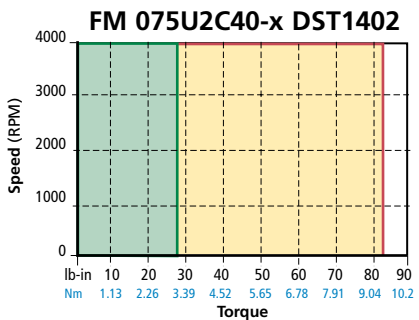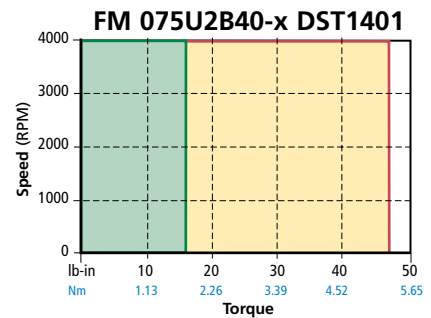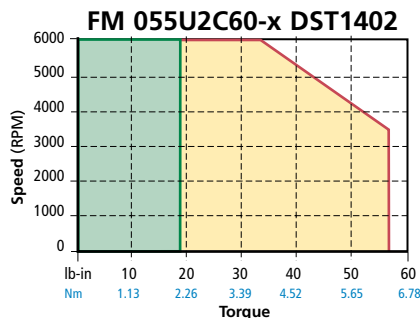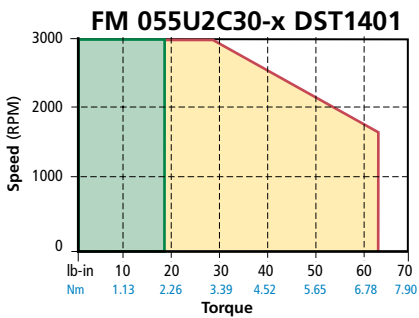| Drive Model	Motor Model*	Cont. Stall Torque lb-in Nm	Peak Stall Torque lb-in Nm	Rated Torque @Rated Speed lb-in Nm	Rated Power HP kWatts	Max. Speed RPM	Encoder Resolution lines/rev	Inertia lb-in-sec² kg-cm²	Motor Ke Vrms/krpm	Motor Kt lb-in/Arms Nm/Arms	Motor Weight lb kg
DST1401	055U2C30	18.7 / 2.1	62.9 / 7.1	15.9 / 1.8	0.9 / 0.64	3000	4096	0.00030 / 0.34	96	13.98 / 1.58	4.0 / 1.80
DST1401	075U2B40	15.9 / 1.8	47.8 / 5.4	15.0 / 1.7	0.9 / 0.71	4000	4096	0.00106 / 1.20	74	10.62 / 1.20	9.7 / 4.40
DST1402	055U2C60	18.7 / 2.1	56.6 / 6.4	11.9 / 1.4	1.3 / 0.99	6000	4096	0.00030 / 0.34	48	6.99 / 0.79	4.0 / 1.80
DST1402	075U2C40	27.4 / 3.1	82.3 / 9.3	20.4 / 2.3	1.3 / 0.96	4000	4096	0.00142 / 1.60	74	10.62 / 1.20	11.4 / 5.20
DST1403	095U2B40	38.1 / 4.3	114.2 / 12.9	26.5 / 3.0	1.7 / 1.26	4000	4096	0.00257 / 2.90	74	10.62 / 1.20	13.9 / 6.30
DST1404	115U2C30	83.2 / 9.4	249.6 / 28.2	71.7 / 8.1	3.4 / 2.54	3000	4096	0.00797 / 9.00	98	14.16 / 1.60	25.5 / 11.60
DST1405	115U2D30	109.7 / 12.4	329.2 / 37.2	92.0 / 10.4	4.4 / 3.27	3000	4096	0.01009 / 11.40	98	14.16 / 1.60	29.7 / 13.50

*See order guide on previous page for complete motor model number.

Digitax ST - 460V FM Motor Speed Torque Curves

FM 055U2C30-x DST1401

FM 055U2C60-x DST1402

FM 075U2B40-x DST1401

FM 075U2C40-x DST1402

FM 095U2B40-x DST1403

FM 115U2C30-x DST1404

FM 115U2D30-x DST1405

SPECIFICATIONS

Voltage	240 VAC
Drive Frequency	6 kHz
Ambient Temperature	25°C (77°F)
Case Temperature	100°C (212°F)

Legend
- ▨ Continuous Torque
- ▨ Peak Torque

All performance data listed above has a +/-10% tolerance and is subject to change at any time without notice. For more detailed information on performance data and test conditions please refer to the motor section of the catalog. For brake motor information, complete motor specifications and dimensions please refer to our motor section.

