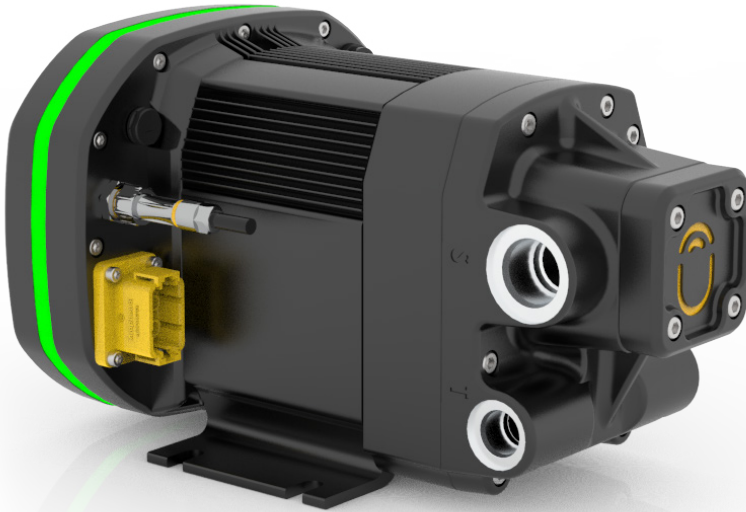


**EHSU - ELECTRO-HYDRAULIC STEERING UNIT**



Model EHSU-2.5-U



Model EHSU-2.5-UPR shown with optional reservoir



Model EHSU-5-U

**Applications:**

- Medium & Heavy-duty trucks
- Electric, Hybrid, & Standard Bus
- Trailer steering
- Tag-axle steering
- Off-Highway Vehicles
- Hybrid and Electric Vehicles

The Hydrapulse® EHSU is a ruggedized electro-hydraulic pump unit with integrated motor, controller, and closed-loop feedback that is specifically designed for mobile steering assist and e-steering applications. The EHSU is available in both high and low voltage models and a variety of pump displacements and power levels.

**FEATURES**

- Power on demand or idle modes
- 3 times smaller overall system size
- Custom options and porting
- Standard SAE hydraulic ports
- CAN J1939 communication interface
- High-voltage models have HVIL connector
- SAE J1455 Environmental rating
- 1.5kw, 2.5kw, and 10kw models
- Plug & Play

**TECHNICAL**

Temperature Range	-40° to +85°C (Operating) -40° to +125°C (Storage)
Protection	IP 6k9k
Power Input	24v to 48v DC 200v to 800v DC
Supply Voltage	9-36v DC
Supply Current	700 mA (idle @ 12V)
Flowrate Range	0 to 15 gpm
Pressure Range	0 to 4,000 psi

# SPECIFICATIONS

EHSU MODEL	EHSU-1.5	EHSU-2.5	EHSU-5.0	EHSU-10
Rated DC Voltage (V)	24 / 48	200 - 800	24 / 48	200 - 800
Rated Power kW (HP)	1.5 (2.0)	2.5 (3.3) @650v	3.6 (4.8) @24v 6.0 (8.1) @48v	10 (13.4) @650v
Rated Current (A)	33A (48v) / 64a (24v)	3.8A (650v)	150A / 125A (24v/48v)	17A (650v)
IP Rating	6k9k	6k9k	6k9k	6k9k
Max Speed (RPM)	4,000	4,000	4,000	4,000
Comms Cable	Samtec IP68 - M12	Samtec IP68 - M12	Samtec IP68 - M12	Samtec IP68 - M12
Power Connector	Hydrapulse LV	Amphenol Mini Magnamate Series	Hydrapulse LV	Amphenol EL Series
Communication Protocol	CAN J1939	CAN J1939	CAN J1939	CAN J1939
Temperature Ratings				
Operating	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C
Storage	-40°C to 125°C	-40°C to 125°C	-40°C to 125°C	-40°C to 125°C
Compliance	SAE J1455, UL 845, 1741 - UL/IEC/EN 61800-5-1 - FCC Radiated Emissions			
Weight (lbs)	31.4	31.4	72.5	72.5
Pump Output	Model # dependant	Model # dependant	Model # dependant	Model # dependant

\*Specifications are nominal and subject to change. Consult factory prior to ordering.

