

“Innovation by Design”

Designed and Built in America

Unique Automation Products with
#COOL Features

Serving a \$4 B/yr. Market Segment

With Great Margins up to 40%

No Inventory Investment

The logo for AVG, consisting of the letters 'AVG' in a bold, blue, sans-serif font. The letters are stylized with a slight shadow effect. Below the letters is a thick red horizontal line.

**Automation
Division**

✓ Limited Distribution

✓ No Inventory Investment!

✓ Virtually No Competition!

✓ Unique Features at Great Prices

Easy to Learn, Easy to Sell and Simply Fun!

AVG

**Automation
Division**



Digital Timer



Long range
Stainless Steel
Proximity Sensor



Smart Encoders



Digital Power Supply

About AVG Automation...

Installed Base of \$1 Billion World Wide



American Pride in Manufacturing

All Research, Development and
Manufacturing for AVG Automation is done
at our American Plant



Headquartered in Chicago, IL

American Plants in Heartland of America

Significant Highlights and Core Competencies...

- Established in 1968, AVG has introduced more than 500 innovative new products
- Extensive hardware, firmware, & software design capability in the heartland of America
- Hold 20+ Patents & 15 New Pending
- AVG Semiconductors, 10 million sqft. Plant in Minsk, Belarus
- Thick film hybrids for analog precision electronics
- 40 layer PCB fabrication
- 3 EMS Plants for Complete Turn Key Assembly & Box Build
- AVG Eagle, secure telecommunications

AVG's Track record of First's

"Innovation by Design"

- Inventor of PLC in 1968
- Introduced C-MOS transistor technology in industrial controls, 1970
- First use of a Microprocessor in Automation controls, 1972
- Invented PLS & created a new industry in 1975
- Introduced first Touchpanel HMI, 1992

First microprocessor based modular PLS with an incredible scan-time of 57 microseconds for 20,000 setpoints



First integrated digital resolver, DigiSolver, Standard of the tire industry



First PLS with a built-in PLC



Due to the patented DMA techniques utilized in its PLSs to achieve 1° accuracy at even 3000 RPM, Autotech's M1250, 1450 series PLSs remain the exclusive standard for two piece can lines throughout the world.



First Touchpanel HMI



Five Traits Common to AVG Automation Products



1. Highest Processing Power per Cubic Inch

We have always packed the most processing power per cubic inch in most of our products. M1150 PLS remains today as the most compact PLS in the business. This is possible because of the vertical integration of AVG companies allowing us to utilize our strengths in the semiconductor technology, thick film hybrid technology and printed circuit board technology.



2. Highest Operating Speed

We hold numerous patents in the area of high speed PLC or PLS operations, particularly under electrically noisy environments. Our M1250 PLS can process 20,000 of 3 digit set points in 57 microseconds, the fastest in the industry. Our recently introduced TouchPLS can process 256 of 4 digit set points in less than 10 microseconds.



3. Simplest Human Interface

We require our design engineers to spend considerable time in technical field support. They have gone through numerous machine start-ups. They recognize the importance of simple human interface. You will find that trait throughout AVG Automation products. We developed a five key interface for our PLSs where as all our competitors use at least 20 keys. The simplicity and Ease of use of AVG Touchpanel is already legendary. In developing the AVG Touchpanel and AVG Text panel products, our designers counted the number of clicks for every operation, resulting in an HMI where you can develop a fairly complex screen in less than 10 minutes.



Five Traits Common to AVG Automation Products



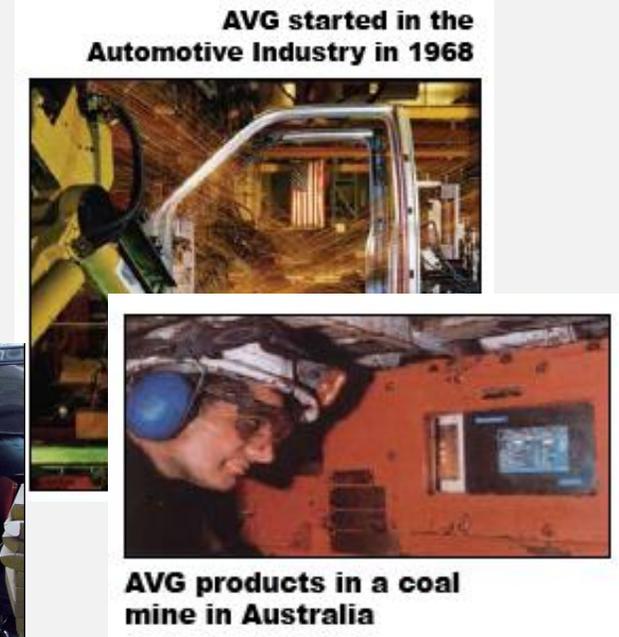
4. High Reliability Products

Our rigorous design and manufacturing process has earned us the reputation for providing “Built Like a Tank” and “Utitor Tough” products to the industry. Most notably, our LED marquees look the same 10 years after their installation as they looked on the first day of operation. All products are HALT/HASS certified.



