

# MAXFORCE

PRE-ENGINEERED ELECTRIC  
LINEAR ACTUATION SOLUTION  
SIZE 5



THE ELECTRO-MECHANICAL SOLUTION  
FOR HIGH PERFORMANCE ACTUATION

# SIZE 5

Moog MaxForce Pre-Engineered Electric Actuation Solutions provide an electro-mechanical alternative to traditional hydraulic actuation. Combining an electro-mechanical servoactuator, a servodrive and integrated software, this high performance solution delivers world-class motion control to a wide array of linear applications, ensuring high speed and high force in today's most demanding industrial environments.

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This catalog is for users with technical knowledge. To ensure that all necessary characteristics for function and safety of the system are given, the user has to check the suitability of the products described herein. The products described herein are subject to change without notice. In case of doubt, please contact Moog.

For the most current information, visit [www.moog.com/servomotorsanddrives](http://www.moog.com/servomotorsanddrives)

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## An Integrated System Designed To Achieve Maximum Machine Performance

### PERFORMANCE

- Long lasting performance and reliability with integrated design and reduced part count
- Pre-engineered system - servoactuator, servodrive, software - allows for easy set-up and installation

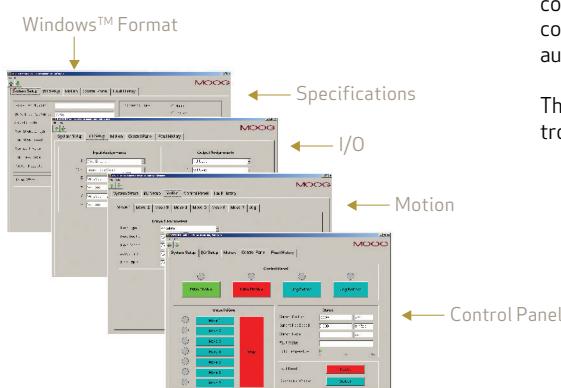
### PRECISION

- Ensures more accurate precision motion control
- Low inertia servomotors for higher acceleration
- Lower audible noise compared to hydraulic installation

### EFFICIENCY

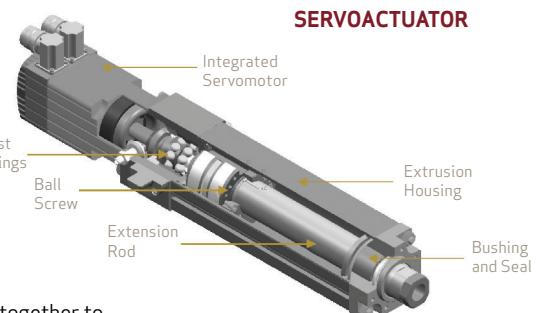
- Reduces maintenance and operating costs
- Match unique machine designs with a full range of options, sizes and configurations
- Reduces energy consumption
- Eliminates oil leaks

### COMMISSIONING SOFTWARE



### Components optimized to work together

The MaxForce Pre-Engineered Electric Linear Actuation Solution is an actuation package that employs Moog's innovative brushless servomotor and ball-screw technology, a state-of-the-art servodrive and user-friendly commissioning software. All of the components are optimized to work together to provide the highest level of performance and accuracy.



### Engineered in advance

Moog's depth of motion control expertise provides you with a flexible solution unique to your machine needs. Moog has engineered the majority of the work in advance so that with minimal effort the system can be easily implemented into your application.

### SERVODRIVE



### World-class components for high performance

The MaxForce Pre-Engineered Electric Linear Actuation Solution features genuine Moog components so you can rest assured that you're getting the world-class performance today's design engineers have come to trust.

### User-friendly software

Moog's intuitive commissioning software helps the user reduce system setup time.

The commissioning software saves time at system start up by automatically uploading preset system tuning parameters off the absolute encoder. The software also ensures error-free start up by implementing preset safety limits for speed, force and stroke length.

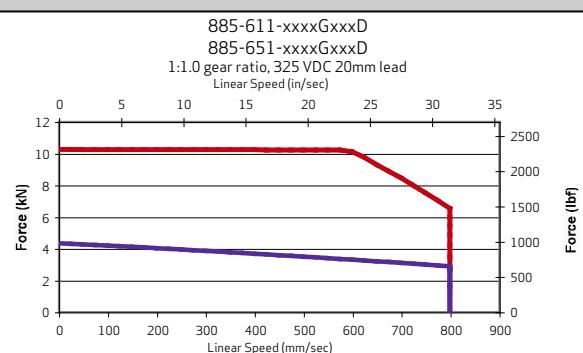
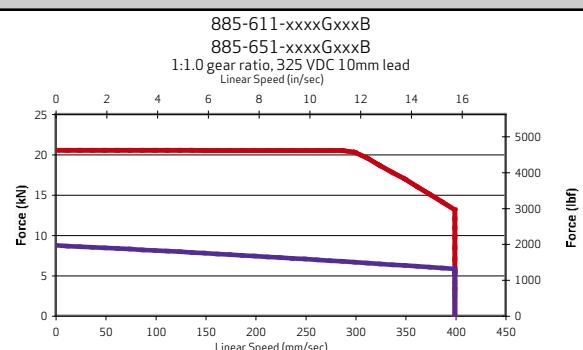
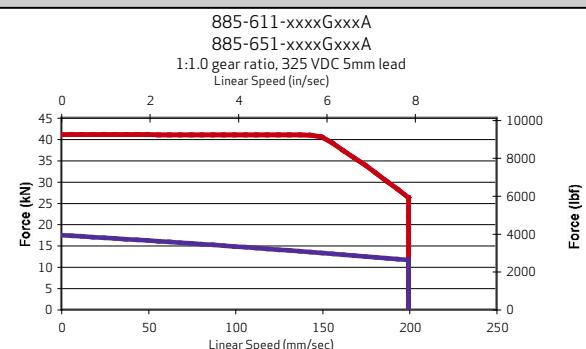
The Servodrive is programmed in user-friendly engineering units eliminating the need for the conversion from RPM to rod speed, from servomotor current to force and from encoder counts to position. This information is preprogrammed into the servoactuator encoder for automatic upload.