## Order numbering

**EHSU - 1.5 - 1.0 - 06 - B P x<sup>1,2</sup>**

### Model type

**EHSU** - Electro-Hydrapulse Steering Unit

### Power

**1.5** - 1.5 kW (frame size 100)

**2.5** - 2.5 kW (frame size 100)

**5.0** - 5.0 kW (frame size 200)

**10** - 10 kW (frame size 200)

### Pump C.C.

**1.0** - 1.5 kW (frame size 100)

**2.0** - 2.5 kW (frame size 100)

**5.0** - 5.0 kW (frame size 200)

### Customization

**C** - Custom options

### Options

**R** - Reservoir

**P** - Integral Coolant Pump

### Direction

**B** - Bi-Directional

**U** - Uni-Directional

### Reservoir Size

**06** - 1 Gallon

**12** - 1.8 Gallon

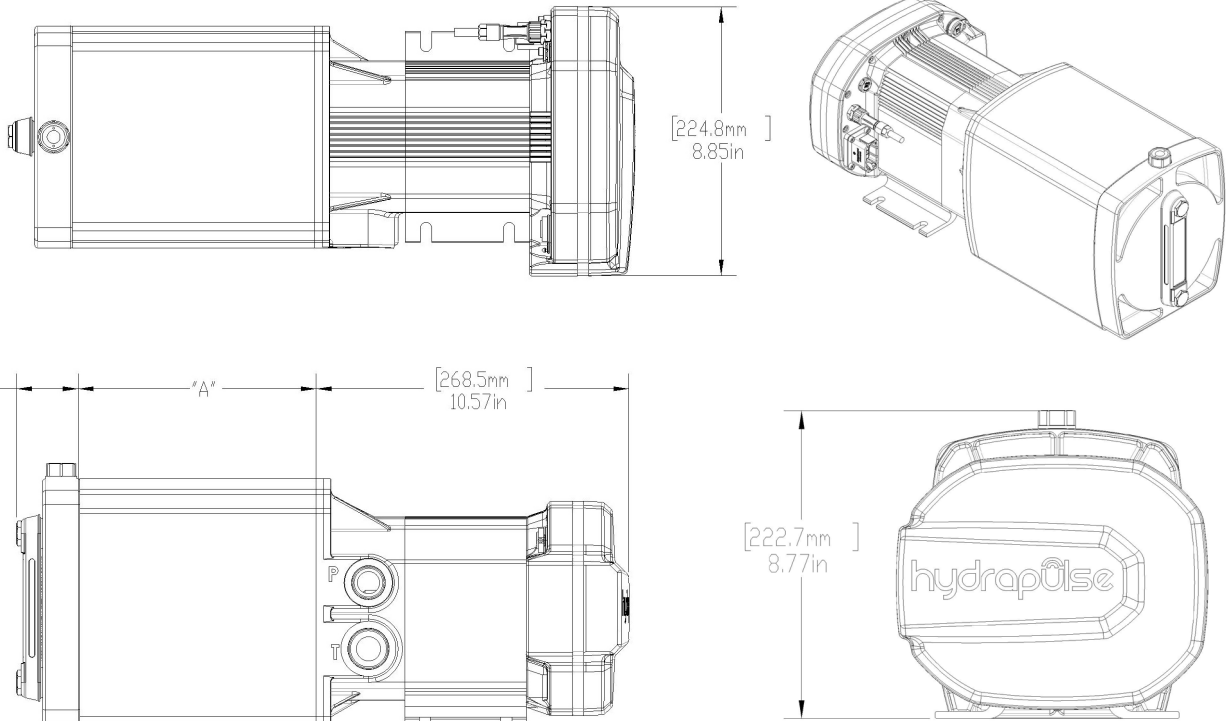
**18** - 2.8 Gallon

<sup>1</sup> Leave off if not applicable

<sup>2</sup> Options include non-standard c.c. or reservoir size

**INSTALLATION DRAWINGS - 100 FRAME SIZE**

**MODEL EHSU-2.5-UPR**



**"A" Dimension**

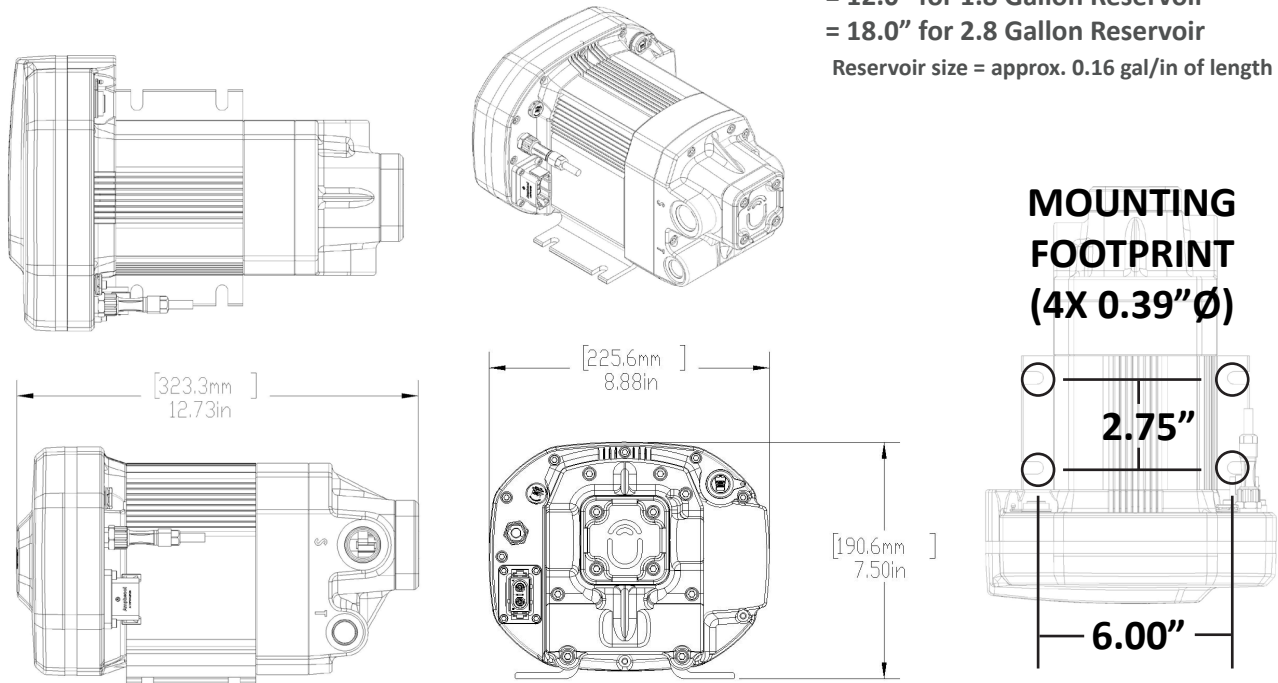
= 6.0" for 1 Gallon Reservoir

= 12.0" for 1.8 Gallon Reservoir

= 18.0" for 2.8 Gallon Reservoir

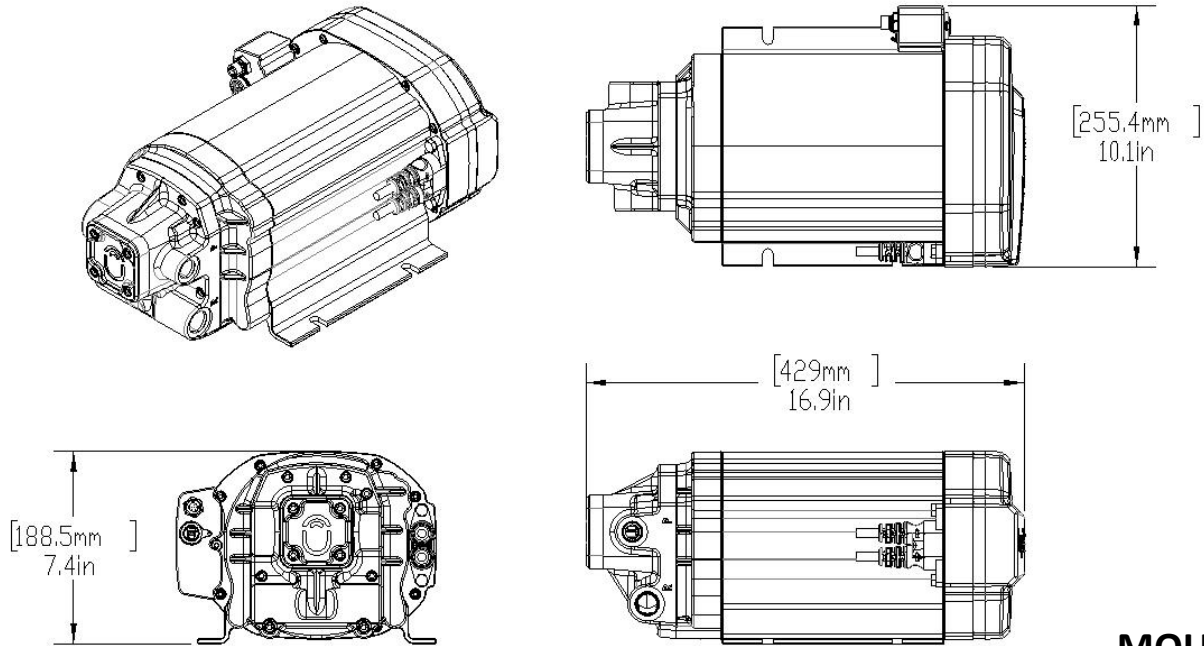
Reservoir size = approx. 0.16 gal/in of length