5. Highest Immunity to Electrical Noise

We come from a background where our Automotive customers, such as Pontiac Motors, back in 1976, required us to run encoder wiring right along side with 440 VAC motor wiring without a shield as they did not want to change the connector between the control cabinet and the machine. You see, we had just invented the PLS and were replacing the old rotary cam switch with a PLS. GM wanted the benefits of the advanced technology but not change their wiring. Our Autotech division designed a Resolver based PLS where you could run it right along with 440 VAC and withstand unimaginable inductive kicks. In fact, we ended up making the resolver wiring short circuit proof and capable of taking a direct 120 VAC hit.



All our products go through exclusive noise testing and have the following ratings:

NEMA ICS 2-230 Showering Arc

ANSI C37, 90a-1974 SWC

Level C Chattering Relay Test



-60°C to 150°C
at 100 °C/min and 50 Gs
of shock and vibration



Smart Power Supply™

Compact, DIN Mount, up to 240 Watts. NEC Class 2 up to 90W
Digitally Programmable with Bright LED Display

- ✓ **3 Digit Bright LED for Output Voltage**
- ✓ **2 Digit Bright LED for Output Current**
- ✓ **Programmable Current Limit**
- ✓ **Display Maintenance Timer Remaining**
- ✓ **Output Voltage Setting Adjustment**
- ✓ **1/4 to 1/2 the Form Factor Size of Competition**

