



Devicenet™ Electric Actuator Controller Operations Manual

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Electric Actuator Controller, DNET 115V

Introduction

The DNET115V is an actuator control module designed to meet the specific performance requirements of the RCS/ANDCO electric actuators. The module is an integral part of the electric actuator.

The DNET115V provides actuator open/stop/close control, Emergency Shutdown (ESD), end of travel limit switch status, fail to open alarm, and fail to close alarm, via the DeviceNet bus. The module will switch the control power to an electric motor, solenoid, or contactor, by the use of two triacs.

The DNET115V electronic circuitry is powered by the 24 Vdc supply provided by the DeviceNet bus.

Features

- Open/Stop/Close output control to the actuator
- Open/Close limit switch indication through internally sourced current sensing digital inputs
- Configurable: Drive Open / Drive Closed / Stay-put / Emergency Shut Down commands via the DeviceNet network.
- Failed to achieve Open or Close Alarms
- LED status indicators for local diagnostics
- Configurable address via the DeviceNet network, or on-board DIP switch
- "Plug In" style electrical terminal blocks

Hardware Specifications

| | |
|------------------------|--------------------------|
| Operating Temperature: | -20 to + 70 C |
| Storage Temperature: | -40 to + 80 C |
| Humidity: | 90% Non Condensing |
| Supply Power: | 1.5W @ 24Vdc |
| Solid State Outputs: | (2) Isolated 600VAC 15A |
| Digital Inputs: | (8) Dry Contacts |
| Analog Inputs: | (2) Channels (see below) |
| Processor: | Temic 89C51CC01 |
| RAM: | 1K |
| Flash Memory: | 32KB |
| EEPROM: | 32KB |
| Physical Dimensions: | 4.00" x 2.78" x 1.50" |
| Serial Interfaces: | One CAN 2.0 port. |

Network Communication Protocols

Module supports DeviceNet Group 2 Slave

Analog Inputs Specification

| | |
|--------------------|--|
| Resolution: | 8bit |
| Accuracy: | 1% of full span (FS). |
| Linearity: | 1% of FS. |
| Temperature Drift: | 2% of FS. |
| Range: | 0 to 5Vdc or 0 to 20mAdc input for Analog Input 1 (AI1) |

1-5K Ω Potentiometer for the Position Feedback.

Configuration Switches

Address Switches SW1 and SW2, See Figure 1

Three 16-position DIP switches determines the boards Address and Baud rate:

- MSB selects the high nibble of the Address.
- LSB selects the low nibble of the Address.
- DR selects the Data Rate. 0-125K, 1-250K, 2-500K, 3-> - Non Volatile

Note: For DeviceNet, Address values greater than 63 would use address in non-volatile memory.

Calibration Switches, See Figure 1

- S1 – Sets the Close Position for RCS Actuators
Sets the Retract Position for Andco Actuators
- S2 – Sets the Open Position for RCS Actuators
Sets the Extend Position for Andco Actuator

When the calibration switches are depressed, two of the three Status LEDs will turn ON, indicating that the push button is depressed. After the push button has been depressed for approximately five seconds, the LEDs will return to their previous state indicating that the action has been performed.

Configuration Jumpers, see Figure 1

- JP1 Installed: Connect DeviceNet Shield to Chassis via a High pass filter.
- JP2 Installed: Set board in Program Mode
- JP2 Not Installed: Normal Operation

LED Indications, see Figure 1

| LED | Description |
|-----|--|
| M | DeviceNet Module LED: Green Red DNET115V module ok DNET115V module error |
| N | DeviceNet Network LED: Green solid Network communicating with recognized device, network communication O/K Green blinking Network communicating with unrecognized device (Check EDS file) Red No network communication, check network wiring |
| A | Actuator Status: Red/Green Actuator Stopped in mid travel. Flashing Green Actuator moving toward full closed (RCS actuators) or retract (Andco actuators) position. Solid Green Actuator at the full closed (RCS actuators) or retract (Andco actuators) position. Flashing Red Actuator moving toward full open (RCS actuators) or extend (Andco actuators) position. Solid Red Actuator at the full open (RCS actuators) or extend (Andco actuators) position |
| D9 | Triac Output Status: Solid Green Close/retract command active Off Actuator stopped or no command received over the network |
| D10 | Triac Output Status: Solid Red Open/extend command active Off Actuator stopped or no command received over the network |