**MODEL EHSU-2.5-U**



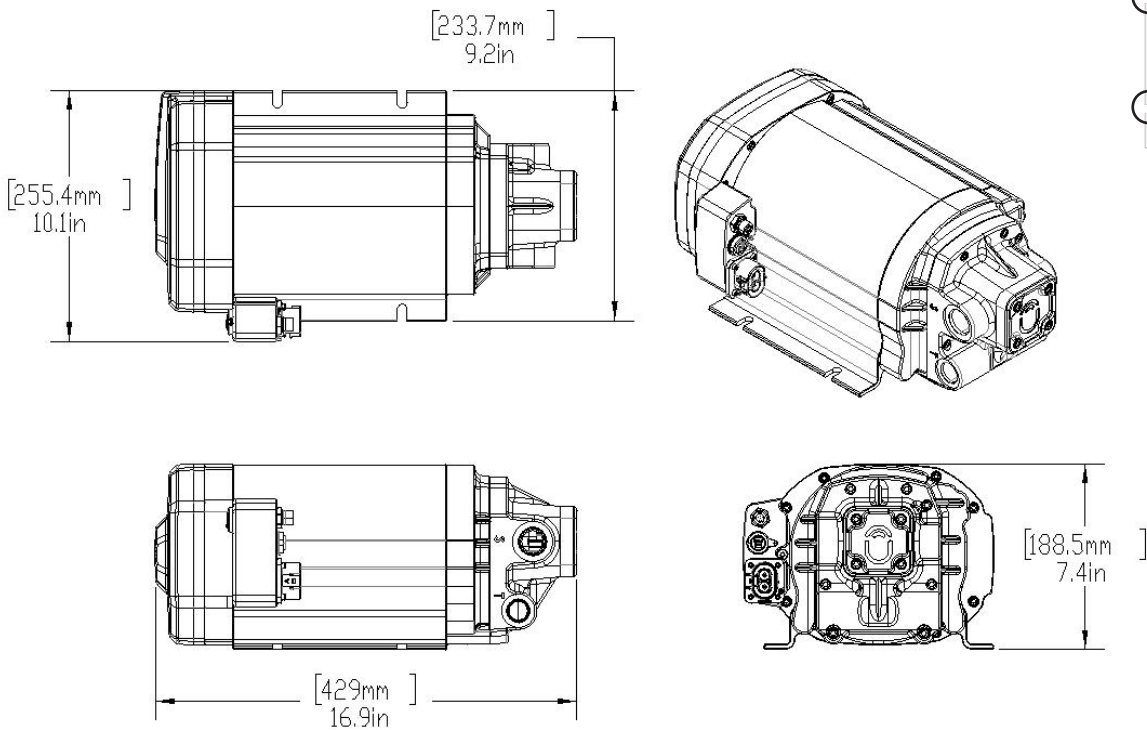
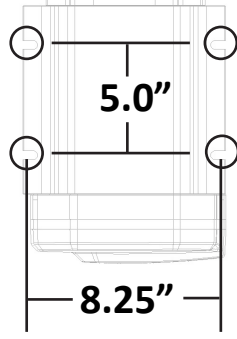
**INSTALLATION DRAWINGS - 200 FRAME SIZE**