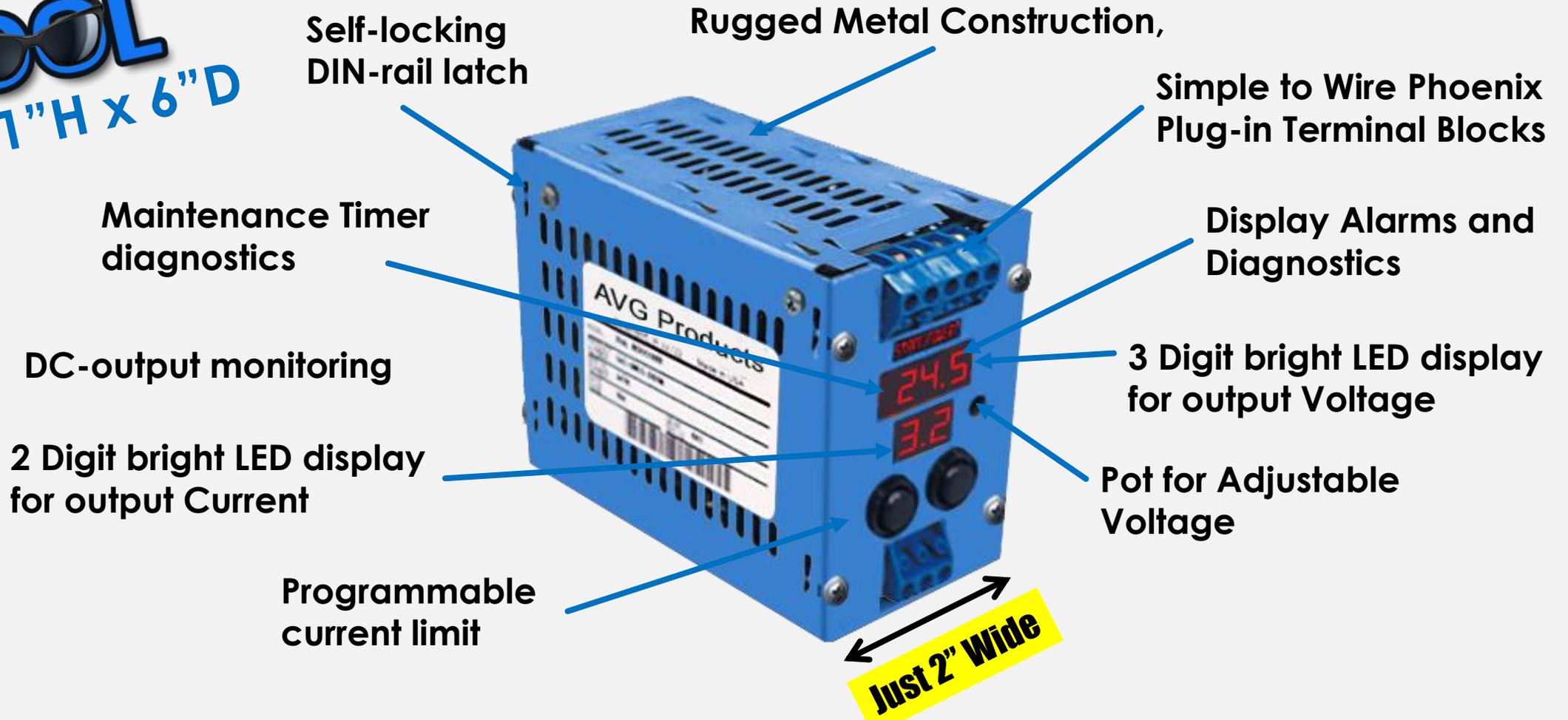


#COOL
Display & Program

Smart Power Supply™

Digital, ¼ the size up to 240 W

#COOL
2"W x 3.1"H x 6"D



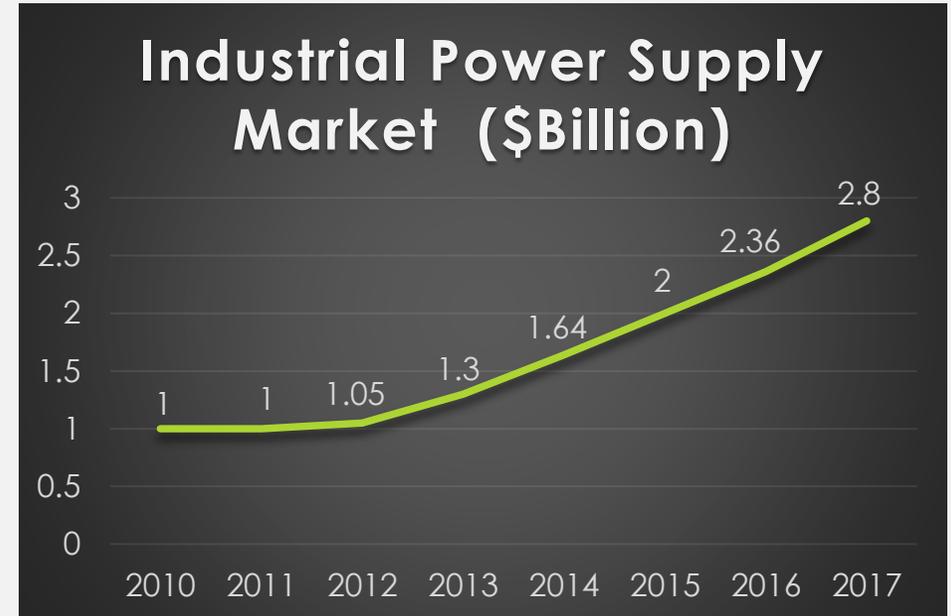
Power Supply Market Potential

- **U.S. Market for industrial power supplies up to 240 Watts is over \$2 Billion/yr.**
- **Smart Digital Power Supply starting at \$149 with up to 40% margin for Distributor**



#COOL
Display & Program

Maintenance Personnel
Just Love the Display



Tough Prox™

Stainless Steel Long Range Inductive Proximity Sensors with Great Prices and Great Margin



- ✓ 8 mm, 12 mm, 18 mm, 30 mm
- ✓ Long Range Sensing Distance
- ✓ Robust, Chemical Resistant Wash-down
Stainless Steel Housing
- ✓ World Class Electrical Specifications
- ✓ “Cool Light Ring”

#COOL
360° LED Light Ring

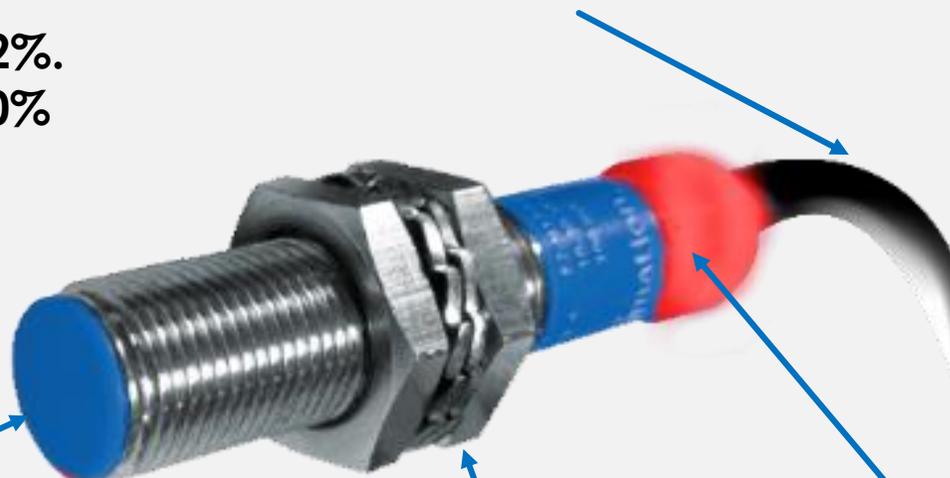
12mm Stainless Steel at \$49, Up to 40% Margin

- Time delay <100 ms
- Repeat accuracy <=2%.
- Differential travel 2-10%

Temperature ranging
from -25° C to 70°C

2.5 mm Flush, 4.00 mm
Non-Flush sensing range,
PBT sensing head.