CONTROL TECHNIQUES

Digitax ST
230V NT Motor Selection

The NT Series Motors deliver high torque-power to motor-size ratios that were previously impossible. Using the latest motor design and production technology greatly reduces motor size. High-energy neodymium iron born magnets give the NT motor high torque output and low rotor inertia, providing superior dynamic performance for servo applications. The NT motor design delivers up to 46% more torque in 20% less space when compared to standard high-performance motor designs.

Digitax ST

Order String

| NT | x | x | xx | x | x | N | S | 0000 |

Special Options: DPXX = DSUB (DP = 15 pin, XX = feet)

Inertia: **S** = Standard, **I** = Medium
N = Encoder Feedback Type: Encoder

Brake Option: **B** = with Brake, **O** = No Brake

Connector Type:
C = MS connectors on motor
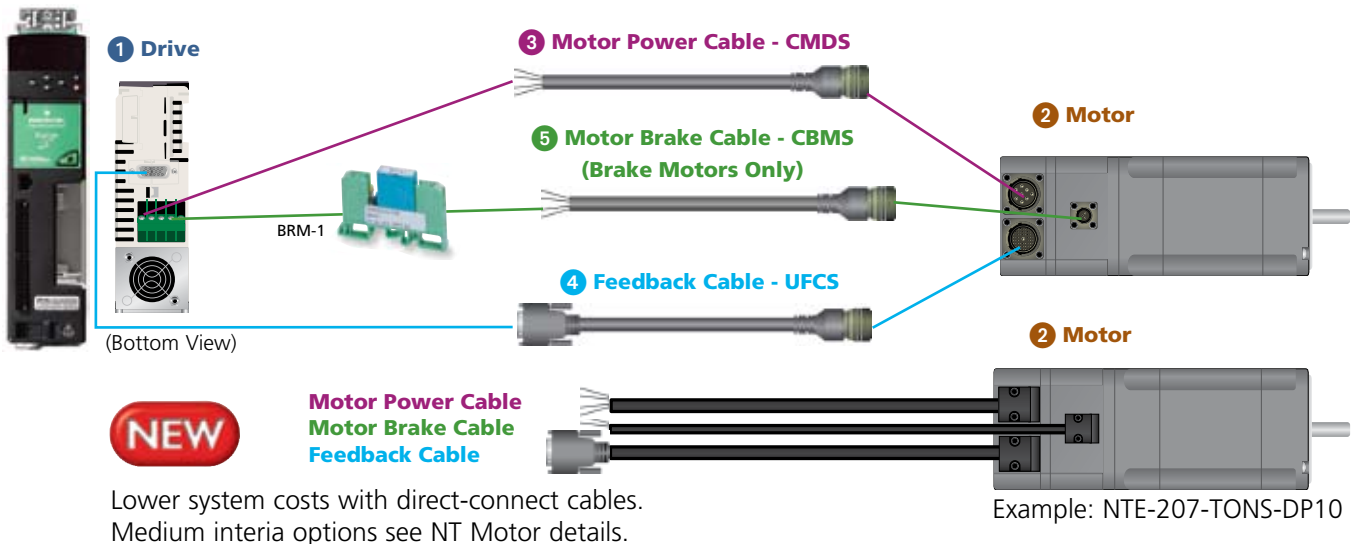**T** = Leads with connectors
L = Leads without connectors

Continuous Torque (lb-in): **7, 12, 20, 30, 45** or **55**

Frame Size (in inches): **2** or **3**

Mounting Flange: **E** = English, **M** = Metric

NT Motor Family

① Drive

③ Motor Power Cable - CMDS

⑤ Motor Brake Cable - CBMS (Brake Motors Only)

② Motor

BRM-1

④ Feedback Cable - UFCS

(Bottom View)

② Motor

NEW

Motor Power Cable
Motor Brake Cable
Feedback Cable

Lower system costs with direct-connect cables. Medium interia options see NT Motor details.