There is also a Control Panel function and Fault History which allows ease of setup and troubleshooting. Various levels of intelligence and communication options are available.



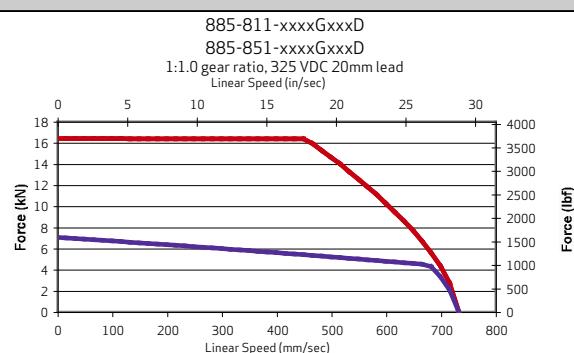
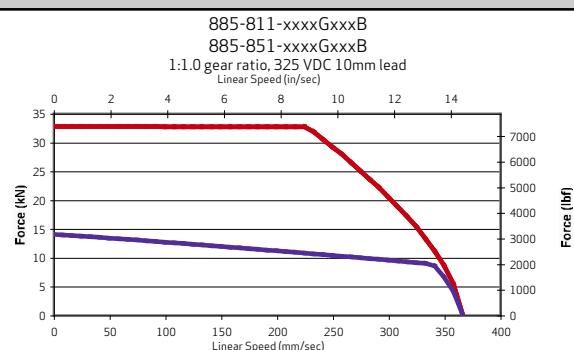
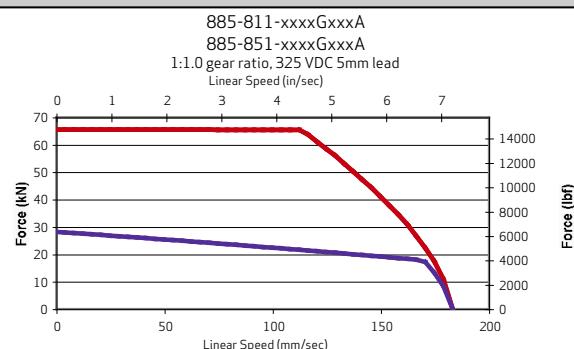
## 1:1 GEAR RATIO 300 VOLT

## Servomotor Stack Number -6

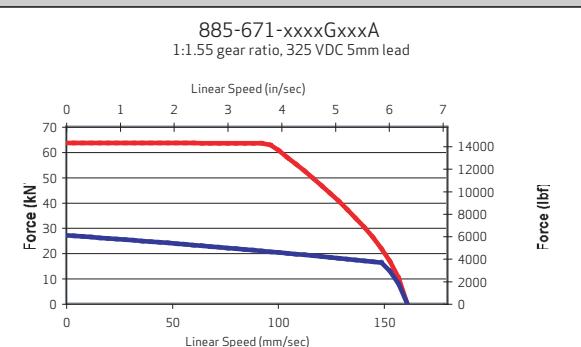
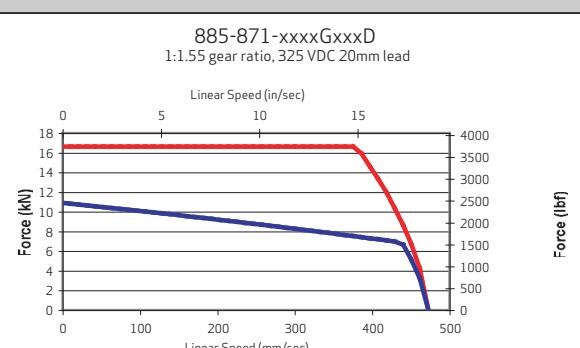
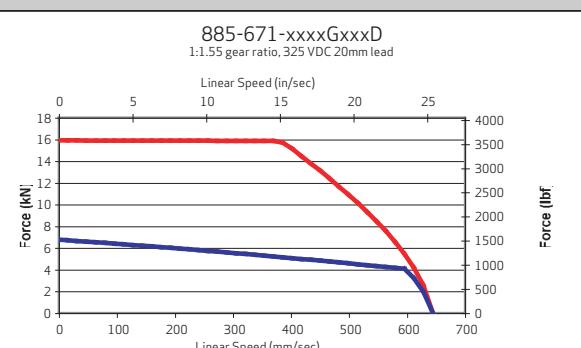
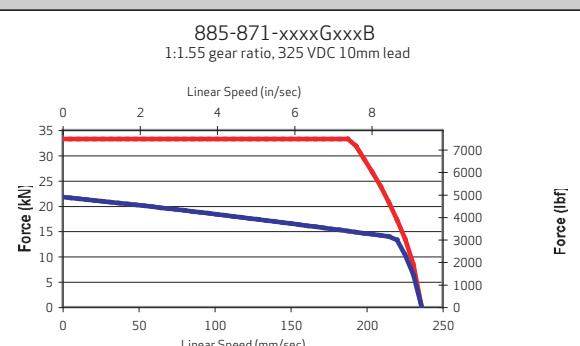
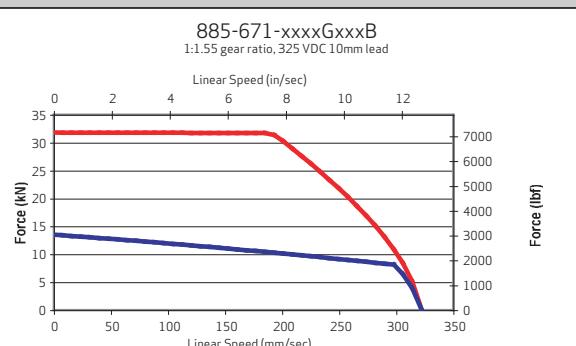
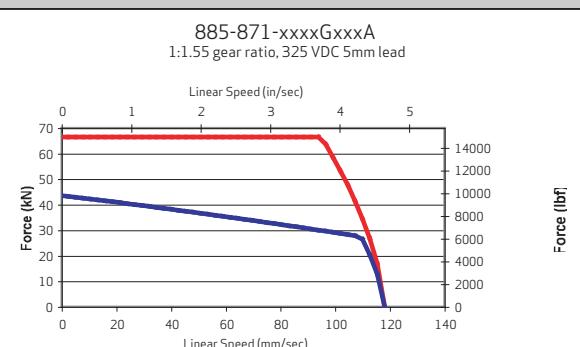


