

**PROPORTIONAL CONTROLS**



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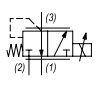


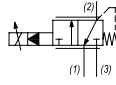
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QUICK SELECTION GUIDE

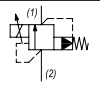
PROPORTIONAL CONTROLS - Page PT1

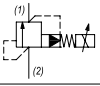
PROPORTIONAL PRESSURE REDUCING / RELIEVING VALVES

| DIRECT ACTING   | GPM | PSI  | LPM | BAR | CAVITY  | MODEL        | PAGE |
|---|-----|------|-----|-----|---------|--------------|------|
|  | 1   | 700  | 4   | 50  | slip-in | IP-DAR-250-L | PT4  |
|   | 1   | 700  | 4   | 50  | slip-in | IP-DAR-43C-L | PT6  |
|   | 1   | 5000 | 4   | 345 | slip-in | IP-DAR-43C-H | PT6  |
|  | 7.5 | 700  | 30  | 50  | slip-in | IP-RDS-222-L | PT8  |
|   | 5.3 | 3500 | 20  | 241 | 7/8-14  | EG-RDS-42-H  | PT10 |

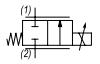
| PILOT OPERATED  | GPM | PSI  | LPM | BAR | CAVITY  | MODEL       | PAGE |
|---|-----|------|-----|-----|---------|-------------|------|
|  | 7.9 | 700  | 30  | 50  | slip-in | IP-PRZ-59   | PT12 |
|   | 7.9 | 700  | 30  | 50  | 7/8-14  | EG-TRZ-42-L | PT14 |
|   | 7.9 | 3500 | 30  | 241 | 7/8-14  | EG-TRZ-42-H | PT16 |

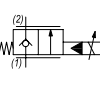
PROPORTIONAL PRESSURE RELIEF VALVES

| NORMALLY CLOSED   | GPM | PSI  | LPM | BAR | CAVITY | MODEL  | PAGE |
|---|-----|------|-----|-----|--------|--------|------|
|  | 12  | 3000 | 45  | 207 | 7/8-14 | EE-PRB | PT18 |


| NORMALLY OPEN   | GPM | PSI  | LPM | BAR | CAVITY | MODEL  | PAGE |
|---|-----|------|-----|-----|--------|--------|------|
|  | 12  | 3000 | 45  | 207 | 7/8-14 | EE-PRD | PT22 |

2 WAY NORMALLY CLOSED PROPORTIONAL FLOW REGULATOR VALVES

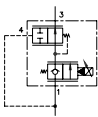
| SPOOL TYPE  | GPM  | PSI  | LPM | BAR | CAVITY    | MODEL  | PAGE |
|---|------|------|-----|-----|-----------|--------|------|
|  | 13.2 | 3500 | 50  | 245 | 7/8-14    | EE-P2G | PT26 |
|   | 23.7 | 3500 | 90  | 245 | 1 1/16-12 | ET-P2S | PT28 |

| POPPET TYPE   | GPM | PSI  | LPM | BAR | CAVITY    | MODEL  | PAGE |
|---|-----|------|-----|-----|-----------|--------|------|
|  | 6.5 | 3500 | 25  | 245 | 3/4-16    | EB-P2A | PT30 |
|   | 12  | 3500 | 45  | 245 | 7/8-14    | EE-P2A | PT32 |
|   | 29  | 3500 | 110 | 245 | 1 1/16-12 | ET-P2A | PT34 |

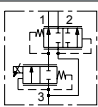
2 WAY NORMALLY OPEN PROPORTIONAL FLOW CONTROL VALVES

| SPOOL TYPE  | GPM | PSI  | LPM | BAR | CAVITY | MODEL  | PAGE |
|---|-----|------|-----|-----|--------|--------|------|
|  | 8   | 3500 | 30  | 245 | 7/8-14 | EE-P2H | PT38 |


2 WAY NORMALLY CLOSED PRESS. COMPENSATED PROP. FLOW REGULATOR VALVES


| POPPET TYPE   | GPM | PSI  | LPM | BAR | CAVITY  | MODEL  | PAGE |
|---|-----|------|-----|-----|---------|--------|------|
|  | 12  | 3500 | 45  | 245 | 7/8-14  | EG-F2A | PT42 |
|   | 12  | 3500 | 100 | 245 | 1/16-12 | EU-F2A | PT44 |

3 WAY NORMALLY CLOSED PRESS. COMPENSATED PROP. FLOW REGULATOR VALVES

| SPOOL TYPE  | GPM | PSI  | LPM | BAR | CAVITY  | MODEL  | PAGE |
|---|-----|------|-----|-----|---------|--------|------|
|  | 6   | 3500 | 22  | 245 | 7/8-14  | EF-F3G | PT48 |
|   | 16  | 3500 | 60  | 245 | 1/16-12 | EU-F3G | PT50 |

4W/3P PROPORTIONAL DIRECTIONAL CONTROL VALVES

| MOTOR SPOOL TYPE   | GPM | PSI  | LPM | BAR | CAVITY | MODEL  | PAGE |
|--|-----|------|-----|-----|--------|--------|------|
|  | 3   | 3500 | 12  | 245 | 3/4-16 | EQ-S4M | PT54 |
|  | 6   | 3500 | 23  | 245 | 7/8-14 | EG-S4M | PT56 |

| CYLINDER SPOOL TYPE   | GPM | PSI  | LPM | BAR | CAVITY | MODEL  | PAGE |
|---|-----|------|-----|-----|--------|--------|------|
|  | 3   | 3500 | 12  | 245 | 3/4-16 | EQ-S4P | PT58 |
|   | 6   | 3500 | 23  | 245 | 7/8-14 | EG-S4P | PT60 |

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**PROPORTIONAL PRESSURE REDUCING / RELIEF VALVES**

| DIRECT ACTING | GPM | PSI  | LPM | BAR | CAVITY  | MODEL               | PAGE |
|---------------|-----|------|-----|-----|---------|---------------------|------|
|               | 1   | 700  | 4   | 50  | slip-in | <b>IP-DAR-250-L</b> | PT4  |
|               | 1   | 700  | 4   | 50  | slip-in | <b>IP-DAR-43C-L</b> | PT6  |
|               | 1   | 5000 | 4   | 345 | slip-in | <b>IP-DAR-43C-H</b> | PT6  |
|               | 7.5 | 700  | 30  | 50  | slip-in | <b>IP-RDS-222-L</b> | PT8  |
|               | 5.3 | 3500 | 20  | 241 | 7/8-14  | <b>EG-RDS-42-H</b>  | PT10 |

| PILOT OPERATED | GPM | PSI  | LPM | BAR | CAVITY  | MODEL                 | PAGE |
|----------------|-----|------|-----|-----|---------|-----------------------|------|
|                | 7.9 | 700  | 30  | 50  | slip-in | <b>IP-PRZ-59-AM12</b> | PT12 |
|                | 7.9 | 700  | 30  | 50  | 7/8-14  | <b>EG-TRZ-42-L</b>    | PT14 |
|                | 7.9 | 3500 | 30  | 241 | 7/8-14  | <b>EG-TRZ-42-H</b>    | PT16 |

**TYPICAL SCHEMATIC**

Typical application for the IP-DAR-43 is the control of a metering spool on a directional valve.

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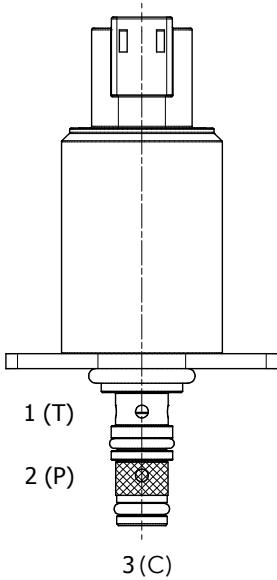


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**IP-DAR-250** DIRECT ACTING PROPORTIONAL, PRESSURE REDUCING/RELIEVING, SLIP-IN TYPE



**DESCRIPTION**

Special cavity, slip-in style flange retained, direct acting proportional, pressure reducing/relieving valve.

**OPERATION**

The IP-DAR-250 generates a variable pressure in response to a PWM (Pulse Width Modulated) current signal. With no current applied to the proportional solenoid, the inlet port 2 (P) is blocked and the regulated port 3 (C) is vented to port 1 (T). As current is increased, fluid pressure is proportionally controlled at the regulated port 3 (C). On attainment of proportionally determined pressure at 3 (C), the cartridge shifts to block flow at 2 (P), thereby regulating pressure at 3 (C). In this mode, the valve also will relieve 3 (C) to 1 (T) at a variable value over the set reducing pressure.

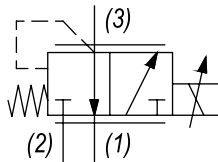
**FEATURES**

- Slip-in style.
- Efficient wet-armature construction.
- Integral waterproof coil.
- Continuous duty rated solenoid.



*Flanged retained product. The coil is an integral part of the valve and is not serviceable. Eventual tank pressure exceeding 0 bar, has to be added to reduced pressure value.*

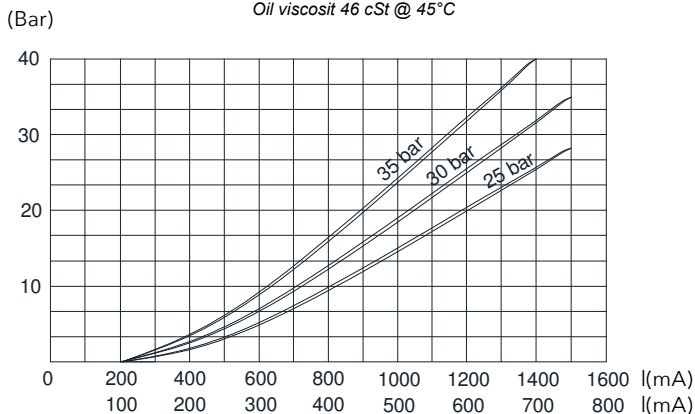
**HYDRAULIC SYMBOL**



**PERFORMANCE**

**Pressure Vs. Current Characteristic**

*Oil viscosit 46 cSt @ 45°C*



**VALVE SPECIFICATIONS**

|                                   |   |
|-----------------------------------|---|
| Nominal Flow                      | 1 GPM (4 LPM) @ 8 bar Delta P                 |
| Max Inlet Pressure "L" version    | 700 PSI (50 bar)                              |
| Controlled Pressure Range         | 0÷25 bar / 0÷30 bar / 0÷35 bar<br>(see graph) |
| Reduced Pressure Tolerance        | ±5%   |
| Max Back-Pressure at T Port       | 30 bar  |
| Internal Leakage                  | 15 ml/min @ 500 PSI (35 bar) inlet            |
| Viscosity Range                   | 36 to 3000 SSU (3 to 647 cSt)                 |
| Filtration                        | ISO 18/15/13                                  |
| Media Operating Temp. Range       | -30°C / +100°C                                |
| Weight                            | .43 lbs (.20 kg)                              |
| Operating Fluid Media             | General Purpose Hydraulic Fluid               |
| Cavity                            | T250  |
| Cavity Tool Kit                   | K-T250  |
| Flange Mounting Screws and Torque | M4x10 / 3ft-lbs (4 Nm)                        |

**COIL SPECIFICATIONS**

|  |   |
|--|---|
| Current Supply Characteristics           | PWM (Pulse Width Modulation)                                |
| Rated Current Range                      | 200÷1500 (12 V coil)<br>100÷750 (24 V coil)                 |
| PWM or Super-Imposed Dither Freq.        | 100-200 Hz  |
| Coil Resistance (12 VDC)                 | 4.8 Ohm ±5% at 68°F (20°C)                                  |
| (24 VDC)                                 | 20 Ohm ±5% at 68°F (20°C)                                   |
| Max Power Consumption                    | 11 Watt (20°C)  |
| Coil Termination                         | Deutsch-Integral DT04-2P (DT)<br>AMP Jr. Timer 84-9419 (AJ) |
| Color Connectors                         | Black   |
| Protection Degree (according to IEC 529) | IP 69K (DT)<br>IP 67 (AJ)                                   |

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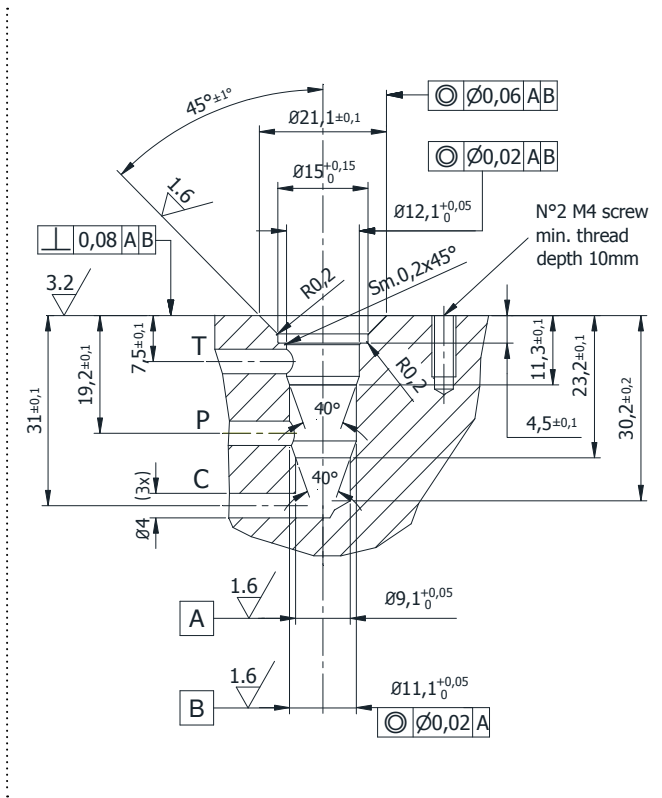
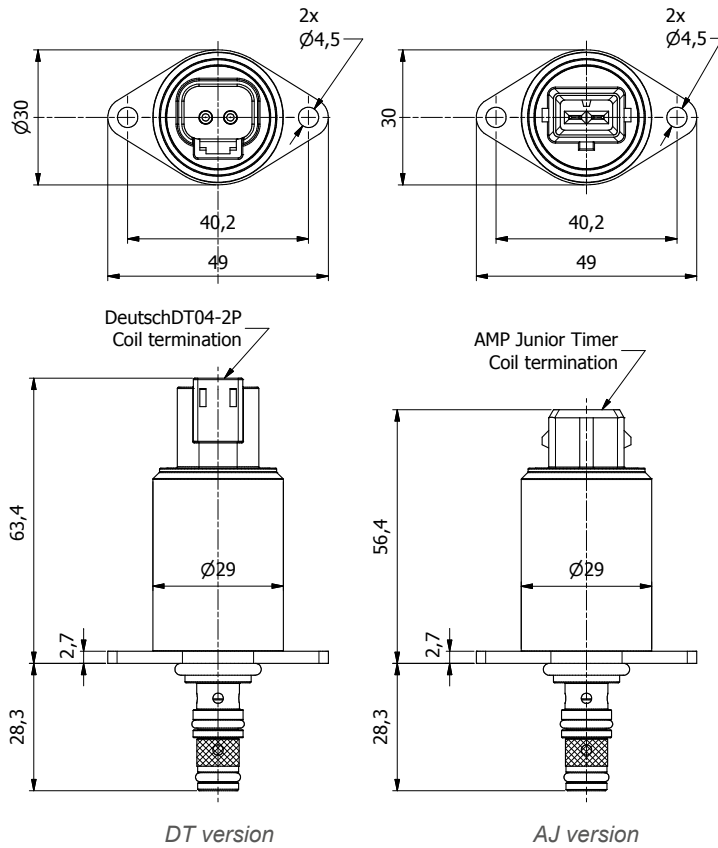


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**DIMENSIONS**



**ORDERING INFORMATION**

IP-DAR-250 -

| COIL TERMINATION   | VOLTAGE | INLET PRESSURE             | MAX REGULATED PRESSURE | OPTIONS  | BODIES               |
|--------------------|---------|----------------------------|------------------------|--|----------------------|
| AJ - AMP Jr. Timer | 12 VDC  | L - up to 700 PSI (50 bar) | 20 bar                 | A0 - NBR seals and 300 µm (50 mesh) screen on port 2 | Blank - Without body |
| DT - Deutsch DT04  | 24 VDC  |                            | 25 bar                 |  | N - 1/4" BSP Ports   |
|                    |         |                            | 32 bar                 |  |                      |

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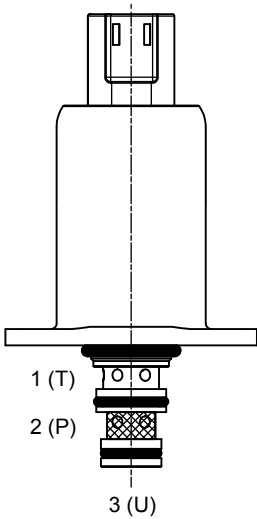


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**IP-DAR-43C** DIRECT ACTING PROPORTIONAL, PRESSURE REDUCING/RELIEVING, SLIP-IN TYPE



**DESCRIPTION**

Special cavity, slip-in style flange retained, direct acting proportional, pressure reducing/relieving valve.

**OPERATION**

The IP-DAR-43C-AJ12 generates a variable pressure in response to a PWM (Pulse Width Modulated) current signal. With no current applied to the proportional solenoid, the inlet port 2 (P) is blocked and the regulated port 3 (U) is vented to port 1 (T). As current is increased, fluid pressure is proportionally controlled at the regulated port 3 (U). On attainment of proportionally determined pressure at 3 (U), the cartridge shifts to block flow at 2 (P), thereby regulating pressure at 3 (U). In this mode, the valve also will relieve 3 (U) to 1 (T) at a variable value over the set reducing pressure.

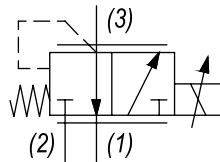
**FEATURES**

- Slip-in style.
- Efficient wet-armature construction.
- Integral waterproof coil.
- Continuous duty rated solenoid.



*Flanged retained product. The coil is an integral part of the valve and is not serviceable. Eventual tank pressure exceeding 0 bar, has to be added to reduced pressure value.*

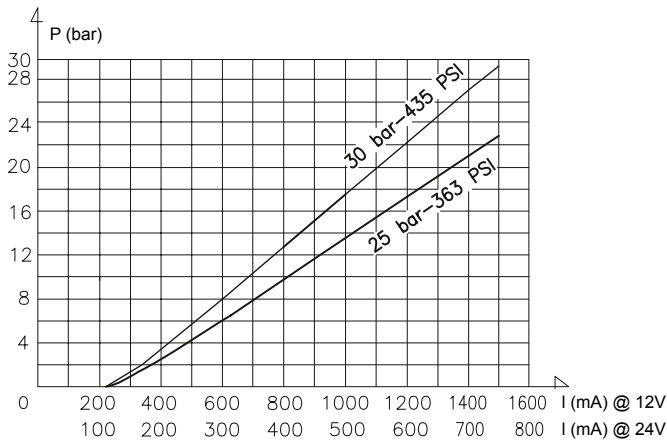
**HYDRAULIC SYMBOL**



**PERFORMANCE**

**Reduced pressure (bar) vs. Current (mA)**

12 V and 24 V Coil



**VALVE SPECIFICATIONS**

|                                   |  |
|-----------------------------------|--|
| Nominal Flow                      | 1 GPM (4 LPM) @ 8 bar Delta P  |
| Max Inlet Pressure "H" version    | 5000 PSI (345 bar)   |
| Max Inlet Pressure "L" version    | 700 PSI (50 bar)   |
| Controlled Pressure Range         | 0÷25 bar / 0÷30 bar (see graph)  |
| Reduced Pressure Tolerance        | ±5%  |
| Max Back-Pressure at T Port       | 20 bar   |
| Internal Leakage                  | 15 ml/min @ 500 PSI (35 bar) inlet<br>35 ml/min @ 5000 PSI (350 bar) inlet |
| Viscosity Range                   | 36 to 3000 SSU (3 to 647 cSt)  |
| Filtration                        | ISO 18/15/13   |
| Media Operating Temp. Range       | -30°C / +100°C   |
| Weight                            | .54 lbs (.25 kg)   |
| Operating Fluid Media             | General Purpose Hydraulic Fluid  |
| Cavity                            | T043   |
| Cavity Tool Kit                   | K-T043   |
| Flange Mounting Screws and Torque | M4x10 / 3ft-lbs (4 Nm)   |

**COIL SPECIFICATIONS**

|                                   |   |
|-----------------------------------|---|
| Current Supply Characteristics    | PWM (Pulse Width Modulation)                      |
| Rated Current Range               | 200÷1500 (12 V coil)<br>100÷750 (24 V coil)       |
| PWM or Super-Imposed Dither Freq. | 100-200 Hz  |
| Coil Resistance (12 VDC)          | 5.4 Ohm ±5% at 68°F (20°C)                        |
| Coil Resistance (24 VDC)          | 22 Ohm ±5% at 68°F (20°C)                         |
| Max Power Consumption             | 12 Watt (20°C)                                    |
| Protection Degree                 | IP 67 according to IEC 529                        |
| Coil Termination                  | Deutsch-Integral DT04-2P<br>AMP Jr. Timer 84-9419 |
| Color Connectors                  | Black   |

