Cygnus® Digital Tension Readout and Control

Cygnus-E

Cygnus-DIN

Never has so much power and so many features been designed into such a small package. At less than 101 mm (4 inches) deep, the Cygnus leaves plenty of space to mount other components. Now you can dramatically reduce setup time and improve consistency with powerful features like Auto Tuning, Out-of-Round Roll Compensation, Weightless Load Cell Calibration and Web Break Detection.

Web tension is easily maintained or adjusted using multi-function SmartKeys. Operators simply navigate the control using full text and on-screen prompts on the large backlit display. To ensure global operation, Cygnus can display multiple languages including German, French, Italian, Spanish and Chinese.

Cygnus provides the flexibility of remote tension readout and control over your standard industrial bus communication network, allowing you to harness all of the power, features and performance from a central control point.

The PS-90 or PS-24 power amplifier may be used to operate 90 VDC or 24 VDC magnetic particle clutches and brakes. The amplifier mounts inside of the Cygnus-E enclosure.

Features

Large backlit display for viewing in any light condition

Tactile feedback SmartKeys for confirmed data entry

Web Break Detection and Out-of-Round Roll Compensation features to reduce waste and the need for expensive dancer systems

Automatic tuning for quick setup

"Weightless" calibration and on-screen diagnostics simplify load cell setup and operation

Multiple memory setup for quick material/machine changeover

IP65 protection against dirt and liquids

Selectable language and metric or inch units for global installations

Choice of mounting options for flexibility

Bus Communication for remote operation over an existing DeviceNet, Profibus-DP, or Ethernet/IP network

UL and CE Compliant

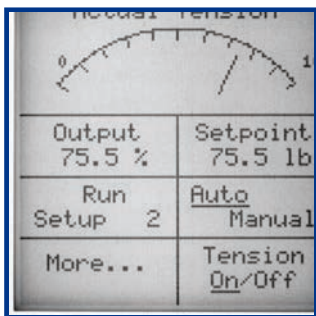# Cygnus® Keypad and Display

Home Screen with Digital Tension Display

Large Backlit Display

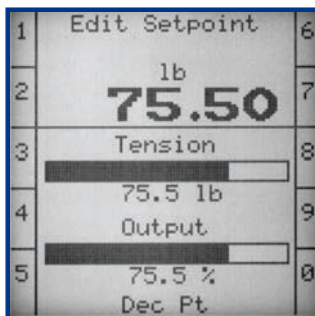Tactile Feedback Keys

Backspace

Enter

Home Digital
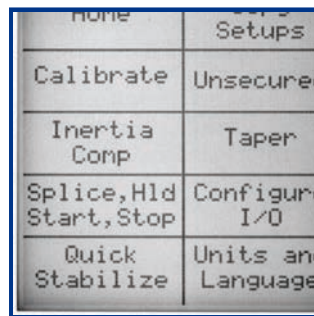(Environmentally sealed, electrostatically protected touch keypad for setting tension and inputting data)

Home Analog Tension Display
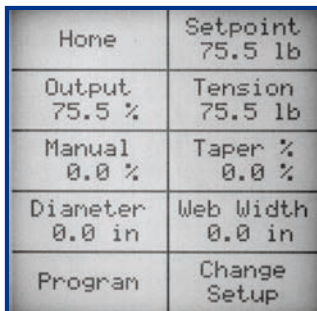For customers who prefer an analog readout