**MODEL EHSU-5-U**



**MODEL EHSU-10-U**

**MOUNTING  
FOOTPRINT  
(4X 0.39" Ø)**



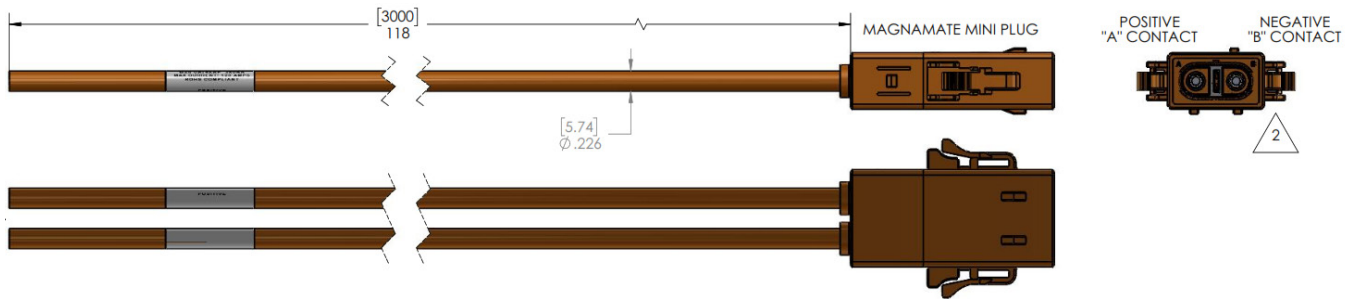
## M12 COMMUNICATIONS CABLE - (ORDER CODE 200-00051)



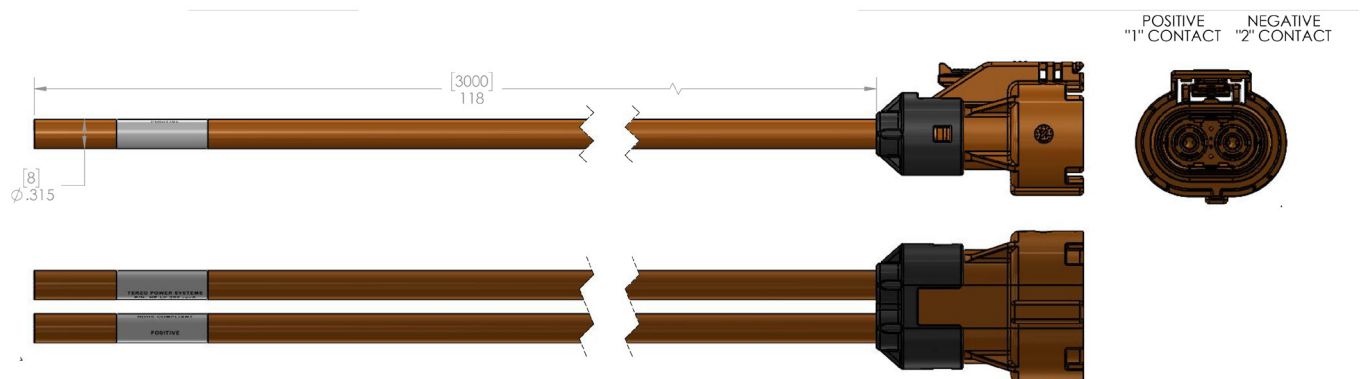
NAME	PIN	COLOR	DESCRIPTION
VCC	1	Brown	9-36V control power
GND	2	Red	9-36V control ground
CAN-H	3	Orange	CAN High
CAN-L	4	Yellow	CAN Low
STO-0	5	Green	E-Stop 0 (safe torque off)
STO-1	6	Blue	E-Stop 1