3-wire, 2mtr cable



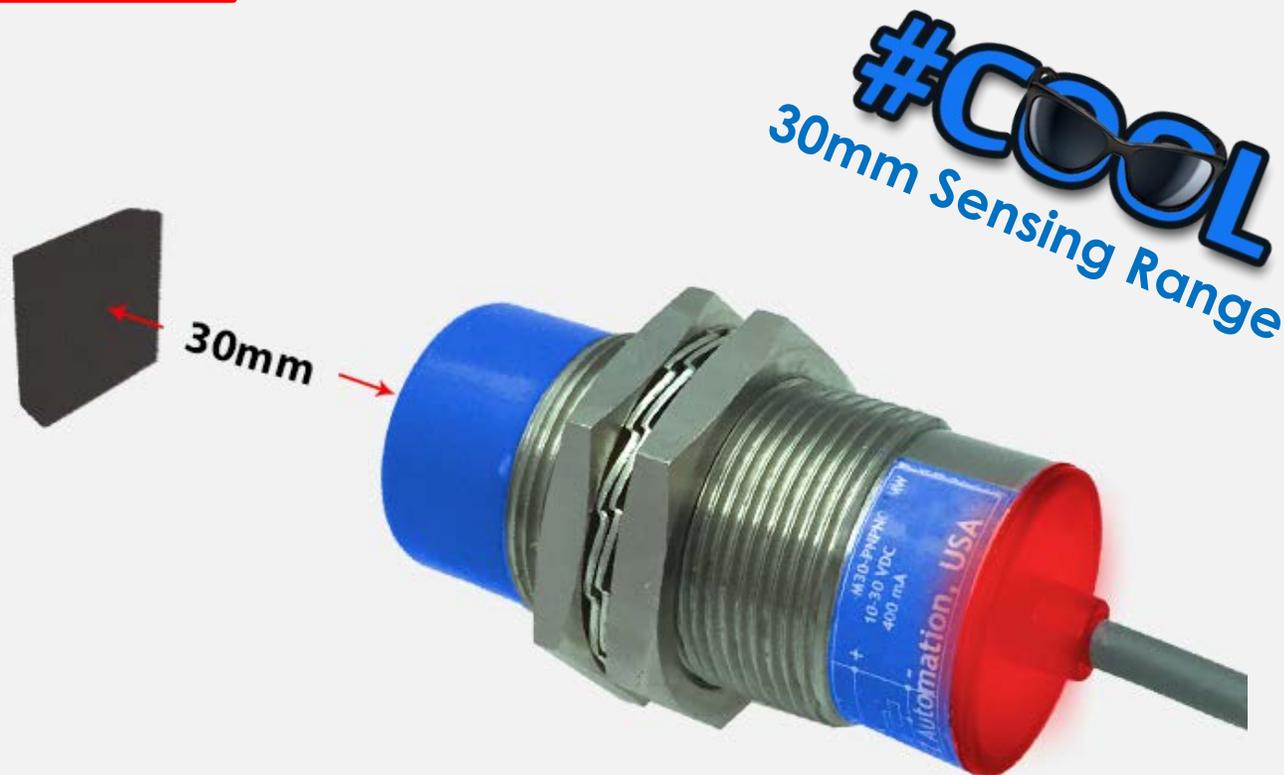
12 mm Stainless Steel

- Operating voltage 10-30V DC
- Load current 200mA
- Leakage current <= 10 μ A
- Reverse polarity protection
- Output short-circuit protection