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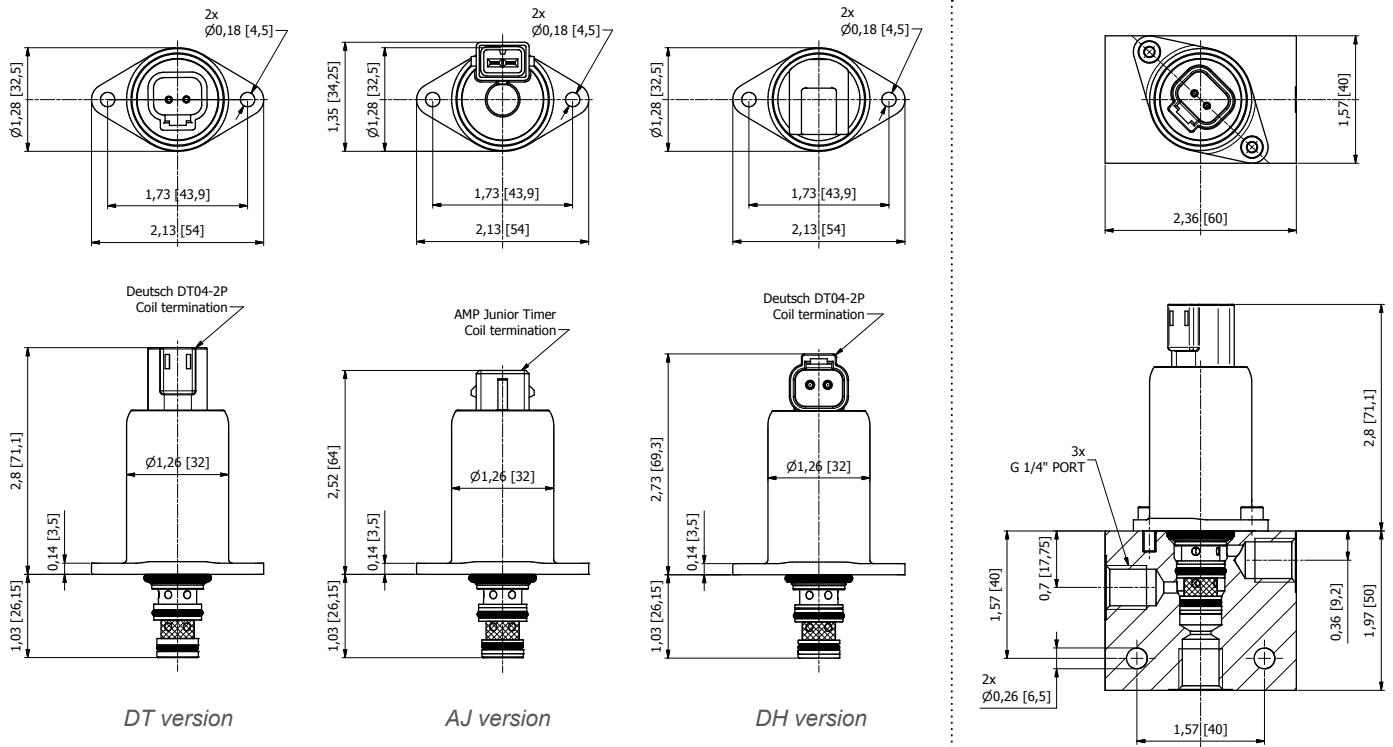


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**DIMENSIONS**



**ORDERING INFORMATION**

**IP-DAR-43C**

| <u>COIL TERMINATION</u>      | <u>VOLTAGE</u> | <u>INLET PRESSURE</u>        | <u>MAX REGULATED PRESSURE</u> | <u>OPTIONS</u>                                       | <u>BODIES</u>        |
|------------------------------|----------------|------------------------------|-------------------------------|--|----------------------|
| AJ - AMP Jr. Timer           | 12 VDC         | L - up to 700 PSI (50 bar)   | 25 bar                        | A0 - NBR seals and 300 µm (50 mesh) screen on port 2 | Blank - Without body |
| DT - Deutsch DT04            | 24 VDC         | H - up to 5000 PSI (350 bar) | 30 bar                        |  | N - 1/4" BSP Ports   |
| DH - Deutsch DT04 Horizontal |                |                              |                               |  | S - #6 SAE Ports     |

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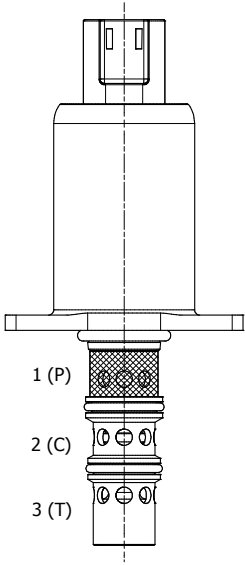


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**IP-RDS-222 DIRECT ACTING PROPORTIONAL, PRESSURE REDUCING/RELIEVING, SLIP-IN TYPE**



**DESCRIPTION**

Special cavity, slip-in style flange retained, "step bore" direct acting proportional, pressure reducing/relieving valve.

**OPERATION**

The IP-RDS-222 generates a variable pressure in response to a PWM (Pulse Width Modulated) current signal. With no current applied to the proportional solenoid, the inlet port 1 (P) is blocked and the regulated port 2 (C) is vented to port 3 (T). As current is increased, fluid pressure is proportionally controlled at the regulated port 2 (C). On attainment of proportionally determined pressure at 2 (C), the cartridge shifts to block flow at 1 (P), thereby regulating pressure at 2 (C). In this mode, the valve also will relieve 2 (C) to 3 (T) at a variable value over the set reducing pressure.

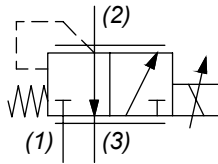
**FEATURES**

- Slip-in style.
- Efficient wet-armature construction.
- Integral waterproof coil.
- Continuous duty rated solenoid.



*Flanged retained product. The coil is an integral part of the valve and is not serviceable. Eventual tank pressure exceeding 0 bar, has to be added to reduced pressure value.*

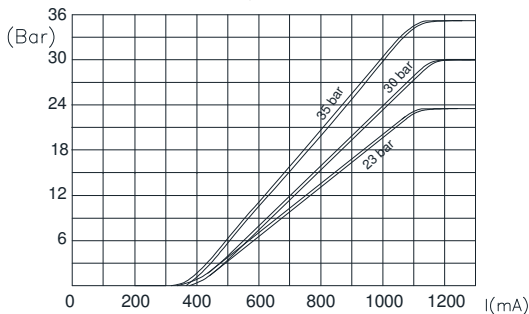
**HYDRAULIC SYMBOL**



**PERFORMANCE**

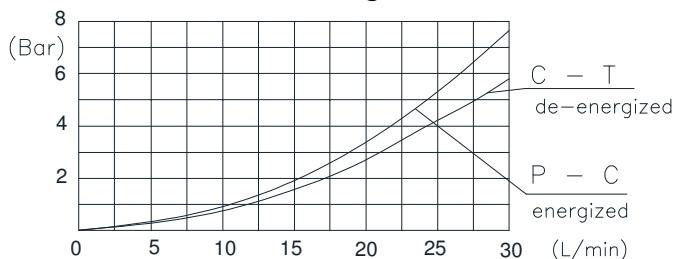
**Pressure Vs. Current Characteristic**

Oil viscosit 46 cSt @ 45°C and PWM 100 Hz



**Pressure Drop**

Oil viscosit 46 cSt @ 45°C



**VALVE SPECIFICATIONS**

|                                   |   |
|-----------------------------------|---|
| Nominal Flow                      | 7.5 GPM (30 LPM) @ 6 bar Delta P              |
| Max Inlet Pressure "L" version    | 700 PSI (50 bar)                              |
| Controlled Pressure Range         | 0÷23 bar / 0÷30 bar / 0÷35 bar<br>(see graph) |
| Reduced Pressure Tolerance        | ±5%   |
| Max Back-Pressure at T Port       | 25 bar  |
| Internal Leakage                  | 15 ml/min @ 500 PSI (35 bar) inlet            |
| Viscosity Range                   | 36 to 3000 SSU (3 to 647 cSt)                 |
| Filtration                        | ISO 18/15/13                                  |
| Media Operating Temp. Range       | -30°C / +100°C                                |
| Weight                            | .58 lbs (.27 kg)                              |
| Operating Fluid Media             | General Purpose Hydraulic Fluid               |
| Cavity                            | T222  |
| Cavity Tool Kit                   | K-T222  |
| Flange Mounting Screws and Torque | M4x10 / 3ft-lbs (4 Nm)                        |

**COIL SPECIFICATIONS**

|  |  |
|--|--|
| Current Supply Characteristics           | PWM (Pulse Width Modulation)                                     |
| Rated Current Range                      | 200÷1500 (12 V coil)<br>100÷750 (24 V coil)                      |
| PWM or Super-Imposed Dither Freq.        | 100-200 Hz   |
| Coil Resistance (12 VDC)                 | 5.4 Ohm ±5% at 68°F (20°C)                                       |
| (24 VDC)                                 | 22 Ohm ±5% at 68°F (20°C)  |
| Max Power Consumption                    | 12 Watt (20°C)   |
| Coil Termination                         | Deutsch-Integral DT04-2P (DT & DH)<br>AMP Jr. Timer 84-9419 (AJ) |
| Color Connectors                         | Black  |
| Protection Degree (according to IEC 529) | IP 69K (DT & DH)<br>IP 67 (AJ)                                   |

**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.

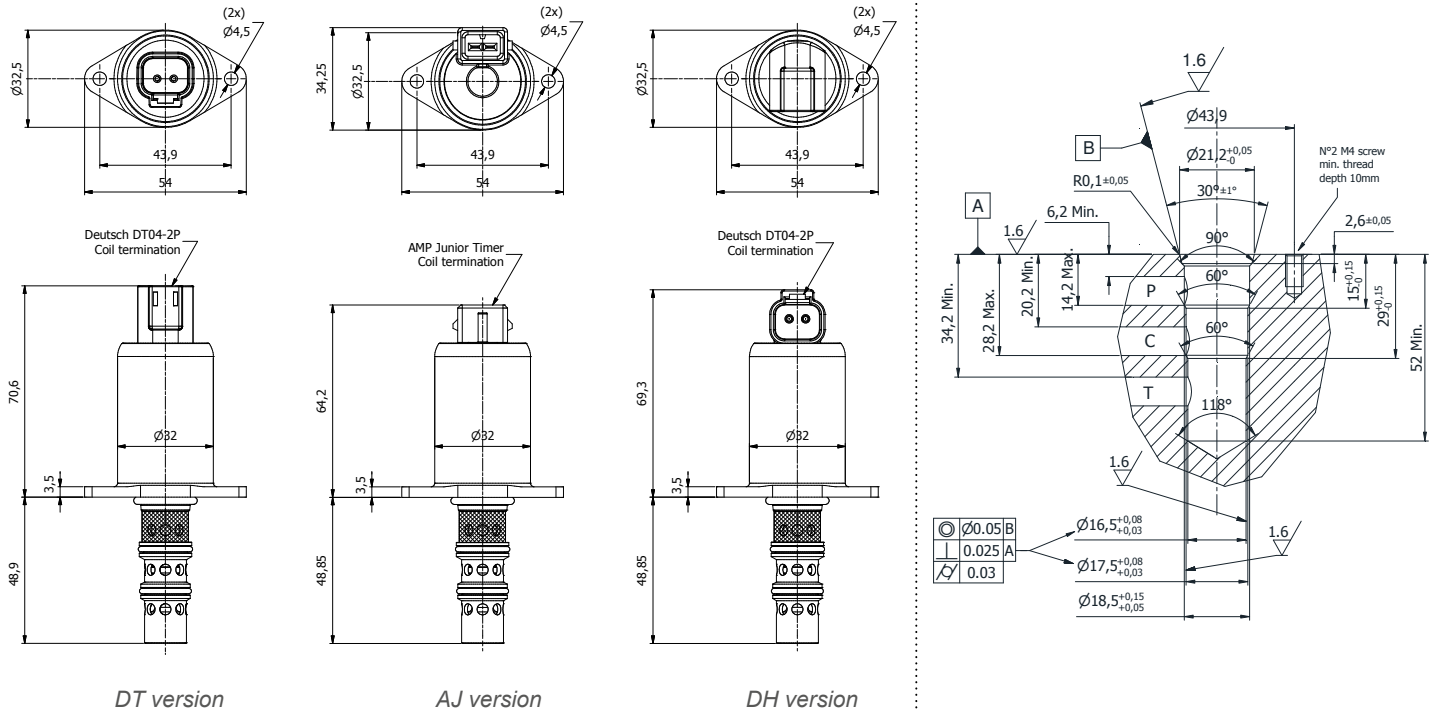


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**DIMENSIONS**



**ORDERING INFORMATION**

IP-RDS-222 -

| <u>COIL TERMINATION</u>      | <u>VOLTAGE</u> | <u>INLET PRESSURE</u>      | <u>MAX REGULATED PRESSURE</u> | <u>OPTIONS</u>                                       | <u>BODIES</u>        |
|------------------------------|----------------|----------------------------|-------------------------------|--|----------------------|
| AJ - AMP Jr. Timer           | 12 VDC         | L - up to 700 PSI (50 bar) | 23 bar                        | A0 - NBR seals and 300 µm (50 mesh) screen on port 2 | Blank - Without body |
| DT - Deutsch DT04            | 24 VDC         |                            | 30 bar                        |  | N - 3/8" BSP Ports   |
| DH - Deutsch DT04 Horizontal |                |                            | 35 bar                        |  |                      |

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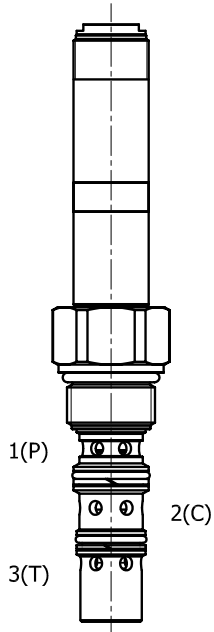


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**EG-RDS-42-H DIRECT ACTING PROPORTIONAL, PRESSURE REDUCING/RELIEVING**



**DESCRIPTION**

Special cavity, 7/8-14 thread, "step bore" direct acting proportional, pressure reducing/relieving valve.

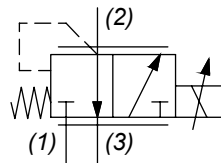
**OPERATION**

The EG-RDS-42-H generates a variable pressure in response to a PWM (Pulse Width Modulated) current signal. With no current applied to the proportional solenoid, the inlet port 1 (P) is blocked and the regulated port 2 (C) is vented to port 3 (T). As current is increased, fluid pressure is proportionally controlled at the regulated port 2 (C). On attainment of proportionally determined pressure at 2 (C), the cartridge shifts to block flow at 1 (P), thereby regulating pressure at 2 (C). In this mode, the valve also will relieve 2 (C) to 3 (T) at a variable value over the set reducing pressure.

**FEATURES**

- Hardened parts for long life.
- Efficient wet-armature construction.
- Unitized valve/coil.
- Continuous duty rated solenoid.

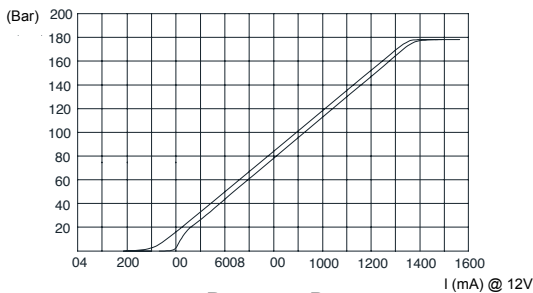
**HYDRAULIC SYMBOL**



**PERFORMANCE**

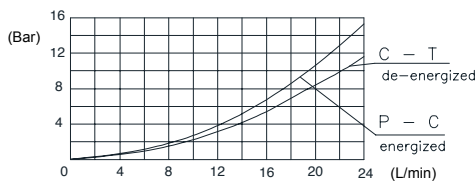
**Pressure Vs. Current Characteristic**

Inlet pressure 180 bar, Oil viscosity 46 cSt @ 45°C and PWM 60 Hz



**Pressure Drop**

Oil viscosity 46 cSt @ 45°C



**VALVE SPECIFICATIONS**

|   |                                     |
|---|-------------------------------------|
| Nominal Flow                              | 5.3 GPM (20 LPM)                    |
| Max Inlet Pressure                        | 3500 PSI (241 bar)                  |
| Controlled Pressure Range                 | (see graph)                         |
| Max Internal Leakage                      | 160 ml/min @ 180 bar inlet pressure |
| Viscosity Range                           | 36 to 3000 SSU (3 to 647 cSt)       |
| Filtration                                | ISO 18/15/13                        |
| Media Operating Temp. Range               | -30°C / +100°C                      |
| Weight                                    | .63 lbs (.29 kg)                    |
| Operating Fluid Media                     | General Purpose Hydraulic Fluid     |
| Cartridge Torque Requirements             | 16 ft-lbs (30 Nm)                   |
| Coil Nut Torque Requirements              | 1-2 ft-lbs (2-3 Nm)                 |
| Cavity                                    | T042                                |
| Cavity Tools Kit (form tool, reamer, tap) | K-T042                              |

**COIL SPECIFICATIONS**

|                                |  |
|--------------------------------|--|
| Current Supply Characteristics | PWM (Pulse Width Modulation)                               |
| Rated Current Range            | 100-1400 mA with 12 VDC Coil<br>50-700 mA with 24 VDC Coil |
| PWM or Super-Imposed           |  |
| Dither Frequency               | 60-100 Hz  |
| Coil Resistance (12 VDC)       | 7.2 Ohm ±5% at 68°F (20°C)                                 |

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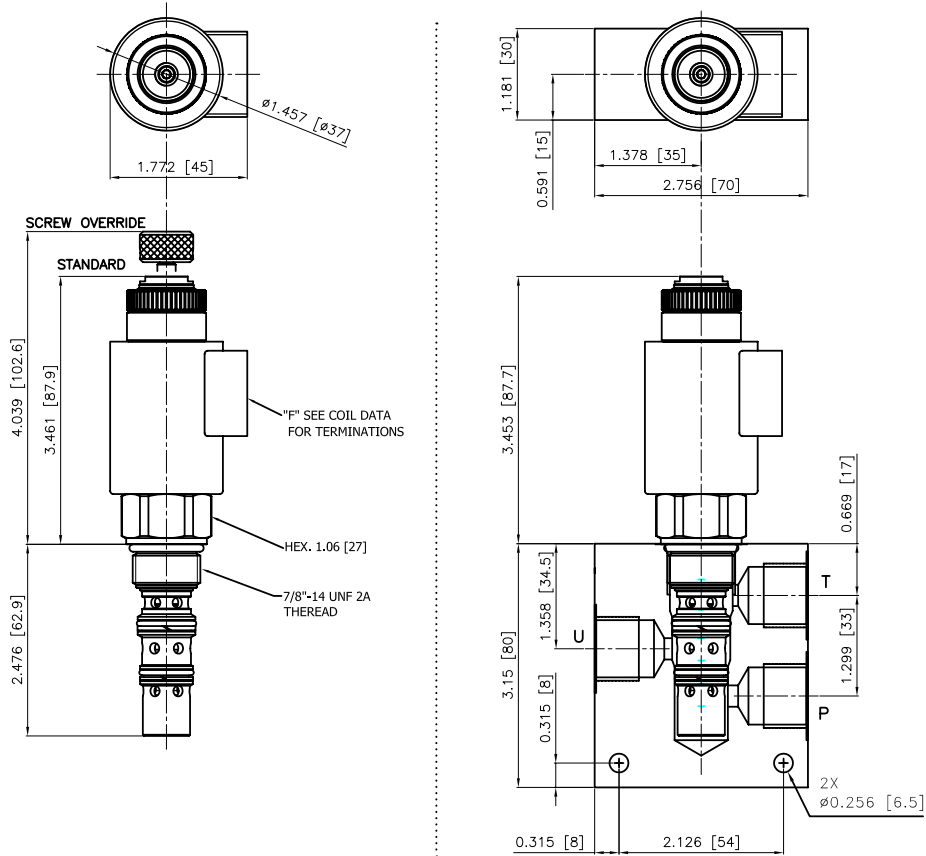


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DIMENSIONS



ORDERING INFORMATION

Approximate Coil Weight: .47 lbs (.21 kg)

EG-RDS-42-H -

**MAX REGULATED PRESSURE**

180 bar

**OPTIONS**

00 - Buna Standard

**"F" COIL TERMINATION**

HC - DIN 43650 (Hirschmann)

JT - AMP Jr. Timer

DI - Deutsch DT04-2P

**VOLTAGE**

12 - 12 VDC

24 - 24 VDC

**BODIES**

Blank - Without body

N - 3/8" BSP Ports

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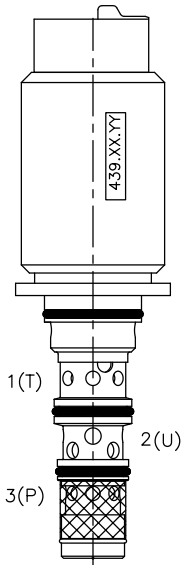


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**IP-PRZ-59-AM12 PILOT OPERATED PROPORTIONAL, PRESSURE REDUCING/RELIEVING, SLIP-IN TYPE**



**DESCRIPTION**

Special cavity, flange retained, slip-in proportional pressure reducing/relieving valve.