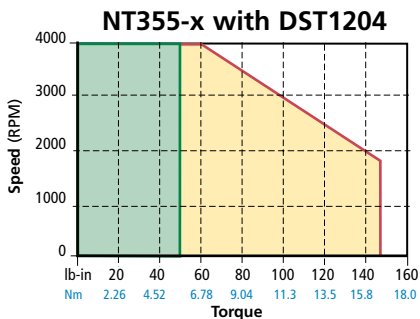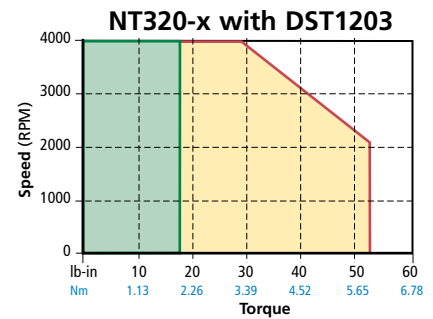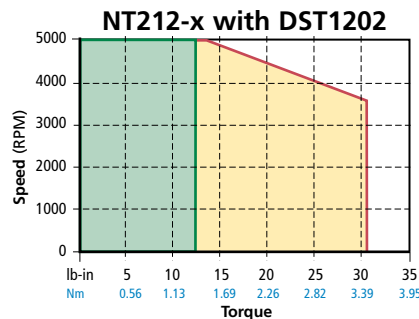Example: NTE-207-TONS-DP10

Servo System Order Guide

① Drive Model x=B,I,P,Z	**②** Motor Model (x=Flange, y=Connector z=Brake, ww=Cable Length)	**③** Motor Power Cable (xxx=feet)	**④** Feedback Cable (xxx=feet)	**⑤** Motor Brake Cable (required w/all brake motors) (xxx=feet)
DST1201x	NTx-207-yONS-0000	CMDS-xxx	UFCS-xxx	
	NTx-207-yBNS-0001	CMDS-xxx	UFCS-xxx	CBMS-xxx
	NTx-207-TzNS-DPww	Integrated	Integrated	Integrated
DST1202x	NTx-212-yONS-0000	CMDS-xxx	UFCS-xxx	
	NTx-212-yBNS-0001	CMDS-xxx	UFCS-xxx	CBMS-xxx
	NTx-212-TzNS-DPww	Integrated	Integrated	Integrated
DST1203x	NTx-320-yONS-0000	CMDS-xxx	UFCS-xxx	
	NTx-320-yBNS-0001	CMDS-xxx	UFCS-xxx	CBMS-xxx
	NTx-320-TzNS-DPww	Integrated	Integrated	Integrated
DST1204x	NTx-355-yONS-0000	CMDS-xxx	UFCS-xxx	
	NTx-355-yBNS-0001	CMDS-xxx	UFCS-xxx	CBMS-xxx
	NTx-355-TzNS-DPww	Integrated	Integrated	Integrated

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CONTROL TECHNIQUES

Digitax ST

Digitax ST - 230V NT Motor Specifications

Drive Model	Motor Model*	Cont. Stall Torque lb-in / Nm	Peak Stall Torque lb-in / Nm	Rated Torque @Rated Speed* lb-in / Nm	Rated Power HP / kWatts	Max. Speed RPM	Encoder Resolution lines/rev	Inertia** lb-in-sec² / kg-cm²	Motor Ke Vrms/krpm	Motor Kt lb-in/Arms / Nm/Arms	Motor Weight lb / kg
DST1201	NT207	7.5 / 0.8	18.4 / 2.1	7.5 / 0.8	0.6 / 0.45	5000	2048	0.000094 / 0.11	35	5.12 / 0.58	3.0 / 1.36
DST1202	NT212	12.5 / 1.4	30.7 / 3.5	12.0 / 1.4	1.0 / 0.72	5000	2048	0.000164 / 0.19	35	5.12 / 0.58	4.0 / 1.82
DST1203	NT320	18.5 / 2.1	56.7 / 6.4	16.0 / 1.8	1.0 / 0.77	4000	2048	0.000328 / 0.37	29	3.50 / 0.40	7.3 / 3.31
DST1204	NT355	48.0 / 5.4	144.1 / 16.3	48.0 / 5.4	2.3 / 1.72	3000	2048	0.000888 / 1.00	50	6.32 / 0.71	12.3 / 5.58

*See order guide on previous page for complete motor model number.
**See NT Motor detail section for medium inertia option details.

Digitax ST - 230V NT Motor Speed Torque Curves

NT207-x with DST1201

NT212-x with DST1202

NT320-x with DST1203

NT355-x with DST1204

SPECIFICATIONS

Voltage	240 VAC
Drive Frequency	6 kHz
Ambient Temperature	25°C (77°F)
Case Temperature	100°C (212°F)

All performance data listed above has a +/-10% tolerance and is subject to change at any time without notice. For more detailed information on performance data and test conditions please refer to the motor section of the catalog. For brake motor information, complete motor specifications and dimensions please refer to our motor section.