\*PLEASE REFER TO OUR OPERATIONS AND INSTALLATION MANUAL FOR MORE DETAILS

## FRAME SIZE 100 HIGH VOLTAGE CABLE - (ORDER CODE 200-00012)\*

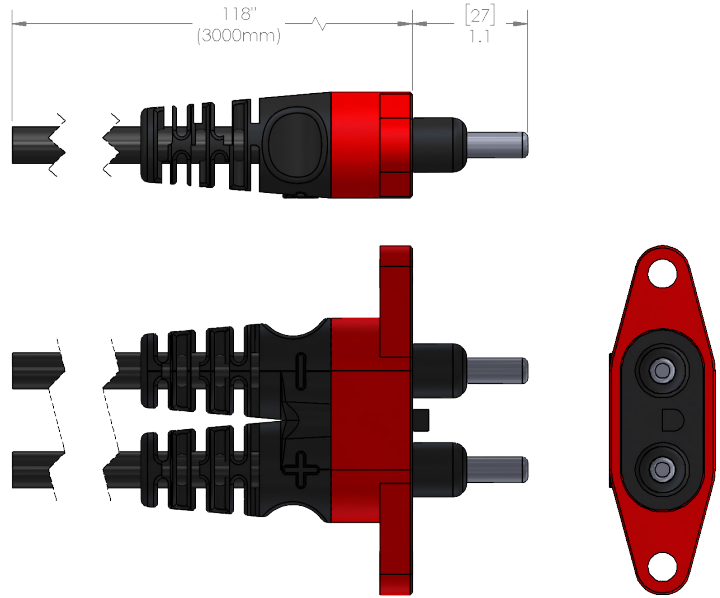
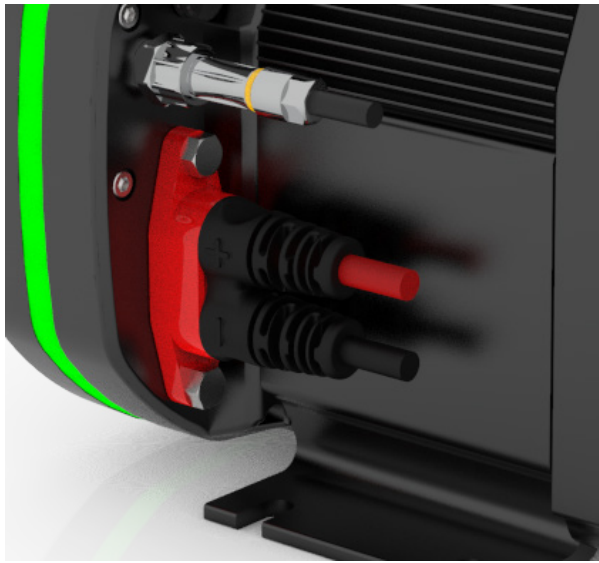