Terminal Blocks, see Figure 1

| J3 DeviceNet | J1, J2 Digital Inputs | J4 Actuator Outputs | J5 Analog Inputs | J6 Feedback Potentiometer | J11 Download |
|------------------------|-----------------------|----------------------|---|---------------------------|--------------|
| J3-5: DeviceNet V+ | J1-7: DI1 J2-5: D15 | J4-1: Actuator Power | J5-1: In+ | J6-1: CW | J11-1: RXD |
| J3-4: DeviceNet CanH | J1-6: DI2 J2-4: D16 | J4-2: Actuator Power | J5-2: In- | J6-2: Slider | J11-2: TXD |
| J3-3: DeviceNet Shield | J1-5: GND J2-3: D17 | J4-3: Actuator Open | Not available yet. Future development. | J6-3: CCW | J11-3: GND |
| J3-2: DeviceNet CanL | J1-4: DI3 J2-2: D18 | J4-4: Actuator Close | | | |
| J3-1: DeviceNet V- | J1-3: GND J2-1: GND | J4-5: Actuator Cmn | | | |
| | J1-2: DI4 | J4-6: Actuator Cmn | | | |
| | J1-1: GND | | | | |

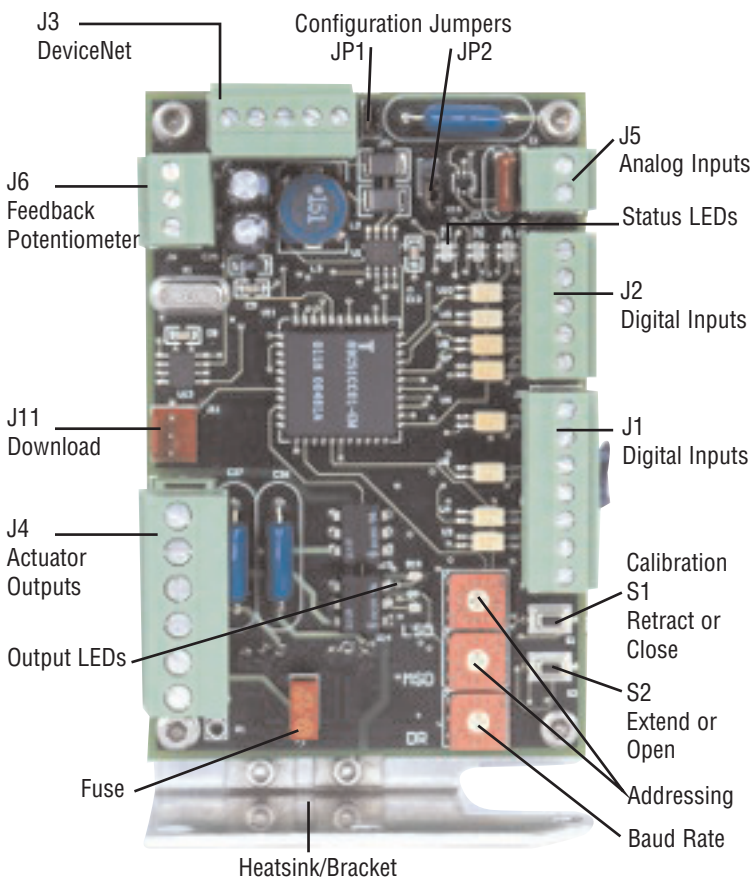


Figure 1

Calibration Procedure

a. Installation Notes

Note 1: The following instructions assume that the DNET115V board is installed in the actuator and all safety, installation and startup instructions outlined in the appropriate RCS and ANDCO actuator installation and instruction manuals have been carried out. Be certain the actuator is in proper operating condition before attempting to calibrate the DNET115V board.

Note 2: The terms “clockwise” and “counterclockwise” refer to the direction of rotation of the actuator output shaft, for rotary actuators, as viewed from the top of the actuator. For linear actuators, the term “extend”, rod moving away from the body of the actuator, and “retract”, rod moving into the body of the actuator, refer to the direction of movement of the extension rod.

b. Potentiometer Calibration

1. Move the actuator to 50% of full travel. Remove the potentiometer slider wire from terminal point 2 on terminal strip J6 and the potentiometer minimum signal wire from terminal point 1 on J6.
2. Using an ohmmeter, measure the resistance between the two wires. The meter reading should be 500 Ohms. If not, loosen the setscrew on the potentiometer pinion gear and adjust the shaft until the reading is 500 Ohms.
3. Tighten the setscrew.
4. Move the actuator to the full closed (RCS actuators) or retract (Andco actuators) position. Use the ohmmeter and measure the resistance between the two wires once again. The reading should be approximately 20 Ohms. Connect the minimum signal wire to terminal point 1 of J6.