Legend

- Continuous Torque
- Peak Torque

**CONTROL
TECHNIQUES**

Digitax ST
230V XV Motor Selection

The new XV Servo Motor line delivers high-performance, low inertia, and high torque in a compact motor package. It offers a low cost solution with the features of a premium priced servo offering. Intended for higher throughputs and smaller machines, XV motors are available in four frame sizes: 40, 60, 80 and 130 mm with speeds ranging from 2000 to 5000 RPM.

System Torque range is 3.1 lb-in (.3 Nm) to 105 lb-in (11.4 Nm).

XV motors are CE, UL and RoHS approved.

Digitax ST

Order String

| XVM | w | xx | C | x | NS | 0000 |

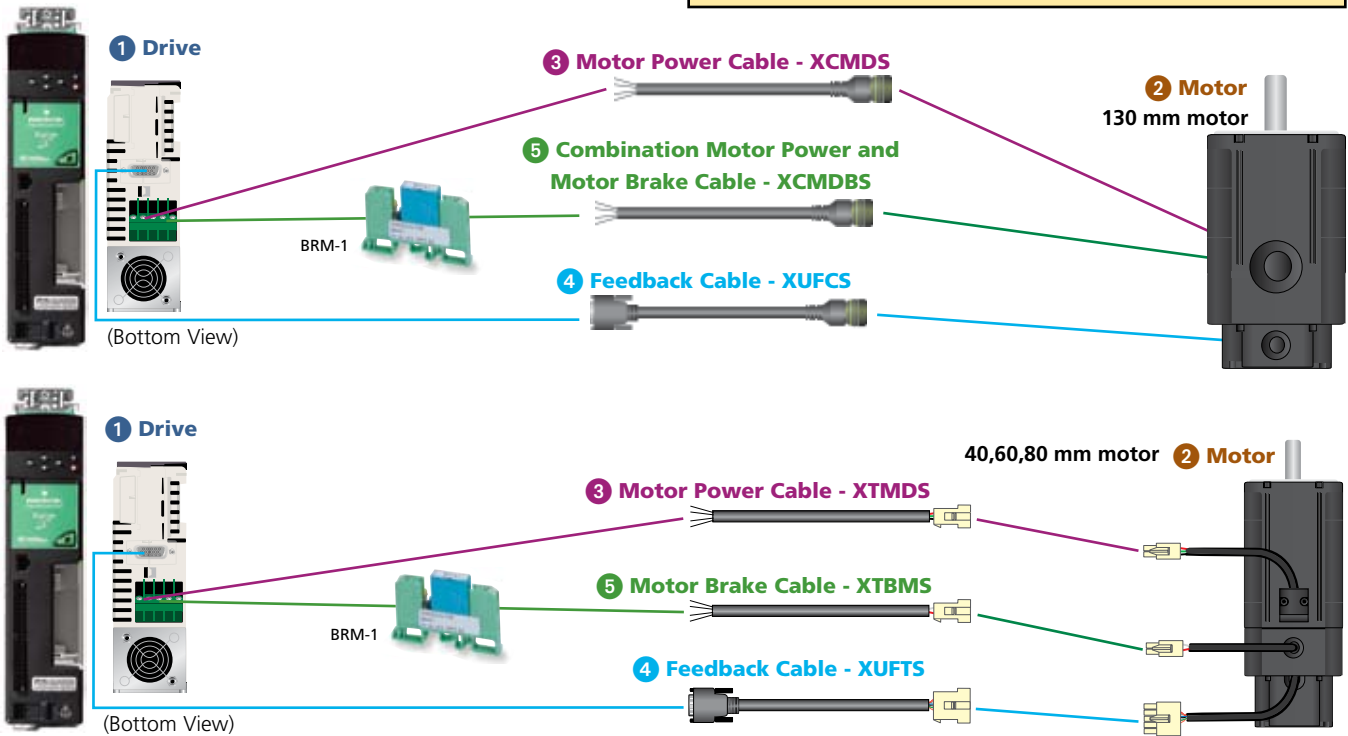0000 = standard

x: **O** = standard, **B** = brake

xx = **1, 2, 3** for 40 mm
xx = **4, 6,11** for 60 mm
xx = **17, 22, 23, 28** for 80 mm
xx = **42, 46, 51, 68, 89, 101** for 130 mm