Continuous Force ——————  
Peak Force ——————

## Servomotor Stack Number -8



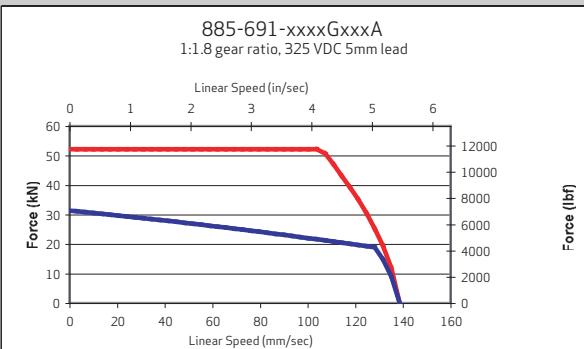
## 1:1.55 GEAR RATIO 300 VOLT

**Servomotor Stack Number -6****Servomotor Stack Number -8**

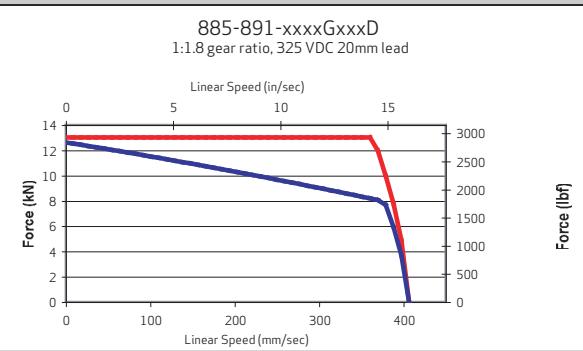
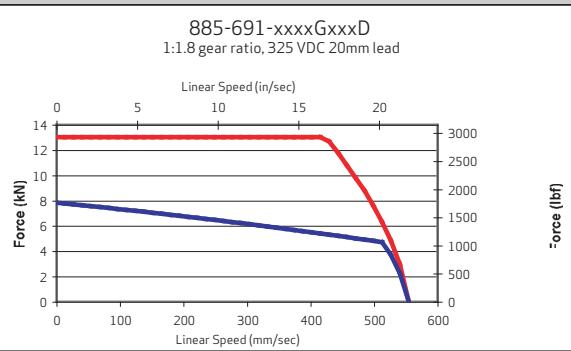
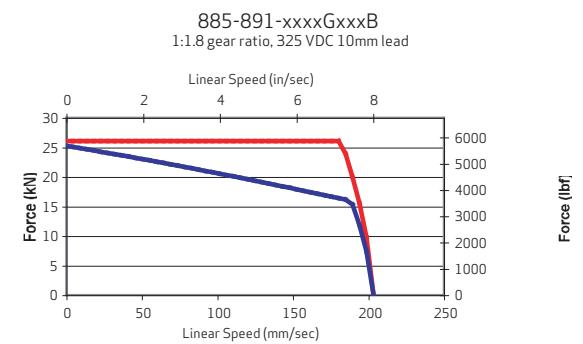
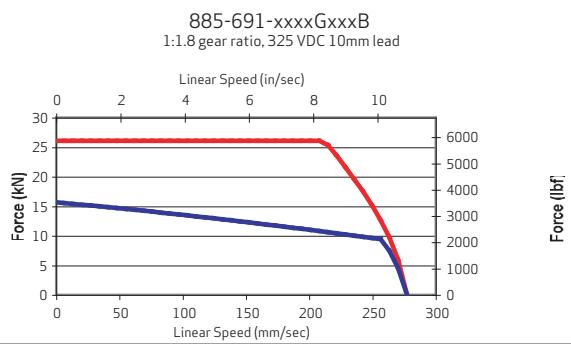
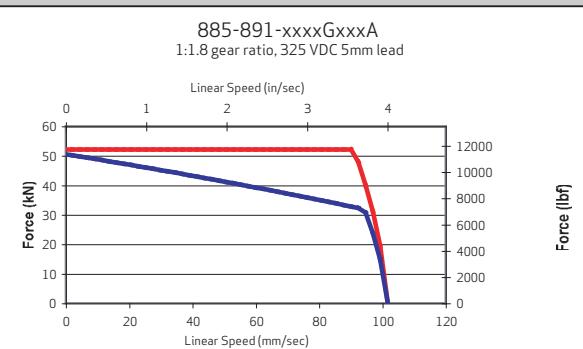
**Continuous Force** ——————  
**Peak Force** ——————

## 1:1.8 GEAR RATIO 300 VOLT

Servomotor Stack Number -6



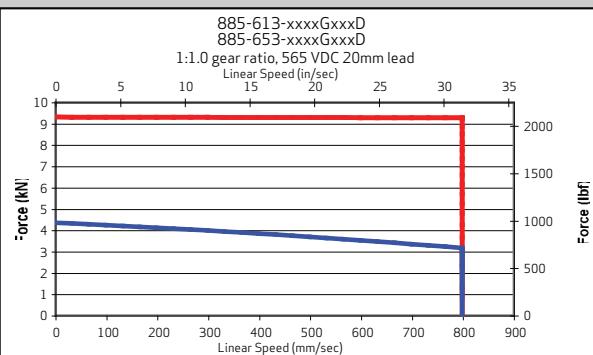
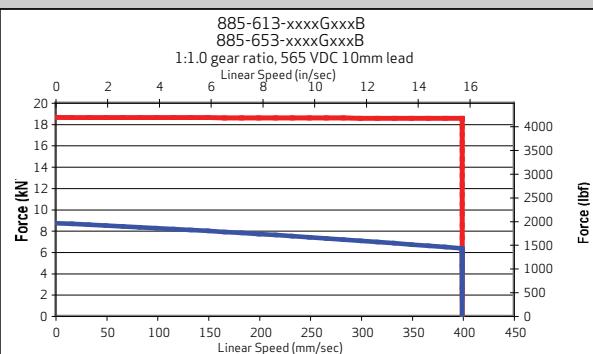
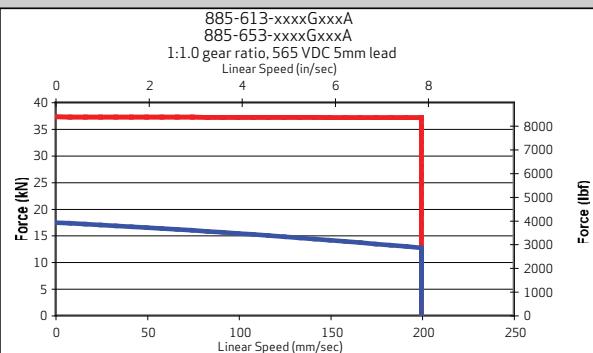
Servomotor Stack Number -8