#COOL
360° LED Light Ring

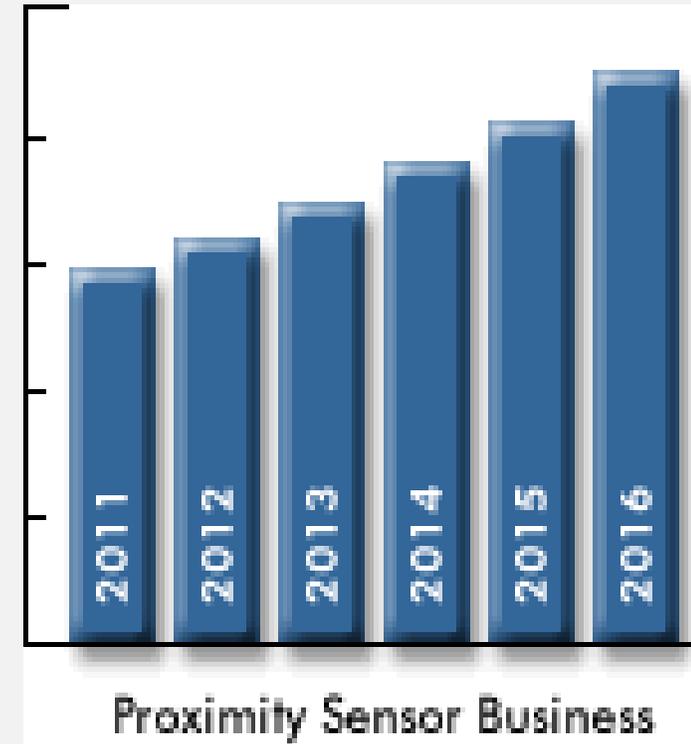
Tough Prox™

30mm Stainless Steel Long range at \$119, up to 40% Margin
30mm Sensing Range



Prox Market Potential

- Inductive Proximity Sensor Market is over \$500 Million/yr. (growing at 22.8% CAGR)
- On average, AVG Prox is 30-40% less compared to Rockwell Automation, Turck, Banner, Pepperl & Fuchs, Sick, Omron etc..



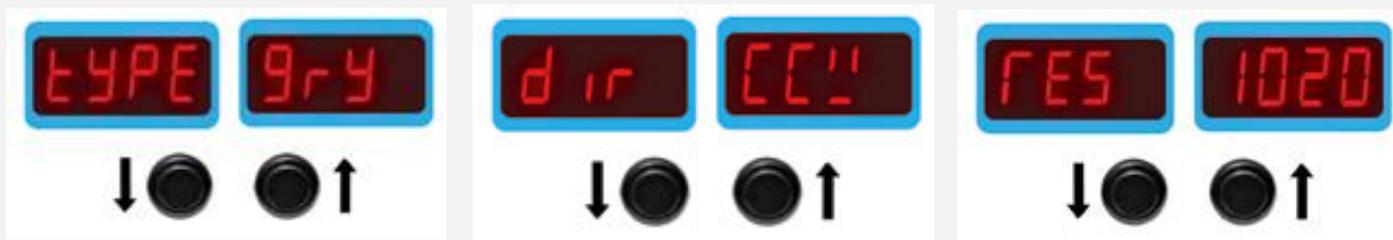
Smart Tough Encoders™

Field Programmable (Type/Count) starting \$495
No Laptop or Software Required to Program

- ✓ 4 Digit Bright LED Display with 2 Simple Push Buttons
- ✓ Password Protected: Total Lockdown Capability
- ✓ Displays Count & RPM for troubleshooting **#COOL**

Save 30-40%

Program any Resolution and Code from 10 to 5000 while installed and connected



#COOL
Field Programmable
Display



2 program
buttons

Up to
5000 PPR

Smart Tough Encoders™

Field Programmable (Type/Count) starting \$495



- BEI Programmable Omni coder
- Needs Laptop
- Needs Software
- Needs Cables
- Approx. \$700 in Cost
- Incremental Only

2 program
buttons



#COOL
Field Programmable
Display

- ✓ AVG Smart Tough Encoder
- ✓ No Laptop needed
- ✓ No Software needed
- ✓ No Cables needed
- ✓ Incremental/Absolute
- ✓ Displays Position/RPM
- ✓ Starting at \$495

Smart Tough Encoders™

Drop-in Replacement for BEI, Dynapar, Rockwell & EPC

- ✓ Heavy Duty 80 Lb Shaft rating
- ✓ Rugged NEMA 4/4X, Class I, DIV II Aluminum Housing
- ✓ Absolute Resolver Based Options for ultimate reliability
- ✓ Ethernet I/P, Modbus TCP/IP, GE SRTP, DeviceNet, Profibus, Interbus, & SSI options on Absolute Encoder models