Note: If the resistance measured at this step is greater than 500 Ohms, the minimum and maximum potentiometer leads are reversed. Remove the remaining potentiometer lead from terminal point 3 of terminal strip J6 and measure the resistance between it and the slider wire. The reading should be approximately 20 to 50 Ohms. Terminate this lead to terminal point 1 of J6. Connect the other lead (not the slider) to terminal point 3 of terminal strip J6.

5. Move the actuator to the full open (RCS actuators) or extend (Andco actuators) position. Remove the maximum signal potentiometer lead from terminal point 3 of terminal strip J6. Use the ohmmeter and measure the resistance between it and the slider wire. The reading should be approximately 900 to 950 Ohms.
6. Reconnect this lead to terminal point 3 of terminal strip J6.
7. Reconnect the potentiometer slider wire to terminal point 2 of terminal strip J6.

c. Calibrating the DNET115V

1. Electrically, move the actuator toward the full closed (RCS actuators) or retract (Andco actuators) position.

Note: If no local pilot devices are available, this may be accomplished by installing a jumper between terminal point 1 and terminal point 4 of terminal block J4. This will run the actuator to the full closed (RCS actuators) or retract (Andco actuators) position.

As the actuator is moving the LED's on the DNET115V should give the following indications:

- M: Solid Green
- N: Solid Green
- A: Flashing Green
- D9: Solid Green
- D10: Off

When the end of travel is reached and the limit switch activates, the actuator will stop and the LED's will give the following indications:

- M: Solid Green
- N: Solid Green
- A: Solid Green
- D9: Solid Green
- D10: Off

2. Push down and hold S1 on the DNET115V. The LED's will now give the following indications:

- M: Solid Red
- N: Solid Red
- A: Off
- D9: Solid Green
- D10: Off

Hold down S1 (approximately 5 seconds) until the LED's indicate the following:

- M: Solid Green
- N: Solid Green
- A: Solid Green
- D9: Solid Green
- D10: Off

3. Electrically, move the actuator toward the full open (RCS actuators) or extend (Andco actuators) position.

Note: If no local pilot devices are available, this may be accomplished by installing a jumper between terminal point 1 and terminal point 3 of terminal block J4. This will run the actuator to the full open (RCS actuators) or extend (Andco actuators) position.

As the actuator is moving the LED's on the DNET115V should give the following indications:

- M: Solid Green
- N: Solid Green
- A: Flashing Red
- D9: Off
- D10: Red

When the end of travel is reached and the limit switch activates, the actuator will stop and the LED's will give the following indications:

- M: Solid Green
- N: Solid Green
- A: Solid Red
- D9: Off
- D10: Solid Red

4. Push down and hold S2 on the DNET115V. The LED's will now give the following indications:

- M: Solid Red
- N: Off
- A: Solid Red
- D9: Off
- D10: Solid Red

Hold down S1 until the LED's indicate the following:

- M: Solid Green
- N: Solid Green
- A: Solid Red
- D9: Off
- D10: Solid Red

Release S1.

The actuator is now ready for operation over the DeviceNet network. Reinstall the control enclosure, ensuring the gasket (NEMA 4 versions) is properly installed and all retaining bolts are tight.

Functional Specifications

Database

| Variable | Type | C=64 I = 1 A=X | Description |
|--------------|-------|----------------|---|
| StatusWord | UINT | 3 | Bit Mapped Actuator Status |
| AlarmWord | UINT | 4 | Bit Mapped Actuator Alarms |
| Position | INT | 5 | A10 Scaled Value/Position |
| Spare AI | INT | 6 | A12 Scaled Value |
| DeadBand | UINT | 7 | Actuator DeadBand |
| DlImage0 | UCHAR | 20 | Voltage Sensing Input Image |
| DlImage1 | UCHAR | 21 | Address Switch Image |
| DlImage2 | UCHAR | 22 | Data Rate Switch Image |
| DlImage3 | UCHAR | 23 | Push Buttons Image |
| Raw Position | UINT | 24 | Raw Position |
| Raw AI | UINT | 25 | Raw Analog Input |
| CommandWord | UINT | 1 | Bit Mapped Actuator Commands |
| Setpoint | INT | 2 | Remote Setpoint in same scale as the position |
| ControlWord | UINT | 12 | Bit Mapped Configuration Word |
| InstRevTime | UINT | 13 | Motor Direction Change Delay in 100ms resolution. |
| PosLo | INT | 14 | Analog Input Configuration Variables |
| PosHi | INT | 15 | |
| PosScale | FLOAT | 16 | |
| PosFailHi | INT | 17 | Positive Valid Range |
| PosFailLo | INT | 18 | |
| FailPosition | INT | 19 | Actuator Fail Position |

