Digitax ST

Servo drives range
Intelligent, Compact and Dynamic

From 0.72Nm to 19.3Nm (57.7Nm Peak)

CONTROL TECHNIQUES

www.controltechniques.com

THE ULTIMATE SERVO DRIVE

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

Designed around you

Digitax ST is optimised 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.

- **Digitax ST – Base**

  Optimised for centralised control, to operate with motion controllers, motion PLCs and Industrial PC based motion systems using a wide range of digital or analogue interface technologies.

- **Digitax ST – Indexer**

  Designed for simple stand alone positioning applications using an onboard position controller. Fieldbus, Ethernet and I/O enable connectivity to other automation components.

- **Digitax ST – EZ Motion**

  This drive offers a stand alone solution for many common indexing and synchronised motion applications. This is achieved using a unique, PC programming interface that guides the user through the drive, I/O and motion configuration.

- **Digitax ST – Plus**

  Features a full functionality motion controller, optimised for high performance machine cells requiring drive-to-drive networking and precision synchronisation. 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.

Reliability and Innovation

Digitax ST is designed using a well proven development process that prioritises innovation and reliability. This process has resulted in Control Techniques having a market leading reputation for both product performance and quality.
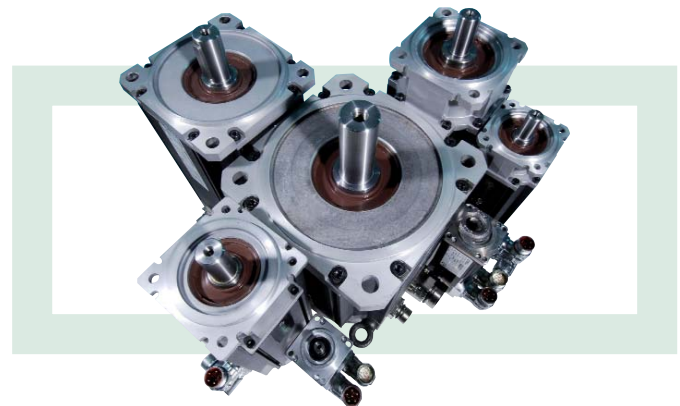
Global Service

Control Techniques' 54 Drive Centres located in 31 countries ensure that service, support and expertise are just around the corner, all around the world.

N1652   CE   RoHS Compliant   2 YEAR Digital Drive Warranty

UL LISTED E171230

EMERSON.
Industrial Automation

AC Input Power, 48Vdc & Dynamic Brake Terminals

Cable Management

Optional Removable Keypad

Programming Port

EMERSON.
Industrial Automation

Digitax ST

Analogue I/O

Digital I/O & 24Vdc

Safe Torque Off

Relay Output

Cable Management

Quick and easy mounting arrangement with DIN rail clip

Motor Output & DC Bus

www.controltechniques.com

**Quick and Easy
Mounting Arrangement**

**Optional Internal
Braking Resistor**

Smartcard

**Option
Module Slot 1**

**Option
Module Slot 2**

**Buffered
Encoder Output**

**Personality
Terminals**

**Universal
Encoder Input**

VALUE YOUR TIME

Reduced Development Time

Three motion programming options allow you to choose the style you prefer, either CTSoft index motion, IEC61131-3 environment with PLCopen functions or PowerTools Pro, drag and drop functionality and a BASIC-like programming language. Servo and fieldbus option modules are independently certified for conformity with open standards to ensure interoperability. CAD files in both 2D and 3D formats make it easier and quicker to design the drive into your machines.

Quicker Installation

Innovative mechanical design reduces the installation time considerably. The mounting arrangements enable the bottom of the drive to be quickly clipped on to standard DIN rail and the cable management system features rigid mounting and earthing brackets. Pluggable control terminals enable looms to be easily prepared. Click-in option modules mean the drive can be customised to your needs at the point of installation without specialist tools and gives the flexibility to customise the functionality at a future time.

Reduced Commissioning Time

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. Selected Unimotor FM models enable the motor dimensions to be stored onboard the encoder as an 'electronic nameplate'. This data is stored during the motor manufactuing process and provides Digitax ST with the motor dimensions enabling automatic motor setup, further reducing the commissioning time. Auto-tune features help you to get the best performance by measuring the machine dynamics and automatically optimising the control loop gains. CTScope, a real-time software oscilloscope, is supplied 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.

COMPACT & COMPLETE

More Compact Machinery

Digitax ST is an extremely compact servo drive that can be mounted side-by-side with other drives or components without leaving space. The result is an incredibly high packing density for multiple axes. Onboard features such as synchronised motion control and Safe Torque Off reduce the need for external components further reducing cubicle sizes and cost.

Matched Motors

Unimotor FM is a performance matched range of servo motors. FM means Flexible Motor, available in six different diameters with a wide range of motor lengths, rated speeds and feedback devices.

Factory fitted options include integral brakes and servo gear boxes. Digitax ST operates successfully with other manufacturers' servo motors including linear motors and almost any feedback device.

Increased Value

How do you increase the value of your machines while reducing your costs? Digitax ST offers reliability, and the performance to increase speed, repeatability and accuracy while also reducing the size and cost. Digitax ST addresses all of the challenges associated with modern machine design.

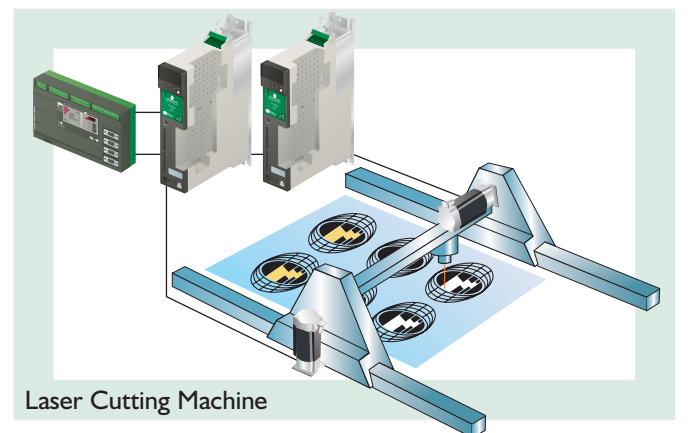|	Digitax ST - Base	Digitax ST - Indexer	Digitax ST - EZ Motion	Digitax ST - Plus
Two option module slots	✔	✔	✔	✔
Digital and analogue I/O with pluggable connector	✔	✔	✔	✔
Smartcard	✔	✔	✔	✔
High speed Freeze input for position capture	✔	✔	✔	✔
Safe Torque Off (Secure Disable)	✔	✔	✔	✔
CTSoft and CTScope commissioning software	✔	✔		✔
Removable keypad (optional)	✔	✔	✔	✔
RS485 PC programming port	✔	✔	✔	✔
Intellectual Property Protection		✔		✔
Index motion programming within CTSoft		✔		Able to import Index Motion
Program multi-tasking			✔	✔
PowerTools Pro programming environment			✔	
SyPT Pro programming environment with PLCopen programming				✔
Drive-to-drive networking				✔

Typical Applications

- Packaging
- Pick and place
- Glue depositing
- Metal, glass, plastic and fabric x y cutting tables
- Materials Handling
- Profiling applications
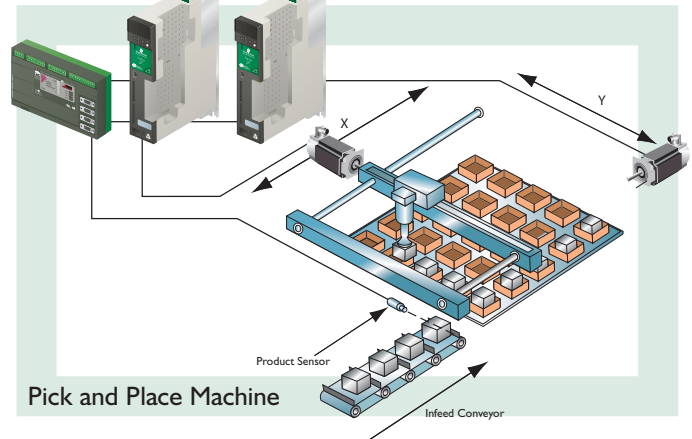
Pick and Place Machine

DIGITAX ST - BASE

Centralised, coordinated motion

Digitax ST - Base is designed for integration with centralised motion controllers, connected using either digital communications or analogue technologies. The drive offers optimised servo performance, flexible connectivity and is quick and simple to configure using either the optional keypad, Smartcard or CTSoft, an intuitive drive configuration software that is included with every drive.

