

**AMETEK®**

# GEMCO

## The Series 7500 UHS

Ultra High-Speed Programmable Limit Switch





## **SPEED**

The 5 microsecond scan time ensures that the controls scheme is not the limiting factor. Nothing else comes close.

## **CONNECTIVITY**

By connecting to the parent machine's network, the Series 7500 becomes a fully integrated part of the process. Now operators can program and tune the unit from the main machine interface. No more having to separately adjust these processes.



## **VERSATILITY**

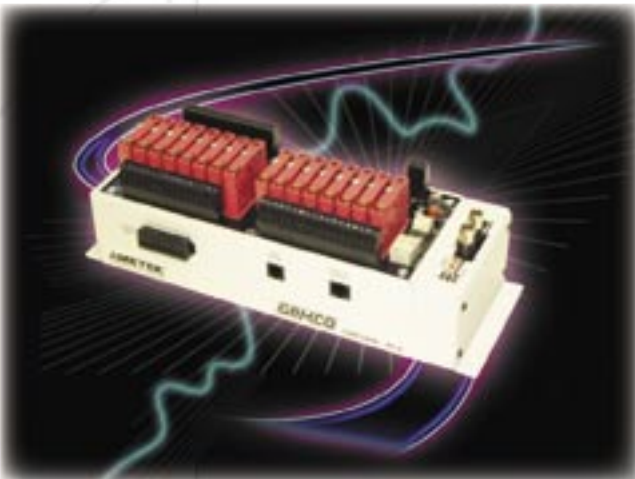
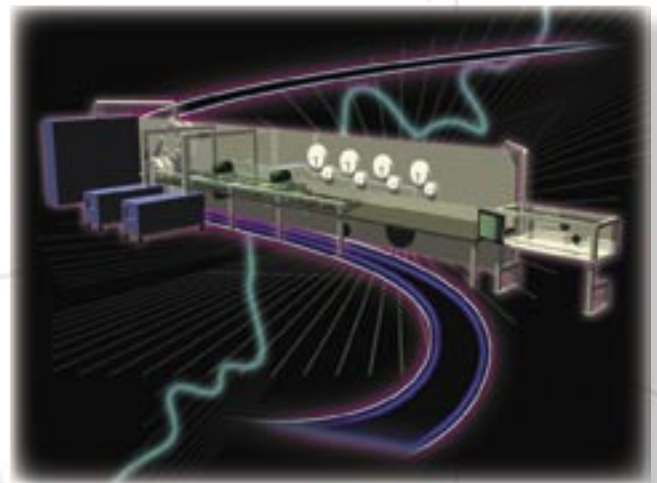
Resolver input? Quadrature? Neither? The machine can feed the position input to the Series 7500 with either a resolver or an encoder. If the machine has neither, just drop a virtual pulse train into the unit. It works with them all.





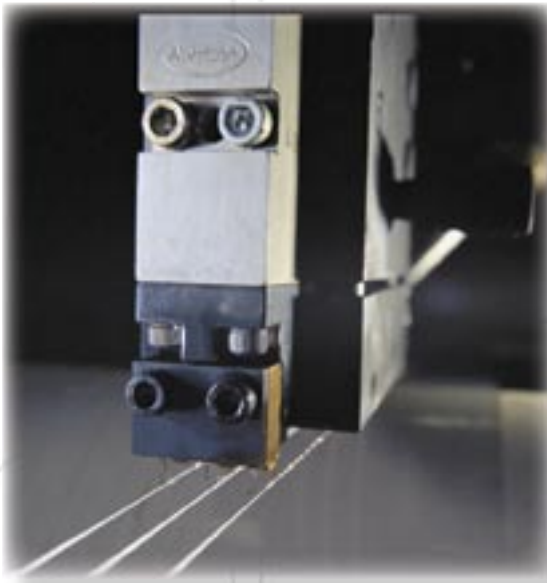
The Gemco Series 7500 UHS is the fastest, most feature-rich programmable limit switch (PLS) available. This new addition to the Gemco family of PLS's was designed specifically for the unique requirements of the high speed diaper/napkin and converting industries in mind. In fact, machine builders and diaper and napkin manufacturers worked with our engineers to design a product that meets not only today's requirements, but those of the next generation, higher speed disposables lines as well.

The Series 7500 is a modular PLS with network communication capabilities. Rather than limit this versatile product to one PLC brand or specific backplane, the unit is Din-rail mountable, stand alone, and can be equipped with a network communication module to allow interface with various controllers. ControlNet, Ethernet I/P, PROFIBUS and other industry standard interfaces allow full integration of the PLS with the parent machine.