**OPERATION**

The IP-PRZ-59-AM12 generates a variable pressure in response to a PWM (Pulse Width Modulated) current signal. With no current applied to the proportional solenoid, the inlet port 3 (P) is blocked and the regulated port 2 (U) is vented to port 1 (T). As current is increased, fluid pressure is proportionally controlled at the regulated port 3 (P). On attainment of proportionally determined pressure at 2 (U), the cartridge shifts to block flow at 3 (P), thereby regulating pressure at 2 (U). In this mode, the valve also will relieve 2 (U) to 1 (T) at a variable value over the set reducing pressure.

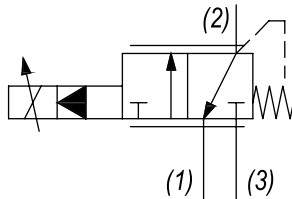
**FEATURES**

- Economical slip-in style.
- Integral waterproof coil.
- Efficient wet-armature construction.
- Hardened parts for long life.



*Flanged Retained Product. The coil (12 VDC) is an integral part of the valve and is not serviceable. Inlet pressure up to 50 bar. Max regulated pressure can be increased up to 35 bar (factory preset).*

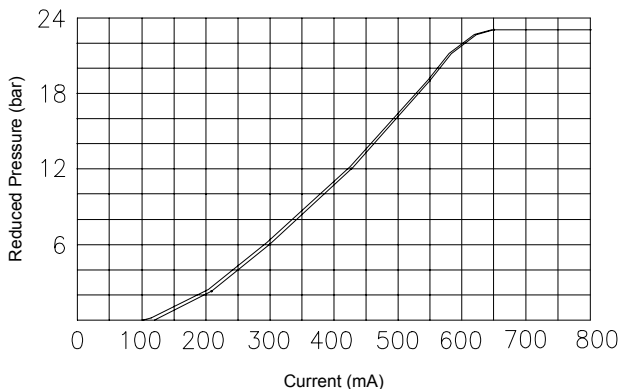
**HYDRAULIC SYMBOL**



**PERFORMANCE**

**Reduced pressure (bar) vs. Current (mA)**

12 V coil, 24 bar inlet pressure



Curve is attained with SAE 40 - Grade oil @ 50°C

**VALVE SPECIFICATIONS**

|   |                                 |
|---|---------------------------------|
| Nominal Flow                              | 7.9 GPM (30 LPM) @ 3 bar DeltaP |
| Max Inlet Pressure                        | 700 PSI (50 bar)                |
| Controlled Pressure Range                 | (see graph)                     |
| Max Internal Leakage                      | <500 cc/min @ 35 bar            |
| Viscosity Range                           | 5 to 5000 cSt                   |
| Filtration                                | ISO 18/15/13                    |
| Media Operating Temp. Range               | -30°C / +100°C                  |
| Weight                                    | .63 lbs (.29 kg)                |
| Operating Fluid Media                     | General Purpose Hydraulic Fluid |
| Cavity                                    | T059                            |
| Cavity Tools Kit (form tool, reamer, tap) | K-T059                          |
| Flange Mounting Screws and Torque         | M6x10 / 4 ft-lbs (6 Nm)         |

**COIL SPECIFICATIONS**

|                                |  |
|--------------------------------|--|
| Current Supply Characteristics | PWM (Pulse Width Modulation)           |
| Rated Current Range            | 100-900 mA                             |
| PWM or Super-Imposed           |  |
| Dither Frequency               | 100-150 Hz                             |
| Coil Resistance (12 VDC)       | 10 Ohm ±5% at 68°F (20°C)              |
| Max Power Consumption          | 14 Watt                                |
| Protection Degree              | IP 67 according to IEC 529             |
| Coil Termination               | AMP Superseal 1.5 Series 282080-1 Type |
| Color Connectors               | Green                                  |

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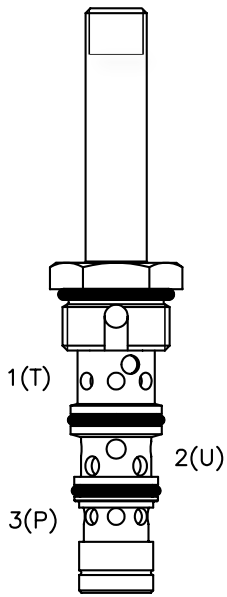
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**EG-TRZ-42-L PILOT OPERATED PROPORTIONAL, PRESSURE REDUCING/RELIEVING**



**DESCRIPTION**

Special cavity, 7/8-14 thread, pilot operated proportional pressure reducing/relieving valve.

**OPERATION**

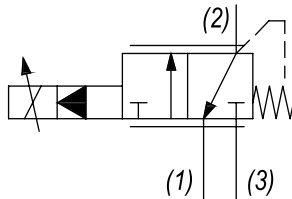
The EG-TRZ-42-L generates a variable pressure in response to a PWM (Pulse Width Modulated) current signal. With no current applied to the proportional solenoid, the inlet port 3 (P) is blocked and the regulated port 2 (U) is vented to port 1 (T).

As current is increased, fluid pressure is proportionally controlled at the regulated port 2 (U). On attainment of proportionally determined pressure at 2 (U), the cartridge shifts to block flow at 3 (P), thereby regulating pressure at 2 (U). In this mode, the valve also will relieve 2 (U) to 1 (T) at a variable value over the set reducing pressure.

**FEATURES**

- Hardened parts for long life.
- Efficient wet-armature construction.
- Unitized valve/coil.
- Continuous duty rated solenoid.

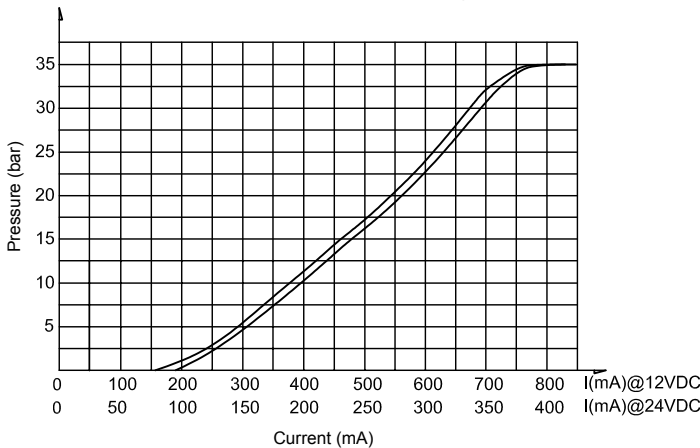
**HYDRAULIC SYMBOL**



**PERFORMANCE**

**Pressure vs. Current characteristic**

*Inlet pressure 36 bar, Oil viscosity 46 cSt @ 45°C*



**VALVE SPECIFICATIONS**

|  |                                 |
|--|---------------------------------|
| Nominal Flow                                 | 7.9 GPM (30 LPM)                |
| Max Inlet Pressure                           | 700 PSI (50 bar)                |
| Controlled Pressure Range                    | (see graph)                     |
| Max Internal Leakage                         | 700 cc/min @ 50 bar             |
| Max Back-Pressure at T Port                  | 20 bar                          |
| Viscosity Range                              | 36 to 3000 SSU (3 to 647 cSt)   |
| Filtration                                   | ISO 18/15/13                    |
| Media Operating Temp. Range                  | -30°C / +100°C                  |
| Weight                                       | .63 lbs (.29 kg)                |
| Operating Fluid Media                        | General Purpose Hydraulic Fluid |
| Cartridge Torque Requirements                | 16 ft-lbs (30 Nm)               |
| Coil Nut Torque Requirements                 | 1-2 ft-lbs (2-3 Nm)             |
| Cavity                                       | T042                            |
| Cavity Tools Kit<br>(form tool, reamer, tap) | K-T042                          |

**COIL SPECIFICATIONS**

|                                |   |
|--------------------------------|---|
| Current Supply Characteristics | PWM (Pulse Width Modulation)  |
| Rated Current Range            | 100-1000 mA with 12 VDC Coil<br>50-500 mA with 24 VDC Coil            |
| PWM or Super-Imposed           |   |
| Dither Frequency               | 150-200 Hz  |
| Coil Resistance                | 7.8 Ohm ±5% at 68°F (20°C) 12 VDC<br>32 Ohm ±5% at 68°F (20°C) 24 VDC |
| Max Power Consumption          | 18 Watt   |

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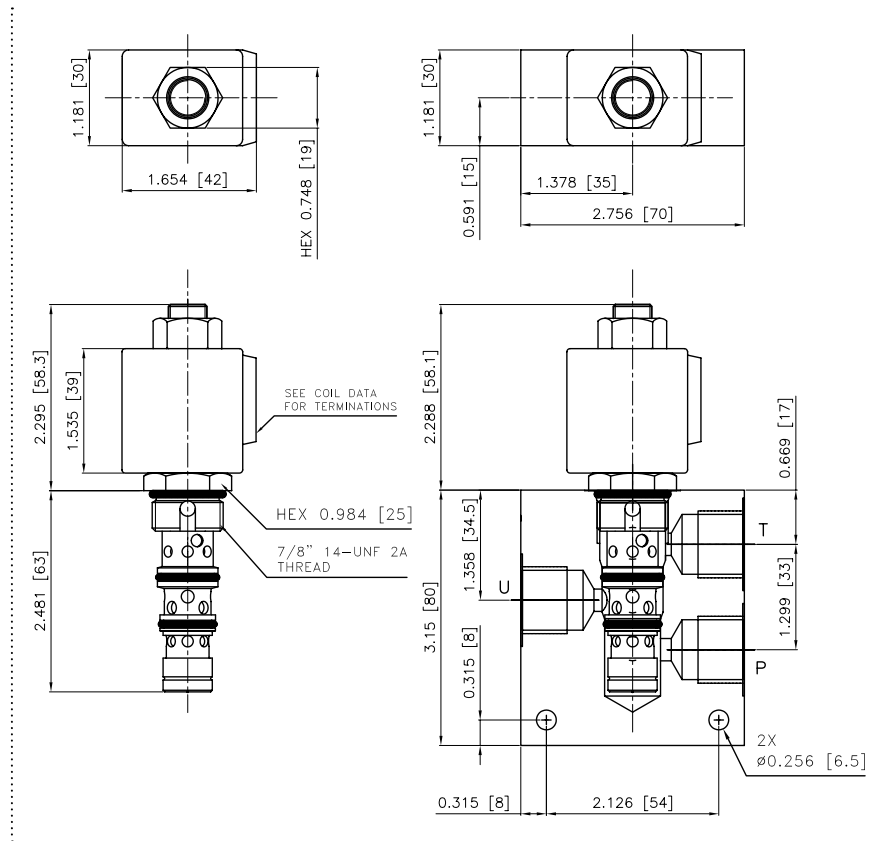
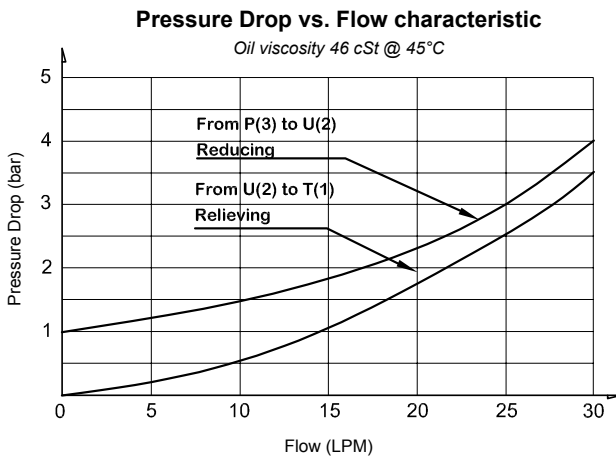


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**DIMENSIONS**



**ORDERING INFORMATION**

Approximate Coil Weight: .42 lbs (.19 kg)

EG-TRZ-42-L -

**MAX REGULATED PRESSURE**

35 bar

**OPTIONS**

00 - Buna Standard

A0 - Buna Screen

**"A" COIL TERMINATION**

DL - Double Lead

HC - DIN 43650 (Hirschmann)

JT - AMP Jr. Timer

DT - Deutsch DT04-2P

**VOLTAGE**

12 - 12 VDC

24 - 24 VDC

**BODIES**

Blank - Without body

N - 3/8" BSP Ports

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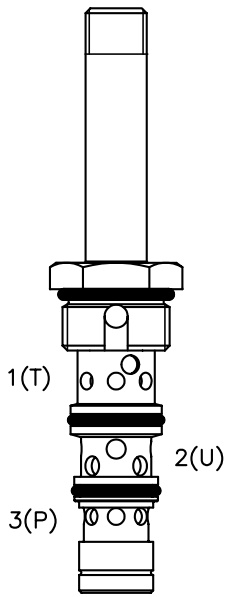


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**EG-TRZ-42-H PILOT OPERATED PROPORTIONAL, PRESSURE REDUCING/RELIEVING**



**DESCRIPTION**

Special cavity, 7/8-14 thread, pilot operated proportional pressure reducing/relieving valve.

**OPERATION**

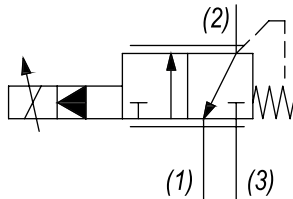
The EG-TRZ-42-H generates a variable pressure in response to a PWM (Pulse Width Modulated) current signal. With no current applied to the proportional solenoid, the inlet port 3 (P) is blocked and the regulated port 2 (U) is vented to port 1 (T).

As current is increased, fluid pressure is proportionally controlled at the regulated port 2 (U). On attainment of proportionally determined pressure at 2 (U), the cartridge shifts to block flow at 3 (P), thereby regulating pressure at 2 (U). In this mode, the valve also will relieve 2 (U) to 1 (T) at a variable value over the set reducing pressure.

**FEATURES**

- Hardened parts for long life.
- Efficient wet-armature construction.
- Unitized valve/coil.
- Continuous duty rated solenoid.

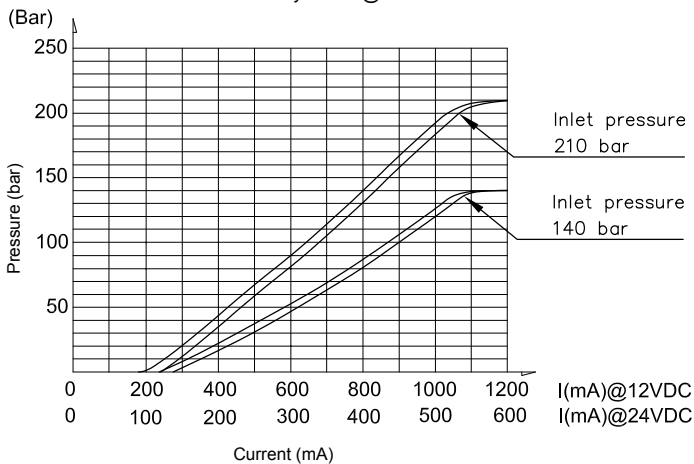
**HYDRAULIC SYMBOL**



**PERFORMANCE**

**Pressure vs. Current characteristic**

Oil viscosity 46 cSt @ 45°C



**VALVE SPECIFICATIONS**

|   |                                      |
|---|--------------------------------------|
| Nominal Flow                              | 7.9 GPM (30 LPM)                     |
| Max Inlet Pressure                        | 3500 PSI (241 bar)                   |
| Controlled Pressure Range                 | (see graph)                          |
| Max Internal Leakage                      | 1500 ml/min @ 200 bar inlet pressure |
| Max Back-Pressure at T Port               | 20 bar                               |
| Viscosity Range                           | 36 to 3000 SSU (3 to 647 cSt)        |
| Filtration                                | ISO 18/15/13                         |
| Media Operating Temp. Range               | -30°C / +100°C                       |
| Weight                                    | .63 lbs (.29 kg)                     |
| Operating Fluid Media                     | General Purpose Hydraulic Fluid      |
| Cartridge Torque Requirements             | 16 ft-lbs (30 Nm)                    |
| Coil Nut Torque Requirements              | 1-2 ft-lbs (2-3 Nm)                  |
| Cavity                                    | T042                                 |
| Cavity Tools Kit (form tool, reamer, tap) | K-T042                               |

**COIL SPECIFICATIONS**

|                                |  |
|--------------------------------|--|
| Current Supply Characteristics | PWM (Pulse Width Modulation)   |
| Rated Current Range            | 100-1200 mA with 12 VDC Coil<br>50-600 mA with 24 VDC Coil             |
| PWM or Super-Imposed           |  |
| Dither Frequency               | 150-200 Hz   |
| Coil Resistance                | 6.85 Ohm ±5% at 68°F (20°C) 12 VDC<br>27 Ohm ±5% at 68°F (20°C) 24 VDC |
| Max Power Consumption          | 21 Watt  |

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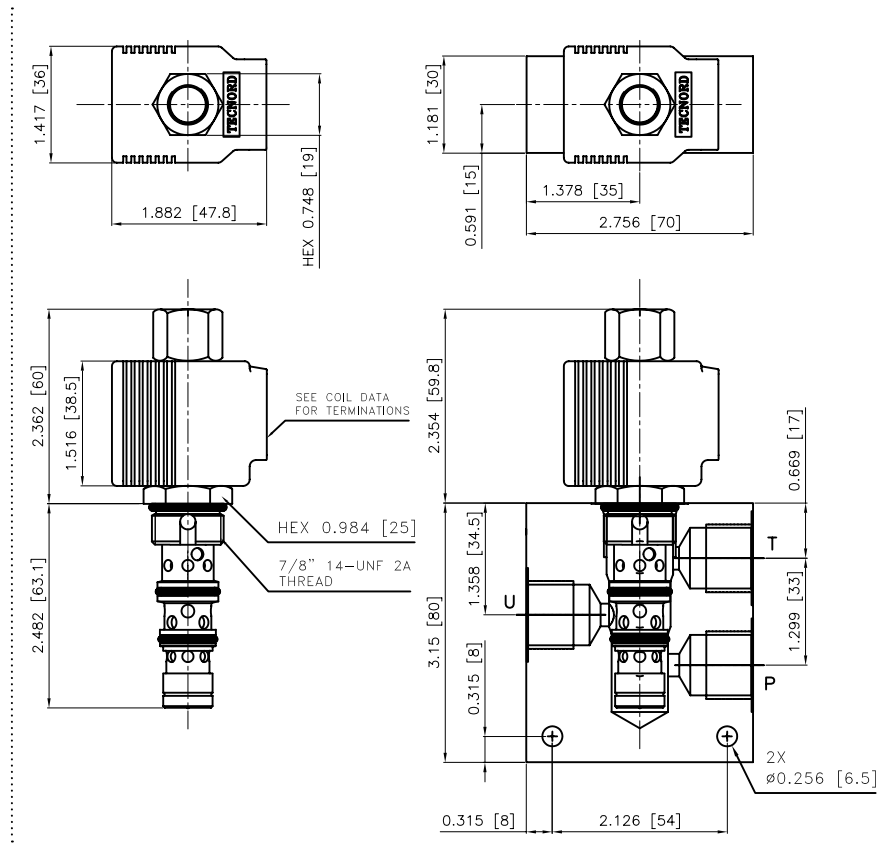
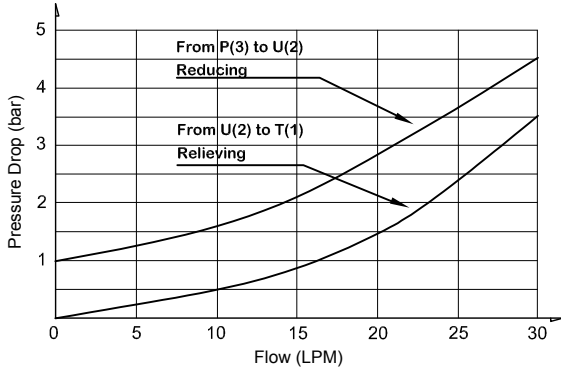


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**DIMENSIONS**

**Pressure Drop vs. Flow characteristic**

Oil viscosity 46 cSt @ 45°C



**ORDERING INFORMATION**

Approximate Coil Weight: .42 lbs (.19 kg)

| EG-TRZ-42-H - | MAX REGULATED PRESSURE | OPTIONS                    | "PJ" COIL TERMINATION       | VOLTAGE     | BODIES               |
|---------------|------------------------|----------------------------|-----------------------------|-------------|----------------------|
|               | 140 bar                | 00 - Polyurethane Standard | JH - DIN 43650 (Hirschmann) | 12 - 12 VDC | Blank - Without body |
|               | 210 bar                |                            | JA - AMP Superseal          | 24 - 24 VDC | N - 3/8" BSP Ports   |
|               |                        |                            | JD - Deutsch DT04-2P        |             |                      |
|               |                        |                            | JJ - AMP Jr. Timer          |             |                      |

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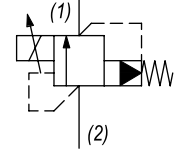


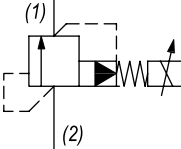
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**PROPORTIONAL PRESSURE RELIEF VALVES**

| NORMALLY CLOSED   | GPM | PSI  | LPM | BAR | CAVITY | MODEL  | PAGE |
|---|-----|------|-----|-----|--------|--------|------|
|  | 12  | 3000 | 45  | 207 | 7/8-14 | EE-PRB | PT18 |

| NORMALLY OPEN   | GPM | PSI  | LPM | BAR | CAVITY | MODEL  | PAGE |
|---|-----|------|-----|-----|--------|--------|------|
|  | 12  | 3000 | 45  | 207 | 7/8-14 | EE-PRD | PT22 |

**TYPICAL SCHEMATIC**

Typical application for the PRL and PRB is for fan or motor speed control.