Price Starting at \$395

Hose-down with 80 Lb shaft load

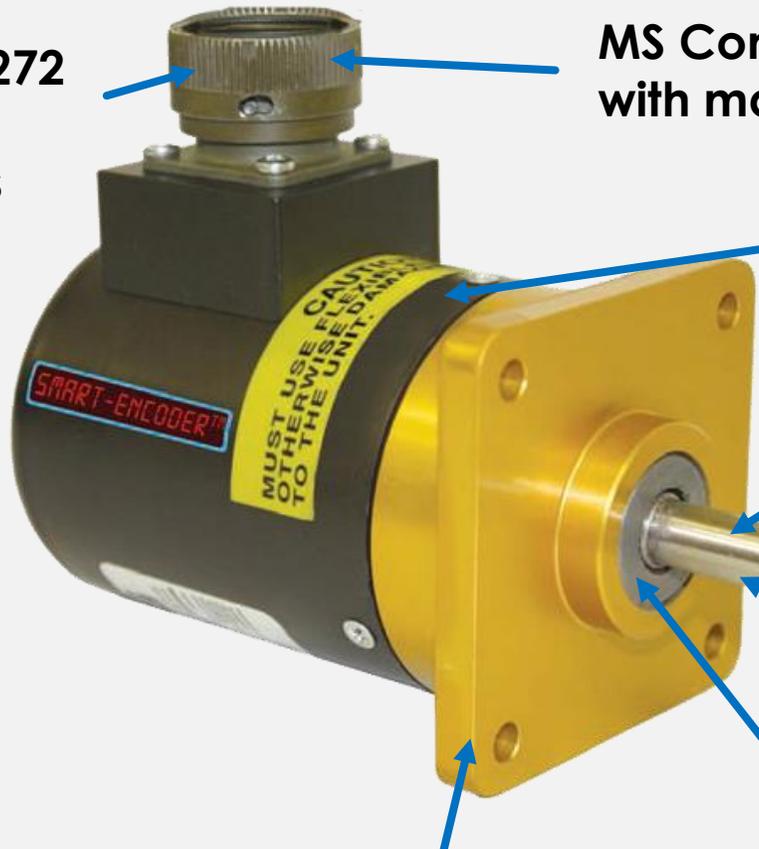
#COOL
Twice as Rugged &
30% Savings



Smart Tough Encoders™

Heavy Duty Size 25 Incremental Encoder at \$395

10-30V DC
Power or ET7272
short-circuit
proof outputs



MS Connector pin compatible
with major brands

NEMA 4/4X, IP65,
Hose-down

80 lb. Axial/Radial
shaft load

3/8" Stainless Steel Shaft

Max. 5000 RPM

Dual row bearings
with shaft seal

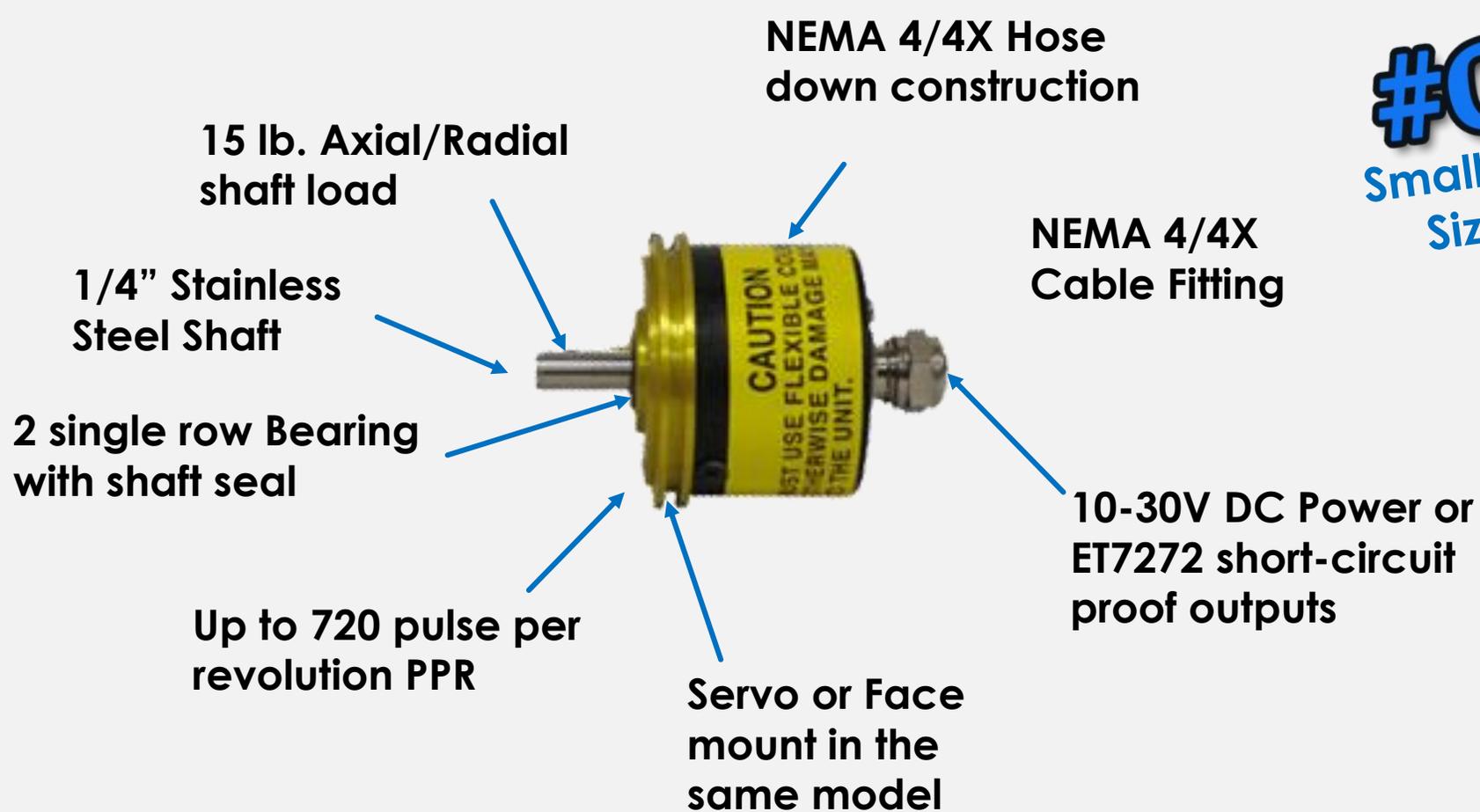
Servo, Face or Flange

#COOL
Mechanical Shaft
Load Strength

Smart Tough Encoders™

World's Smallest NEMA 4/4X Hose-down for \$245

Size 15

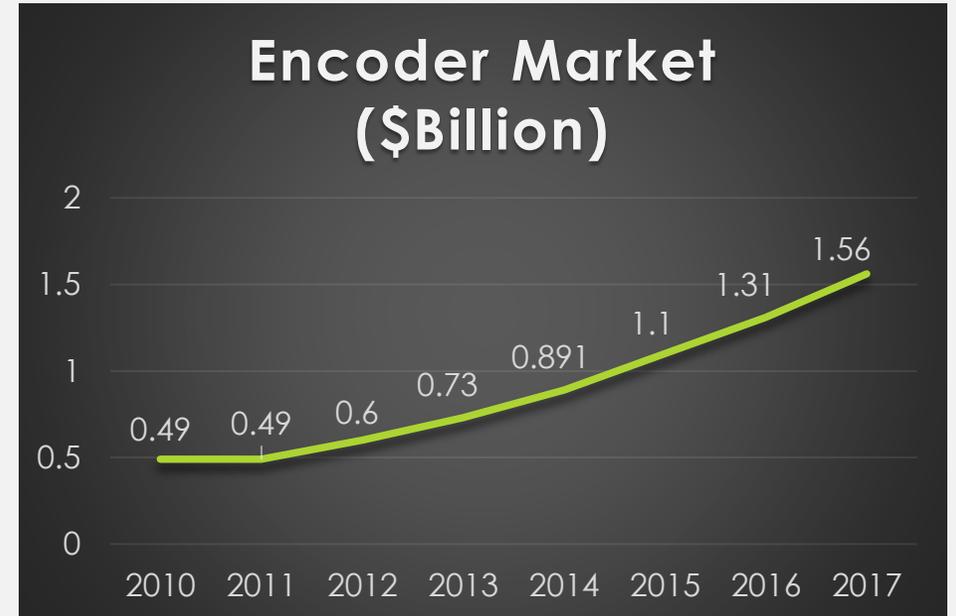


#COOL
Smallest NEMA 4/4X
Size 15 Encoder

Encoder Market Potential

- **Industrial Shaft Encoder Market is currently at \$1.1 Billion/yr. (growing at approximately 18.9% CAGR)**
- **AVG Smart Encoder is on average 30% lower than competition with up to 40% margin for Distributor**

#COOL
30% Savings, 40% Margin



Digital & Multi-Function Timer

No Knobs and One Model to Replace all your Timers
Starting at \$49, Saves your Customer Up to 40%



#COOL

Multi-Function Model with 10 Programmable Modes: On delay, Off delay, One shot, Cycle etc.

#COOL

3-Digit LED Countdown display for help in Machine operation and trouble shooting

#COOL

Digital Setting with 1% Resolution, 1% Absolute Accuracy and 0.1% Repeat Accuracy

Octal Socket Digital Timer
with Precision time Setting



**2 program
buttons**

Digital & Multi-Function Timer

*From the Original Designer & Founder of Timers, back in 1972

All Digital Programmable Timers with Flexible Features at \$99!!