Laser Cutting Machine

Typical Architecture

Analogue/Motion Fieldbus
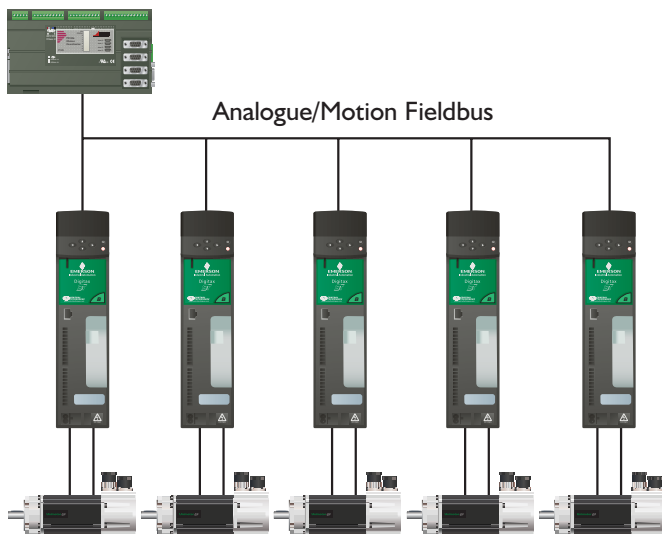
Key Benefits

Option modules with synchronous drive connectivity allow the drive to interface using dedicated servo networks such as EtherCAT, SERCOS and CANopen. Compliance certification ensures interoperability with other manufacturers' equipment.

The standard I/O includes high speed Freeze input for position capture, high resolution analogue input and an encoder output to enable the drive to be connected to traditional motion controllers.

The on-board universal encoder input is able to connect to Incremental, SinCos, Hiperface, EnDAT and SSI encoders allowing you to choose the best feedback device for each application.

As standard the drive features a Safe Torque Off input, which disables the output stage of the drive with a high degree of security. This reduces the cost of complying with machine safety standards such as EN954-1 Cat 3 and enables the drive to integrate easily with the machine safety system.
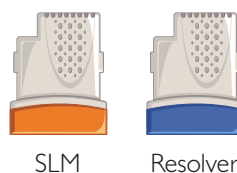
Key Option Modules
Communications

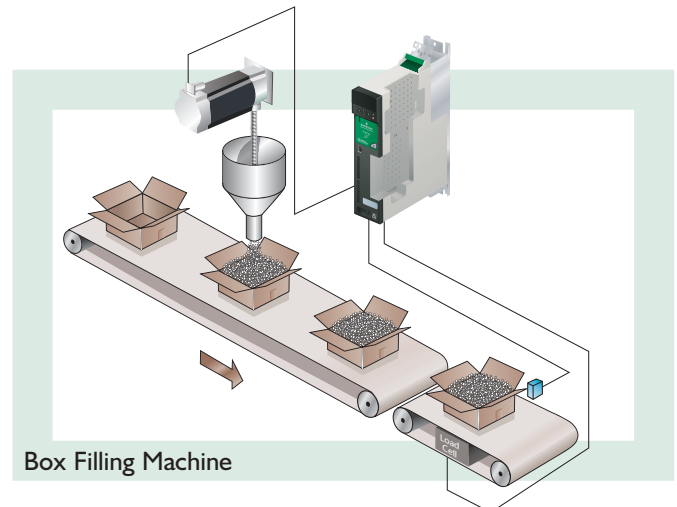EtherCAT   SERCOS   CANopen

Feedback

SLM   Resolver
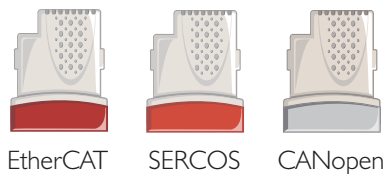
Typical Applications

- Indexing tables
- Fast conveyor positioning
- Cut-to-length machines
- Punching
- Transfer mechanisms
- Fast and precise fluid dispensing

Cut-to-length Machine
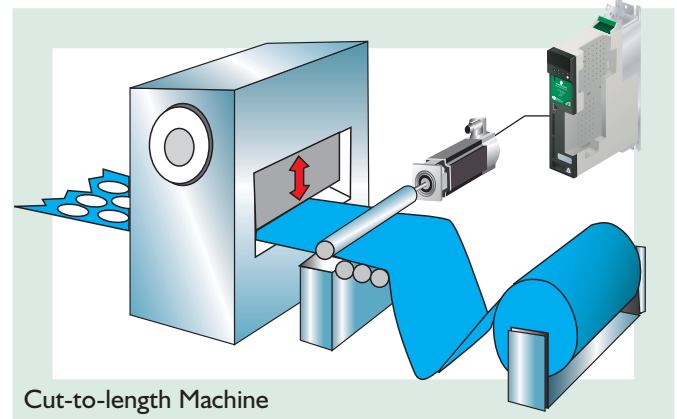
DIGITAX ST – INDEXER

Easy to use, point-to-point positioning

Digitax ST - Indexer has the same high performance features as the Base model, but additionally offers easy to use point-to-point positioning functionality. The drive can operate as a standalone controller or integrate with a wider automation system using fieldbus and I/O. The drive and positioning features are commissioned using CTSoft, an intuitive drive configuration software that is included free with every drive.

Box Filling Machine

Typical Architecture

Ethernet / Fieldbus
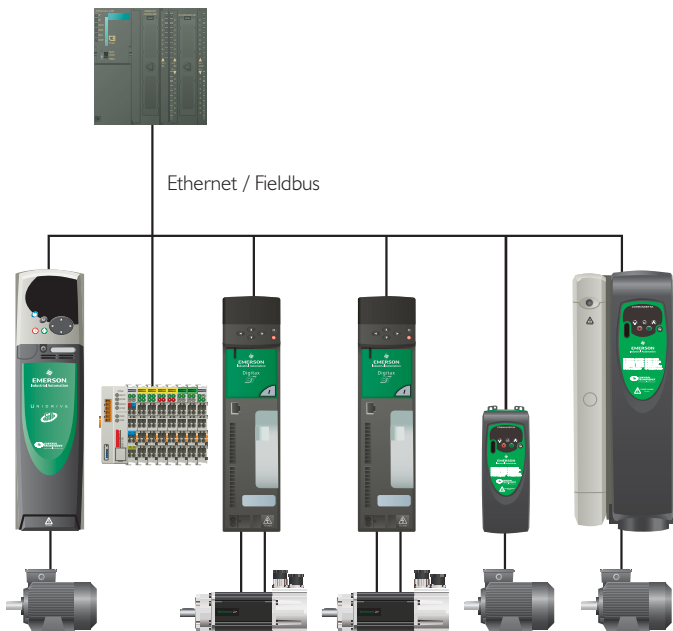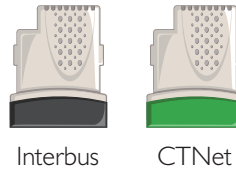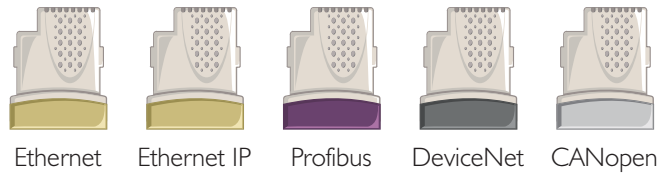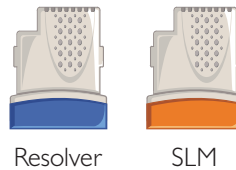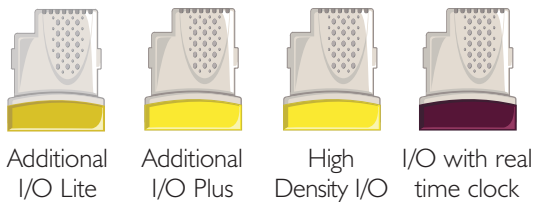
Key Benefits

On-board motion controller with easy-to-use yet powerful graphical software tools enable positioning applications to be configured quickly and easily using the graphical sequential function chart language.

Option modules for Ethernet and fieldbus connectivity such as Profibus and DeviceNet allow the drive to integrate with a wider automation system.

Positioning applications developed for the Indexer can be imported into SyPT Pro, giving access to more advanced features and drive-to-drive communications.

Key Option Modules

Communications

Ethernet   Ethernet IP   Profibus   DeviceNet   CANopen

Interbus   CTNet

Feedback

Resolver   SLM

Input and Output

Additional I/O Lite   Additional I/O Plus   High Density I/O   I/O with real time clock

Typical Applications

- Indexing table
- Pick and place
- Packaging machines
- Dancer arm loop control
- High speed labelling
- Rotary knife

Random Infeed - Smart Belt
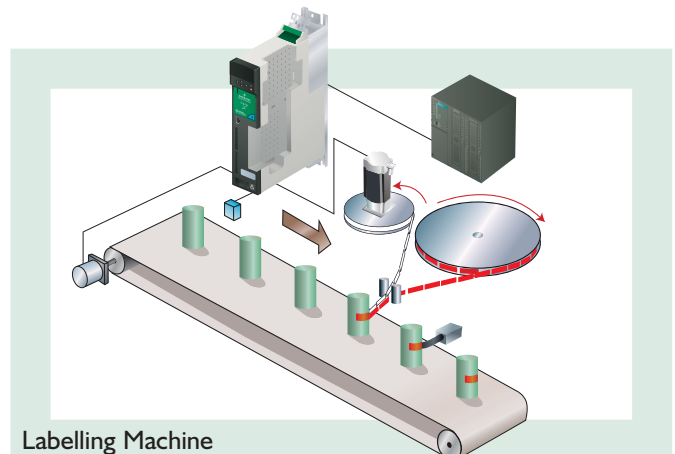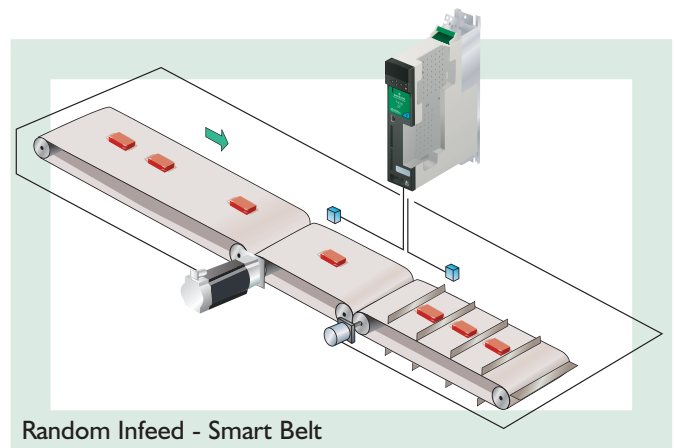
DIGITAX ST – EZ MOTION

Easy motion for indexing and synchronised motion applications

Digitax ST – EZ Motion features an easy to use programming environment making motion control accessible to experienced and first time motion users alike. While simplicity is a primary focus, performance is not compromised, offering a precision servo solution for many common indexing and synchronised motion applications.