w = 40, 60, 80, 130 mm

XV Motor family

Example: XVM-13046-CONS-0000
XVM-130101-CBNS-0000

For additional motor information see Motors.
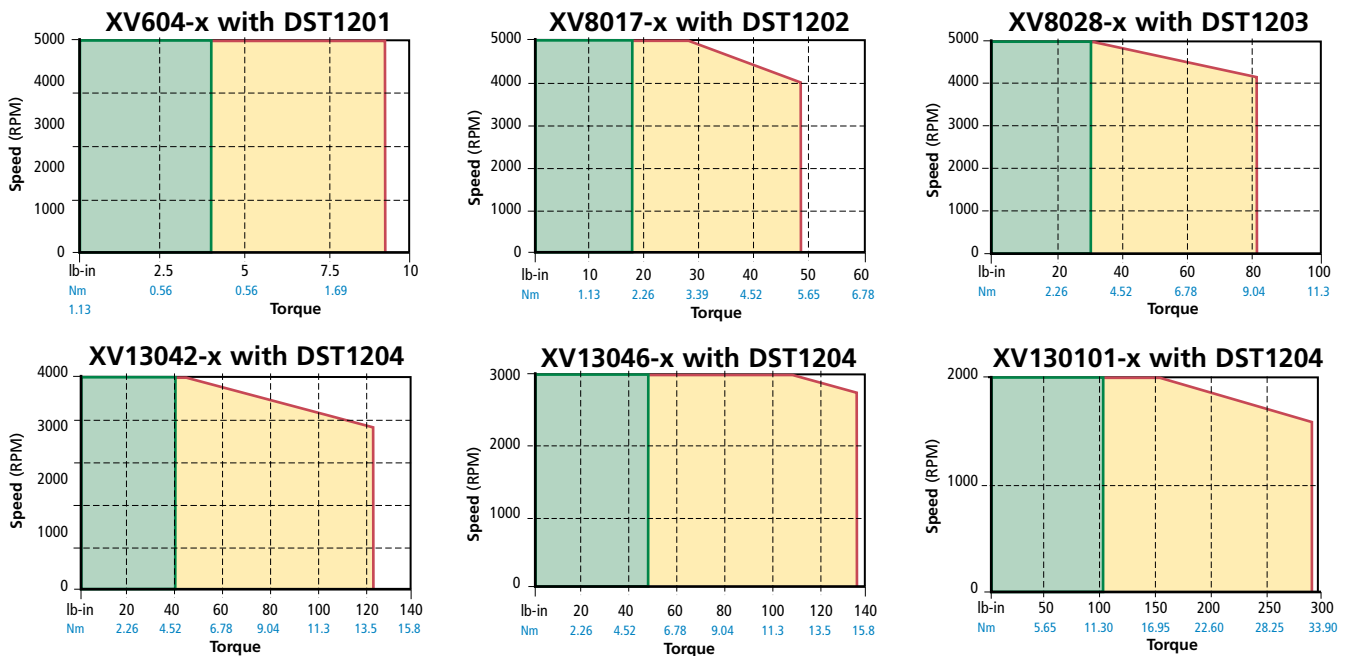For additional cable options see Options.

❶ **Drive**

❸ Motor Power Cable - XCMDS

❺ Combination Motor Power and
Motor Brake Cable - XCMDBS

BRM-1

❹ Feedback Cable - XUFCS

(Bottom View)

❷ **Motor**
130 mm motor

❶ **Drive**

40,60,80 mm motor ❷ **Motor**

❸ Motor Power Cable - XTMDS

❺ Motor Brake Cable - XTBMS

BRM-1

❹ Feedback Cable - XUFTS

(Bottom View)

Servo System Order Guide

❶ Drive Model x=B,I,P,Z	❷ Motor Model (y: O=Standard, B=Brake)	❸ Motor Power Cable (xxx=feet)	❹ Feedback Cable (xxx=feet)	❺ Motor Brake Cable (required w/all brake motors) (xxx=feet)
DST1201x	XV-604-TyNS-0000	XTMDS-xxx	XUFTS-xxx	XTBMS-xxx
DST1202x	XV-8017-TyNS-0000	XTMDS-xxx	XUFTS-xxx	XTBMS-xxx
DST1203x	XV-8028-TyNS-0000	XTMDS-xxx	XUFTS-xxx	XTBMS-xxx
DST1204x	XV-13042-CONS-0000	XCMDS-xxx	XUFTS-xxx	-
	XV-13042-CBNS-0000	-	XUFTS-xxx	XCMDBS-xxx
DST1204x	XV-13046-CONS-0000	XCMDS-xxx	XUFTS-xxx	-
	XV-13046-CBNS-0000	-	XUFTS-xxx	XCMDBS-xxx
DST1204x	XV-130101-CONS-0000	XCMDS-xxx	XUFTS-xxx	-
	XV-130101-CBNS-0000	-	XUFTS-xxx	XCMDBS-xxx