The Series 7500 incorporates Gemco's patented ULTRA HIGH SPEED technology. Of the unit's 32 total outputs, 16 operate at 5 microsecond scan times and are designed for the highest speed applications like adhesive system control. The remaining 16 outputs are ideal for the numerous lower speed applications that consume valuable I/O and processor time in the PLC.

The Series 7500 comes complete with 8 hardware inputs and 8 software inputs, for a total of 16. Even more impressive is that the inputs can be configured in any of 10 different trigger modes. Standard modes such as reset-to-preset, output enable and remote set-point tuning have been augmented by a host of new features specifically engineered to improve the performance of disposables lines. For example, new 'smart' input modes eliminate the occasional, random triggering of input sensors from throwing off the entire process and causing expensive downtime. Other modes unavailable anywhere else solve many of the most common production problems, including misplaced adhesive patterns.



Input and output grouping further simplifies programming and system operation by combining the I/O into software groups that mirror the actual devices being controlled. Operators and engineers alike find system setup, programming, and troubleshooting are made easier and more logical.

Another huge advantage of the Series 7500 is that it operates with either encoder or resolver input. If your machine module does not have a 1:1 product registration - or if you simply have an encoder signal already available on the machine - the Series 7500 with quadrature input allows the use of incremental pulse trains instead of requiring a resolver input.



- The adhesive applicator Add-On Test function triggers selected outputs exactly as if the line were running. Operators can now confirm the adhesive systems' operation with the line stopped, which is extremely critical with today's recirculating applicators. Only Gemco offers this feature!
- The Input Capture feature saves where the inputs transition every cycle. This allows viewing of critical process information for quality assurance and diagnostic purposes.
- Setpoints can be remotely phased or tuned on the fly, allowing the process to be continually adjusted and eliminating costly downtime.

<b>Specifications</b>	
<b>Outputs</b>	<b>32 Total</b>
Ultra High Speed Outputs	16 Hard Outputs @ 5 microseconds update
Soft Outputs	16 Software Outputs @ 500 microseconds update and transmitted @ NUT (Network Update Time)
Output Modules	Opto-22 G4 Series, individually fused 5 - 60 VDC @ 3A (50µS), 24 - 280 VAC @ 3A (8.3mS)
<b>Inputs</b>	<b>16 Total</b>
Hardware Inputs	8 High Speed Hardware Inputs, interrupt driven (10 - 30 VDC, 4mA max., optically isolated)
Software Inputs	8 Software Inputs @ NUT (Network Update Time)
<b>I/O Groups</b>	8 Total Each Group has programmable scale factor, offset, position and speed compensation
<b>Input Configurations</b>	10 types, including reset-to-preset, output enablers, remote setpoint tuning, and output forcing modes
<b>Other Features</b>	Adhesive applicator add-on-test feature, input capture
<b>Position Input</b> Number of Channels Types	1 Resolver, 14 bits (1 part in 16, 384) Quadrature Encoder, 14 bits (1 part in 16,384) 5 VDC @ 0.2A encoder power supply
<b>Communication</b> Local Network	Aux. RS-485, Consult factory for protocol ControlNet; others available, consult factory
<b>Mounting</b>	DIN Rail Panel Mount
<b>Environmental</b> Enclosure Temperature	IP50 Operating: 32° - 131°F (0° - 55°C) Storage: 0° - 150°F (-17° - 65°C)
<b>Input Power Requirements</b> Voltage Power Consumption	10 - 30 VDC 10 Watts Max. (7.5 Watts Typical)
<b>Fault Check Output Relay</b>	8A @ 250 VAC, 8A @ 30 VDC
<b>Resolver Cable Length</b>	1000 Ft. max
<b>Max. Speed</b>	1800 RPM
<b>Specification May Change Without Notice</b>	

7500 — R — A — D — 0A16D — A — X

**The Series 7500  
Ultra High Speed PLS**

**Input Type**

R = Resolver  
E = Encoder

**Software**

A = General Automation

**Input Power**

D = DC 24 VDC @2A

**Output Relays (16 Maximum)**

D = DC Relay  
A = AC Relays

(Insert number of relays followed by letter for type, for example 4A12D = 4 AC relays & 12 DC relays or 0A0D for no relays.)