Labelling Machine

www.controltechniques.com

Typical Architecture

Controller for monitoring and command

Ethernet switch

Ethernet
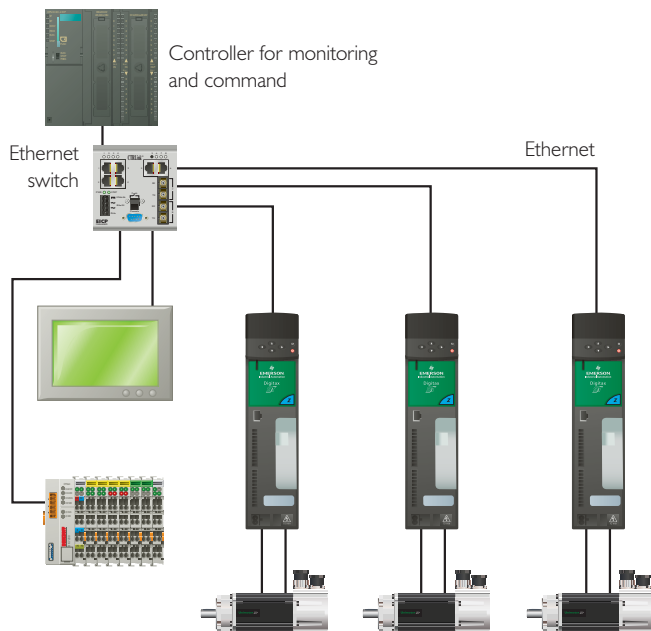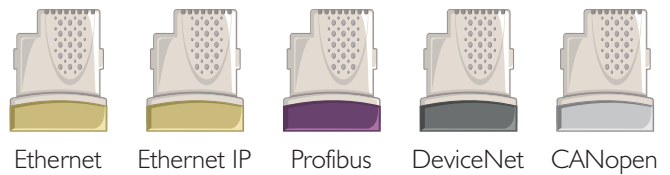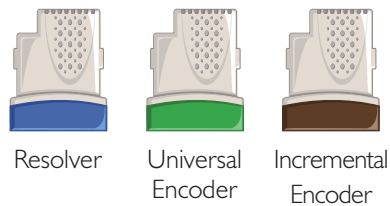
Key Benefits

Digitax ST - EZ Motion is supplied with PowerTools Pro, an easy-to-use software tool for configuration, commissioning and monitoring of all aspects of the drive and motion application.

High level software features help you to reduce your development time. Motion configurations such as travel limits, queuing and gearing are easily deployed within PowerTools Pro software using easy to complete forms and drag and drop functionality.

Six additional high-speed digital I/O points can be used for position capture and system interfacing enabling more complex applications and registration features to be implemented.

Key Option Modules
Communications

Ethernet   Ethernet IP   Profibus   DeviceNet   CANopen

Interbus

Feedback

Resolver   Universal Encoder   Incremental Encoder

Input and Output

Additional I/O Lite   Additional I/O Plus   High Density I/O   I/O with real time clock
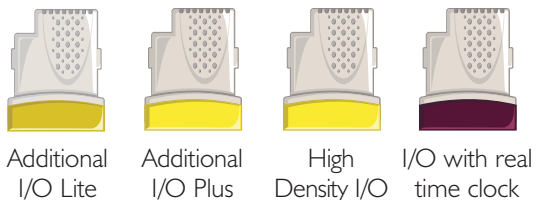
Typical Applications

● Printing

● Packaging

● Synchronising conveyors

● Flying shear

● Rotary knife

● Winder traverse for textile/cable

In-Line Printing
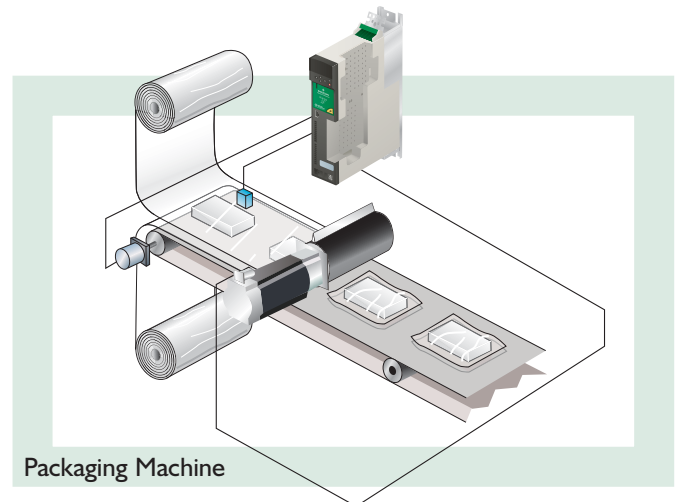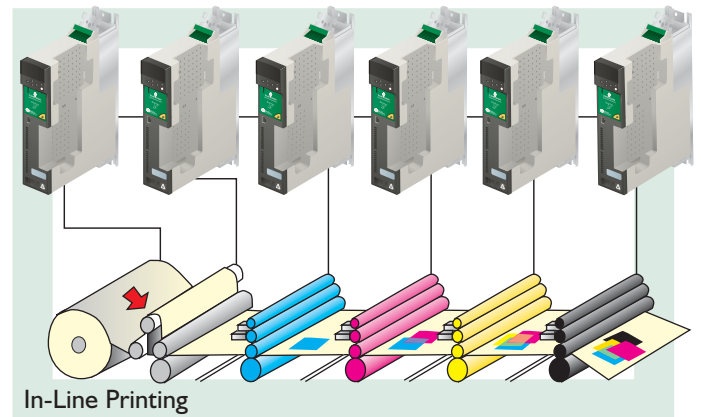
DIGITAX ST - PLUS

Flexibility for the most demanding motion applications

Digitax ST - Plus offers all of the features available on the indexer drive together with more advanced motion functionality including cam profiling and synchronised 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 SyPT Pro automation development environment.

Packaging Machine

Typical Architecture

PLC for monitoring and command

Fieldbus / Ethernet

Intelligent servo drive system with high speed drive-to-drive network

High speed, deterministic drive-to-drive communications reduces wiring and improves the system performance.

Control Techniques drive-to-drive network allows Digitax ST - Plus to integrate closely with other automation devices such as HMIs, PCs, I/O and other Control Techniques drives such as Unidrive SP and Mentor.

Key Option Modules

Communications

| Ethernet | Ethernet IP | Profibus | DeviceNet | CANopen |

Interbus

Key Benefits

On-board position controller ensures superior performance and reduced cubicle space.

Digitax ST - Plus is configured using Control Techniques market leading development environment, SyPT Pro. Standard IEC61131-3 languages, multi-tasking and PLCopen motion function blocks increase familiarity and reduce the development time.

Digitax ST - Plus prevents others benefiting from your unique knowledge. SyPT Pro 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 synchronisation and a wide range of network communication options, Digitax ST makes it easy for you to standardise your designs whilst retaining full connectivity to any PLC.

Feedback

| Resolver | Universal Encoder | Incremental Encoder | SLM |

Input and Output

| Additional I/O Lite | Additional I/O PLUS | High Density I/O | I/O with real time clock | Distributed I/O |

CONTROL TECHNIQUES SOFTWARE

Control Techniques makes it easier to access the drive's full feature set. Our software allows you to optimise the drive tuning, back-up the configuration, configure the on-board motion controller and design the drive-to-drive network data links. There are five main software packages:

- CTSoft - Drive configuration and index motion editor

- CTScope - Real-time software oscilloscope

- PowerTools Pro - Easy to use, all in one drive configuration software for Digitax ST - EZ Motion drives

- SyPT Pro - Drive automation and motion programming environment

- CTOPCServer - OPC compliant server for interfacing your own PC software with Control Techniques drives

The software packages connect using Ethernet, CTNet, Serial or USB connections. Ethernet communications allow the drives to be accessed remotely, anywhere in the world.

