

HIGH POWER systems

SMX30 Nutrunner Control

Single-Channel



High-end control in compact design

The SMX30 is the natural advancement to our successful SMXP high-end nutrunner control. By using a PC in 3.5" format, the size of the control is significantly reduced in size – while maintaining the same range of functions!

Flexibility through integrated PC

An integrated PC expands SMX30 functionality considerably, when compared to conventional controls. For example, it allows you to establish a direct connection to your host computer.

The operating system, programs, and system data are stored on a write-protect CompactFlash card, with temporary data stored on a second CompactFlash card. The operating system, Windows XP Embedded, is condensed to provide only the necessary functions, while offering maximum protection against network virus attacks. A 6.5" touch-screen display facilitates the operator and graphic interface.

Programming complex nutrunning processes

The SMX30 offers programming capabilities for complex nutrunning processes. All torque- and angle-based algorithms are available as base modules. These modules, along with additional commands for process control, can be linked with a user-friendly parameter software to create complex nutrunning processes. Conditional program statements can be based on rundown results, which enable,

for example, loosening operations with or without repeated nutrunning. In addition, the control offers advanced nutrunning and monitoring processes, such as yield control, retrospective nutrunning monitor, and friction measurement.

Integrated task management

When a single work station requires several nutrunning operations to be executed, the SMX30 offers the possibility to define up to 31 different nutrunning programs in one task plan. These can be carried out automatically or with guidance. The SMX30 counts and monitors whether all processes have been completed and creates a total quality assessment at the end. Task plans are stored either locally or uploaded from the SMX30 to your host computer.

Quality assurance documentation

Rundown results and graphs can be stored locally or uploaded to a host computer.

Interfaces

The SMX30 communication possibilities afforded by the integrated PC are almost unlimited. Available interfaces include Ethernet, field bus, RS232, RS485, and USB. Additional interfaces are available with expansion cards.

High Power Nutrunning

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Local nutrunning network configurations

It is possible to create a local, cost-effective nutrunning network with the SMX30. Up to nine SMX10 nutrunner controls can be linked via Ethernet to an SMX30. The SMX30 also functions in this case as a master control, communicating with customer systems, e.g., conveyor control system or host computer, and coordinates all connected SMX10 slaves.

Technical Data

General

- Low-power processor, 1 GHz
- Windows XP Embedded
- Operating system, system programs, and data on removable CompactFlash card

Assembly/Dimensions

- Four assembly mounting holes in wall console
- IP54 protection
- Control dimensions: 330x180x316 (HxWxD in mm)
- Wall console dimensions: 330x180x63 (HxWxD in mm)
- Total dimensions: 330x180x379 (HxWxD in mm)
- Weight of control: approx. 10 kg
- Weight of wall console: approx. 2 kg

Display and Operator Controls

- 6.5" touch-screen display

Programming and Parameterization

- User-friendly programming software via network

Nutrunning Processes

- Torque-controlled tightening
- Torque-controlled with angle monitor
- Angle-controlled with torque monitor
- Yield-controlled tightening
- Angle-controlled and torque-controlled loosening

- Shutdown based on digital signal with torque and angle control
- Friction measurement
- Retrospective nutrunning monitor
- Redundant motor current control
- Nutrunning time monitor

Interfaces

- 2 x Ethernet
- RS232, RS485
- USB
- Field bus systems available with expansion cards (optional)

Peripheral Equipment

- Operator console
- Socket tray
- Signalers (e.g., stacklight, alarm horn, etc.)
- I/O modules (parallel)
- Barcode reader, read/write devices (e.g., Moby E)

Number of Programs

- Max. 31 per tool

Expanded Functions

- Part-based "good"/"no good" determination with counter function, available for multiple programs
- Connection to host computer for part-based target data
- Uploading nutrunning data to host computer
- Nutrunning location recognition
- Load-dependent spindle maintenance management

Power Supply

- 230 V / 50 Hz

Nutrunner Models

- Hand tools from HCR, HCRK, and PCR Series with reaction torque sensors or action torque sensors
- Built-in tools from ECR1 and ECR2 Series with reaction torque sensors and action torque sensors