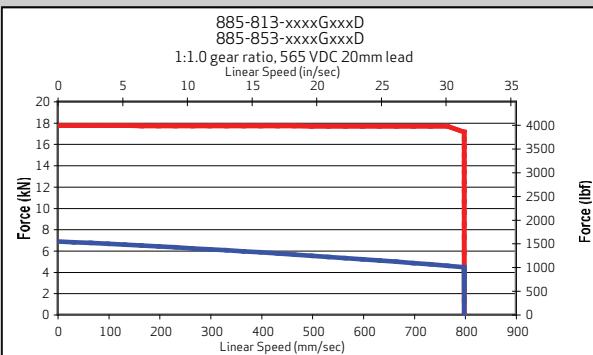
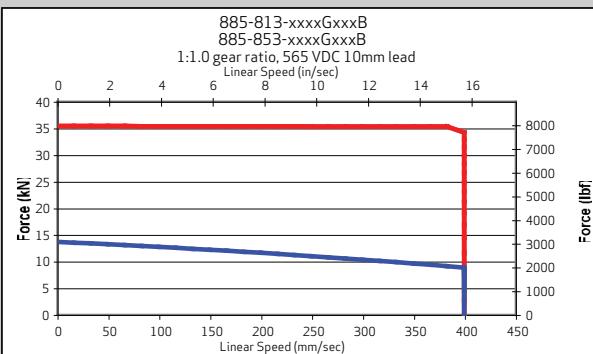
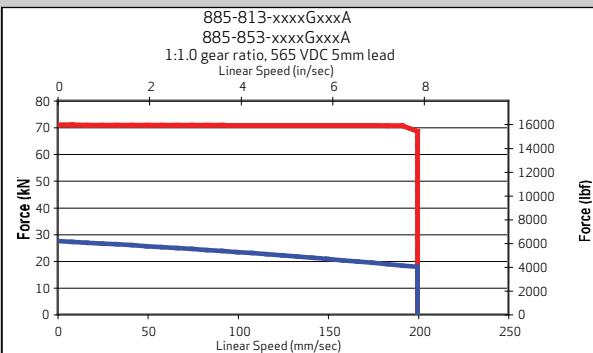
Continuous Force ——————  
Peak Force ——————



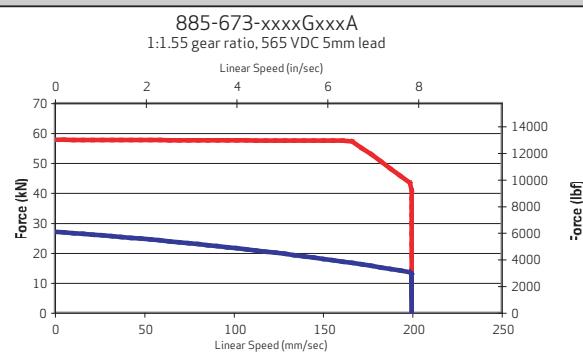
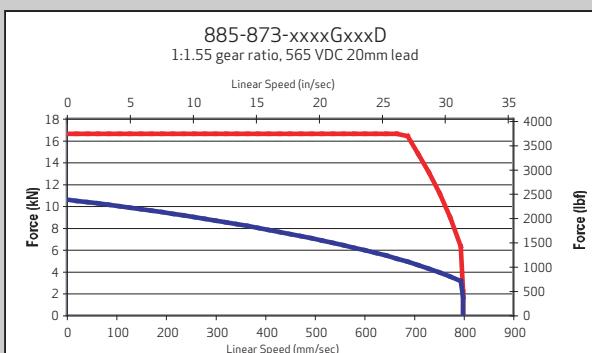
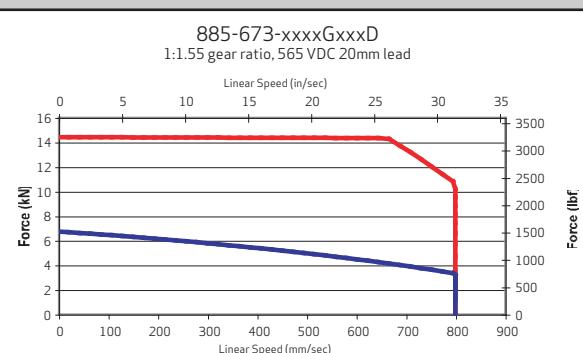
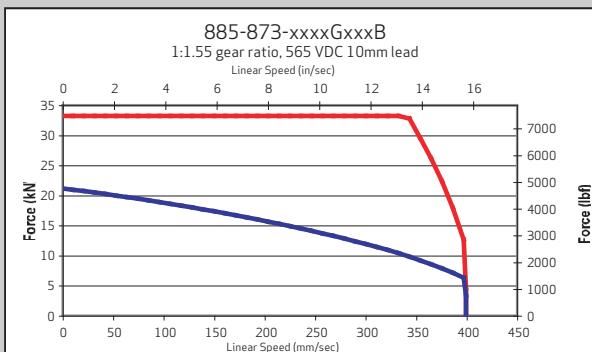
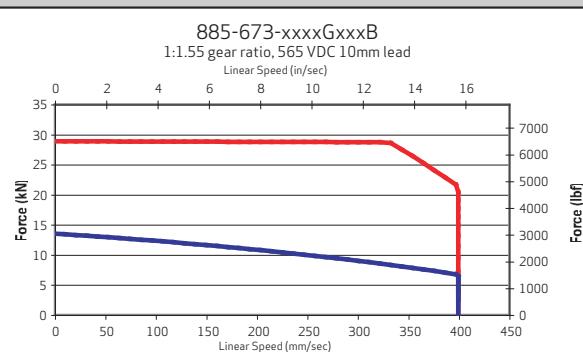
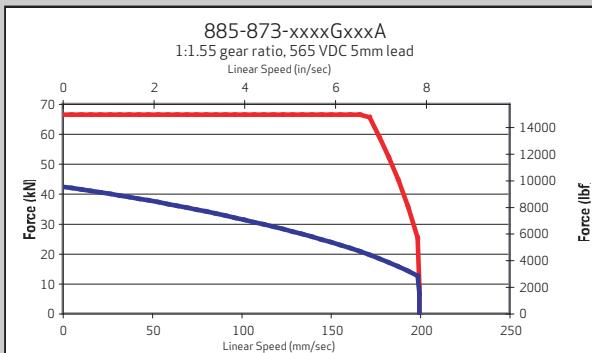
## 1:1 GEAR RATIO 600 VOLT