	Ethernet	RS485	CTNet	USB
CT Soft	✔	✔	✔	✔
CTScope	✔	✔	✔	✔
PowerTools Pro	✔	✔		✔
SyPT Pro	✔	✔	✔	✔
CTOPCServer	✔	✔	✔	✔

CTSoft

	Base	Indexer	EZ Motion	Plus
Available for	✔	✔		✔

CTSoft is a drive configuration tool for commissioning, optimising and monitoring Control Techniques drives. It allows you to:

● Use the configuration wizards to commission your drive

● Program the Digitax ST on-board motion controller

● Read, save and load drive configuration settings

● Manage the drive's smartcard data

● Visualise and modify the configuration with live animated diagrams
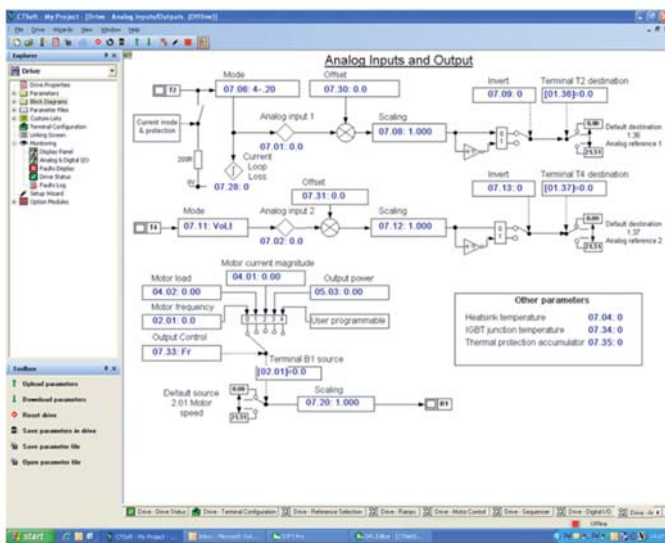
For evaluation, download the full software from www.controltechniques.com

FREE Software

Index Motion Controller

	Base	Indexer	EZ Motion	Plus
Available for		✔		

Digitax ST - index motion controller is programmed within CTSoft using industry standard Sequential Function Chart (SFC) language. The user can quickly configure a range of motion commands such as homing and various index moves. The focus is on reducing development time and ease of use.
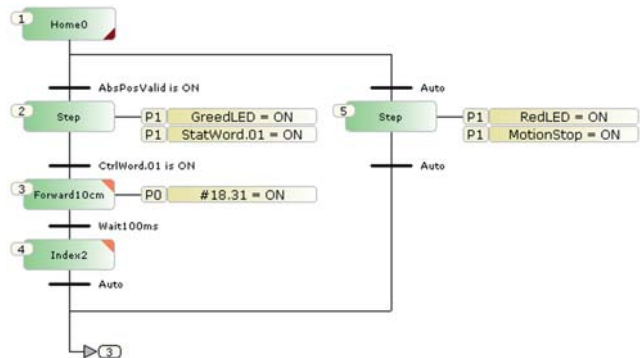
The status of the program can be monitored, and the speed of the motion reduced for commissioning and testing purposes:
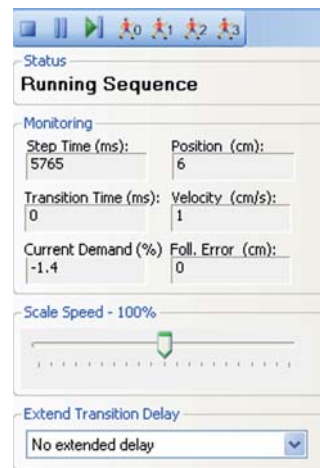
For evaluation, download the full software from www.controltechniques.com

FREE Software

CT*Scope*

	Base	Indexer	EZ Motion	Plus
Available for	✔	✔		✔
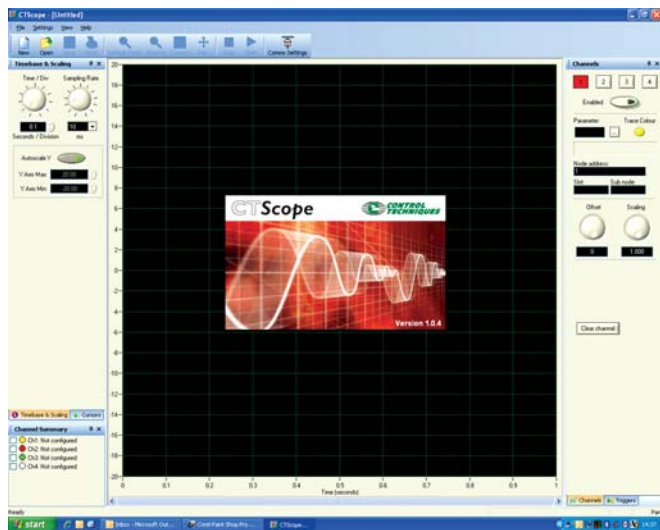
CTScope is a full featured software oscilloscope for viewing and analysing changing values within the drive. The time base can be set to give high speed capture for tuning or intermittent capture for longer term trends. The user interface is based on a traditional oscilloscope, making it familiar and friendly to all engineers across the globe.

For evaluation, download the full software from www.controltechniques.com

PowerTools Pro

	Base	Indexer	EZ Motion	Plus
Available for			✔	

Developing motion applications with PowerTools Pro is a simple "five step, top-down process". The five steps are displayed within an explorer bar that allows easy intuitive navigation. Each step is configured using simple check boxes, drop down selections and drag and drop functionality. The five steps are:

● Hardware Configuration

● Drive Setup

● I/O Setup

● Motion

● Programs

A "BASIC"-like programming language enables users to develop more complex applications and sequencing with functions being selected by dragging and dropping onto the work area.
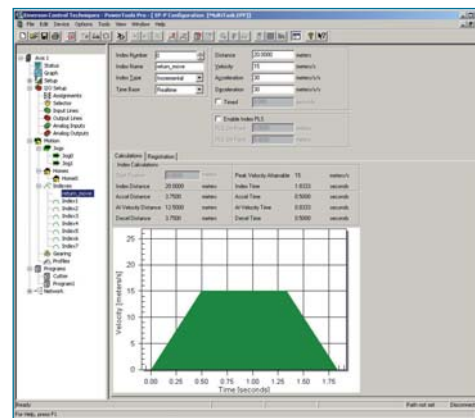
For evaluation, download the full software from www.controltechniques.com

SyPT*Pro*

	Base	Indexer	EZ Motion	Plus
Available for				✔

SyPT Pro is a full featured automation development environment that can be used for developing solutions for single or multiple axis applications. The programming environment supports three industry standard languages: Function Block, Ladder and Structured Text. Motion control is configured using the new PLCopen motion language, supporting up to 1.5 axes. CTNet, a high-speed, drive-to-drive network links the drives, SCADA and I/O together to form an intelligent networked system. SyPT Pro manages both the system programming and motion communications.

For evaluation, download a demo version of the software at www.syptpro.com.
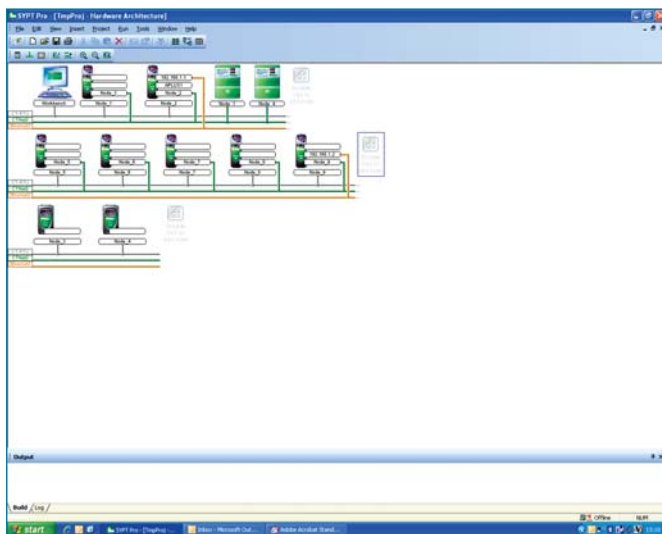
For more information please refer to SyPT Pro brochure, part number 0175-0334

CT*OPCserver*

	Base	Indexer	EZ Motion	Plus
Available for	✔	✔	✔	✔

CTOPCServer is an OPC compliant server which allows PCs to communicate with Control Techniques drives. The server supports communication using Ethernet, CTNet, RS485 and USB. OPC is a standard interface on SCADA packages and is widely supported within Microsoft™ products. The server is supplied free of charge and may be downloaded from www.controltechniques.com.

![EMERSON Industrial Automation]

UNIMOTOR FM 0.72Nm - 19.3Nm

Performance AC Brushless Servo Motor

Overview

Unimotor FM a high performance brushless AC servo motor range matched for use with Control Techniques drives. FM means Flexible Motor, designed to accommodate a wide range of applications. The motors are available in six frame sizes with various mounting arrangements and motor lengths.

Benefits

● Unimotor FM allows various feedback devices to be used. The standard feedback device is an incremental encoder as this offers an optimum balance of cost and performance. SinCos and SLM feedback can be selected for increased resolution and Resolver feedback is available for use in extreme environments

● High peak torque values allow smaller motors to be used where the RMS value is low but the maximum torque is high

● A wide selection of ready made cables is available for quick and easy connection to Control Techniques drives

● High inertia versions are available to allow the motor inertia to be more closely matched to the load inertia for increased performance and stability

● IP65 environmental protection is standard and ATEX protection is available as an option

● Motor brakes may be integrated within the motor, a choice of parking brake or high energy dissipation brake is available

● Other options include plain or keyed shaft and various flange shaft combinations.