Actuator Status Mapping

| Bit | Description |
|-------|------------------------|
| 0 | Open Limit |
| 1 | Close Limit |
| 2 | Remote |
| 3 | Local |
| 4 | Actuator Running Open |
| 5 | Actuator Running Close |
| 6 | ESD Active |
| 7 | RSV |
| 8 | Motor Commanded Open |
| 9 | Motor Commanded Close |
| 10-15 | RSV |

Actuator Alarm Mapping

| Bit | Description |
|------|-------------|
| 0-15 | RSV |

DI Image0 Mapping

| Bit | Description |
|-----|-------------|
| 0 | DI0 |
| 1 | DI1 |
| 2 | DI2 |
| 3 | DI3 |
| 4 | DI4 |
| 5 | DI5 |
| 6 | DI6 |
| 7 | DI7 |

Command Word Mapping

| Bit | Description |
|------|-------------|
| 0 | Open |
| 1 | Close |
| 2 | Stop |
| 3 | Remote ESD |
| 4-15 | RSV |

Control Word Mapping

| Bit | Description |
|------|---|
| 1-2 | ESD |
| 3 | On – Actuator On/Off Mode Off – Actuator Setpoint Mode |
| 4-13 | Reserved |

Emergency Shutdown

| Action | Configuration |
|----------------|---------------|
| Fail to Preset | ESD = 3 |
| Fail as is | ESD = 0 |
| Open | ESD = 1 |
| Close | ESD = 2 |

Position Scaling

$$\text{Position} = \text{INT} \left\{ \text{Adc0Scale} * (\text{RawAd0} - \text{Adc0Lo}) / (\text{Adc0Hi} - \text{Adc0Lo}) \right\}$$

Note that the Remote Setpoint, Deadband, FailPosition are in units per Adc0Scale.

DeviceNet Device Profile

Note that all objects are specified in the DeviceNet specification with the exception of the user object class 64, which is specific to the DNET115V.

Identity Object: Class Code: 01 (0x01)

Identity Object Class Attributes

| Attribute | Access | Name | Type | Value |
|-----------|--------|------------------------|------|-------|
| 1 | Get | Revision | UINT | 1 |
| 2 | Get | Max Object Instance | UINT | 1 |
| 6 | Get | Max Class Identifier | UINT | 7 |
| 7 | Get | Max Instance Attribute | UINT | 7 |

Identity Object, Instance 1 Attributes

| Attribute | Access | Name | Type | Value |
|-----------|--------|----------------|------------|--------------------|
| 1 | Get | Vendor | UINT | 129 |
| 2 | Get | Product Type | UINT | 7 |
| 3 | Get | Product Code | UINT | 1 |
| 4 | Get | Revision | STRUCT OF | |
| | | Major Revision | USINT | 1 |
| | | Minor Revision | USINT | 1 |
| 5 | Get | Device Status | UINT | See DN spec |
| 6 | Get | Serial Number | UINT | Unique to DNET115V |
| 7 | Get | Product Name | STRUCT OF | |
| | | Length | USINT | 7 |
| | | Name | STRING [6] | DNET115V |

Common Services

| Service Code | Class | Instance | Service Name |
|--------------|-------|----------|----------------------|
| 05 (0x05) | NoYes | Reset | |
| 14 (0x0E) | Yes | Yes | Get_Attribute_Single |

Router Object: Class Code: 02 (0x02)

Router Object Class Attributes

| Attribute | Access | Name | Type | Value |
|-----------|--------|------------------------|------|-------|
| 1 | Get | Revision | UINT | 1 |
| 2 | Get | Max Object Instance | UINT | 1 |
| 6 | Get | Max Class Identifier | UINT | 7 |
| 7 | Get | Max Instance Attribute | UINT | 2 |

Router Object, Instance 1 Attributes

| Attribute | Access | Name | Type | Value |
|-----------|--------|-----------------------|------|-------|
| 2 | Get | Number of Connections | UINT | 2 |

Common Services

| Service Code | Class | Instance | Service Name |
|--------------|-------|----------|----------------------|
| 14 (0x0E) | Yes | Yes | Get_Attribute_Single |