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CONTROL TECHNIQUES

Digitax ST

Digitax ST - 230V XV Motor Specifications

Drive Model	Motor Model	Cont. Stall Torque lb-in Nm	Peak Stall Torque lb-in Nm	Rated Torque @Rated Speed* lb-in Nm	Rated Power HP kWatts	Max. Speed RPM	Encoder Resolution lines/rev	Inertia lb-in-sec² kg-cm²	Motor Ke Vrms/krpm	Motor Kt lb-in/Arms Nm/Arms	Motor Weight lb kg
DST1201	XV604	3.1 / 0.3	8.4 / 1.0	2.8 / 0.3	0.1 / 0.10	5000	2048	0.000101 / 0.11	14	1.86 / 0.21	1.8 / 0.84
DST1202	XV8017	17.9 / 2.0	48.6 / 5.5	16.9 / 1.9	0.8 / 0.60	5000	2048	0.000960 / 1.08	35	5.00 / 0.56	5.4 / 2.49
DST1203	XV8028	29.9 / 3.4	81.1 / 9.2	28.2 / 3.2	1.3 / 1.00	5000	2048	0.001705 / 1.93	39	5.57 / 0.63	8.3 / 3.80
DST1204	XV13042	40.7 / 4.6	122.0 / 13.8	40.7 / 4.6	2.0 / 1.50	5000	2048	0.010611 / 11.99	39	5.35 / 0.60	15.8 / 7.20
DST1204	XV13046	48.4 / 5.5	137.2 / 15.5	46.5 / 5.3	1.5 / 1.10	3000	2048	0.010611 / 11.99	53	7.71 / 0.87	15.8 / 7.20
DST1204	XV130101	101.0 / 11.4	296.5 / 33.5	101.0 / 11.4	1.6 / 1.20	2000	2048	0.020007 / 22.61	90	13.88 / 1.57	22.4 / 10.20

Digitax ST - 230V XV Motor Speed Torque Curves

XV604-x with DST1201

XV8017-x with DST1202

XV8028-x with DST1203

XV13042-x with DST1204

XV13046-x with DST1204

XV130101-x with DST1204

SPECIFICATIONS

Voltage	240 VAC
Drive Frequency	6 kHz
Ambient Temperature	25°C (77°F)
Case Temperature	75°C (167°F)

All performance data listed above has a +/-10% tolerance and is subject to change at any time without notice. For more detailed information on performance data and test conditions please refer to the motor section of the catalog. For brake motor information, complete motor specifications and dimensions please refer to our motor section.

Legend

■ Continuous Torque
■ Peak Torque

"One Source" for Motion Control

Control Techniques offers its motion control customers industry standard, specialized options and accessories from select leading companies to complement the wide breadth of products we manufacture. This allows our customers to obtain the very best solution from only "One Source" providing piece of mind in their selecting the very best motion solutions available in the industry. For more information, contact your local distributor or sales representative.
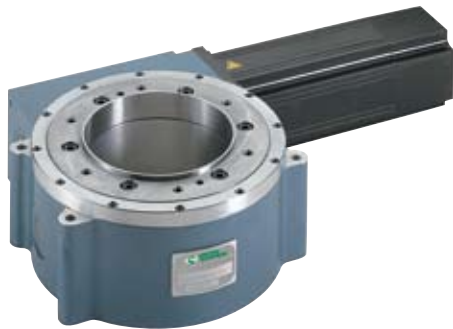
Motion Control

High Performance Actuators (Linear)
Fast
Powerful
Precision
Long Life

Gearing Options
Compact Gear Motors
Precision or Value, Planetary Gears (inline or right angle)
High Torque Worm Gears

Servo Motor Options
Explosion Proof
Food Grade
Gear Motors
Feedback Options (resolver, Sin/Cos absolute encoder)
Customized Finish, Connectors, Mounting
Wide range of IP Ratings
High Flex Cables

Mechanical Cam / Servo Indexers (Rotary)
Zero Backlash
High Repeatability
Versatile Mounting