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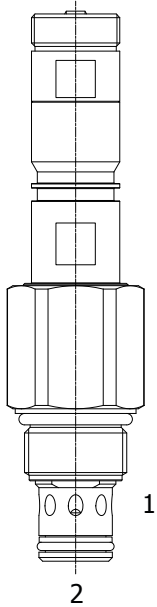


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**EE-PRB 2 WAY NORMALLY CLOSED, PROPORTIONAL RELIEF VALVE**



**DESCRIPTION**

10 size, 7/8-14 thread, "Delta" series, solenoid operated, 2 way normally closed, pilot operated spool type relief valve.

**OPERATION**

The EE-PRB blocks flow from (2) to (1) until sufficient pressure is present at (2) to offset a spring induced force. As solenoid current is increased, it offsets a portion of this force, resulting in a lower relief pressure. Can be infinitely adjusted across a prescribed range in response to a PWM (Pulse Width Modulated) current. Pressure output is inversely proportional to the current input. With full current applied to the solenoid, the valve will free flow from (2) to (1), at approximately 100 PSI (7 bar).

*Note: backpressure on port (1) becomes additive to the pressure setting at a 1:1 ratio.*

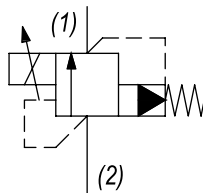
**FEATURES**

- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Industry common cavity.
- Unitized, molded coil design.
- Continuous duty rated solenoid.
- Optional coil voltages and terminations.



*Great for fan drive motor control.*

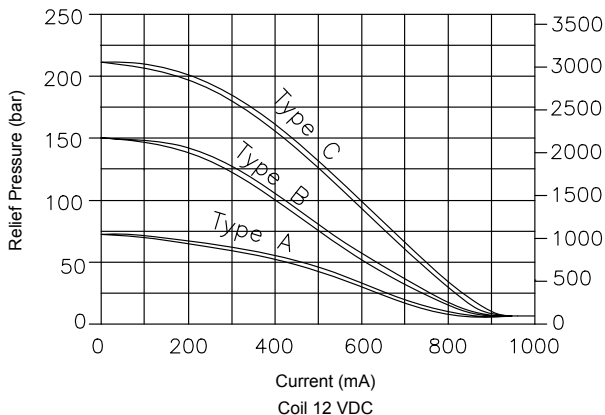
**HYDRAULIC SYMBOL**



**PERFORMANCE**

**Relief pressure vs. Current**

*Constant flow 10 LPM (2.6 GPM)*



**VALVE SPECIFICATIONS**

|  |                                 |
|--|---------------------------------|
| Nominal Flow                                 | 0+20 GPM (0+76 LPM)             |
| Operating Range                              | 100-3000 PSI (7-207 bar)        |
| Typical Hysteresis                           | 10% Max                         |
| Viscosity Range                              | 36 to 3000 SSU (3 to 647 cSt)   |
| Filtration                                   | ISO 18/16/13                    |
| Media Operating Temp. Range                  | -30°C / +100°C                  |
| Weight                                       | .62 lbs (.28 kg)                |
| Operating Fluid Media                        | General Purpose Hydraulic Fluid |
| Cartridge Torque Requirements                | 30 ft-lbs (40.6 Nm)             |
| Coil Nut Torque Requirements                 | 2-3 ft-lbs (3-4 Nm)             |
| Cavity                                       | DELTA 2W                        |
| Cavity Tools Kit<br>(form tool, reamer, tap) | 40500000                        |
| Seal Kit                                     | 21191202                        |

**COIL SPECIFICATIONS**

|                                |                              |
|--------------------------------|------------------------------|
| Current Supply Characteristics | PWM (Pulse Width Modulation) |
| Rated Current Range            | 100+1000 mA                  |
| PWM or Super-Imposed           |                              |
| Dither Frequency               | 120+200 Hz                   |
| Coil Resistance (12 VDC)       | 7.2 Ohm ±5% at 68°F (20°C)   |

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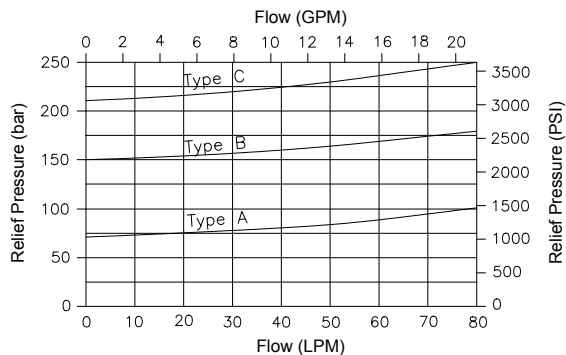


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**DIMENSIONS**

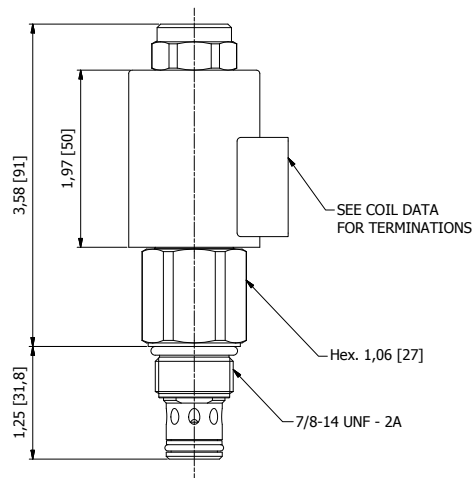
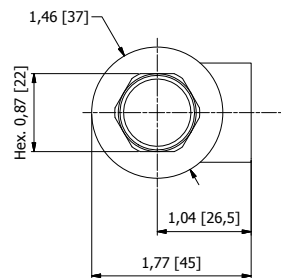
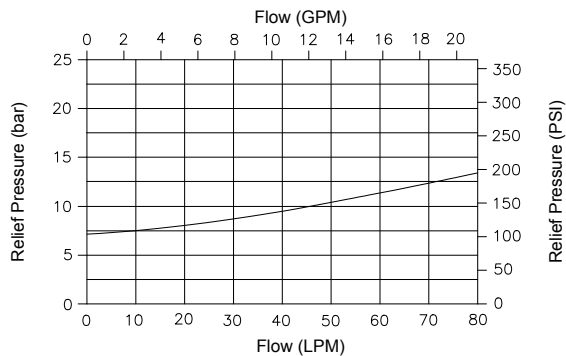
**Relief pressure vs. Flow - No current applied**

Costant flow 10 LPM (2.6 GPM)



**Pressure Drop vs. Flow**

Coil energized



(for bodies style and sizes see section "Accessories")

**ORDERING INFORMATION**

Approximate Coil Weight: .47 lbs (.21 kg)

EE-PRB - - - -

**OPTIONS**

- Buna, 100-1015 PSI range (7-70 bar) **0A**
- Viton, 100-1015 PSI range (7-70 bar) **VA**
  
- Buna, 100-2175 PSI range (7-150 bar) **0B**
- Viton, 100-2175 PSI range (7-150 bar) **VB**
  
- Buna, 100-3000 PSI range (7-207 bar) **0C**
- Viton, 100-3000 PSI range (7-207 bar) **VC**

**"F" COIL TERMINATION**

- DIN 43650 (Hirschmann) **HC**
- Deutsch - Integral DT04-2P **DI**
- AMP Jr. Timer **JT**

**BODIES**

- Blank Without Body
- N** 3/8" BSP Ports
- S** #8 SAE Ports

**VOLTAGE** (other voltages available on request)

- 12** 12 VDC
- 24** 24 VDC

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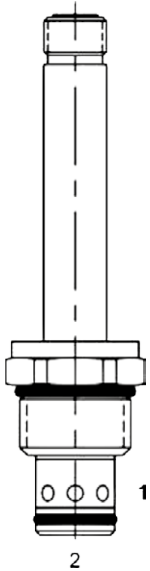


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**EE-PRD 2 WAY NORMALLY OPEN, PROPORTIONAL RELIEF VALVE**



**DESCRIPTION**

10 size, 7/8-14 thread, "Delta" series, solenoid operated, 2 way normally open, pilot operated spool type relief valve.

**OPERATION**

The EE-PRD blocks flow from (2) to (1) until sufficient pressure is present at (2) to offset the electrically induced solenoid force. Can be infinitely adjusted across a prescribed range in response to a PWM (Pulse Width Modulated) current. Pressure output is proportional to the current input.

With no current applied to the solenoid, the valve will free flow from (2) to (1) at approximately 50 PSI.

*Note: backpressure on port (1) becomes additive to the pressure setting at a 1:1 ratio.*

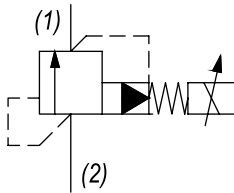
**FEATURES**

- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Industry common cavity.
- Unitized, molded coil design.
- Continuous duty rated solenoid.
- Optional coil voltages and terminations.

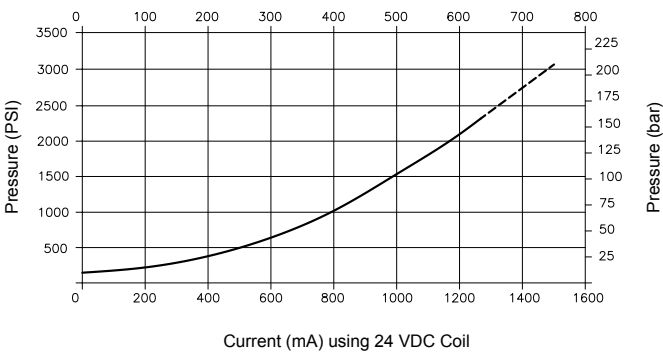


*For best performance valve must be purged of air. Locate below reservoir or add check valve to return.*

**HYDRAULIC SYMBOL**



**PERFORMANCE**



**VALVE SPECIFICATIONS**

|   |                                 |
|---|---------------------------------|
| Nominal Flow                              | 0-12 GPM (0-45 LPM)             |
| Operating Range                           | 50-3000 PSI (3-207 bar)         |
| Typical Hysteresis                        | 5%                              |
| Viscosity Range                           | 36 to 3000 SSU (3 to 647 cSt)   |
| Filtration                                | ISO 18/16/13                    |
| Media Operating Temp. Range               | -30°C / +100°C                  |
| Weight                                    | .30 lbs (.13 kg)                |
| Operating Fluid Media                     | General Purpose Hydraulic Fluid |
| Cartridge Torque Requirements             | 30 ft-lbs (40.6 Nm)             |
| Coil Nut Torque Requirements              | 4-6 ft-lbs (5.4-8.1 Nm)         |
| Cavity                                    | DELTA 2W                        |
| Cavity Tools Kit (form tool, reamer, tap) | 40500000                        |
| Seal Kit                                  | 21191202                        |

**COIL SPECIFICATIONS**

|                                |                              |
|--------------------------------|------------------------------|
| Current Supply Characteristics | PWM (Pulse Width Modulation) |
| Rated Current Range            | 200-1500 mA                  |
| PWM or Super-Imposed           |                              |
| Dither Frequency               | 500 Hz                       |
| Coil Resistance (12 VDC)       | 5.9 Ohm ±5% at 68°F (20°C)   |

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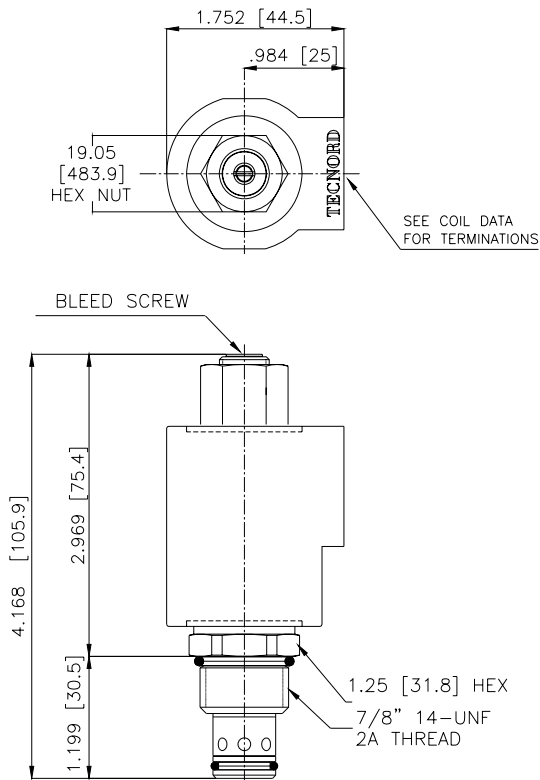


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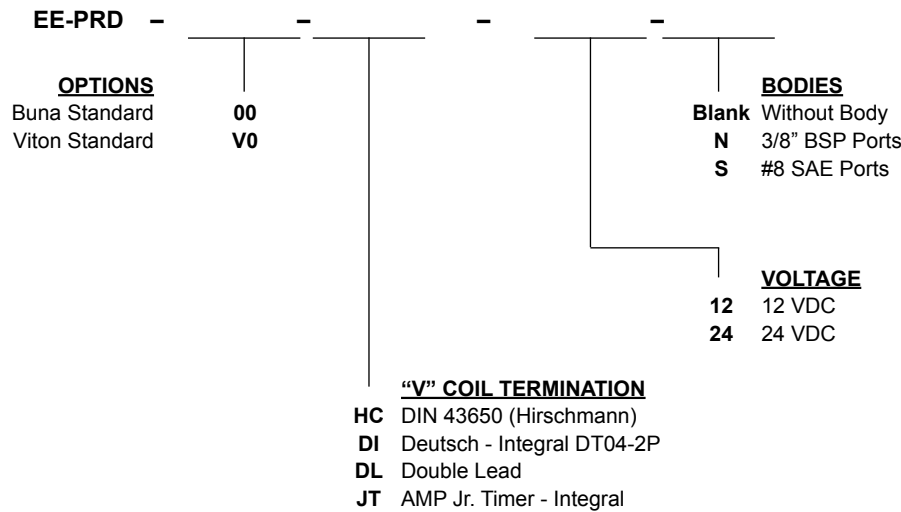
**DIMENSIONS**



(for bodies style and sizes see section "Accessories")

**ORDERING INFORMATION**

Approximate Coil Weight: .42 lbs (.19 kg)



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**2 WAY NORMALLY CLOSED PROPORTIONAL FLOW CONTROL VALVES**

| SPOOL TYPE | GPM  | PSI  | LPM | BAR | CAVITY    | MODEL         | PAGE |
|------------|------|------|-----|-----|-----------|---------------|------|
|            | 13.2 | 3500 | 50  | 241 | 7/8-14    | <b>EE-P2G</b> | PT26 |
|            | 23.7 | 3500 | 90  | 241 | 1 1/16-12 | <b>ET-P2S</b> | PT28 |

| POPPET TYPE | GPM | PSI  | LPM | BAR | CAVITY    | MODEL         | PAGE |
|-------------|-----|------|-----|-----|-----------|---------------|------|
|             | 6.5 | 3500 | 25  | 241 | 3/4-16    | <b>EB-P2A</b> | PT30 |
|             | 12  | 3500 | 45  | 241 | 7/8-14    | <b>EE-P2A</b> | PT32 |
|             | 29  | 3500 | 110 | 241 | 1 1/16-12 | <b>ET-P2A</b> | PT34 |

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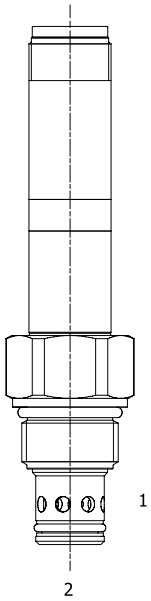


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**EE-P2G 2 WAY NORMALLY CLOSED, PROPORTIONAL FLOW CONTROL VALVE**



**DESCRIPTION**

10 size, 7/8-14 thread, "Delta" series, solenoid operated, 2 way normally closed, proportional flow control valve.

**OPERATION**

When de-energized the EE-P2G blocks flow at ports (1) and (2). When energized, the valve allows flow from (2) to (1). Flow is proportional to the current applied to the coil. A compensator must be used to create a pressure compensated flow control function.

**OPERATION OF MANUAL OVERRIDE OPTION:** to override, turn the manual override screw clockwise. To release turn the manual override screw counterclockwise.

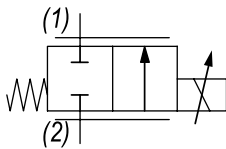
**FEATURES**

- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Industry common cavity.
- Unitized, molded coil design.
- Continuous duty rated solenoid.
- Optional coil voltages and terminations.



*Curves are attained with Tecnord QC-CP3 compensator.*

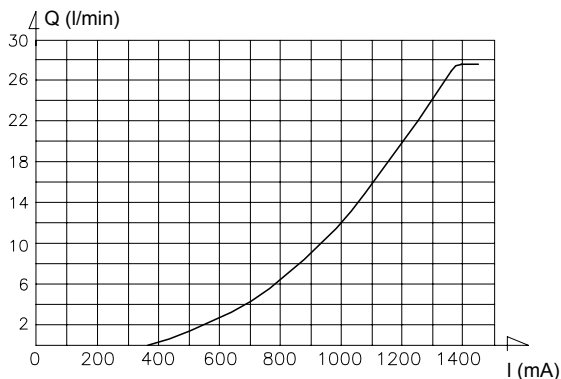
**HYDRAULIC SYMBOL**



**PERFORMANCE**

**Flow vs. Current - "A" Version**

Coil 12 VDC - Delta P = 14 bar - Oil 26 cSt (121 SSU) @ 50°C (104°F)



**VALVE SPECIFICATIONS**

|   |                                 |
|---|---------------------------------|
| Flow Range                                | See curves for various versions |
| Max System Pressure                       | 3500 PSI (241 bar)              |
| Leakage                                   | Max 50 cc/min at 245 bar        |
| Hysteresis                                | ±3%                             |
| Viscosity Range                           | 36 to 3000 SSU (3 to 647 cSt)   |
| Filtration                                | ISO 18/16/13                    |
| Media Operating Temp. Range               | -30°C / +100°C                  |
| Weight                                    | .58 lbs (.26 kg)                |
| Operating Fluid Media                     | General Purpose Hydraulic Fluid |
| Cartridge Torque Requirements             | 26 ft-lbs (35 Nm)               |
| Coil Nut Torque Requirements              | 2-3 ft-lbs (3-4 Nm)             |
| Cavity                                    | DELTA 2W                        |
| Cavity Tools Kit (form tool, reamer, tap) | 40500000                        |
| Seal Kit                                  | 21191200                        |

**COIL SPECIFICATIONS**

|                                |                              |
|--------------------------------|------------------------------|
| Current Supply Characteristics | PWM (Pulse Width Modulation) |
| Rated Current Range            | 400-1400 mA                  |
| PWM or Super-Imposed           |                              |
| Dither Frequency               | 100-150 Hz                   |
| Coil Resistance (12 VDC)       | 7.2 Ohm ±5% at 68°F (20°C)   |

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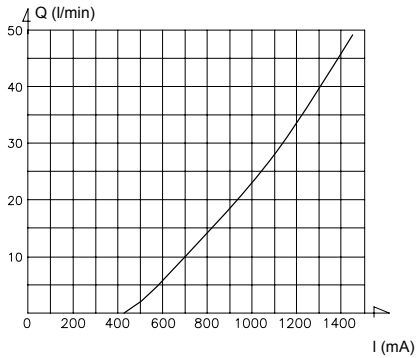


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**DIMENSIONS**

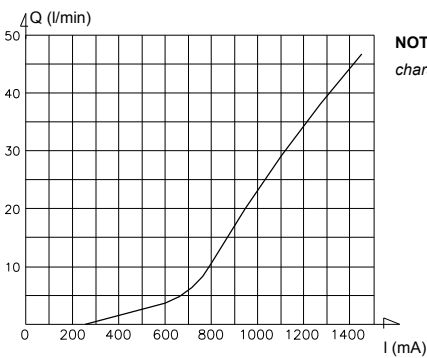
**Flow vs. Current - "B" Version**

Coil 12 VDC - Delta P = 14 bar - Oil 26 cSt (121 SSU) @ 50°C (104°F)

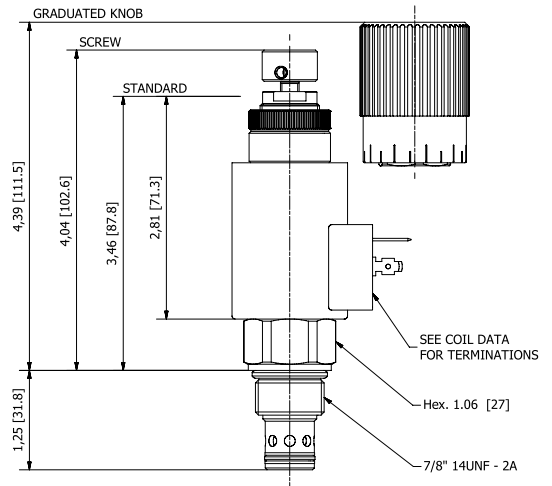
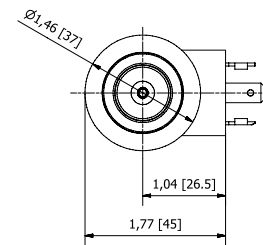


**Flow vs. Current - "C" Version**

Coil 12 VDC - Delta P = 14 bar - Oil 26 cSt (121 SSU) @ 50°C (104°F)



NOTE: non linear characteristics



(for bodies style and sizes see section "Accessories")

**ORDERING INFORMATION**

Approximate Coil Weight: .47 lbs (.21 kg)

EE-P2G - - - -

**OPTIONS**

- Buna, Push Type Override Standard **AP** Up to 22 l/min
- Buna, Screw Type Override (Knob) **AS** Up to 22 l/min
- Buna, Screw Type Override (Grad. Knob) **AK** Up to 22 l/min
  
- Buna, Push Type Override Standard **BP** Up to 50 l/min
- Buna, Screw Type Override (Knob) **BS** Up to 50 l/min
- Buna, Screw Type Override (Grad. Knob) **BK** Up to 50 l/min
  
- Buna, Push Type Override Standard **CP** Up to 50 l/min
- Buna, Screw Type Override (Knob) **CS** Up to 50 l/min
- Buna, Screw Type Override (Grad. Knob) **CK** Up to 50 l/min

**BODIES**

- Blank** Without Body
- N** 3/4" BSP Ports
- S** #8 SAE Ports

**VOLTAGE**

- 12** 12 VDC
- 24** 24 VDC

**"F" COIL TERMINATION**

- HC** DIN 43650 (Hirschmann)
- DI** Deutsch-Integral DT04-2P
- JT** AMP Jr. Timer

NOTES: 1) Flows refer to a 14 bar Delta P  
2) For other seals, consult factory

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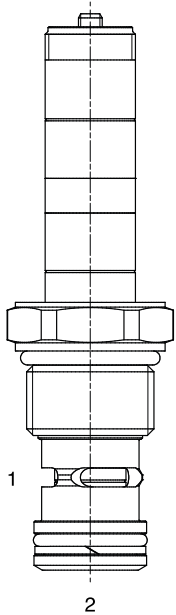


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**ET-P2S 2 WAY NORMALLY CLOSED, PROPORTIONAL FLOW CONTROL VALVE**



**DESCRIPTION**

12 size, 1 1/16-12 thread, "Tecnord" series, solenoid operated, 2 way normally closed, proportional flow control valve.