DeviceNet Object: Class Code: 03 (0x03)

DeviceNet Object Class Attributes

| Attribute | Access | Name | Type | Value |
|-----------|--------|----------|------|-------|
| 1 | Get | Revision | UINT | 2 |

DeviceNet Object, Instance 1 Attributes

| Attribute | Access | Name | Type | Value |
|-----------|---------|--|----------------------------|-------------|
| 1 | Get/Set | MACID | USINT | Switch/NV |
| 2 | Get/Set | Baud Rate | USINT | Switch/NV |
| 3 | Get/Set | Bus Off Interrupt | BOOL | See DN spec |
| 4 | Get/Set | Bus Off Counter | USINT | See DN spec |
| 5 | Get/SpC | Allocation Information Choice Byte Master Node Addr. | STRUCT of BYTE USINT | See DN spec |
| 6 | Get | MACID Changed | BOOL | See DN spec |
| 7 | Get | Baud Rate Changed | BOOL | See DN spec |
| 8 | Get | MACID Switch Value | USINT | See DN spec |
| 9 | Get | Baud Rate Switch Value | USINT | See DN spec |

Common Services

| Service Code | Class | Instance | Service Name |
|--------------|-------|----------|----------------------|
| 05 (0x05) | No | Yes | Reset |
| 14 (0x0E) | Yes | Yes | Get_Attribute_Single |

Common Services

| Service Code | Class | Instance | Service Name |
|--------------|-------|----------|-----------------------|
| 14 (0x0E) | Yes | Yes | Get_Attribute_Single |
| 16 (0x10) | No | Yes | Set_Attribute_Single |
| 75 (0x4B) | No | Yes | Allocate Master/Slave |
| 76 (0x4C) | No | Yes | Release Master/Slave |

Assembly Object: Class Code: 04 (0x04)

Assembly Object Class Attributes

| Attribute | Access | Name | Type | Value |
|-----------|--------|--------------|------|-------|
| 1 | Get | Revision | UINT | 2 |
| 2 | Get | Max Instance | UINT | 2 |

Assembly Object, Instance 1 Attributes

| Attribute | Access | Name | Type | Value |
|-----------|--------|---------------------------------|--------------------------|--------------------------------|
| 3 | Get | Input Data Status Word Position | STRUCT of UINT INT | See section 2 See section 2 |

Connection Object, Instance 1 Attributes (Explicit Message)

| Attribute | Access | Name | Type | Value |
|-----------|---------|-------------------------|-------|-----------------------|
| 1 | Get | State | USINT | See DN spec |
| 2 | Get | Instance Type | USINT | 0 = Explicit Message |
| 3 | Get | Transport Class Trigger | USINT | 0x83 |
| 4 | Get | Production Connection | UINT | See DN spec |
| 5 | Get | Consumed Connection | UINT | See DN spec |
| 6 | Get | Initial Comm. Char. | USINT | 0x21 |
| 7 | Get | Production Size | UINT | 18 |
| 8 | Get | Consumed Size | UINT | 21 |
| 9 | Get/Set | Expected Packet Rate | UINT | Default 2500 msec |
| 12 | Get/Set | Timeout Action | USINT | Default 0 See DN spec |
| 13 | Get | Prod. Path Length | USINT | 0 |
| 14 | Get | Production Path | | (null) |
| 15 | Get | Cons. Path Length | USINT | 0 |
| 16 | Get | Consumed Path | | (null) |

Assembly Object, Instance 2 Attributes

| Attribute | Access | Name | Type | Value |
|-----------|---------|---|--------------------------|--------------------------------|
| 3 | Get/Set | Output Data Command Word Setpoint Value | STRUCT of UINT INT | See section 2 See section 2 |

Common Services

| Service Code | Class | Instance | Service Name |
|--------------|-------|----------|----------------------|
| 14 (0x0E) | Yes | Yes | Get_Attribute_Single |
| 16 (0x10) | No | Yes | Set_Attribute_Single |

Connection Object: Class Code: 05 (0x05)

Connection Object Class Attributes

| Attribute | Access | Name | Type | Value |
|-----------|--------|------------------------|------|-------|
| 1 | Get | Revision | UINT | 1 |
| 2 | Get | Max Object Instance | UINT | 2 |
| 6 | Get | Max Class Identifier | UINT | 7 |
| 7 | Get | Max Instance Attribute | UINT | 17 |