● Flexibility of the Unimotor range ensures the best fit for your application, as well as the various physical sizes and feedback devices available, options extend to the type of connectors fitted
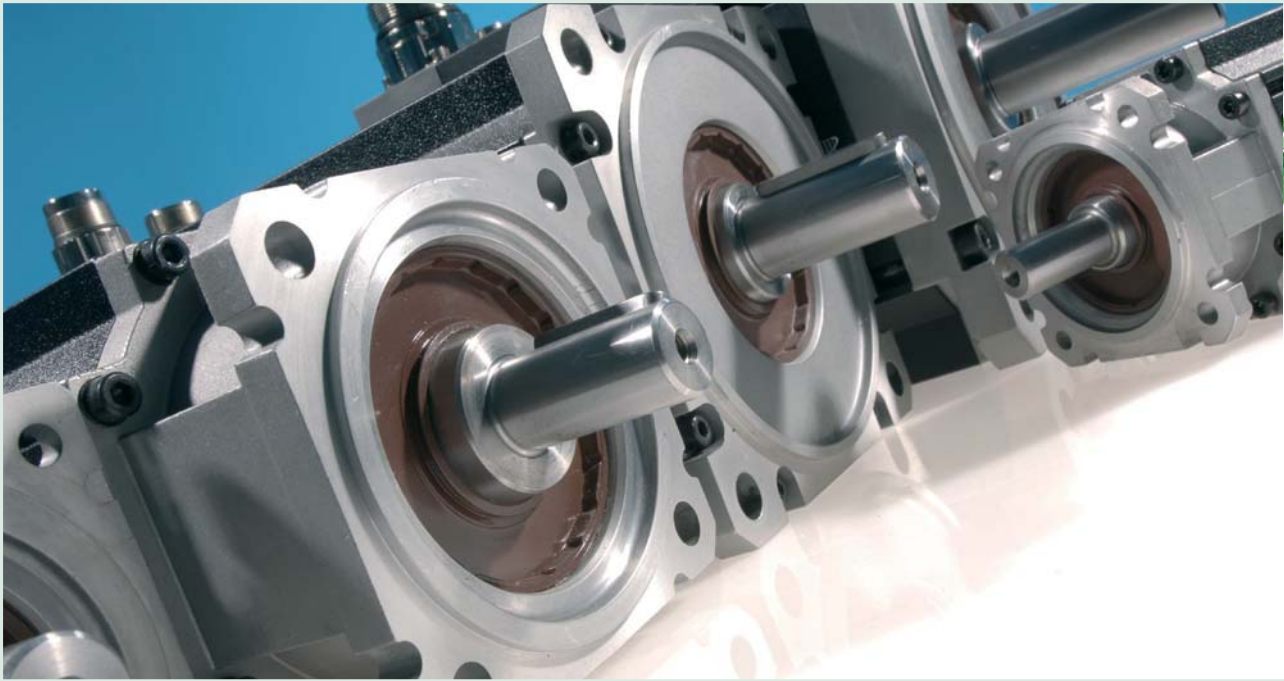
AVAILABLE MOTOR / DRIVE COMBINATIONS

Legend:
- Peak
- 200V Nom
- 400V Nom

Motor Speed (RPM) / Torque (Nm):

Speed	Voltage	Nom	Peak
2000	400V	0.72 / 19.3	57.7
2000	200V	0.72 / 10.7	31.9
3000	400V	0.72 / 12.4	37.6
3000	200V	0.72 / 7.1	21.1
4000	400V	0.72 / 9.4	28.2
4000	200V	0.72 / 5.5	16.4
6000	400V	0.72 / 6.4	19.2
6000	200V	0.72 / 3.5	10.5

1   10 Torque (Nm)   100
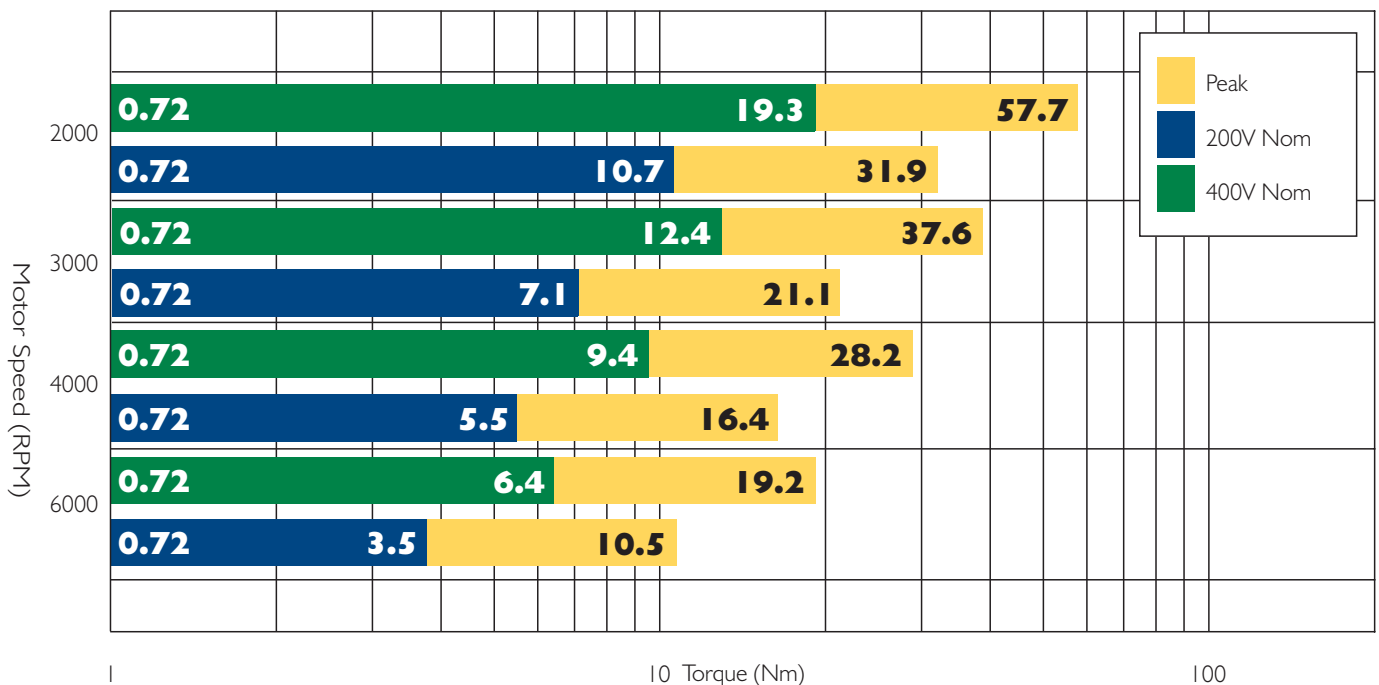
NB: The selection of Drive-Motor combinations should be based on Duty/Load Profiles of the application

DIGITAX ST UNIMOTOR FM @ 2000RPM COMBINATIONS

Table data based on 2000 rpm motors 3x Stall Torque

200V							400V						
Drive Part No.	Stall Nm	Stall Amp	Peak Nm	Peak Amp	Inertia kg/cm²	Motor Part No.	Drive Part No.	Stall Nm	Stall Amp	Peak Nm	Peak Amp	Inertia kg/cm²	Motor Part No.
DST1201	0.72	1.0	2.16	2.9	0.12	055E2A300	DST1401	0.72	0.9	2.16	2.8	0.12	055U2A300
DST1201	1.2	0.9	3.6	2.6	0.7	075E2A200	DST1401	1.2	0.5	3.6	1.5	0.7	075U2A200
DST1201	1.4	1.7	4.2	5.1	0.23	055E2B300	DST1401	1.4	0.9	4.2	2.8	0.23	055U2B300
DST1202	2.1	2.4	6.3	7.3	0.34	055E2C300	DST1401	2.1	1.3	6.3	4.0	0.34	055U2C300
DST1201	2.2	1.6	6.6	4.7	1.2	075E2B200	DST1401	2.2	0.9	6.6	2.8	1.2	075U2B200
DST1201	2.3	1.6	6.9	4.9	1.7	095E2A200	DST1401	2.3	1.0	6.9	2.9	1.7	095U2A200
DST1202	3.1	2.2	9.3	6.6	1.6	075E2C200	DST1401	3.1	1.3	9.3	3.9	1.6	075U2C200
DST1202	3.5	2.5	10.5	7.5	4.4	115E2A200	DST1401	3.5	1.5	10.5	4.4	4.4	115U2A200
DST1202	3.9	2.8	11.7	8.4	2	075E2D200	DST1402	3.9	1.6	11.7	4.9	2	075U2D200
DST1202	4.3	3.1	12.9	9.2	2.9	095E2B200	DST1402	4.3	1.8	12.9	5.4	2.9	095U2B200
DST1203	5.7	4.1	17.1	12.2	9	142E2A200	DST1402	5.7	2.4	17.1	7.1	9	142U2A200
DST1203	5.9	4.2	17.7	12.6	4	095E2C200	DST1402	5.9	2.5	17.7	7.4	4	095U2C200
DST1203	6.6	4.7	19.8	14.1	6.7	115E2B200	DST1402	6.5	2.7	19.5	8.1	6.7	115U2B200*
DST1203	7.5	5.4	22.5	16.1	5.1	095E2D200	DST1403	7.5	3.1	22.5	9.4	5.1	095U2D200
DST1204	9.0	6.4	27	19.3	6.2	095E2E200	DST1403	9	3.8	27	11.3	6.2	095U2E200
DST1204	9.4	6.7	28.2	20.1	9	115E2C200	DST1403	9.4	3.9	28.2	11.8	9	115U2C200
DST1204	9.6	6.9	28.8	20.6	29.9	190E2A200	DST1403	9.6	4.0	28.8	12.0	29.9	190U2A200
DST1204	10.7	7.6	31.9	22.8	15.6	142E2B200*	DST1404	10.8	4.5	32.4	13.5	15.6	142U2B200
							DST1404	12.4	5.2	37.6	15.7	11.4	115U2D200
							DST1405	15.3	6.4	45.9	19.1	13.8	115U2E200
							DST1405	15.3	6.4	45.9	19.1	22.2	142U2C200
							DST1405	19.3	8.0	57.7	24.0	28.8	142U2D200*