Edit Tension Setpoint Screen
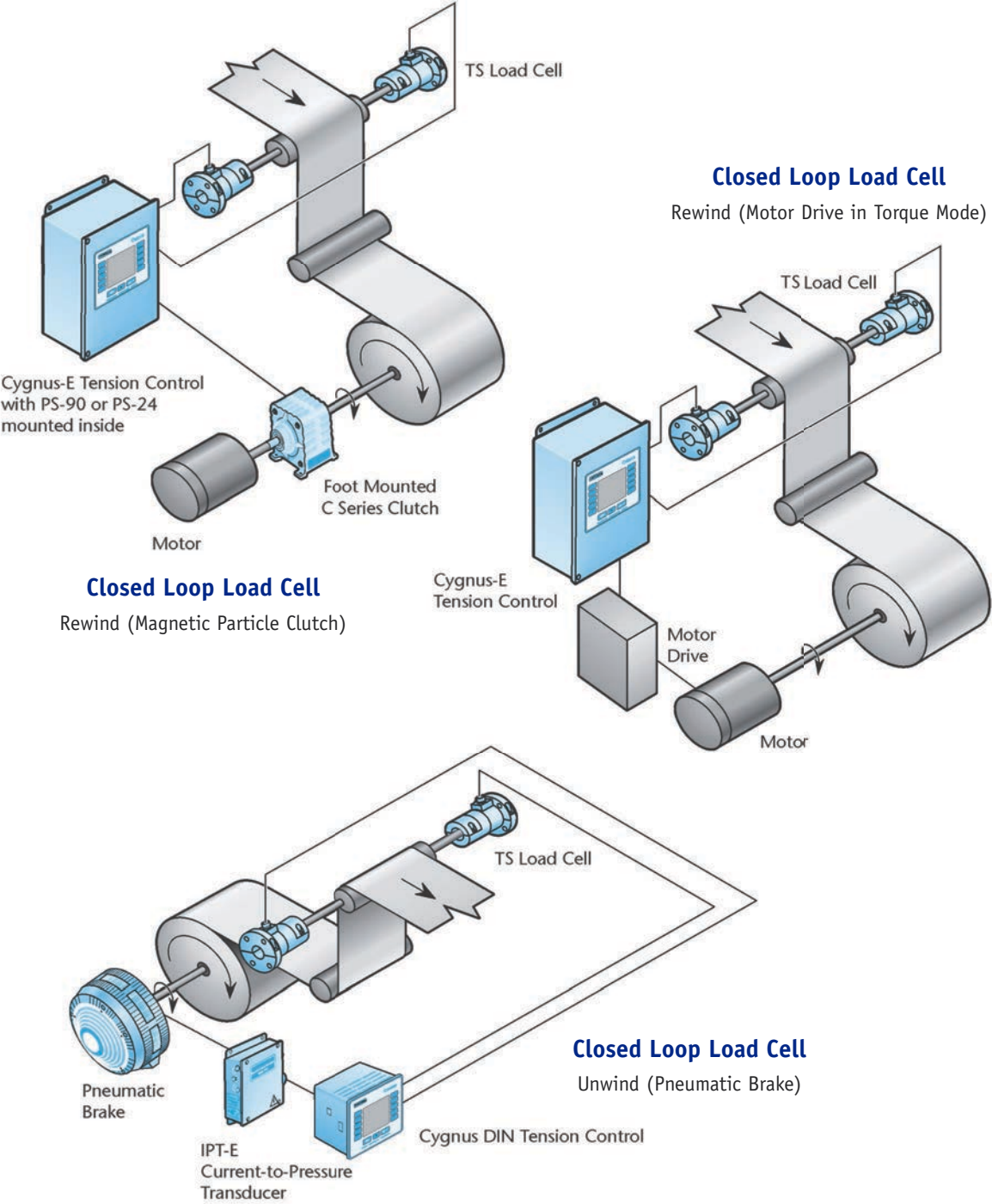Edit screens allow for easy numeric input using SmartKeys

Program Options Screen
Multiple displayed options make navigation more intuitive

More . . . Options Screen

Cygnus® Typical Applications

TS Load Cell

Closed Loop Load Cell

Rewind (Motor Drive in Torque Mode)

TS Load Cell

Cygnus-E Tension Control
with PS-90 or PS-24
mounted inside

Motor

Foot Mounted
C Series Clutch

Cygnus-E
Tension Control

Motor
Drive

Motor

Closed Loop Load Cell

Rewind (Magnetic Particle Clutch)

TS Load Cell

Closed Loop Load Cell

Unwind (Pneumatic Brake)