Connection Object, Instance 2 Attributes (POLL connection)

| Attribute | Access | Name | Type | Value |
|-----------|---------|-------------------------|-----------|-----------------------|
| 1 | Get | State | USINT | See DN spec |
| 2 | Get | Instance Type | USINT | 1 = I/O Message |
| 3 | Get | Transport Class Trigger | USINT | 0x82 |
| 4 | Get | Production Connection | UINT | See DN spec |
| 5 | Get | Consumed Connection | UINT | See DN spec |
| 6 | Get | Initial Comm. Char. | USINT | 0x1 |
| 7 | Get | Production Size | UINT | 4 |
| 8 | Get | Consumed Size | UINT | 4 |
| 9 | Get/Set | Expected Packet Rate | UINT | Default 2500 msec |
| 12 | Get/Set | Timeout Action | USINT | Default 2 See DN spec |
| 13 | Get | Prod. Path Length | USINT | 6 |
| 14 | Get | Production Path | STRUCT of | |
| | | Log. Seg., Class | USINT | 0x20 |
| | | Class Number | USINT | 0x04 |
| | | Log.Seg., Instance | USINT | 0x24 |
| | | Instance Number | USINT | 0x01 |
| | | Log.Seg., Attribute | USINT | 0x30 |
| | | Attribute Number | USINT | 0x03 |
| 15 | Get | Cons. Path Length | USINT | 6 |
| 16 | Get | Production Path | STRUCT of | |
| | | Log. Seg., Class | USINT | 0x20 |
| | | Class Number | USINT | 0x04 |
| | | Log.Seg., Instance | USINT | 0x24 |
| | | Instance Number | USINT | 0x02 |
| | | Log.Seg., Attribute | USINT | 0x30 |
| | | Attribute Number | USINT | 0x03 |

Common Services

| Service Code | Class | Instance | Service Name |
|--------------|-------|----------|----------------------|
| 05 (0x05) | Yes | Yes | Reset |
| 14 (0x0E) | Yes | Yes | Get_Attribute_Single |
| 16 (0x10) | No | Yes | Set_Attribute_Single |

User Object (UC): Class Code: 64 (0x40)

VCO Object Class Attributes

| Attribute | Access | Name | Type | Value |
|-----------|--------|------------------------|------|-------|
| 1 | Get | Revision | UINT | 1 |
| 2 | Get | Max Object Instance | UINT | 1 |
| 6 | Get | Max Class Identifier | UINT | 7 |
| 7 | Get | Max Instance Attribute | UINT | 25 |