* Motor output limited by drive rating

* Motor output limited by drive rating

www.controltechniques.com

DIGITAX ST UNIMOTOR FM @ 3000RPM COMBINATIONS

Table data based on 3000 rpm motors 3x Stall Torque

200V						
Drive Part No.	Stall Nm	Stall Amp	Peak Nm	Peak Amp	Inertia kg/cm²	Motor Part No.
DST1201	0.72	1.0	2.16	2.9	0.12	055E2A300
DST1201	1.2	1.3	3.6	3.9	0.7	075E2A300
DST1201	1.4	1.7	4.2	5.1	0.23	055E2B300
DST1202	2.1	2.4	6.3	7.3	0.34	055E2C300
DST1202	2.2	2.4	6.6	7.1	1.2	075E2B300
DST1202	2.3	2.5	6.9	7.4	1.7	095E2A300
DST1202	3.1	3.3	9.3	10.0	1.6	075E2C300
DST1202	3.5	3.8	10.5	11.3	4.4	115E2A300
DST1203	3.9	4.2	11.7	12.6	2	075E2D300
DST1203	4.3	4.6	12.9	13.9	2.9	095E2B300
DST1204	5.7	6.1	17.1	18.4	9	142E2A300
DST1204	5.9	6.3	17.7	19.0	4	095E2C300
DST1204	6.6	7.1	19.8	21.3	6.7	115E2B300
DST1204	7.1	7.6	21.1	22.7	5.1	095E2D300*

* Motor output limited by drive rating

400V						
Drive Part No.	Stall Nm	Stall Amp	Peak Nm	Peak Amp	Inertia kg/cm²	Motor Part No.
DST1401	0.72	0.9	2.16	2.8	0.12	055U2A300
DST1401	1.2	0.8	3.6	2.3	0.7	075U2A300
DST1401	1.4	0.9	4.2	2.8	0.23	055U2B300
DST1401	2.1	1.3	6.3	4.0	0.34	055U2C300
DST1401	2.2	1.4	6.6	4.1	1.2	075U2B300
DST1401	2.3	1.4	6.9	4.3	1.7	095U2A300
DST1402	3.1	1.9	9.3	5.8	1.6	075U2C300
DST1402	3.5	2.2	10.5	6.6	4.4	115U2A300
DST1402	3.9	2.4	11.7	7.3	2	075U2D300
DST1402	4.3	2.7	12.9	8.1	2.9	095U2B300
DST1403	5.7	3.6	17.1	10.7	9	142U2A300
DST1403	5.9	3.7	17.7	11.1	4	095U2C300
DST1403	6.4	4.0	19.2	12.0	6.7	115U2B300*
DST1404	7.5	4.7	22.5	14.1	5.1	095U2D300
DST1404	9.0	5.6	27	16.9	6.2	095U2E300
DST1404	9.4	5.9	28.2	17.6	9	115U2C300
DST1405	9.6	6.0	28.8	18.0	29.9	190U2A300
DST1405	10.8	6.8	32.4	20.3	15.6	142U2B300
DST1405	12.4	7.8	37.6	23.5	11.4	115U2D300

* Motor output limited by drive rating

DIGITAX ST UNIMOTOR FM @ 4000RPM COMBINATIONS

Table data based on 4000 rpm motors 3x Stall Torque

200V						
Drive Part No.	Stall Nm	Stall Amp	Peak Nm	Peak Amp	Inertia kg/cm²	Motor Part No.
DST1201	0.72	1.7	2.16	5.1	0.12	055E2A600
DST1201	1.2	1.7	3.6	5.0	0.7	075E2A400
DST1202	1.4	3.3	4.2	10.0	0.23	055E2B600
DST1203	2.1	4.8	6.3	14.3	0.34	055E2C600
DST1202	2.2	3.1	6.6	9.2	1.2	075E2B400
DST1202	2.3	3.2	6.9	9.6	1.7	095E2A400
DST1203	3.1	4.3	9.3	12.9	1.6	075E2C400
DST1203	3.5	4.9	10.5	14.6	4.4	115E2A400
DST1203	3.9	5.4	11.7	16.3	2	075E2D400
DST1204	4.3	6.0	12.9	17.9	2.9	095E2B400
DST1204	5.5	7.6	16.4	22.8	9	142E2A400*

* Motor output limited by drive rating

400V						
Drive Part No.	Stall Nm	Stall Amp	Peak Nm	Peak Amp	Inertia kg/cm²	Motor Part No.
DST1401	0.72	1.0	2.16	2.9	0.12	055U2A600
DST1401	1.2	1.0	3.6	3.0	0.7	075U2A400
DST1402	1.4	1.9	4.2	5.8	0.23	055U2B600
DST1402	2.1	2.7	6.3	8.0	0.34	055U2C600
DST1402	2.2	1.8	6.6	5.5	1.2	075U2B400
DST1402	2.3	1.9	6.9	5.8	1.7	095U2A400
DST1402	3.1	2.6	9.3	7.8	1.6	075U2C400
DST1403	3.5	2.9	10.5	8.8	4.4	115U2A400
DST1403	3.9	3.3	11.7	9.8	2	075U2D400
DST1403	4.3	3.6	12.9	10.8	2.9	095U2B400
DST1404	5.7	4.8	17.1	14.3	9	142U2A400
DST1404	5.9	4.9	17.7	14.8	4	095U2C400
DST1404	6.6	5.5	19.8	16.5	6.7	115U2B400
DST1405	7.5	6.3	22.5	18.8	5.1	095U2D400
DST1405	9.0	7.5	27	22.5	6.2	095U2E400
DST1405	9.4	7.8	28.2	23.5	9	115U2C400

www.controltechniques.com
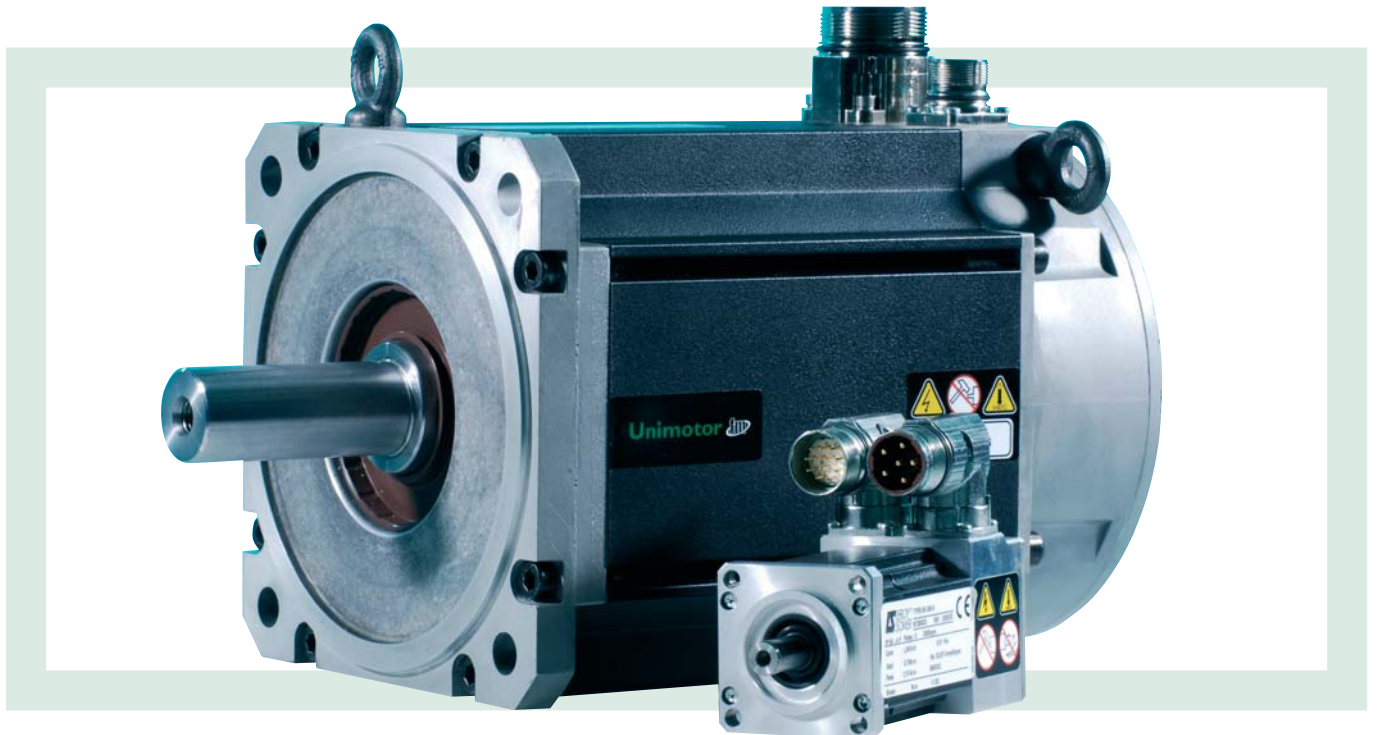
DIGITAX ST UNIMOTOR FM @ 6000RPM COMBINATIONS