Pneumatic
Brake

IPT-E
Current-to-Pressure
Transducer

Cygnus DIN Tension Control

Cygnus® Dimensions and Specifications

Cygnus-E

Cygnus-DIN

Recommended Panel Cutout
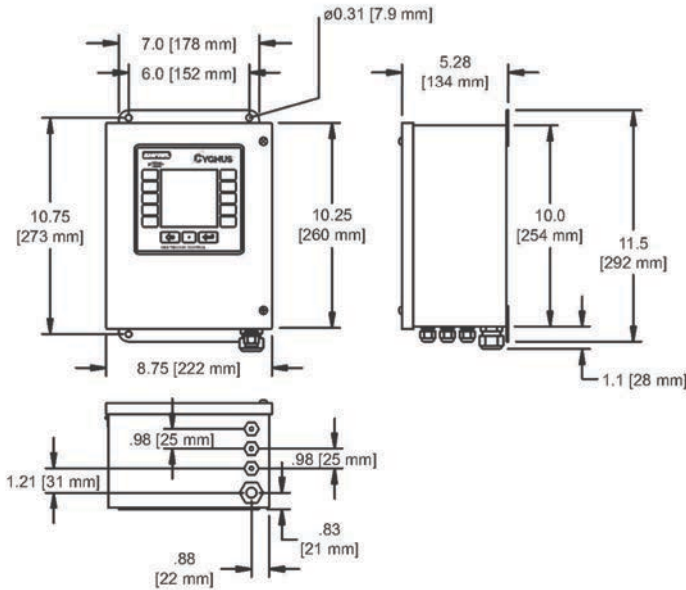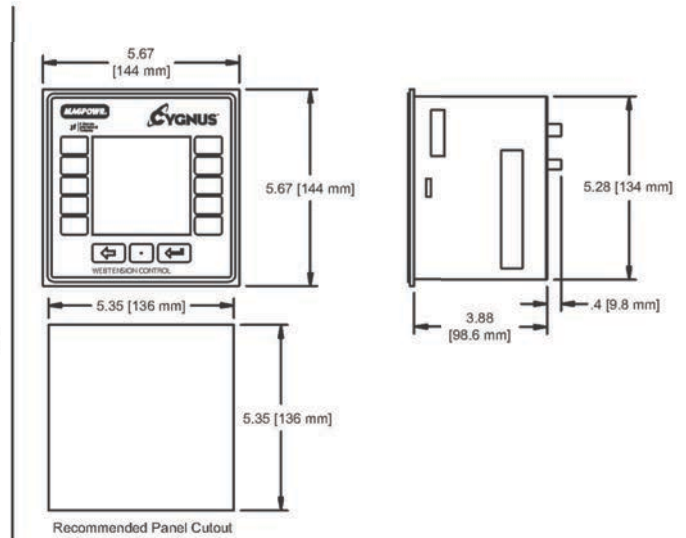
Inputs

Supply Voltage	115/230 VAC +/- 10%, 50/60 Hz, switch selectable
Tension Input	0 to 21 mVDC (1 or 2, 350 Ω full bridges), 0 to 500 mVDC (1 or 2, 120 Ω bridge), 0 to 5 VDC, 1 mADC max
Diameter Input	0 to 10 VDC analog or calculated using velocity/rpm
RPM/Web Speed	0 to 10 VDC analog, or 0.01 to 50,000 pulses per second, 5 VDC or 24 VDC logic
Auxilary Input	0 to 10 VDC
E-Stop, Run/Stop, Tension Off, Format, Splice	switch closure, 5 or 24 VDC logic, active high or low

Enclosure

Cygnus-DIN	Front Panel IP65 (IEC529) Enclosure IP20 (IEC529)
Cygnus-E	IP65 (IEC529)

Certifications

CE
UL 508C Listed

Outputs

Torque	0 to 10 VDC, 4 to 20 mADC (500 Ω max), -10 to +10 VDC
Inverse Diameter	0 to 10 VDC, 1 mADC max
Tension Reference	0 to 10 VDC, 1 mADC max
Load Cell Excitation	5 or 10 VDC, +5 and -5 VDC (10 VDC)
Low Tension (Web Break) Tension Status	DC solid state relay, 100 mADC with a 1.6 VDC drop, 30 VDC max, or 5 mADC with a 0.6 VDC drop 30 VDC max

Weight

Cygnus-DIN	4 lb (1.8 kg)
Cygnus-E	11 lb (5 kg)

Temperature

E-Operating	0 to 40° C
DIN Operating	0 to 50° C
Storage	-30 to 80° C

Bus Communication Gateways

COMMKIT-DN	DeviceNet
COMMKIT-EN	Ethernet/IP
COMMKIT-PB	Profibus-DP