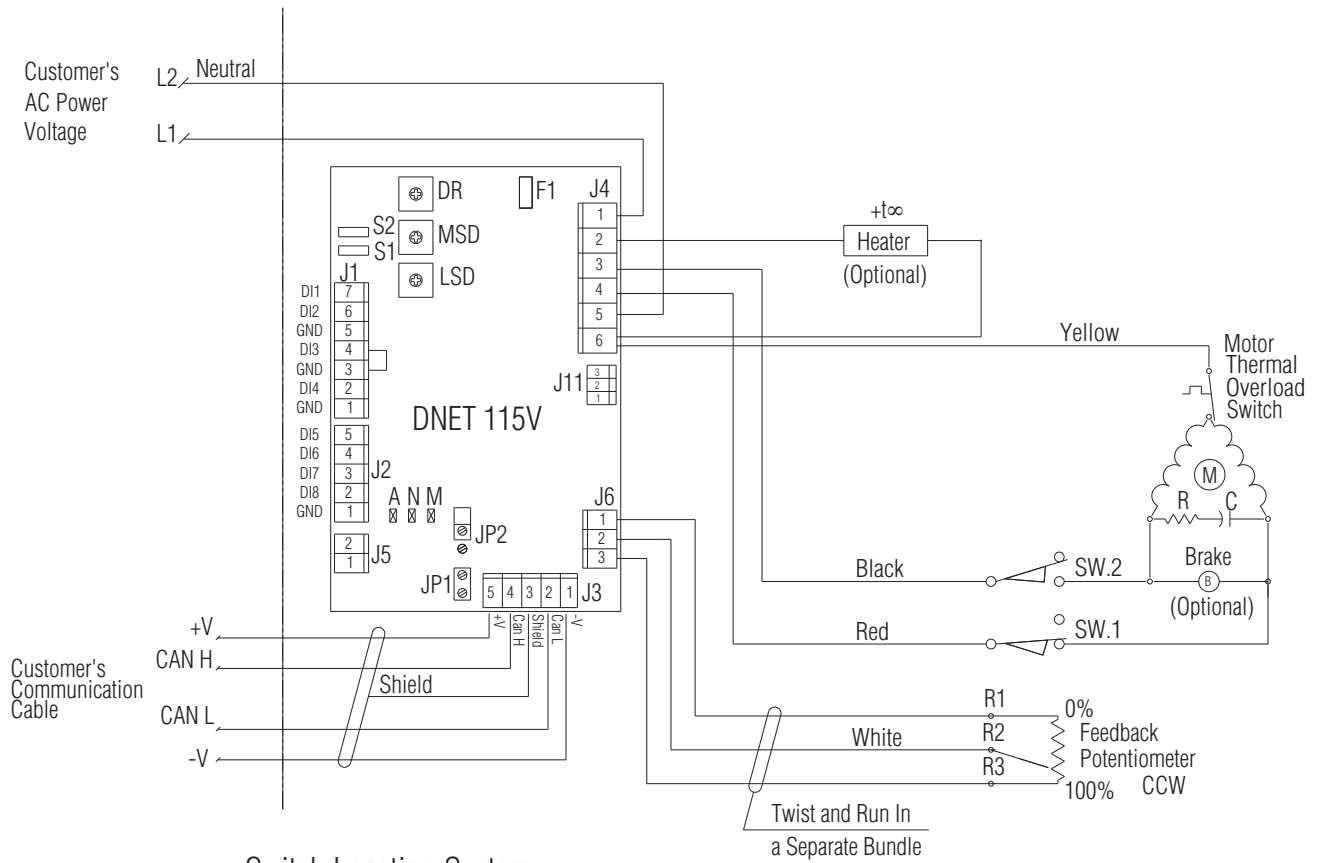
VCO Object, Instance 1 Attributes

| Attribute | Access | Name | Type | Value |
|-----------|---------|----------------|-------|------------------------------------|
| 1 | Get/Set | CommandWord | UINT | See Section 2 |
| 2 | Get/Set | Setpoint | INT | See Section 2 |
| 3 | Get | Status Word | UINT | See Section 2 |
| 4 | Get | Alarm Word | UINT | Reserved |
| 5 | Get | Position | INT | See Section 2 |
| 6 | Get | Spare AI | INT | Reserved |
| 7 | Get/Set | Deadband | UINT | See Section 2 |
| 12 | Get/Set | Control Word | UINT | See Section 2 |
| 13 | Get/Set | Reversal Delay | UINT | 100 ms Resolution See Section 2 |
| 14 | Get/Set | Adc0Lo | UINT | See Section 2 |
| 15 | Get/Set | Adc0Hi | UINT | See Section 2 |
| 16 | Get/Set | Adc0Scale | REAL | See Section 2 |
| 19 | Get/Set | Fail Position | INT | See Section 2 |
| 20 | Get | DiImage0 | USINT | See Section 2 |
| 23 | Get | DiImage3 | USINT | See Section 2 |
| 24 | Get | ADC Channel 0 | USINT | See Section 2 |
| 25 | Get | ADC Channel 1 | USINT | See Section 2 |

Common Services

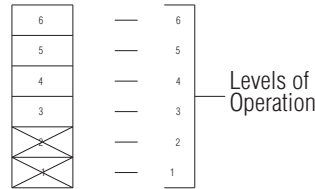
| Service Code | Class | Instance | Service Name |
|--------------|-------|----------|----------------------|
| 14 (0x0E) | Yes | Yes | Get_Attribute_Single |
| 16 (0x10) | No | Yes | Set_Attribute_Single |

Wiring Diagram, E-P Gr. 3 & 9 Actuators with DevicNet™ Controller DNet 115V



Switch Location System

This Drawing Shows 6 Levels of Operation for Optimum Reference Value Only and Does not Imply that this is Available on Every Unit.



The Above Numbering Arrangement Will Be Employed as a Standard System for Use on all Wiring Diagrams Unless Otherwise Specified on the Diagram.