Table data based on 6000 rpm motors 3x Stall Torque

200V						
Drive Part No.	Stall Nm	Stall Amp	Peak Nm	Peak Amp	Inertia kg/cm²	Motor Part No.
DST1201	0.72	1.7	2.16	5.1	0.12	055E2A600
DST1202	1.2	2.6	3.6	7.7	0.7	075E2A600
DST1202	1.4	3.3	4.2	10.0	0.23	055E2B600
DST1203	2.1	4.8	6.3	14.3	0.34	055E2C600
DST1203	2.2	4.7	6.6	14.0	1.2	075E2B600
DST1203	2.3	4.9	6.9	14.7	1.7	095E2A600
DST1204	3.1	6.6	9.3	19.8	1.6	075E2C600
DST1204	3.5	7.4	10.5	22.3	4.4	115E2A600

400V						
Drive Part No.	Stall Nm	Stall Amp	Peak Nm	Peak Amp	Inertia kg/cm²	Motor Part No.
DST1401	0.72	1.0	2.16	2.9	0.12	055U2A600
DST1401	1.2	1.5	3.6	4.5	0.7	075U2A600
DST1402	1.4	1.9	4.2	5.8	0.23	055U2B600
DST1402	2.1	2.7	6.3	8.0	0.34	055U2C600
DST1403	2.2	2.8	6.6	8.3	1.2	075U2B600
DST1403	2.3	2.9	6.9	8.6	1.7	095U2A600
DST1403	3.1	3.9	9.3	11.6	1.6	075U2C600
DST1404	3.5	4.4	10.5	13.1	4.4	115U2A600
DST1404	3.9	4.9	11.7	14.6	2	075U2D600
DST1404	4.3	5.4	12.9	16.1	2.9	095U2B600
DST1405	5.7	7.1	17.1	21.4	9	142U2A600
DST1405	5.9	7.4	17.7	22.1	4	095U2C600
DST1405	6.4	8.0	19.2	24.0	6.7	115U2B600*

* Motor output limited by drive rating

TECHNICAL DATA FOR DIGITAX ST

Model Reference

Model code explanation

	DST	1	2	01	B	

Model:
Digitax ST

Frame Size

Voltage Rating
2 - 200V to 240V
4 - 380V to 480V

Current Rating Step

Available Features
B - Base   **I** - Indexer
Z - EZ Motion **P** - Plus
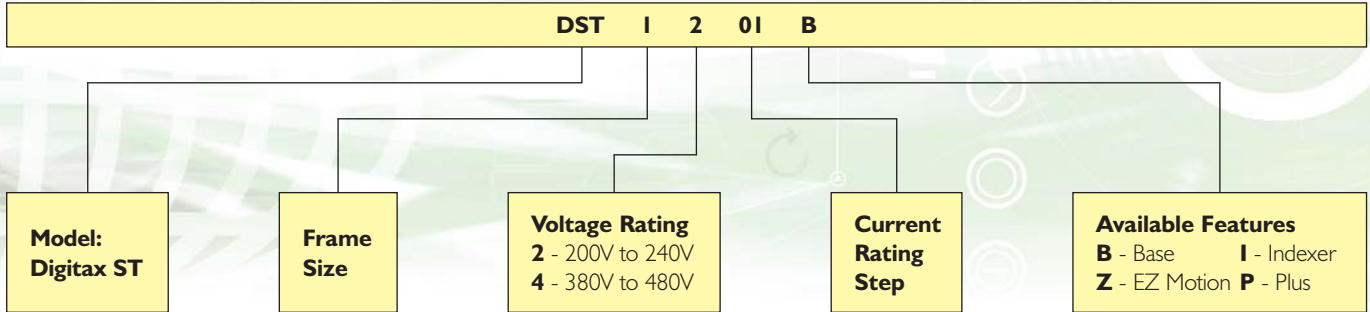
Drive Model Ratings				
Model	Rated Voltage (Volts)	No of input phases	Nominal current (Arms)	Peak current (Arms)
DST1201	230	1	1.1	2.2
DST1202	230	1	2.4	4.8
DST1203	230	1	2.9	5.8
DST1204	230	1	4.7	9.4
DST1201	230	3	1.7	5.1
DST1202	230	3	3.8	11.4
DST1203	230	3	5.4	16.2
DST1204	230	3	7.6	22.8
DST1401	400	3	1.5	4.5
DST1402	400	3	2.7	8.1
DST1403	400	3	4	12
DST1404	400	3	5.9	17.7
DST1405	400	3	8	24

NOTE: The Drive selection should be based on Duty/Load Profile of the application.

Supply Requirements		
Model	Supply Voltage	Supply Frequency Range
DST120X	200V to 240V +/-10% single phase	48Hz to 65Hz
DST120X	200V to 240V +/-10% three phase	48Hz to 65Hz
DST140X	380V to 480V +/-10% three phase	48Hz to 65Hz

Internal Braking Resistor Option	
Part number	1299-0001
DC resistance at 25˚C	70R
Average power	50W
Peak instantaneous power over 1ms at nominal resistance	2.2kW (230V) 8.7kW (400V)

www.controltechniques.com

Drive Dimensions

226mm (8.9in)

322mm (12.7in)

249.7mm (9.8in)

62mm (2.4in)
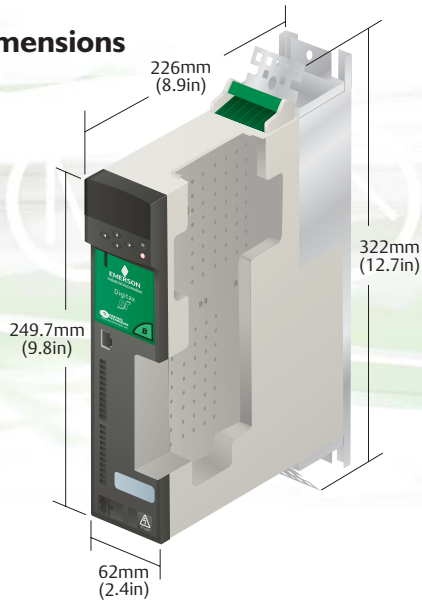
Foot Mounted EMC Filters			
Model	Voltage	Phases	Part Number
DST120X	230	1	4200-6000
DST120X	230	3	4200-6001
DST140X	400	3	4200-6002

Other Options			
Description	Part Number	Description	Part Number
Keypad	Digitax ST Keypad	CT Comms Cable RS232	4500-0087
Additional Standard Smartcard	2214-4246	CT Comms Cable USB	4500-0096
High Capacity Smartcard	2214-1006		

General Drive Data	
Type	Details
IP Rating	IP20 (UL Type 1 / NEMA 1)
Weight (net)	2.1kg (4.6 lb) Excluding keypad and option modules
Ambient operating temperature	0°C to 50°C (32°F to 122°F) Output current is derated at ambient temperatures >40°C (104°F)
Operating humidity	Maximum relative humidity 95% non-condensing
Altitude	0m to 3000m (9900ft). De-rate the maximum output current for the specified figure by 1% per 100m (330 ft) above 1000m (3300 ft).
Power cycles per hour	60 starts per hour equally spaced
Digital and Analogue I/O	1 Relay Output 3 Dedicated Inputs 3 Bi-directional Input/Outputs 1 Safe Torque Off Input 1 High Resolution Analogue Input (16 bit + sign) 1 Standard Analogue Input (10 bit + sign) 2 Analogue Outputs 1 Freeze Input (1μs)
Vibration	Tested in accordance to IEC60068-2-6/64
Mechanical Shock	Tested in accordance to 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

DRIVING THE WORLD...