**Servomotor Stack Number -6**

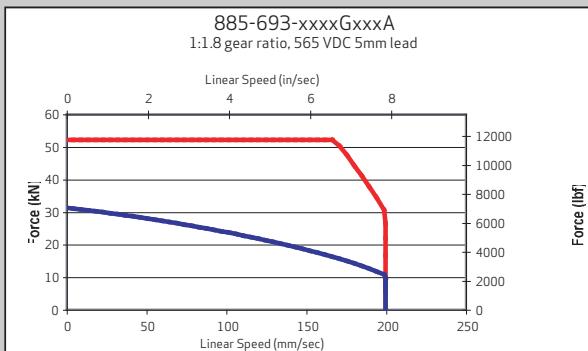
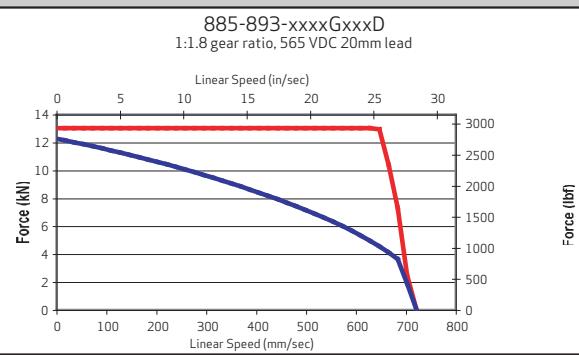
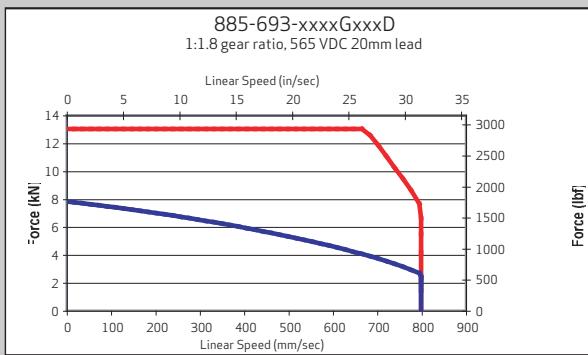
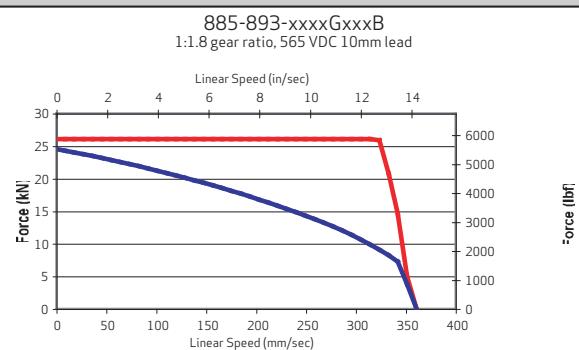
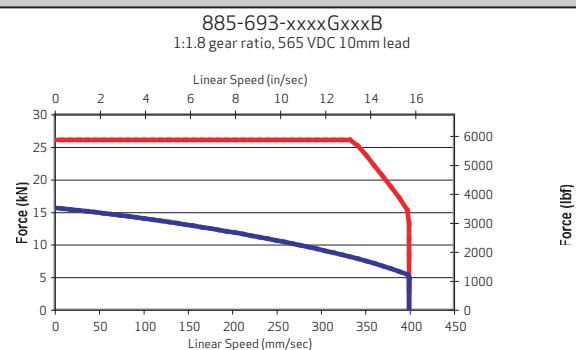
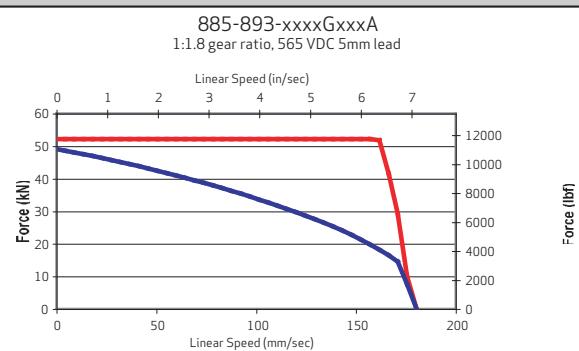
**Continuous Force** ——————  
**Peak Force** ——————