**OPERATION**

When de-energized the ET-P2S blocks flow at ports (2) and (1). When energized, the valve allows flow from (1) to (2). Flow is proportional to the current applied to the coil. A compensator must be used to create a pressure compensated flow control function.

**OPERATION OF MANUAL OVERRIDE OPTION:** to override, turn the manual override screw counterclockwise. To release turn the manual override screw clockwise.

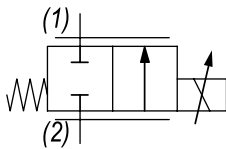
**FEATURES**

- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Industry common cavity.
- Unitized, molded coil design.
- Continuous duty rated solenoid.
- Optional coil voltages and terminations.



*Curves are attained with Tecnord QC-CP3 compensator.*

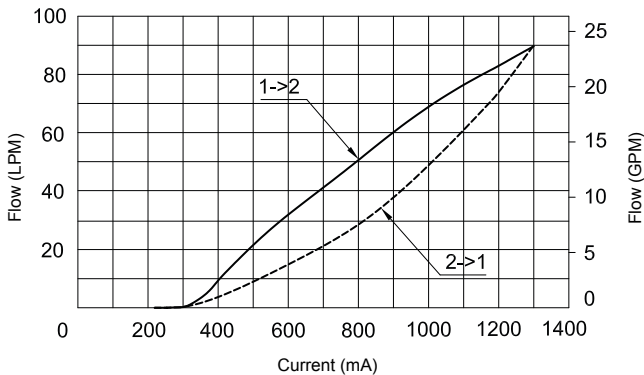
**HYDRAULIC SYMBOL**



**PERFORMANCE**

**Flow vs. Current**

Coil 12 VDC - Press. Drop = 14 bar - Oil 46 cSt (217 SSU) @ 50°C (122°F)



**VALVE SPECIFICATIONS**

|                               |                                 |
|-------------------------------|---------------------------------|
| Flow Range                    | See curves for various versions |
| Max System Pressure           | 3500 PSI (241 bar)              |
| Leakage                       | Max 50 cc/min at 245 bar        |
| Hysteresis                    | ±3%                             |
| Viscosity Range               | 36 to 3000 SSU (3 to 647 cSt)   |
| Filtration                    | ISO 18/16/13                    |
| Media Operating Temp. Range   | -30°C / +100°C                  |
| Weight                        | .72 lbs (.32 kg)                |
| Operating Fluid Media         | General Purpose Hydraulic Fluid |
| Cartridge Torque Requirements | 37 ft-lbs (50 Nm)               |
| Coil Nut Torque Requirements  | 2-3 ft-lbs (3-4 Nm)             |
| Cavity                        | TECNORD 2W                      |
| Cavity Tools Kit              |                                 |
| (form tool, reamer, tap)      | 40500032                        |
| Seal Kit                      | 21191200                        |

**COIL SPECIFICATIONS**

|                                |                              |
|--------------------------------|------------------------------|
| Current Supply Characteristics | PWM (Pulse Width Modulation) |
| Rated Current Range            | 400-1400 mA                  |
| PWM or Super-Imposed           |                              |
| Dither Frequency               | 100-150 Hz                   |
| Coil Resistance (12 VDC)       | 7.2 Ohm ±5% at 68°F (20°C)   |

**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.

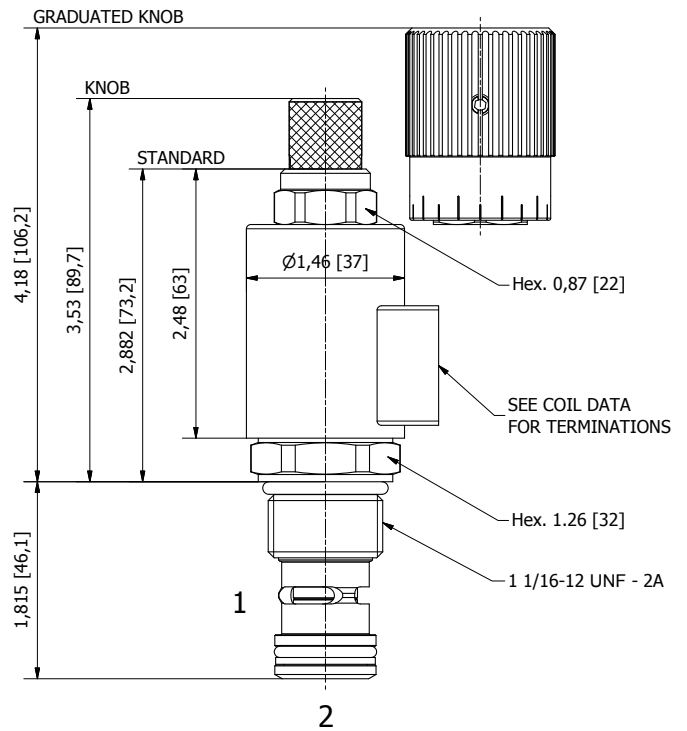
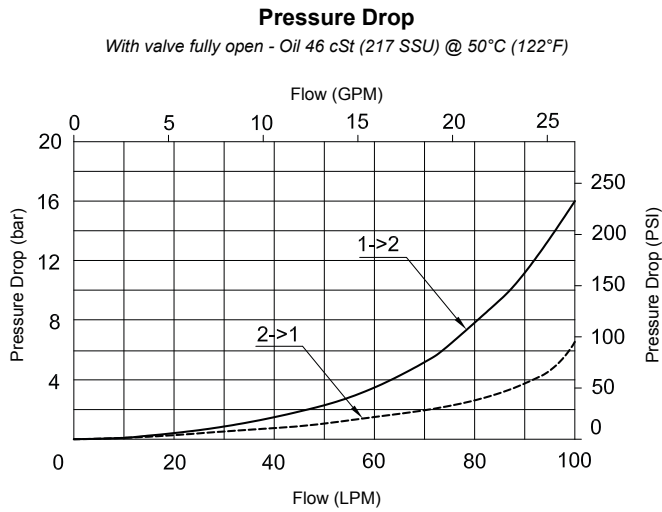


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**DIMENSIONS**



(for bodies style and sizes see section "Accessories")

**ORDERING INFORMATION**

Approximate Coil Weight: .47 lbs (.21 kg)

ET-P2S - - - -

**OPTIONS**

- Buna Standard **C0** Up to 90 l/min
- Buna, Screw Type Override (Knob) **CS** Up to 90 l/min
- Buna, Screw Type Override (Grad. Knob) **CK** Up to 90 l/min

**BODIES**

- Blank** Without Body
- N** 3/4" BSP Ports
- S** #8 SAE Ports

**VOLTAGE**

- 12** 12 VDC
- 24** 24 VDC

**"F" COIL TERMINATION**

- HC** DIN 43650 (Hirschmann)
- DI** Deutsch-Integral DT04-2P
- JT** AMP Jr. Timer

**NOTES:** 1) Flows refer to a 14 bar Delta P  
2) For other seals, consult factory

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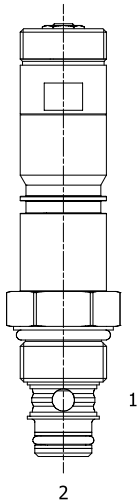


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**EB-P2A 2 WAY NORMALLY CLOSED, PROPORTIONAL FLOW CONTROL VALVE**



**DESCRIPTION**

8 size, 3/4-16 thread, solenoid operated, 2 way normally closed poppet style, proportional flow control valve.

**OPERATION**

When de-energized the EB-P2A blocks flow from (1) to (2) and allows reverse flow from (2) to (1). When energized, the valve allows flow from (1) to (2). Flow is proportional to current applied to the coil. A compensator must be used to create a pressure compensated flow control function.

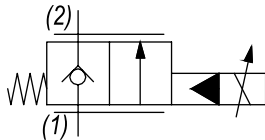
**FEATURES**

- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Industry common cavity.
- Unitized, molded coil design.
- Continuous duty rated solenoid.
- Optional coil voltages and terminations.



Curves are attained without pressure compensator. The valve can work with a pressure drop up to 200 bar.

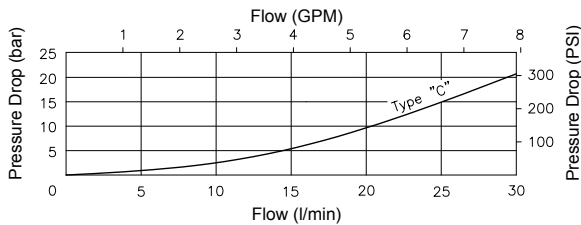
**HYDRAULIC SYMBOL**



**PERFORMANCE**

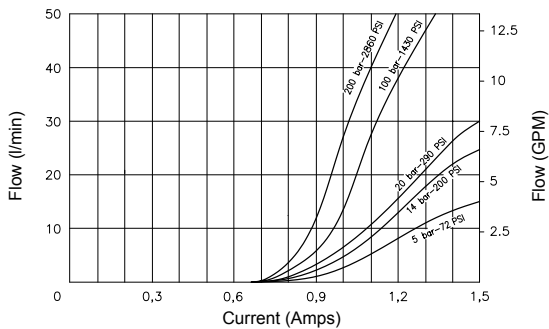
**Pressure Drop**

1 to 2 with valve completely open



**Flow vs. Current at different Pressure Drop**

Coil 12 VDC - hyd. - Oil 26 cSt (121 SSU) @ 40°C (104°F)



**VALVE SPECIFICATIONS**

|  |                                 |
|--|---------------------------------|
| Flow Range                                   | See curves                      |
| Max System Pressure                          | 3500 PSI (241 bar)              |
| Leakage                                      | 0-10 drops / min @ 245 bar      |
| Hysteresis                                   | ±3%                             |
| Viscosity Range                              | 36 to 3000 SSU (3 to 647 cSt)   |
| Filtration                                   | ISO 18/16/13                    |
| Media Operating Temp. Range                  | -30°C / +100°C                  |
| Weight                                       | .72 lbs (.32 kg)                |
| Operating Fluid Media                        | General Purpose Hydraulic Fluid |
| Cartridge Torque Requirements                | 19 ft-lbs (25 Nm)               |
| Coil Nut Torque Requirements                 | 2-3 ft-lbs (3-4 Nm)             |
| Cavity                                       | POWER 2W                        |
| Cavity Tools Kit<br>(form tool, reamer, tap) | 40500005                        |
| Seal Kit                                     | 21191102                        |

**COIL SPECIFICATIONS**

|                                |                              |
|--------------------------------|------------------------------|
| Current Supply Characteristics | PWM (Pulse Width Modulation) |
| Rated Current Range            | 400-1400 mA                  |
| PWM or Super-Imposed           |                              |
| Dither Frequency               | 100 Hz                       |
| Coil Resistance (12 VDC)       | 7.2 Ohm ±5% at 68°F (20°C)   |

**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.

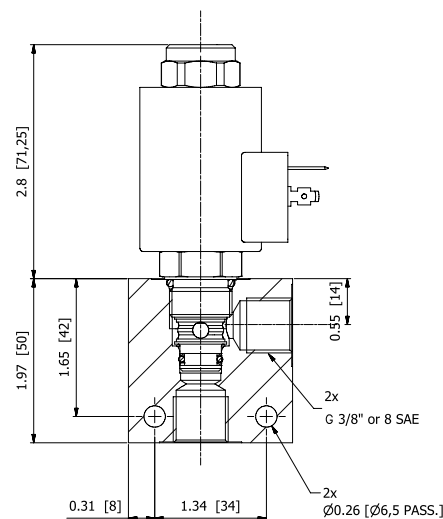
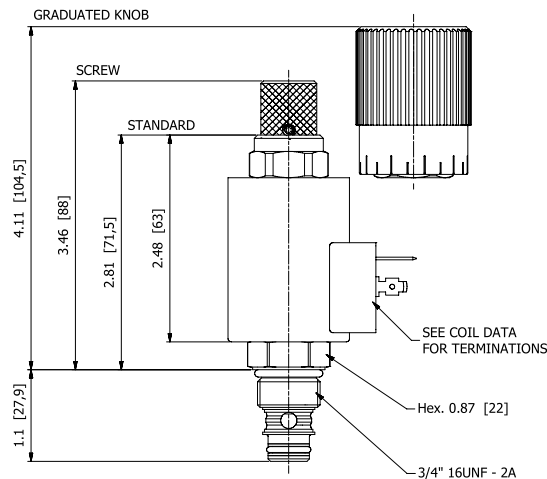
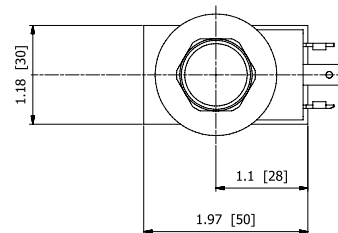
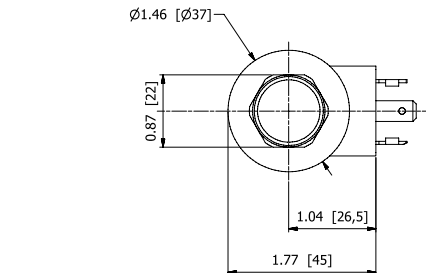


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**DIMENSIONS**



(for bodies style and sizes see section "Accessories")

**ORDERING INFORMATION**

Approximate Coil Weight: .47 lbs (.21 kg)

**EB-P2A** - - - -

**OPTIONS**

- Buna Standard **C0** Up to 25 l/min
- Buna, Screw Type Override (Knob) **CS** Up to 25 l/min
- Buna, Screw Type Override (Grad. Knob) **CK** Up to 25 l/min

**BODIES**

- Blank** Without Body
- N** 3/8" BSP Ports
- S** #8 SAE Ports

**VOLTAGE**

- 12** 12 VDC
- 24** 24 VDC

**"F" COIL TERMINATION**

- HC** DIN 43650 (Hirschmann)
- DI** Deutsch-Integral DT04-2P
- JT** AMP Jr. Timer

**NOTES:** 1) Flows refer to a 14 bar Delta P  
2) For other seals, consult factory

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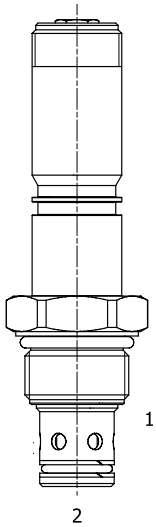


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**EE-P2A 2 WAY NORMALLY CLOSED, PROPORTIONAL FLOW CONTROL VALVE**



**DESCRIPTION**

10 size, 7/8-14 thread, solenoid operated, 2 way normally closed poppet style, proportional flow control valve.

**OPERATION**

When de-energized the EE-P2A blocks flow from (1) to (2) and allows reverse flow from (2) to (1). When energized, the valve allows flow from (1) to (2). Flow is proportional to current applied to the coil. A compensator must be used to create a pressure compensated flow control function.

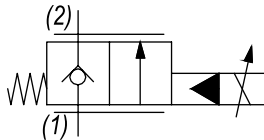
**FEATURES**

- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Industry common cavity.
- Unitized, molded coil design.
- Continuous duty rated solenoid.
- Optional coil voltages and terminations.



*Curves are attained without pressure compensator. The valve can work with a pressure drop up to 200 bar.*

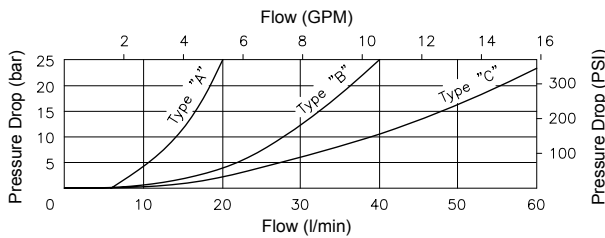
**HYDRAULIC SYMBOL**



**PERFORMANCE**

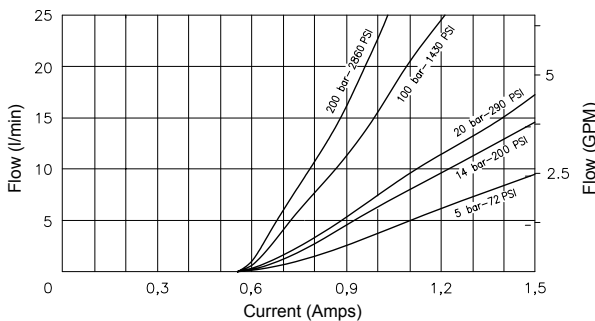
**Pressure Drop**

1 to 2 with valve completely open



**Flow vs. Current at different Pressure Drop**

*Poppet type A - Coil 12 VDC - hyd. oil 26 cSt (121 SSU) @ 40°C (104°F)*



**VALVE SPECIFICATIONS**

|  |                                 |
|--|---------------------------------|
| Flow Range                                   | See curves for various versions |
| Max System Pressure                          | 3500 PSI (241 bar)              |
| Leakage                                      | 0-10 drops / min @ 245 bar      |
| Hysteresis                                   | ±3%                             |
| Viscosity Range                              | 36 to 3000 SSU (3 to 647 cSt)   |
| Filtration                                   | ISO 18/16/13                    |
| Media Operating Temp. Range                  | -30°C / +100°C                  |
| Weight                                       | .72 lbs (.32 kg)                |
| Operating Fluid Media                        | General Purpose Hydraulic Fluid |
| Cartridge Torque Requirements                | 26-35 ft-lbs (50 Nm)            |
| Coil Nut Torque Requirements                 | 2-3 ft-lbs (3-4 Nm)             |
| Cavity                                       | DELTA 2W                        |
| Cavity Tools Kit<br>(form tool, reamer, tap) | 40500000                        |
| Seal Kit                                     | 21191200                        |

**COIL SPECIFICATIONS**

|                                |                              |
|--------------------------------|------------------------------|
| Current Supply Characteristics | PWM (Pulse Width Modulation) |
| Rated Current Range            | 400-1400 mA                  |
| PWM or Super-Imposed           |                              |
| Dither Frequency               | 100 Hz                       |
| Coil Resistance (12 VDC)       | 7.2 Ohm ±5% at 68°F (20°C)   |

**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.



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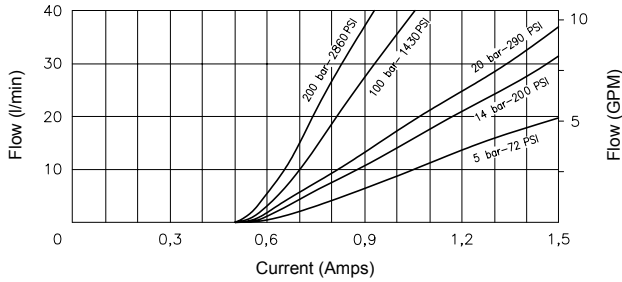