Direct Replacement for Ametek/NCC



3-Digit LED Time Display



Remaining/Elapsed Time Display



Password Protection/Security

Widest Time range from 0.01 sec to 999 hrs

5.EC	0.01 - 9.99 seconds
SEC	1- 999 seconds
min	1- 999 minutes
Hr	1- 999 hours



Multi-Function Model with Ten Programmable Modes

Press either key to select the Timer type:

- **On** Delay On break
- **nSS** Single Shot
- **OFF** Delay Off break
- **CYC** Cycle
- **PUL** Interval
- **rSS** Re-triggerable Single Shot
- **iSS** Inverted Single Shot
- **tSS** Trailing Single Shot
- **idb** Inverted Delay Off break
- **AdL** Accumulated Delay On break



**No Knobs, Digital Setting
1% Resolution
1% Absolute Accuracy
0.1% Repeat Accuracy**

Industrial Timer Market Potential

- Industrial Timer Market is currently at \$200 Million/yr.
- With AVG Timers, say Good-Bye to Knobs, Pots, and tens of timer models based on application.
- Direct Replacement for Ametek / NCC Timers
- Digital & Multi-Function Timer starting at \$49 with up to 40% margin for Distributor.

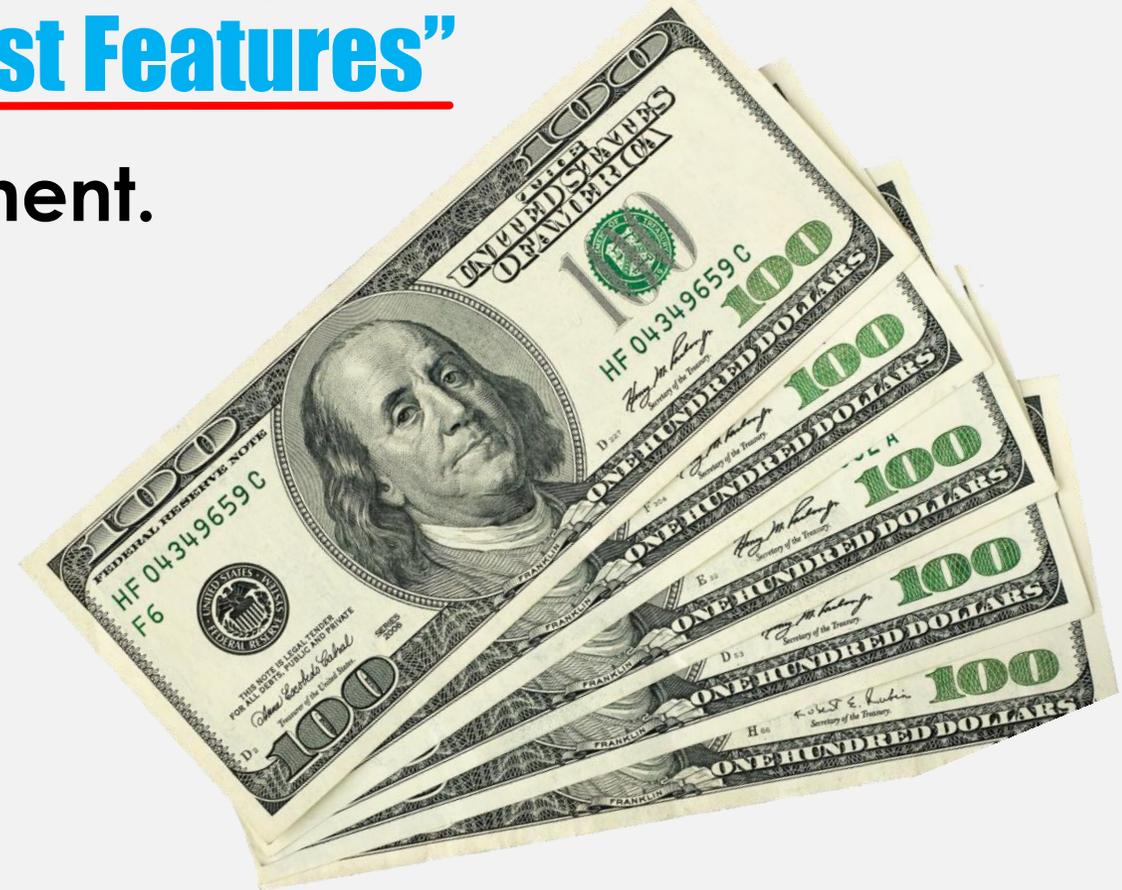


#COOL
Universal Digital Timers
40% Savings and Margin

Recap: AVG Automation for Distribution

Make a Ton of Money in Selling Every Day Use Automation Control **Products with the “Coolest Features”**

- ✓ **Serving \$4 Billion/Yr market segment.**
- ✓ **Best Suited for End-user Plants**
- ✓ **Competitive Market Prices**
- ✓ **Up to 40% margin**
- ✓ **No Inventory Investment**
- ✓ **Limited Distribution**
- ✓ **Less than \$1000 investment in **#COOL** Demo Box**



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