Limit Switch Contact Development

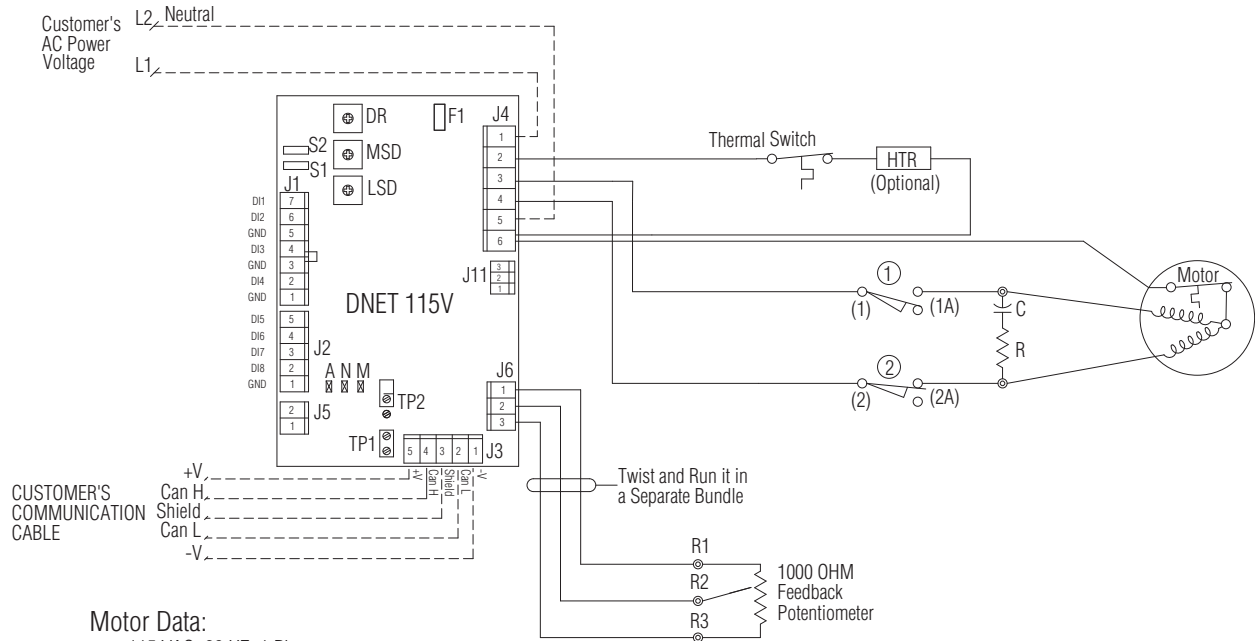
| Switch No. | Contacts Wired | Open (CCW) | A | B | Close (CW) |
|------------|----------------|------------|---|---|------------|
| SW.1 | N.C. | | | | |
| SW.2 | N.C. | | | | |

— Closed Switch Contact
— Open Switch Contact

Standard Notes:

1. Wiring Diagram Shows Actuator in Counter-clockwise (Open) Position.
2. Power at PC Board Connector Terminals 6 & 3 Will Operate to CCW (Open) Position.
3. Power at PC Board Connector Terminals 6 & 4 Will Operate to CW (Closed) Position.
4. Motor Thermal Overload Switch Resets Automatically and is Standard on NEMA 4 and 7 Classification.
5. To Reverse Action, Interchange Wires (3) with (4) at J4 Connector and Wires (1) with (3) at J6 Connector on the Board.

Wiring Diagram, Single Phase Eagle Actuator DeviceNet™ Controller



Motor Data:

115 VAC, 60 HZ, 1 Phase
 3.3 AMP, Full Load Current
 Totally Enclosed, Non-Ventilated
 Permanent Split Capacitor
 130°C Thermal Switch in Motor Winding
 25 % Duty Cycle

Switch Data:

Quick Connect Terminals
 Micro Switch #V3L-3005-D8 or Equiv.
 Rating: 15 AMPS and 1/2 HP, 125 or 250 VAC;
 1/2 AMP, 125 VDC, 1/4 AMP, 250 VDC
 5 AMPS, 120 VAC "L" (LAMP, LOAD)

Legend:

- ① – Extend Position Limit Switch
- ② – Retract Position Limit Switch
- – Switch Connections
- – Customer Wiring
- – Wiring Connection

NOTE:

To Reverse the Action, Interchange Wires (3) with (4) at J4 Connector and Wires (1) with (3) at J6 Connector

Actuator Shown In Fully Extended Position

| Switch | Contact | Limit Switch Contact Development | | | Function |
|--------|---------|----------------------------------|-----------------------|-------------|-----------------------|
| | | Full Retract | Intermediate Position | Full Extend | |
| ① | N.O. | | | --- | Full Extend Position |
| | N.C. | | | | |
| ② | N.O. | --- | | | Full Retract Position |
| | N.C. | | | | |

- Closed Switch Contact
- Open Switch Contact



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