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**DIMENSIONS**

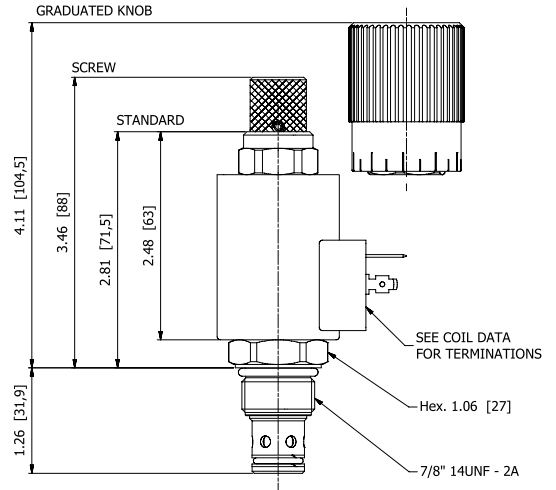
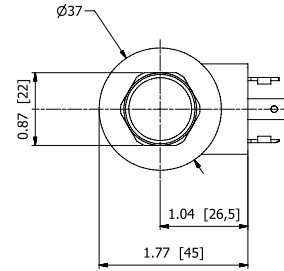
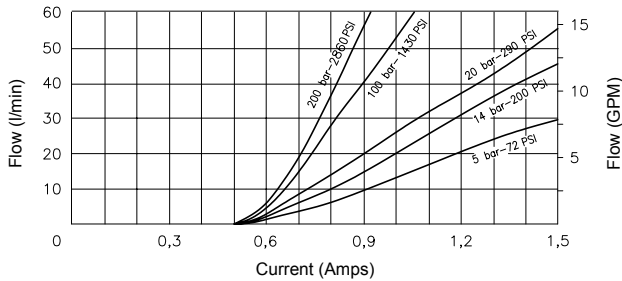
**Flow vs. Current at different Pressure Drop**

**Poppet type B - Coil 12 VDC - hyd. oil 26 cSt (121 SSU) @ 40°C (104°F)**



**Flow vs. Current at different Pressure Drop**

**Poppet type C - Coil 12 VDC - hyd. oil 26 cSt (121 SSU) @ 40°C (104°F)**



(for bodies style and sizes see section "Accessories")

**ORDERING INFORMATION**

Approximate Coil Weight: .47 lbs (.21 kg)

**EE-P2A - - - -**

**OPTIONS**

- Buna Standard **A0** Up to 15 l/min
- Buna, Screw Type Override (Knob) **AS** Up to 15 l/min
- Buna, Screw Type Override (Grad. Knob) **AK** Up to 15 l/min
  
- Buna Standard **B0** Up to 30 l/min
- Buna, Screw Type Override (Knob) **BS** Up to 30 l/min
- Buna, Screw Type Override (Grad. Knob) **BK** Up to 30 l/min
  
- Buna Standard **C0** Up to 45 l/min
- Buna, Screw Type Override (Knob) **CS** Up to 45 l/min
- Buna, Screw Type Override (Grad. Knob) **CK** Up to 45 l/min

**BODIES**

- Blank** Without Body
- N** 3/4" BSP Ports
- S** #8 SAE Ports

**VOLTAGE**

- 12** 12 VDC
- 24** 24 VDC

**"F" COIL TERMINATION**

- HC** DIN 43650 (Hirschmann)
- DI** Deutsch-Integral DT04-2P
- JT** AMP Jr. Timer

**NOTES:** 1) Flows refer to a 14 bar Delta P  
2) For other seals, consult factory

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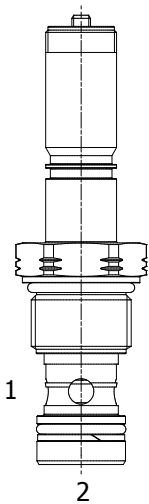


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**ET-P2A 2 WAY NORMALLY CLOSED, PROPORTIONAL FLOW CONTROL VALVE**



**DESCRIPTION**

12 size, 1 1/16-12 thread, solenoid operated, 2 way normally closed poppet style, proportional flow control valve.

**OPERATION**

When de-energized the ET-P2A blocks flow from (1) to (2) and allows reverse flow from (2) to (1). When energized, the valve allows flow from (1) to (2). Flow is proportional to current applied to the coil. A compensator must be used to create a pressure compensated flow control function.

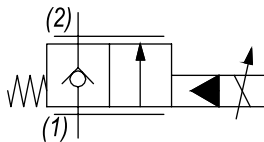
**FEATURES**

- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Industry common cavity.
- Unitized, molded coil design.
- Continuous duty rated solenoid.
- Optional coil voltages and terminations.



Curves are attained without pressure compensator. The valve can work with a pressure drop up to 200 bar.

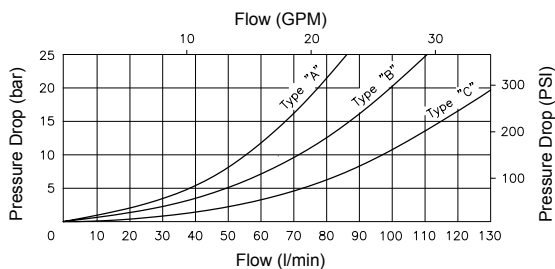
**HYDRAULIC SYMBOL**



**PERFORMANCE**

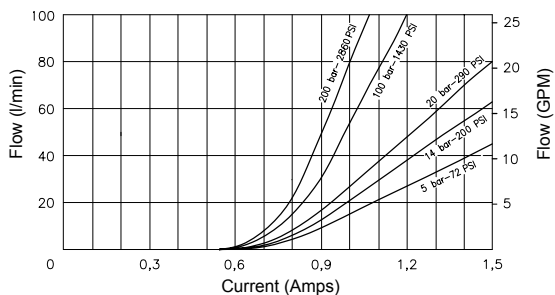
**Pressure Drop**

1 to 2 with valve completely open



**Flow vs. Current at different Pressure Drop**

Poppet type A - Coil 12 VDC - hyd. oil 26 cSt (121 SSU) @ 40°C (104°F)



**VALVE SPECIFICATIONS**

|  |                                 |
|--|---------------------------------|
| Flow Range                                   | See curves for various versions |
| Max System Pressure                          | 3500 PSI (241 bar)              |
| Leakage                                      | 0-10 drops / min @ 245 bar      |
| Hysteresis                                   | ±3%                             |
| Viscosity Range                              | 36 to 3000 SSU (3 to 647 cSt)   |
| Filtration                                   | ISO 18/16/13                    |
| Media Operating Temp. Range                  | -30°C / +100°C                  |
| Weight                                       | .72 lbs (.32 kg)                |
| Operating Fluid Media                        | General Purpose Hydraulic Fluid |
| Cartridge Torque Requirements                | 37 ft-lbs (50 Nm)               |
| Coil Nut Torque Requirements                 | 2-3 ft-lbs (3-4 Nm)             |
| Cavity                                       | TECNORD 2W                      |
| Cavity Tools Kit<br>(form tool, reamer, tap) | 40500032                        |
| Seal Kit                                     | 21191200                        |

**COIL SPECIFICATIONS**

|                                |                              |
|--------------------------------|------------------------------|
| Current Supply Characteristics | PWM (Pulse Width Modulation) |
| Rated Current Range            | 400-1400 mA                  |
| PWM or Super-Imposed           |                              |
| Dither Frequency               | 100 Hz                       |
| Coil Resistance (12 VDC)       | 7.2 Ohm ±5% at 68°F (20°C)   |

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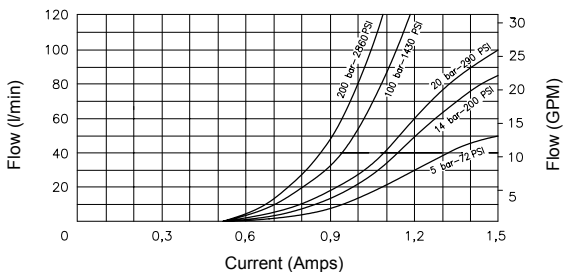


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**DIMENSIONS**

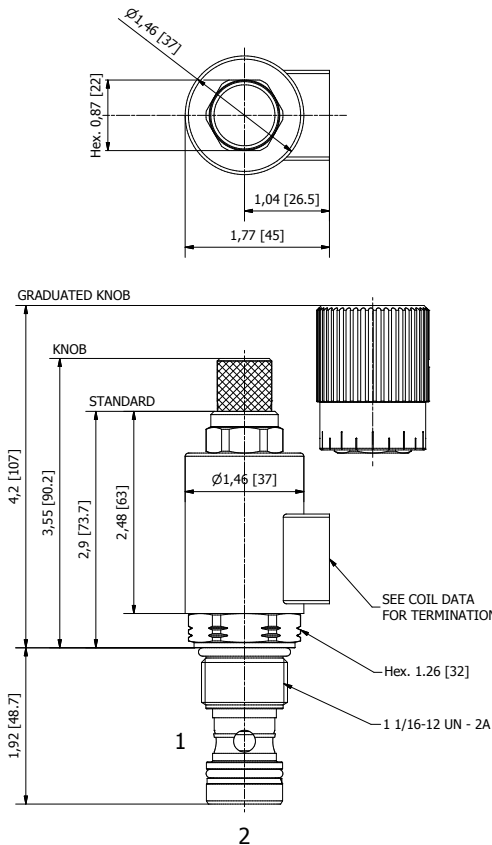
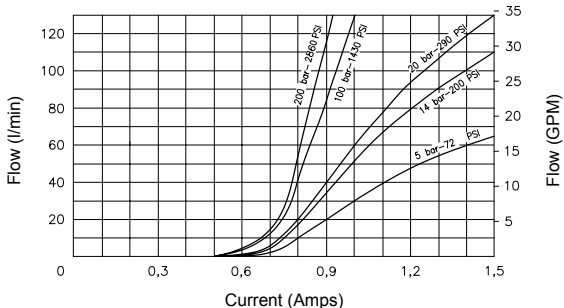
**Flow vs. Current at different Pressure Drop**

**Poppet type B** - Coil 12 VDC - hyd. oil 26 cSt (121 SSU) @ 40°C (104°F)



**Flow vs. Current at different Pressure Drop**

**Poppet type C** - Coil 12 VDC - hyd. oil 26 cSt (121 SSU) @ 40°C (104°F)



(for bodies style and sizes see section "Accessories")

**ORDERING INFORMATION**

Approximate Coil Weight: .47 lbs (.21 kg)

ET-P2A - - - -

**OPTIONS**

- Buna Standard **A0** Up to 65 l/min
- Buna, Screw Type Override (Knob) **AS** Up to 65 l/min
- Buna, Screw Type Override (Grad. Knob) **AK** Up to 65 l/min
  
- Buna Standard **B0** Up to 85 l/min
- Buna, Screw Type Override (Knob) **BS** Up to 85 l/min
- Buna, Screw Type Override (Grad. Knob) **BK** Up to 85 l/min
  
- Buna Standard **C0** Up to 110 l/min
- Buna, Screw Type Override (Knob) **CS** Up to 110 l/min
- Buna, Screw Type Override (Grad. Knob) **CK** Up to 110 l/min

**BODIES**

- Blank** Without Body
- N** 3/4" BSP Ports
- S** #8 SAE Ports

**VOLTAGE**

- 12** 12 VDC
- 24** 24 VDC

**"F" COIL TERMINATION**

- HC** DIN 43650 (Hirschmann)
- DI** Deutsch-Integral DT04-2P
- JT** AMP Jr. Timer

**NOTES:** 1) Flows refer to a 14 bar Delta P  
2) For other seals, consult factory

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**2 WAY NORMALLY OPEN PROPORTIONAL FLOW CONTROL VALVES**

| SPOOL TYPE | GPM | PSI  | LPM | BAR | CAVITY | MODEL         | PAGE |
|------------|-----|------|-----|-----|--------|---------------|------|
|            | 8   | 3500 | 30  | 241 | 7/8-14 | <b>EE-P2H</b> | PT38 |

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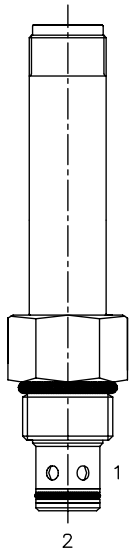


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**EE-P2H 2 WAY NORMALLY OPEN, PROPORTIONAL FLOW CONTROL VALVE**



**DESCRIPTION**

10 size, 7/8-14 thread, solenoid operated, 2 way normally open, proportional flow control valve.

**OPERATION**

When de-energized the EE-P2H allows flow from (1) to (2). When fully energized, the valve blocks flow at port (1) and (2). Flow is proportional to current applied to the coil. A compensator must be used to create a pressure compensated flow control function.

**OPERATION OF MANUAL OVERRIDE OPTION:** to override, turn the manual override screw clockwise. To release turn the manual override screw counterclockwise.

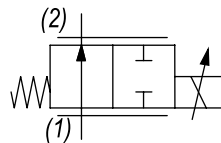
**FEATURES**

- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Industry common cavity.
- Unitized, molded coil design.
- Continuous duty rated solenoid.
- Optional coil voltages and terminations.



Curve is attained with Tecnord QC-CP3 compensator at with various settings.

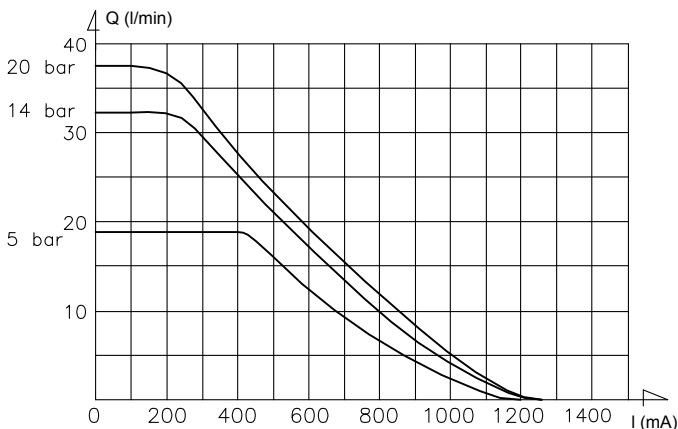
**HYDRAULIC SYMBOL**



**PERFORMANCE**

**Flow (l/min) vs. Current (mA)**

Coil 12 VDC - Delta P = 5, 14, 20 bar; Toil = 40°C



**VALVE SPECIFICATIONS**

|  |                                 |
|--|---------------------------------|
| Flow Range                                   | See curve                       |
| Max System Pressure                          | 3500 PSI (241 bar)              |
| Leakage                                      | Max 100 cc/min at 245 bar       |
| Hysteresis                                   | ±4%                             |
| Viscosity Range                              | 36 to 3000 SSU (3 to 647 cSt)   |
| Filtration                                   | ISO 18/16/13                    |
| Media Operating Temp. Range                  | -30°C / +100°C                  |
| Weight                                       | .58 lbs (.26 kg)                |
| Operating Fluid Media                        | General Purpose Hydraulic Fluid |
| Cartridge Torque Requirements                | 26 ft-lbs (35 Nm)               |
| Coil Nut Torque Requirements                 | 2-3 ft-lbs (3-4 Nm)             |
| Cavity                                       | DELTA 2W                        |
| Cavity Tools Kit<br>(form tool, reamer, tap) | 40500000                        |
| Seal Kit                                     | 21191200                        |

**COIL SPECIFICATIONS**

|                                |                              |
|--------------------------------|------------------------------|
| Current Supply Characteristics | PWM (Pulse Width Modulation) |
| Rated Current Range            | 400-1400 mA                  |
| PWM or Super-Imposed           |                              |
| Dither Frequency               | 100-150 Hz                   |
| Coil Resistance (12 VDC)       | 7.2 Ohm ±5% at 68°F (20°C)   |

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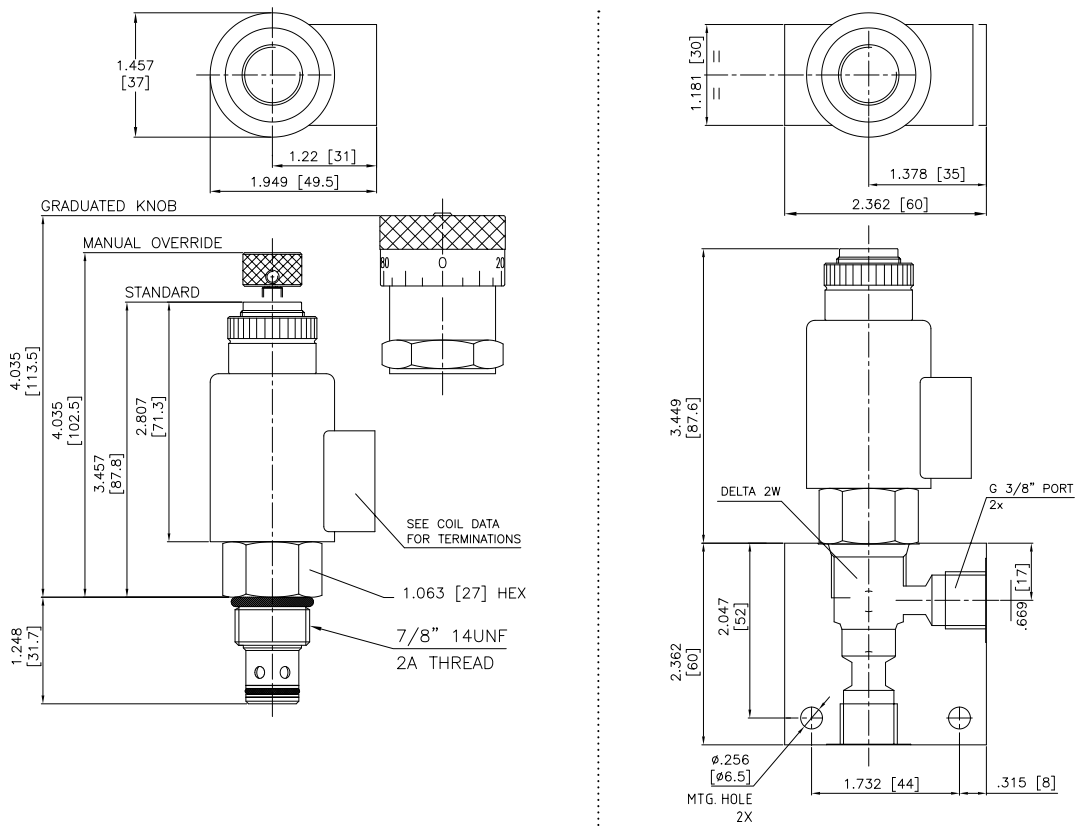


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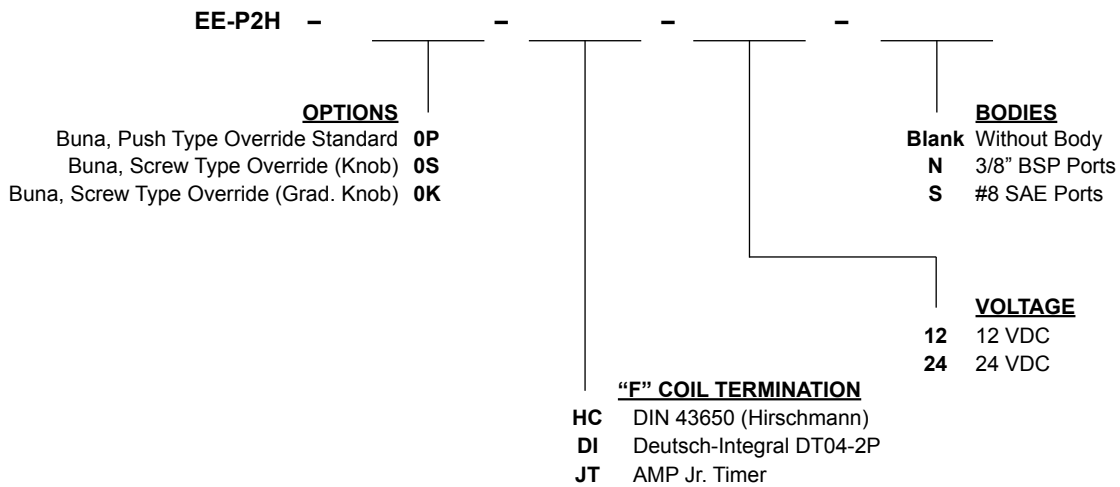
**DIMENSIONS**



(for bodies style and sizes see section "Accessories")

**ORDERING INFORMATION**

Approximate Coil Weight: .47 lbs (.21 kg)



**NOTES:** for other seals, consult factory.

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**2 WAY NORMALLY CLOSED PRESSURE COMPENSATED PROPORTIONAL FLOW REGULATOR VALVES**

| POPPET TYPE | GPM | PSI  | LPM | BAR | CAVITY  | MODEL         | PAGE |
|-------------|-----|------|-----|-----|---------|---------------|------|
|             | 12  | 3500 | 45  | 241 | 7/8-14  | <b>EG-F2A</b> | PT42 |
|             | 12  | 3500 | 100 | 241 | 1/16-12 | <b>EU-F2A</b> | PT44 |

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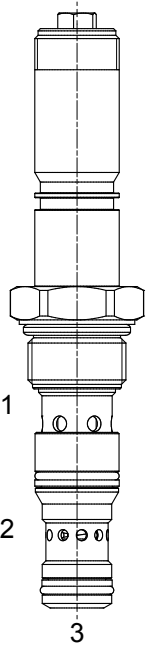


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**EG-F2A 2 WAY PRESSURE COMPENSATED PROPORTIONAL FLOW REGULATOR**



**DESCRIPTION**

10 size, 7/8-14 thread, "Delta" series, solenoid operated, normally closed, poppet style, restrictive type 2 ways pressure compensated proportional flow regulator.