CONTROL TECHNIQUES
www.controltechniques.com

Control Techniques Drive & Application Centres

AUSTRALIA
Melbourne Application Centre
T: +613 973 81777
info.au@controltechniques.com

Sydney Drive Centre
T: +61 2 9838 7222
info.au@controltechniques.com

AUSTRIA
Linz Drive Centre
T: +43 7229 789480
info.at@controltechniques.com

BELGIUM
Brussels Drive Centre
T: +32 1574 0700
info.be@controltechniques.com

BRAZIL
Emerson do Brazil Ltda
T: +5511 3618 6569
info.br@controltechniques.com

CANADA
Toronto Drive Centre
T: +1 905 201 4699
info.ca@controltechniques.com

Calgary Drive Centre
T: +1 403 253 8738
info.ca@controltechniques.com

CHINA
Shanghai Drive Centre
T: +86 21 5426 0668
info.cn@controltechniques.com

Beijing Application Centre
T: +86 10 856 31122 ext 820
info.cn@controltechniques.com

CZECH REPUBLIC
Brno Drive Centre
T: +420 541 192111
info.cz@controltechniques.com

DENMARK
Copenhagen Drive Centre
T: +45 4369 6100
info.dk@controltechniques.com

FRANCE*
Angoulême Drive Centre
T: +33 5 4564 5454
info.fr@controltechniques.com

GERMANY
Bonn Drive Centre
T: +49 2242 8770
info.de@controltechniques.com

Chemnitz Drive Centre
T: +49 3722 52030
info.de@controltechniques.com

Darmstadt Drive Centre
T: +49 6251 17700
info.de@controltechniques.com

GREECE*
Athens Application Centre
T: +0030 210 57 86086/088
info.gr@controltechniques.com

HOLLAND
Rotterdam Drive Centre
T: +31 184 420555
info.nl@controltechniques.com

HONG KONG
Hong Kong Application Centre
T: +852 2979 5271
info.hk@controltechniques.com

INDIA
Chennai Drive Centre
T: +91 44 2496 1123/
2496 1130/2496 1083
info.in@controltechniques.com

Pune Application Centre
T: +91 20 2612 7956/2612 8415
info.in@controltechniques.com

Kolkata Application Centre
T: +91 33 2357 5302/2357 5306
info.in@controltechniques.com

New Delhi Application Centre
T: +91 11 2 576 4782/2 581 3166
info.in@controltechniques.com

IRELAND
Dublin Drive Centre
T: +353 45 448200
info.ie@controltechniques.com

ITALY
Milan Drive Centre
T: +39 02575 751
info.it@controltechniques.com

Reggio Emilia Application Centre
T: +39 02575 751
info.it@controltechniques.com

Vicenza Drive Centre
T: +39 0444 933400
info.it@controltechniques.com

KOREA
Seoul Application Centre
T: +82 2 3483 1605
info.kr@controltechniques.com

MALAYSIA
Kuala Lumpur Drive Centre
T: +603 5634 9776
info.my@controltechniques.com

**REPUBLIC OF
SOUTH AFRICA**
Johannesburg Drive Centre
T: +27 11 462 1740
info.za@controltechniques.com

Cape Town Application Centre
T: +27 21 556 0245
info.za@controltechniques.com

RUSSIA
Moscow Application Centre
T: +7 495 981 9811
info.ru@controltechniques.com

SINGAPORE
Singapore Drive Centre
T: +65 6468 8979
info.sg@controltechniques.com

SLOVAKIA
EMERSON A.S
T: +421 32 7700 369
info.sk@controltechniques.com

SPAIN
Barcelona Drive Centre
T: +34 93 680 1661
info.es@controltechniques.com

Bilbao Application Centre
T: +34 94 620 3646
info.es@controltechniques.com

Valencia Drive Centre
T: +34 96 154 2900
info.es@controltechniques.com

SWEDEN*
Stockholm Application Centre
T: +468 554 241 00
info.se@controltechniques.com

SWITZERLAND
Lausanne Application Centre
T: +41 21 637 7070
info.ch@controltechniques.com

Zurich Drive Centre
T: +41 56 201 4242
info.ch@controltechniques.com

TAIWAN
Taipei Application Centre
T: +886 22325 9555
info.tw@controltechniques.com

THAILAND
Bangkok Drive Centre
T: +66 2580 7644
info.th@controltechniques.com

TURKEY
Istanbul Drive Centre
T: +90 216 4182420
info.tr@controltechniques.com

UAE*
Dubai Application Centre
T: +971 4 883 8650
info.ae@controltechniques.com

UNITED KINGDOM
Telford Drive Centre
T: +44 1952 213700
info.gb@controltechniques.com

USA
California Drive Centre
T: +1 562 943 0300
info.us@controltechniques.com

Charlotte Application Centre
T: +1 704 393 3366
info.us@controltechniques.com

Chicago Application Centre
T: +1 630 752 9090
info.us@controltechniques.com

Cleveland Drive Centre
T: +1 440 717 0123
info.us@controltechniques.com

Florida Drive Centre
T: +1 239 693 7200
info.us@controltechniques.com

Latin America Sales Office
T: +1 305 818 8897
info.us@controltechniques.com

Minneapolis US Headquarters
T: +1 952 995 8000
info.us@controltechniques.com

Oregon Drive Centre
T: +1 503 266 2094
info.us@controltechniques.com

Providence Drive Centre
T: +1 401 541 7277
info.us@controltechniques.com

Utah Drive Centre
T: +1 801 566 5521
info.us@controltechniques.com

Control Techniques Distributors

ARGENTINA
Euro Techniques SA
T: +54 11 4331 7820
eurotech@eurotechsa.com.ar

BAHRAIN
Iftikhar Electrical Est.
T: +973 271 116
ieepower@batelco.com.bh

BULGARIA
BLS - Automation Ltd
T: +359 32 968 007
info@blsautomation.com

CENTRAL AMERICA
Mercado Industrial Inc.
T: +1 305 854 9515
rsaybe@mercadoindustrialinc.com

CHILE
Ingeniería Y Desarrollo
Tecnológico S.A
T: +56 2741 9624
idt@idt.cl

COLOMBIA
Sistronic LTDA
T: +57 2 555 60 00
sistronic@telesat.com.co

CROATIA
Koncar – MES d.d.
T: +385 1 366 7273
nabava@koncar-mes.hr

CYPRUS
Acme Industrial Electronic
Services Ltd
T: +3572 5 332181
acme@cytanet.com.cy

EGYPT
Samiram
T: +202 7360849/
+202 7603877
samiramz@samiram.com

FINLAND
SKS Control
T: +358 20764 6639
control@sks.fi

HUNGARY
Control-VH Kft
T: +361 431 1160
info@controlvh.hu

ICELAND
Samey ehf
T: +354 510 5200
samey@samey.is

INDONESIA
Pt Apikon Indonesia
T: +65 6468 8979
info.my@controltechniques.com

Pt Yua Esa Sempurna Sejahtera
T: +65 6468 8979
info.my@controltechniques.com

ISRAEL
Dor Drives Systems Ltd
T: +972 3900 7595
info@dor1.co.il

KENYA
Kassam & Bros Co. Ltd
T: +254 2 556 418
kassambros@africaonline.co.ke

KUWAIT
Saleh Jamal & Company WLL
T: +965 483 2358
sjceng@almullagroup.com

LATVIA
EMT
T: +371 760 2026
janis@emt.lv

LEBANON
Black Box Automation &
Control
T: +961 1 443773
info@blackboxcontrol.com

LITHUANIA
Elinta UAB
T: +370 37 351 987
sigitas@elinta.lt

MALTA
Mekanika Limited
T: +35621 442 039
mfrancica@gasan.com

MEXICO
MELCSA
T: +52 55 5561 1312
melcsamx@iserve.net.mx

SERVITECK, S.A de C.V
T: +52 55 5398 9591
servitek@data.net.mx

MOROCCO
Leroy Somer Maroc
T: +212 22 354948
lsmaroc@wanadoopro.ma

NEW ZEALAND
Advanced Motor Control. Ph.
T: +64 (0) 274 363 067
info.au@controltechniques.com

PHILIPPINES
Control Techniques Singapore Ltd
T: +65 6468 8979
info.my@controltechniques.com

POLAND
APATOR CONTROL Sp. z o.o
T: +48 56 6191 207
drives@apator.torun.pl

PORTUGAL
Harker Sumner S.A
T: +351 22 947 8090
drives.automation@harker.pt

PUERTO RICO
Powermotion
T: +1 787 843 3648
dennis@powermotionpr.com

QATAR
AFI Sitna Technologies
T: +974 468 4442
jp33@qatar.net.qa

ROMANIA
Dor Drives International
T: +40 21 337 3465
dordrive@zappmobile.ro

SAUDI ARABIA
A. Abunayyan Electric Corp.
T: +9661 477 9111
aec-salesmarketing@
abunayyangroup.com

SERBIA & MONTENEGRO
Master Inzenjering d.o.o
T: +381 24 551 605
master@eunet.yu

SLOVENIA
PS Logatec
T: +386 1 750 8510
ps-log@ps-log.si

TUNISIA
SIA Ben Djemaa & CIE
T: +216 1 332 923
bendjemaa@planet.tn

URUGUAY
Secoin S.A
T: +5982 2093815
secoin@adinet.com.uy

VENEZUELA
Digimex Sistemas C.A.
T: +58 243 551 1634

VIETNAM
N.Duc Thinh
T: +84 8 9490633
infotech@nducthinh.com.vn

© Control Techniques 2007. The information contained in this brochure is for guidance only and does not form part of any contract. The accuracy cannot be guaranteed as Control Techniques have an ongoing process of development and reserve the right to change the specification of their products without notice.

* Operated by sister company

LEROY SOMER

P.N. 0175-0345   10/07