## FRAME SIZE 200 HIGH VOLTAGE CABLE - (ORDER CODE 200-00020)\*



\*STANDARD LENGTH IS 3m. FOR CUSTOM LENGTH PLEASE CONTACT SALES@TERZOPOWER.COM

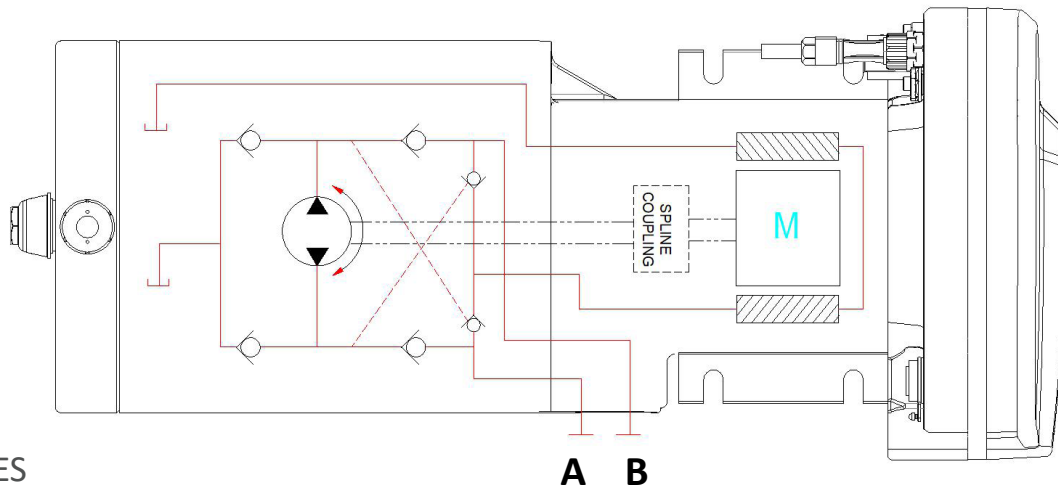
**LOW VOLTAGE CABLE - (ORDER CODE 200-00009)\***



\*STANDARD LENGTH IS 3m. FOR CUSTOM LENGTH PLEASE CONTACT SALES@TERZOPOWER.COM

**INTERNAL SCHEMATICS**

**BI-DIRECTIONAL WITHOUT COOLANT PUMP ("B" ORDER CODE)**



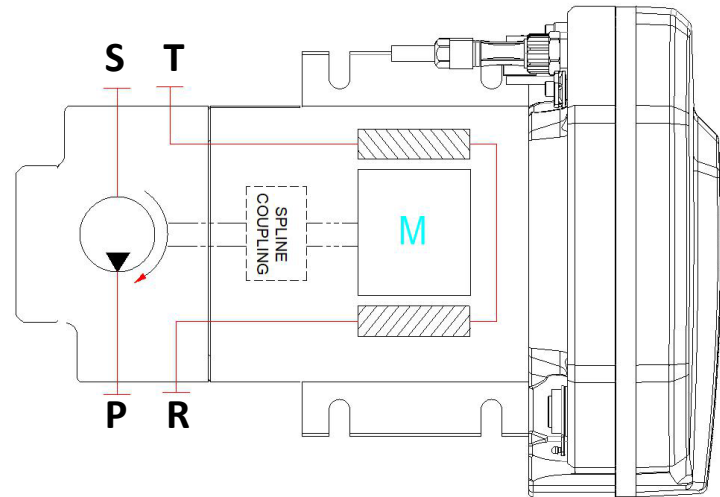
**PORT SIZES**

PORT	SAE SIZE	THREAD
P	- 12	1 1/16 - 12
T	- 16	1 5/16 - 12

## UNI-DIRECTIONAL WITHOUT COOLANT PUMP (“U” ORDER CODE)

### PORT SIZES

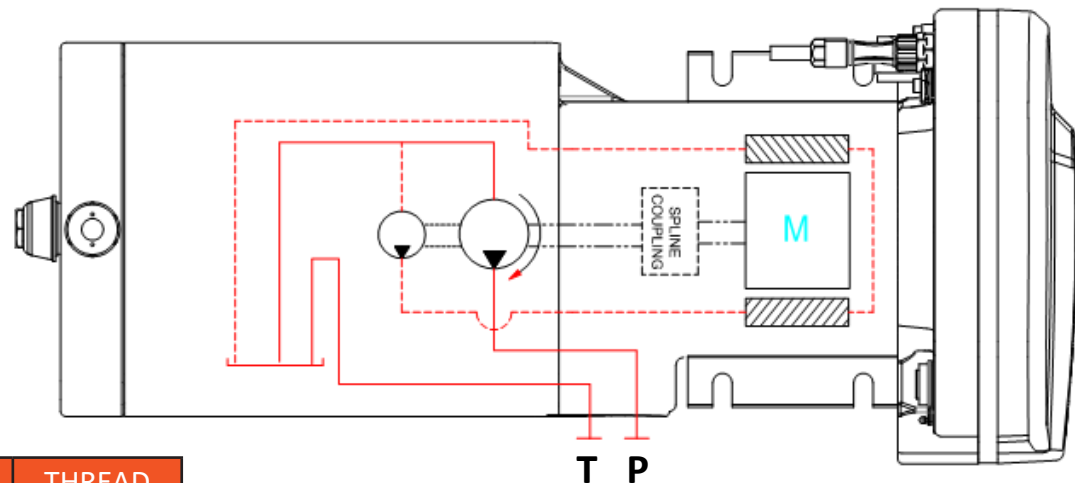
PORT	SAE SIZE	THREAD
P	- 8	3/4 -16
R	- 8	3/4 -16
T	- 8	3/4 -16
S	- 12	1 1/16 - 12



## UNI-DIRECTIONAL WITH COOLANT PUMP (“UP” ORDER CODE)

### PORT SIZES

PORT	SAE SIZE	THREAD
P	- 12	1 1/16 - 12
T	- 16	1 5/16 - 12



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 916-245-9660 | info@terzopower.com | terzopower.com

## WARNING!

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Terzo Power Systems, LLC, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application, including consequences of any failure, and review the information concerning the product or system in the current product catalogue. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Terzo Power Systems, LLC and its subsidiaries at any time without notice.



### WARNING

This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).