**Servomotor Stack Number -8**

## 1:1.55 GEAR RATIO 600 VOLT

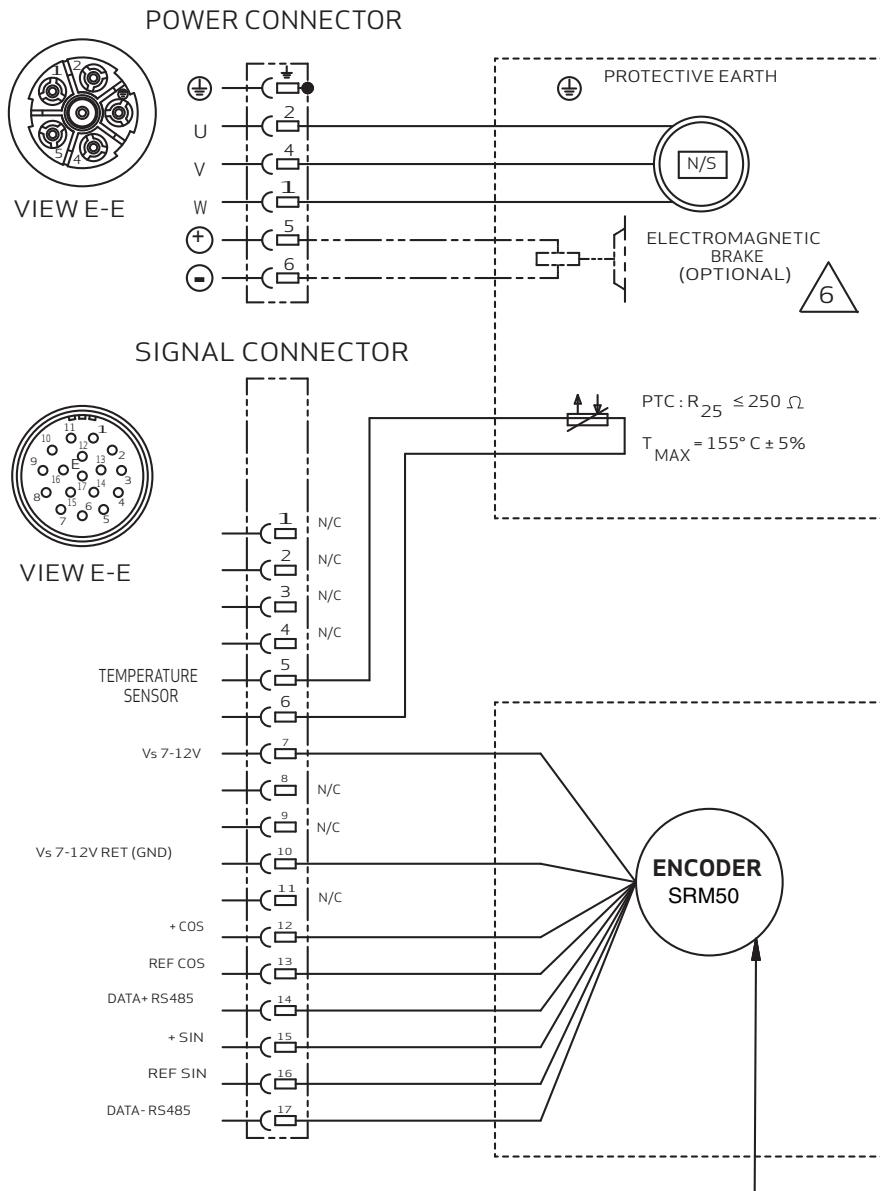
**Servomotor Stack Number -6****Servomotor Stack Number -8**

Continuous Force ——————  
Peak Force ——————

**1:1.8 GEAR RATIO 600 VOLT****Servomotor Stack Number -6****Servomotor Stack Number -8**

**Continuous Force** ———  
**Peak Force** ———





### ELECTRICAL SCHEMATIC WITH ENCODER

(CODE: 1 OR 3)



CABLES (XXX = LENGTH IN METERS)

ENCODER: CA65132-001-XXX

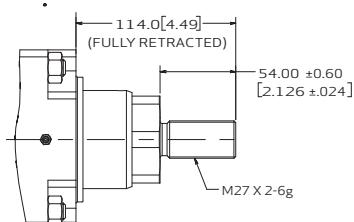
POWER:

300V: CA28936-001-XXX  
600V: CA28937-001-XXX

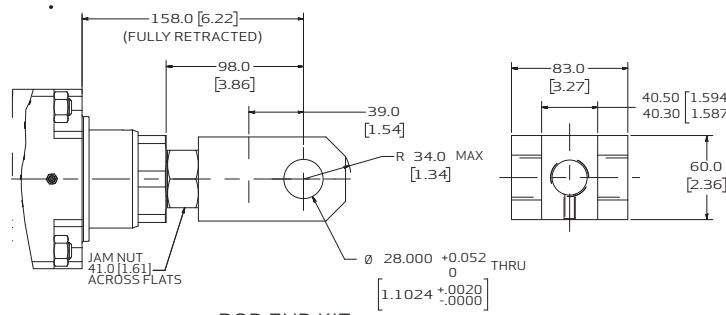


ENERGIZE BRAKE TO RUN

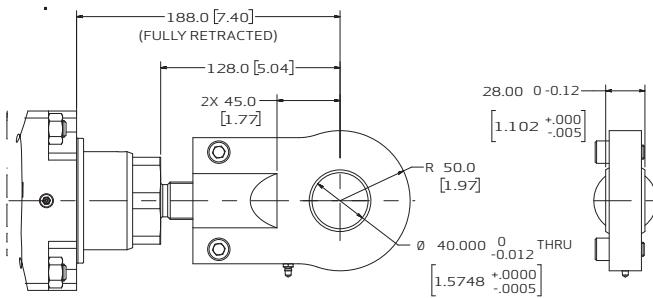


**ROD END KITS**

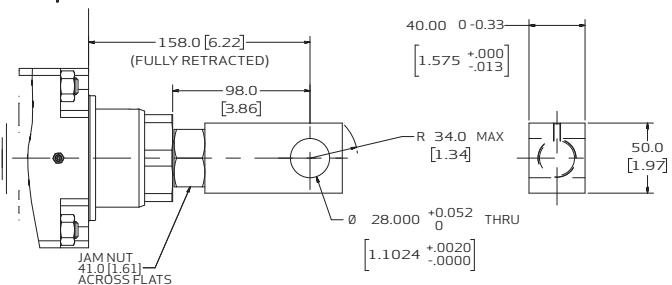
**ROD END KIT,  
MALE END OPTION  
(CODE: 0)**



**ROD END KIT,  
CLEVIS END OPTION  
(CODE: 3)**

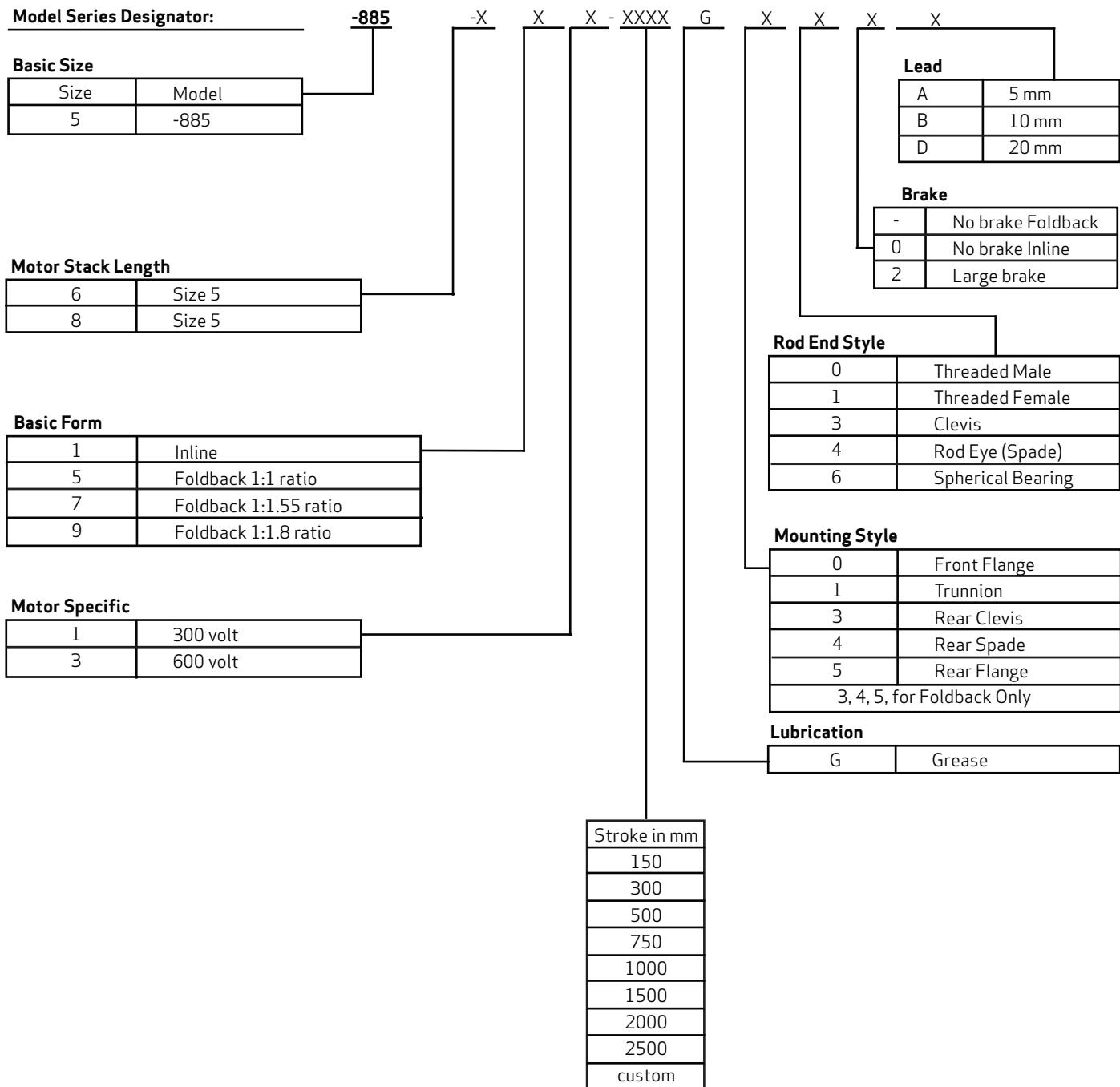


**ROD END KIT, SPHERICAL BEARING OPTION  
(FOR UNITS WITH INTERNAL ANTI-ROTATION)  
(CODE: 6)**



**ROD EYE KIT,  
SPADE END OPTION  
(CODE: 4)**

## BOXCAR MODEL NUMBER EXAMPLE



# SIZE 5

TECHNICAL DATA	
<b>Electrical Characteristics</b>	Power supply 3-phase, 65 Vac to 510 Vac Auxiliary power supply 24 Vdc, 2A PWM Frequency 10 kHz Position control loop Frequency 8 kHz Speed control loop frequency 8 kHz Continuous / peak output current 20A/45A with 3-phase supply
<b>Certifications include</b>	UL, CE, ODVA
<b>Environmental data</b>	Operating ambient temperature 0 to 40°C Storage Temperature -25 to +55°C Thermal Protection 70°C to de-rating the servodrive Ingress Protection IP20
<b>Protection</b>	Servomotor and servodrive over temperature Out of tolerance power supply detection Encoder/Resolver missing signal detection Output Open/Short circuit detection I <sup>2</sup> T limiting Thermal foldback

## FIELDBUS

High-speed interfaces provide a fully digital link for receiving motion commands, providing feedback of status and initializing controller parameters.

### Supported Fieldbuses include:

DeviceNet, Ethernet IP, and 16 bit Analog with Encoder Repeat.