**OPERATION**

EG-F2A maintains a constant flow rate out of (2) regardless of load pressure variations in the circuit downstream of (1). When coil is not energized, there is no regulated flow out of (2). The valve begins to respond to load variations when the flow through the valve creates a pressure differential across the control spool.

Reverse flow from (2) to (1) returns through the control spool and is not compensated.

**OPERATION OF MANUAL OVERRIDE OPTION:** to override, turn the manual override screw counterclockwise. To release turn the manual override screw clockwise.

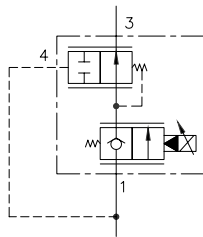
**FEATURES**

- Hardened parts for long-life.
- Industry common cavity.
- Excellent linearity and low hysteresis characteristics.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations available.
- Unitized, molded coil design.
- Continuous duty rated solenoid.



Port (1) must be connected in the manifold to port (3).

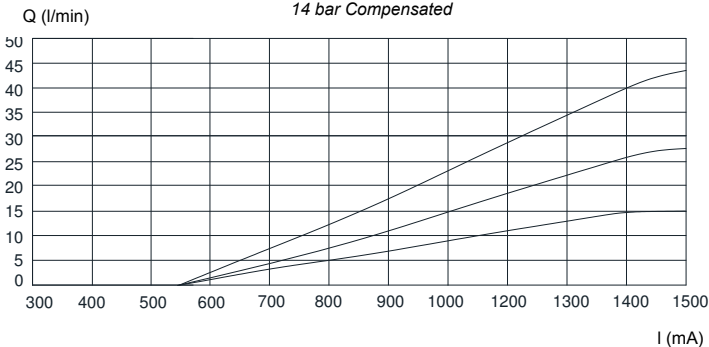
**HYDRAULIC SYMBOL**



**PERFORMANCE**

Flow (l/min) vs. Current (mA - PWM @ 100 Hz)

14 bar Compensated



**VALVE SPECIFICATIONS**

|   |                                 |
|---|---------------------------------|
| Flow Range                                | See curves for various versions |
| Max System Pressure                       | 3500 PSI (241 bar)              |
| Leakage                                   | 0-10 drops / min @ 245 bar      |
| Hysteresis                                | ±5%                             |
| Viscosity Range                           | 36 to 3000 SSU (3 to 647 cSt)   |
| Filtration                                | ISO 18/16/13                    |
| Media Operating Temp. Range               | -30°C / +100°C                  |
| Operating Fluid Media                     | General Purpose Hydraulic Fluid |
| Cartridge Torque Requirements             | 30 ft-lbs (41 Nm)               |
| Coil Nut Torque Requirements              | 2-3 ft-lbs (3-4 Nm)             |
| Cavity                                    | DELTA 4W                        |
| Cavity Tools Kit (form tool, reamer, tap) | 40500002                        |

**COIL SPECIFICATIONS**

|                                |                              |
|--------------------------------|------------------------------|
| Current Supply Characteristics | PWM (Pulse Width Modulation) |
| Rated Current Range            | 400-1400 mA                  |
| PWM or Super-Imposed           |                              |
| Dither Frequency               | 100 Hz                       |
| Coil Resistance (12 VDC)       | 7.2 Ohm ±5% at 68°F (20°C)   |

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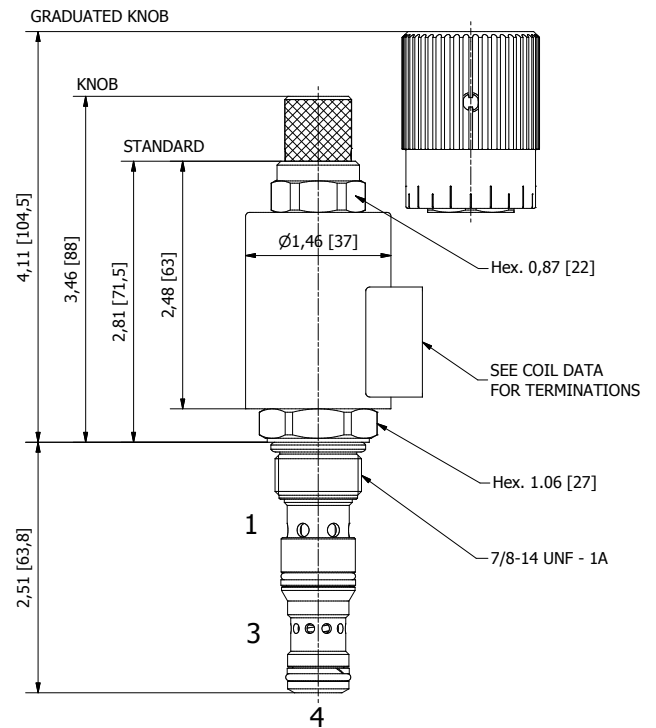
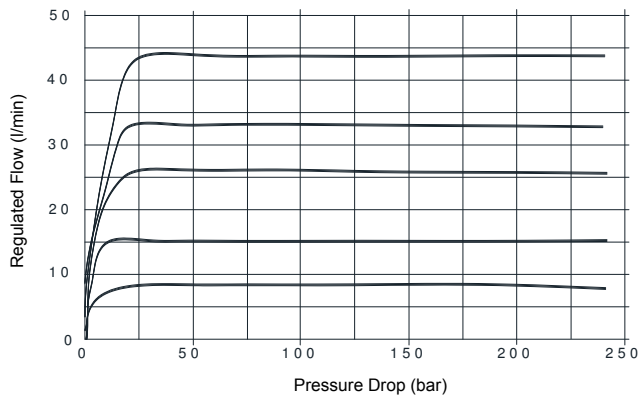


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**DIMENSIONS**

**Regulated Flow vs. Pressure**

Coil 12 VDC - 130 Hz PWM - Oil 26 cSt (121 SSU) @ 50°C (104°F)



(for bodies style and sizes see section "Accessories")

**ORDERING INFORMATION**

Approximate Coil Weight: .47 lbs (.21 kg)

**EG-F2A - - - -**

**OPTIONS**

- Buna Standard **A0** Up to 15 l/min
- Buna, Screw Type Override (Knob) **AS** Up to 15 l/min
- Buna, Screw Type Override (Grad. Knob) **AK** Up to 15 l/min
  
- Buna Standard **B0** Up to 30 l/min
- Buna, Screw Type Override (Knob) **BS** Up to 30 l/min
- Buna, Screw Type Override (Grad. Knob) **BK** Up to 30 l/min
  
- Buna Standard **C0** Up to 45 l/min
- Buna, Screw Type Override (Knob) **CS** Up to 45 l/min
- Buna, Screw Type Override (Grad. Knob) **CK** Up to 45 l/min

**BODIES**

- Blank** Without Body
- N** 3/8" BSP Ports
- S** #6 SAE Ports

**VOLTAGE**

- 12** 12 VDC
- 24** 24 VDC

**"F" COIL TERMINATION**

- HC** DIN 43650 (Hirschmann)
- DI** Deutsch-Integral DT04-2P
- JT** AMP Jr. Timer

**NOTES:** for other seals, consult factory.

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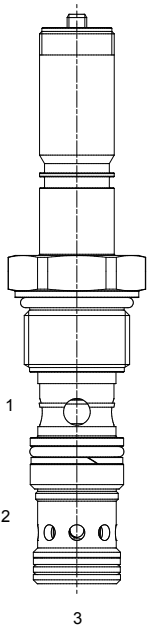


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**EU-F2A 2 WAY PRESSURE COMPENSATED PROPORTIONAL FLOW REGULATOR**



**DESCRIPTION**

12 size, 1" 1/16-12 thread, "Tecnord" series, solenoid operated, normally closed, poppet style, restrictive type 2 ways pressure compensated proportional flow regulator.

**OPERATION**

EU-F2A maintains a constant flow rate out of (2) regardless of load pressure variations in the circuit downstream of (1). When coil is not energized, there is no regulated flow out of (2). The valve begins to respond to load variations when the flow through the valve creates a pressure differential across the control spool.

Reverse flow from (2) to (1) returns through the control spool and is not compensated. The manual override increases flow by counter-clockwise rotation of the manual override knob.

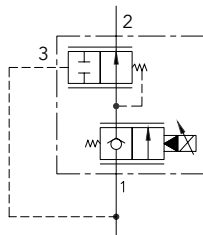
**FEATURES**

- Hardened parts for long-life.
- Industry common cavity.
- Excellent linearity and low hysteresis characteristics.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations available.
- Unitized, molded coil design.
- Continuous duty rated solenoid.



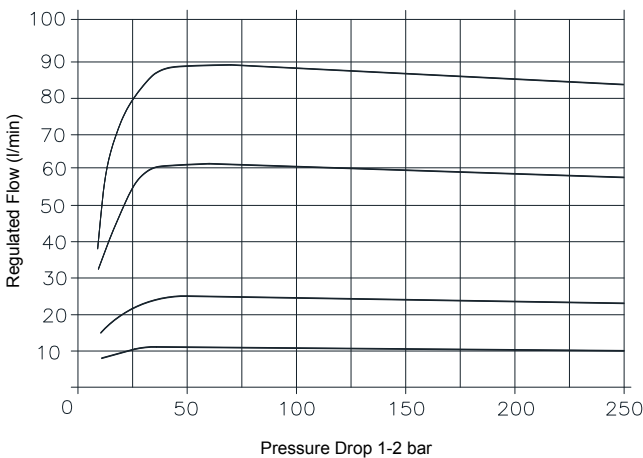
Port (1) must be connected in the manifold to port (3).

**HYDRAULIC SYMBOL**



**PERFORMANCE**

**Regulated Flow vs. Pressure**



**VALVE SPECIFICATIONS**

|  |                                 |
|--|---------------------------------|
| Flow Range                                   | See curves for various versions |
| Max System Pressure                          | 3500 PSI (241 bar)              |
| Leakage                                      | 0-10 drops / min @ 245 bar      |
| Hysteresis                                   | ±5%                             |
| Viscosity Range                              | 36 to 3000 SSU (3 to 647 cSt)   |
| Filtration                                   | ISO 18/16/13                    |
| Media Operating Temp. Range                  | -30°C / +100°C                  |
| Weight                                       | .72 lbs (.32 kg)                |
| Operating Fluid Media                        | General Purpose Hydraulic Fluid |
| Cartridge Torque Requirements                | 37 ft-lbs (50 Nm)               |
| Coil Nut Torque Requirements                 | 2-3 ft-lbs (3-4 Nm)             |
| Cavity                                       | TECNORD 3W                      |
| Cavity Tools Kit<br>(form tool, reamer, tap) | 40500034                        |

**COIL SPECIFICATIONS**

|                                |                              |
|--------------------------------|------------------------------|
| Current Supply Characteristics | PWM (Pulse Width Modulation) |
| Rated Current Range            | 500-1400 mA                  |
| PWM or Super-Imposed           |                              |
| Dither Frequency               | 100 Hz                       |
| Coil Resistance (12 VDC)       | 7.2 Ohm ±5% at 68°F (20°C)   |

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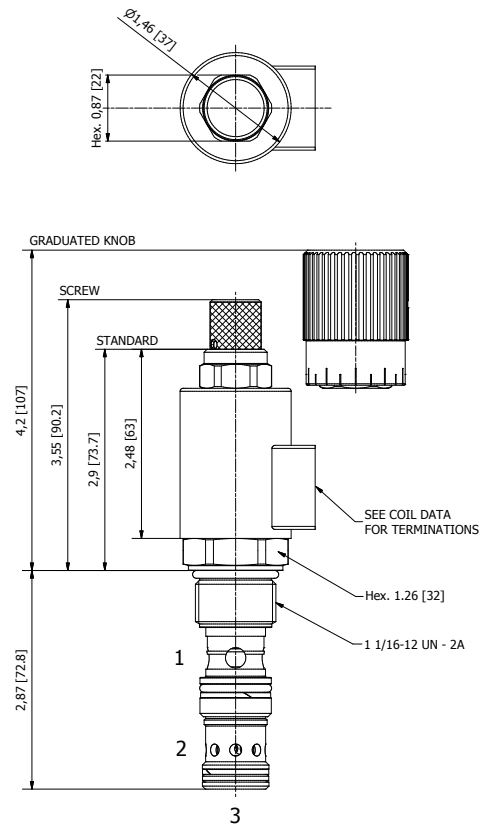
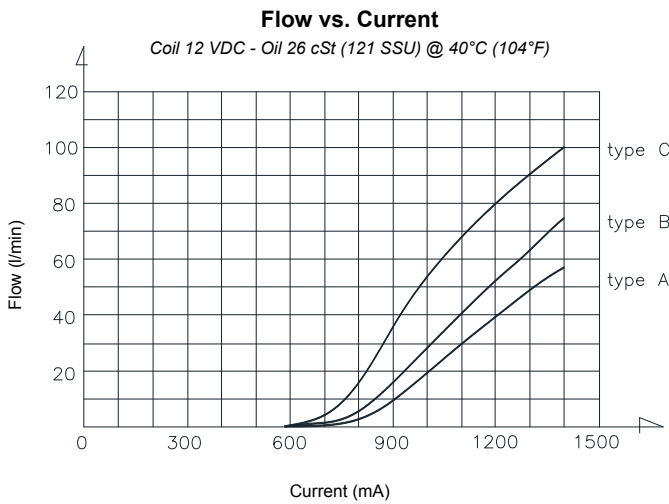


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**DIMENSIONS**



(for bodies style and sizes see section "Accessories")

**ORDERING INFORMATION**

Approximate Coil Weight: .47 lbs (.21 kg)

**EU-F2A - - - -**

**OPTIONS**

- Buna Standard **A0** Up to 55 l/min
- Buna, Screw Type Override (Knob) **AS** Up to 55 l/min
- Buna, Screw Type Override (Grad. Knob) **AK** Up to 55 l/min
  
- Buna Standard **B0** Up to 75 l/min
- Buna, Screw Type Override (Knob) **BS** Up to 75 l/min
- Buna, Screw Type Override (Grad. Knob) **BK** Up to 75 l/min
  
- Buna Standard **C0** Up to 100 l/min
- Buna, Screw Type Override (Knob) **CS** Up to 100 l/min
- Buna, Screw Type Override (Grad. Knob) **CK** Up to 100 l/min

**BODIES**

- Blank** Without Body
- N** 3/4" BSP Ports
- S** #8 SAE Ports

**VOLTAGE**

- 12** 12 VDC
- 24** 24 VDC

**"F" COIL TERMINATION**

- HC** DIN 43650 (Hirschmann)
- DI** Deutsch-Integral DT04-2P
- JT** AMP Jr. Timer

**NOTES:** for other seals, consult factory.

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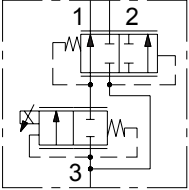


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**3 WAY NORMALLY CLOSED PRESSURE COMPENSATED PROPORTIONAL FLOW REGULATOR VALVES**

| SPOOL TYPE  | GPM | PSI  | LPM | BAR | CAVITY  | MODEL         | PAGE |
|---|-----|------|-----|-----|---------|---------------|------|
|  | 6   | 3500 | 22  | 241 | 7/8-14  | <b>EF-F3G</b> | PT48 |
|   | 16  | 3500 | 60  | 241 | 1/16-12 | <b>EU-F3G</b> | PT50 |

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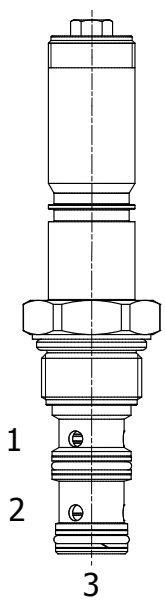


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**EF-F3G 3 WAY PRESSURE COMPENSATED PRIORITY TYPE PROP. FLOW REGULATOR**



**DESCRIPTION**

10 size, 7/8-14 thread, "Delta" series, solenoid operated, normally closed, spool style, 3 ways priority type pressure compensated proportional flow regulator. It can also be used as a restrictive-type 2 way, pressure-compensated flow regulator when the bypass line (port 2) is blocked.

**OPERATION**

EF-F3G maintains a constant flow rate out of (1) regardless of load pressure variations in the circuit downstream of (3) and regardless bypass pressure variations in the circuit downstream of (2). Excess flow bypasses out of (2). When coil is not energized, there is no regulated flow out of (1).

**OPERATION OF MANUAL OVERRIDE OPTION:** to override, turn the manual override screw counterclockwise. To release turn the manual override screw clockwise.

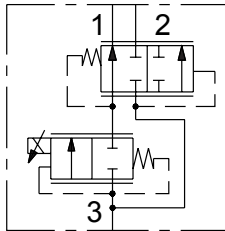
**FEATURES**

- Hardened parts for long-life.
- Industry common cavity.
- Excellent linearity and low hysteresis characteristics.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations available.
- Unitized, molded coil design.
- Continuous duty rated solenoid.



*It can be used as a restrictive 2-way pressure-compensated flow control valve, blocking bypass line port (2)*

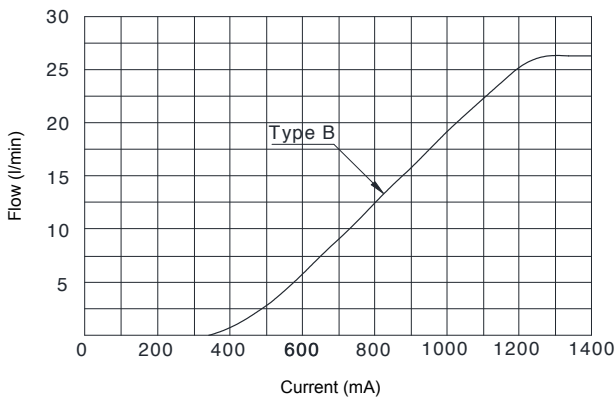
**HYDRAULIC SYMBOL**



**PERFORMANCE**

**Flow vs. Current**

Coil 12 VDC - 130 Hz PWM - Oil 26 cSt (121 SSU) @ 50°C (104°F)



**VALVE SPECIFICATIONS**

|  |   |
|--|---|
| Flow Range                                   | See curves for various versions                 |
| Max System Pressure                          | 3500 PSI (241 bar)                              |
| Leakage                                      | 10 cu-in/min @ 3000 PSI<br>160 cc/min @ 207 bar |
| Hysteresis                                   | ±5%   |
| Viscosity Range                              | 36 to 3000 SSU (3 to 647 cSt)                   |
| Filtration                                   | ISO 18/16/13                                    |
| Media Operating Temp. Range                  | -30°C / +100°C                                  |
| Weight                                       | .49 lbs (.22 kg)                                |
| Operating Fluid Media                        | General Purpose Hydraulic Fluid                 |
| Cartridge Torque Requirements                | 30 ft-lbs (41 Nm)                               |
| Coil Nut Torque Requirements                 | 2-3 ft-lbs (3-4 Nm)                             |
| Cavity                                       | DELTA 3W  |
| Cavity Tools Kit<br>(form tool, reamer, tap) | 40500001  |

**COIL SPECIFICATIONS**

|                                |                              |
|--------------------------------|------------------------------|
| Current Supply Characteristics | PWM (Pulse Width Modulation) |
| Rated Current Range            | 400-1400 mA                  |
| PWM or Super-Imposed           |                              |
| Dither Frequency               | 120-140 Hz                   |
| Coil Resistance (12 VDC)       | 7.2 Ohm ±5% at 68°F (20°C)   |

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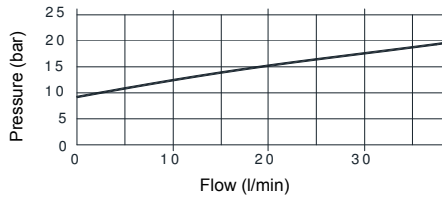


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**DIMENSIONS**

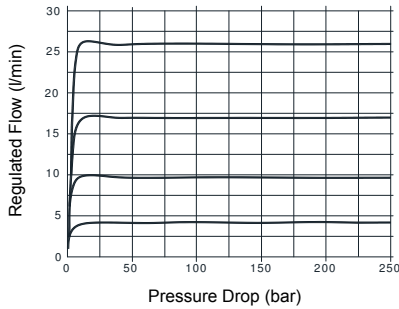
**Pressure Drop 3→2 (bar)**

Oil 26 cSt (121 SSU) @ 50°C (104°F)



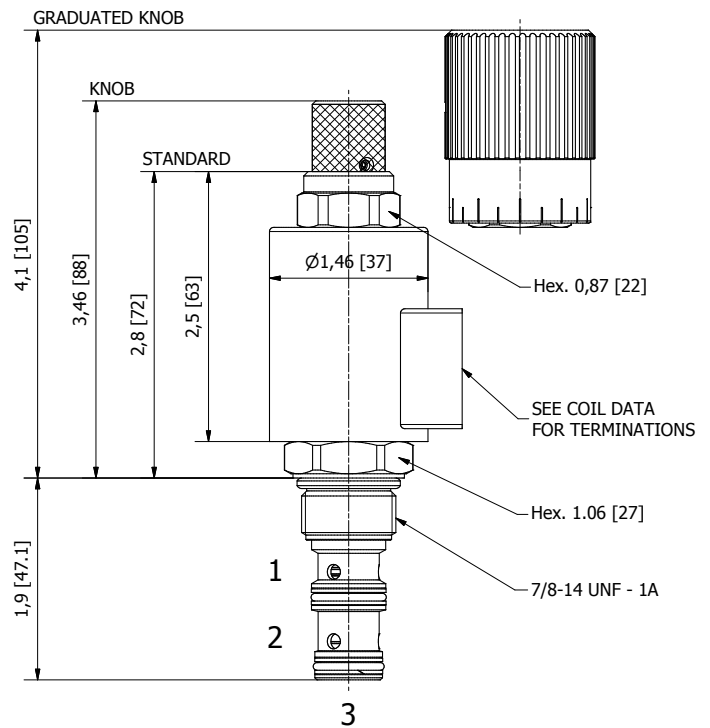
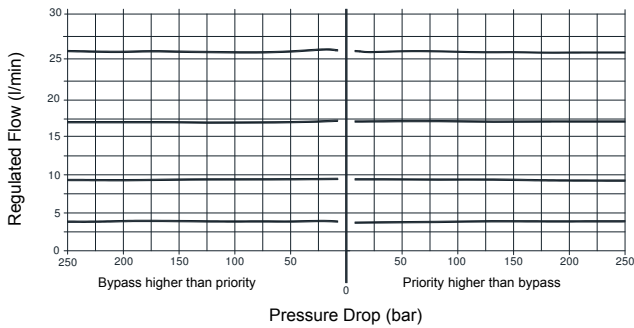
**Regulated Flow vs. Pressure**

2 WAYS - Coil 12 VDC - 130 Hz PWM - Oil 26 cSt (121 SSU) @ 50°C (104°F)



**Pres. Compensation from Inlet to Work Port or Bypass Port**

3 WAYS - Coil 12 VDC - 130 Hz PWM - Oil 26 cSt (121 SSU) @ 50°C (104°F)



(for bodies style and sizes see section "Accessories")

**ORDERING INFORMATION**

Approximate Coil Weight: .47 lbs (.21 kg)

**EF-F3G**

- OPTIONS**
- Buna Standard **B0** Up to 25 l/min
  - Buna, Screw Type Override (Knob) **BS** Up to 25 l/min
  - Buna, Screw Type Override (Grad. Knob) **BK** Up to 25 l/min

- BODIES**
- Blank Without Body
  - N** 3/8" BSP Ports
  - S** #6 SAE Ports

- "F" COIL TERMINATION**
- HC** DIN 43650 (Hirschmann)
  - DI** Deutsch-Integral DT04-2P
  - JT** AMP Jr. Timer
- VOLTAGE**
- 12** 12 VDC
  - 24** 24 VDC

**NOTES:** 1) For other flow settings, consult factory.  
2) For other seals, consult factory.

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**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.