**Communications**

X = No Communications, must use Remote Operator Interface  
C = ControlNet  
E = Ethernet/IP  
P = PROFIBUS

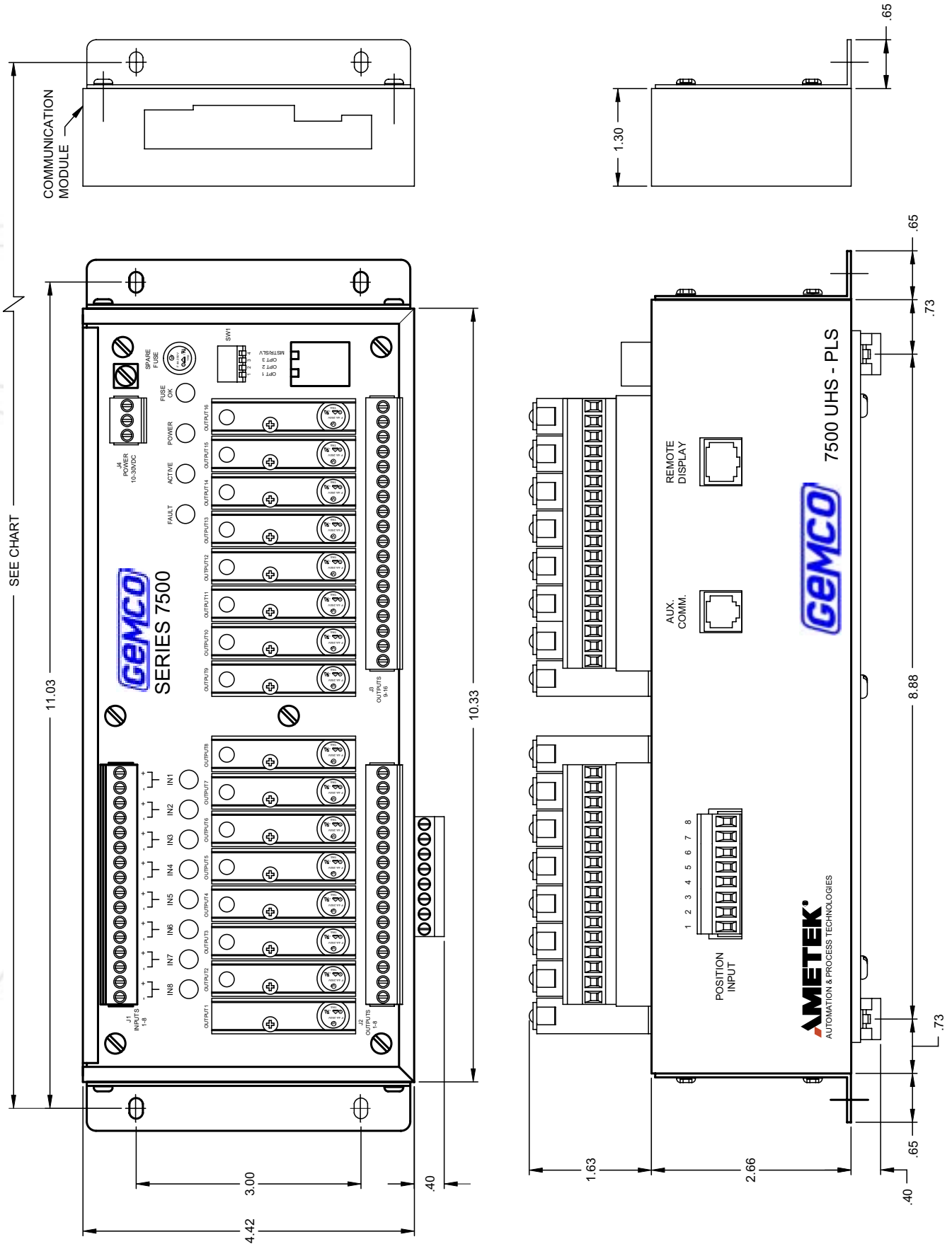
**Options**

X = No Options

Resolvers	
Part Number	Description
1986A1XRX	Industrial Duty Foot Mount Resolver
1986F1XRX	Industrial Duty Block Mount Resolver
Many other models available. See Series 1986 Resolver catalog, part number Z4.	

Resolver Cables	
Part Number	Description
SD0534300L15	Resolver Cable Straight Connector 15 Ft.
SD0534400L15	Resolver Cable Right Angle Connector 15 Ft.
Cable length in feet is required at the end of the part number. Maximum cable length is 1,000 Ft.	





COMMUNICATION MODULE	MOUNTING HOLE OVERALL DIMENSION
ControlNet	12.33

# **GEMCO**

**AMETEK**<sup>®</sup>  
AUTOMATION & PROCESS TECHNOLOGIES

1080 North Crooks Road • Clawson, MI 48017 USA  
800-635-0289 • 248-435-0700 • 248-435-7540  
[www.ametekapt.com](http://www.ametekapt.com) [www.ametek.com](http://www.ametek.com)

7500.B1R  
04/02 • Z149  
3M