## Digital I/O

- Hardware enable input for process control
- Servomotor Brake Control Output
- Servodrive Ready Output
- Additional 7 programmable inputs and 3 programmable outputs allowing for custom servodrive functionality and monitoring

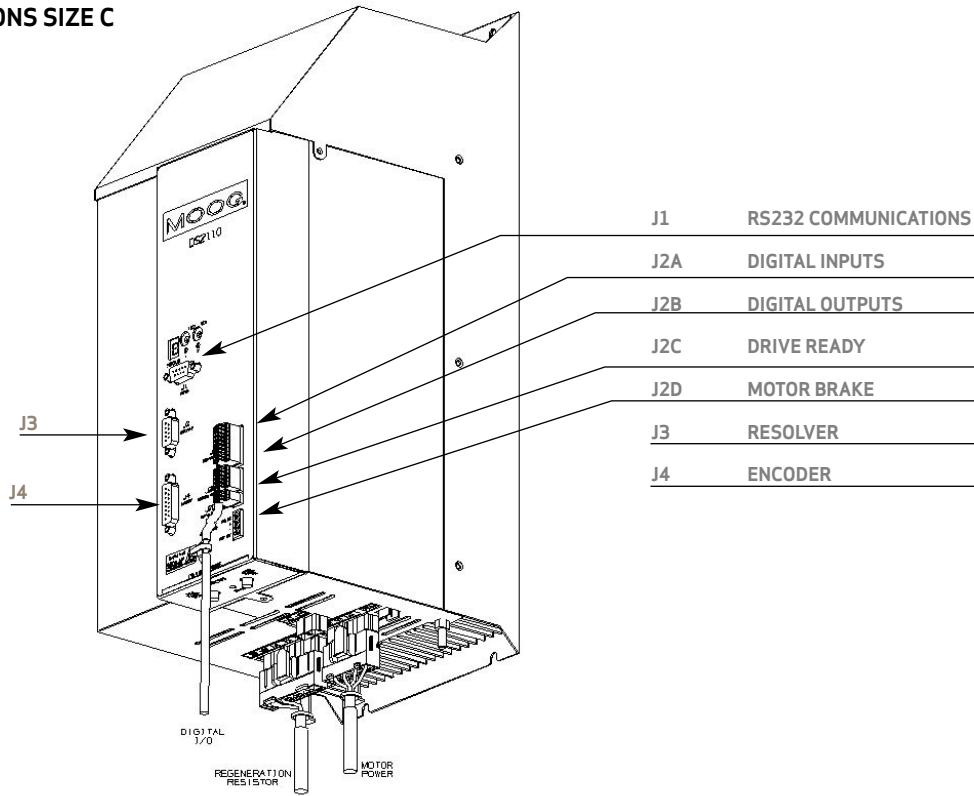
## Servomotor Feedback Supported:

Stegmann Absolute Encoders, Encoder Simulated Output

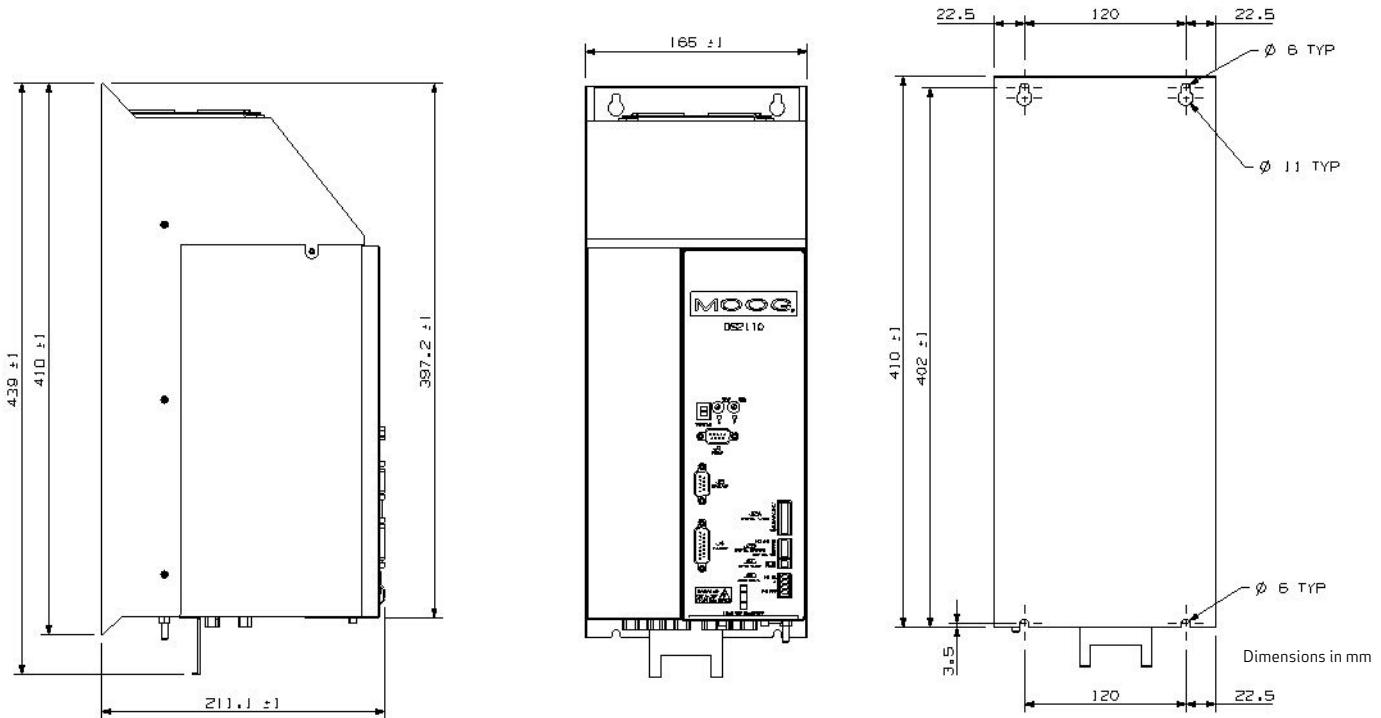
## SIZE 4 MAXFORCE SERVODRIVE ORDERING CODES

FieldBus Ordering Codes	
No Fieldbus	G362-020-00-A-902A
DeviceNet	G362-020-40-A-902A
Ethernet IP	G362-020-90-A-902A
16 Bit analog with encoder repeat +/- 10v, 0-20mA	G362-020-70-A-902A

## CONNECTIONS SIZE C



## DIMENSIONS



# TAKE A CLOSER LOOK

Solutions for MaxForce pre-engineered electro-mechanical actuation for high performance applications are readily available by calling +1 716 652 2000 or emailing us at [info.usa@moog.com](mailto:info.usa@moog.com)

For more information, visit our Web site or locate the distributor nearest you at [www.moog.com/industrial/distributorlocator](http://www.moog.com/industrial/distributorlocator).

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