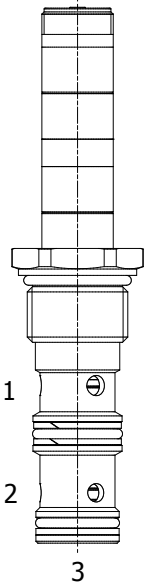


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**EU-F3G 3 WAY PRESSURE COMPENSATED PRIORITY TYPE PROP. FLOW REGULATOR**



**DESCRIPTION**

12 size, 1" 1/16-12 thread, "Tecnom" series, solenoid operated, normally closed, spool style, 3 ways priority type pressure compensated proportional flow regulator. It can also be used as a restrictive-type 2 way, pressure-compensated flow regulator when the bypass line (port 2) is blocked.

**OPERATION**

EU-F3G maintains a constant flow rate out of (1) regardless of load pressure variations in the circuit downstream of (3) and regardless bypass pressure variations in the circuit downstream of (2). Excess flow bypasses out of (2). When coil is not energized, there is no regulated flow out of (1).

**OPERATION OF MANUAL OVERRIDE OPTION:** to override, turn the manual override screw counterclockwise. To release turn the manual override screw clockwise.

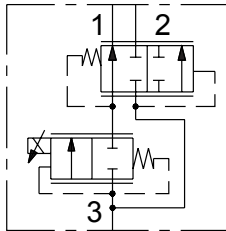
**FEATURES**

- Hardened parts for long-life.
- Industry common cavity.
- Excellent linearity and low hysteresis characteristics.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations available.
- Unitized, molded coil design.
- Continuous duty rated solenoid.



*It can be used as a restrictive 2-way pressure-compensated flow control valve, blocking bypass line port (2)*

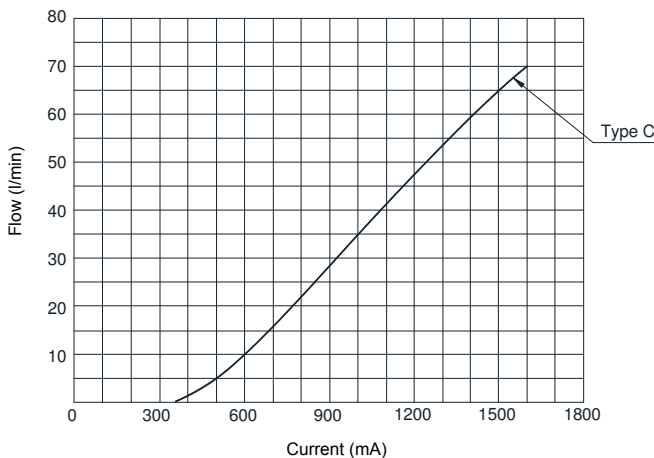
**HYDRAULIC SYMBOL**



**PERFORMANCE**

**Flow vs. Current**

Coil 12 VDC - 130 Hz PWM - Oil 26 cSt (121 SSU) @ 50°C (104°F)



**VALVE SPECIFICATIONS**

|  |   |
|--|---|
| Flow Range                                   | See curves for various versions                   |
| Max System Pressure                          | 3500 PSI (241 bar)                                |
| Leakage                                      | 15.7 cu-in/min @ 3000 PSI<br>250 cc/min @ 207 bar |
| Hysteresis                                   | ±5%   |
| Viscosity Range                              | 36 to 3000 SSU (3 to 647 cSt)                     |
| Filtration                                   | ISO 18/16/13                                      |
| Media Operating Temp. Range                  | -30°C / +100°C                                    |
| Weight                                       | .75 lbs (.34 kg)                                  |
| Operating Fluid Media                        | General Purpose Hydraulic Fluid                   |
| Cartridge Torque Requirements                | 37 ft-lbs (50 Nm)                                 |
| Coil Nut Torque Requirements                 | 2-3 ft-lbs (3-4 Nm)                               |
| Cavity                                       | TECNORD 3W  |
| Cavity Tools Kit<br>(form tool, reamer, tap) | 40500034  |

**COIL SPECIFICATIONS**

|                                |                              |
|--------------------------------|------------------------------|
| Current Supply Characteristics | PWM (Pulse Width Modulation) |
| Rated Current Range            | 400-1400 mA                  |
| PWM or Super-Imposed           |                              |
| Dither Frequency               | 120-140 Hz                   |
| Coil Resistance (12 VDC)       | 7.2 Ohm ±5% at 68°F (20°C)   |

**WARNING:** the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.



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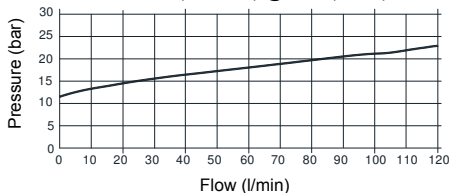


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**DIMENSIONS**

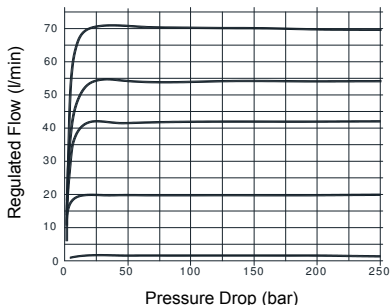
**Pressure Drop 3→2 (bar)**

Oil 26 cSt (121 SSU) @ 50°C (104°F)



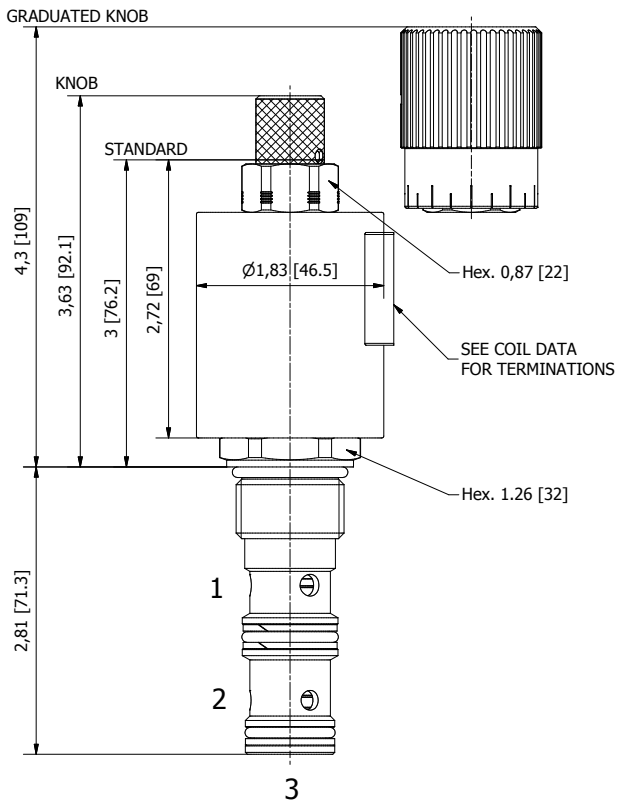
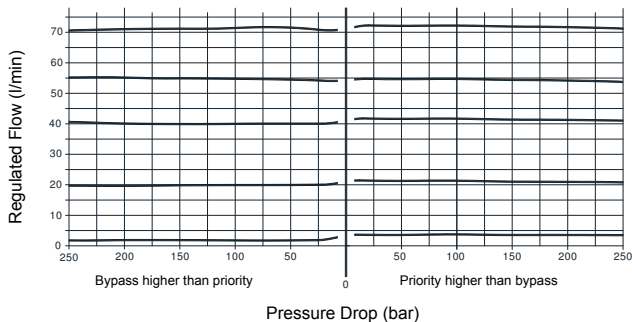
**Regulated Flow vs. Pressure**

2 WAYS - Coil 12 VDC - 130 Hz PWM - Oil 26 cSt (121 SSU) @ 50°C (104°F)



**Pres. Compensation from Inlet to Work Port or Bypass Port**

3 WAYS - Coil 12 VDC - 130 Hz PWM - Oil 26 cSt (121 SSU) @ 50°C (104°F)



(for bodies style and sizes see section "Accessories")

**ORDERING INFORMATION**

Approximate Coil Weight: .47 lbs (.21 kg)

**EU-F3G**

**OPTIONS**  
 Buna Standard **C0** Up to 60 l/min  
 Buna, Screw Type Override (Knob) **CS** Up to 60 l/min  
 Buna, Screw Type Override (Grad. Knob) **CK** Up to 60 l/min

**BODIES**  
**Blank** Without Body  
**N** 3/4" BSP Ports  
**S** #8 SAE Ports

**"Z" COIL TERMINATION**  
**HC** DIN 43650 (Hirschmann)  
**DI** Deutsch-Integral DT04-2P  
**JT** AMP Jr. Timer

**VOLTAGE**  
**12** 12 VDC  
**24** 24 VDC

**NOTES:** 1) For other flow settings, consult factory.  
 2) For other seals, consult factory.

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**4W/3P PROPORTIONAL DIRECTIONAL CONTROL VALVES**

| MOTOR SPOOL TYPE | GPM | PSI  | LPM | BAR | CAVITY | MODEL         | PAGE |
|------------------|-----|------|-----|-----|--------|---------------|------|
|                  | 3   | 3500 | 12  | 241 | 3/4-16 | <b>EQ-S4M</b> | PT54 |
|                  | 6   | 3500 | 23  | 241 | 7/8-14 | <b>EG-S4M</b> | PT56 |

| CYLINDER SPOOL TYPE | GPM | PSI  | LPM | BAR | CAVITY | MODEL         | PAGE |
|---------------------|-----|------|-----|-----|--------|---------------|------|
|                     | 3   | 3500 | 12  | 241 | 3/4-16 | <b>EQ-S4P</b> | PT58 |
|                     | 6   | 3500 | 23  | 241 | 7/8-14 | <b>EG-S4P</b> | PT60 |

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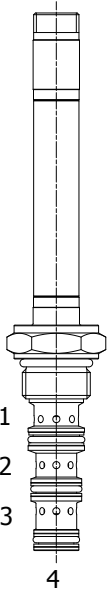


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**EQ-S4M 4 WAY 3 POSITION, MOTOR SPOOL, PROPORTIONAL DIRECTIONAL VALVE**



**DESCRIPTION**

8 size, 3/4-16 thread, "Power" series, solenoid operated, 4 way 3 position, Motor Spool, proportional directional valve.

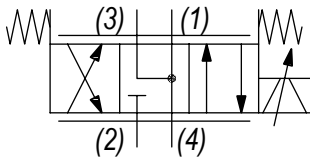
**OPERATION**

EQ-S4M, when de-energized, blocks flow at (2) and allows flow between (1), (3) and (4). When coil (S1) is energized, flow is allowed from (3) to (4), and from (2) to (1). When coil (S2) is energized, flow is allowed from (3) to (2), and from (4) to (1). Flow is proportional to the current applied to the coil. A compensator must be used to create a pressure compensated flow control function.

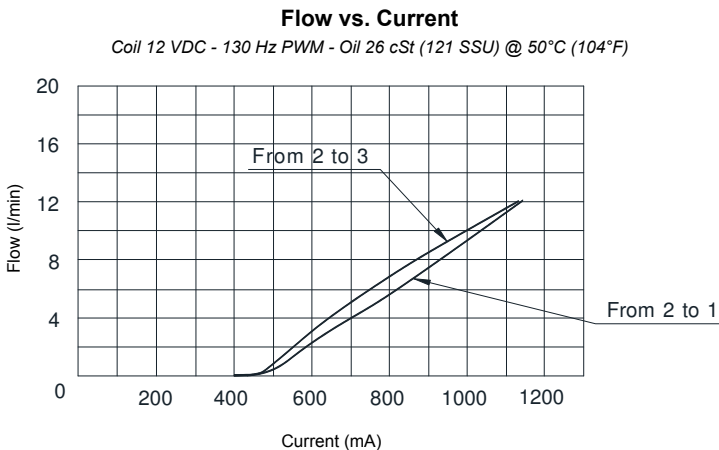
**FEATURES**

- Hardened parts for long-life.
- Industry common cavity.
- Excellent linearity and low hysteresis characteristics.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations available.
- Unitized, molded coil design.
- Continuous duty rated solenoid.

**HYDRAULIC SYMBOL**



**PERFORMANCE**



**VALVE SPECIFICATIONS**

|  |  |
|--|--|
| Flow Range                                   | See curves for various versions          |
| Max System Pressure                          | 3500 PSI (241 bar)                       |
| Leakage                                      | 10 cu-in/min<br>160 cc/min bar @ 210 bar |
| Hysteresis                                   | ±5%                                      |
| Viscosity Range                              | 36 to 3000 SSU (3 to 647 cSt)            |
| Filtration                                   | ISO 18/16/13                             |
| Media Operating Temp. Range                  | -30°C / +100°C                           |
| Operating Fluid Media                        | General Purpose Hydraulic Fluid          |
| Cartridge Torque Requirements                | 18 ft-lbs (26 Nm)                        |
| Coil Nut Torque Requirements                 | 2-3 ft-lbs (3-4 Nm)                      |
| Cavity                                       | POWER 4W                                 |
| Cavity Tools Kit<br>(form tool, reamer, tap) | 40500029                                 |

**COIL SPECIFICATIONS**

|                                |                              |
|--------------------------------|------------------------------|
| Current Supply Characteristics | PWM (Pulse Width Modulation) |
| Rated Current Range            | 400-1400 mA                  |
| PWM or Super-Imposed           |                              |
| Dither Frequency               | 100-200 Hz                   |
| Coil Resistance (12 VDC)       | 6.85 Ohm ±5% at 68°F (20°C)  |

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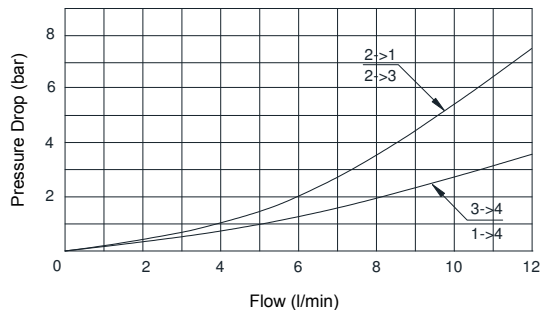


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**DIMENSIONS**

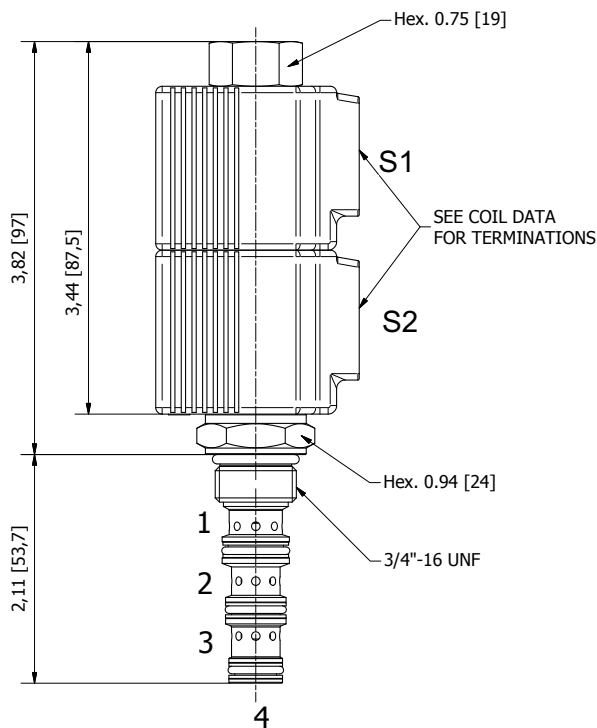
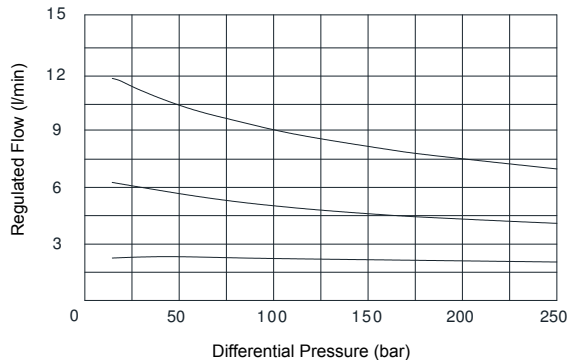
**Pressure Drop vs. Flow**

Coil 12 VDC - 130 Hz PWM - Oil 26 cSt (121 SSU) @ 50°C (104°F)



**Pressure Compensation from Inlet to Work Port**

Coil 12 VDC - 130 Hz PWM - Oil 26 cSt (121 SSU) @ 50°C (104°F)



(for bodies style and sizes see section "Accessories")

**ORDERING INFORMATION**

Approximate Coil Weight: .47 lbs (.21 kg)

**EQ-S4M - - - -**

**OPTIONS**

Buna Standard **B0** Up to 8 l/min  
 Buna Standard **C0** Up to 12 l/min

**BODIES**

**Blank** Without Body  
**N** 3/8" BSP Ports  
**S** #6 SAE Ports

**VOLTAGE**

**12** 12 VDC  
**24** 24 VDC

**"PJ" COIL TERMINATION**

**JH** DIN 43650 (Hirschmann)  
**JD** Deutsch-Integral DT04-2P  
**JA** AMP Superseal  
**JJ** AMP Jr. Timer

**NOTES:** for other seals, consult factory.

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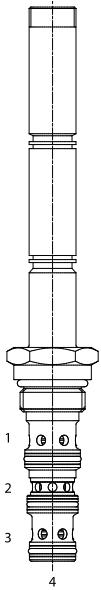


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**EG-S4M 4 WAY 3 POSITION, MOTOR SPOOL, PROPORTIONAL DIRECTIONAL VALVE**



**DESCRIPTION**

10 size, 7/8-14 thread, "Delta" series, solenoid operated, 4 way 3 position, Motor Spool, proportional directional valve.

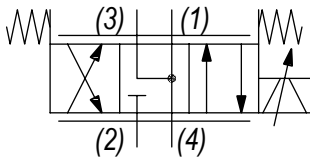
**OPERATION**

EG-S4M, when de-energized, blocks flow at (2) and allows flow between (1), (3) and (4). When coil (S1) is energized, flow is allowed from (3) to (4), and from (2) to (1). When coil (S2) is energized, flow is allowed from (3) to (2), and from (4) to (1). Flow is proportional to the current applied to the coil. A compensator must be used to create a pressure compensated flow control function.

**FEATURES**

- Hardened parts for long-life.
- Industry common cavity.
- Excellent linearity and low hysteresis characteristics.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations available.
- Unitized, molded coil design.
- Continuous duty rated solenoid.

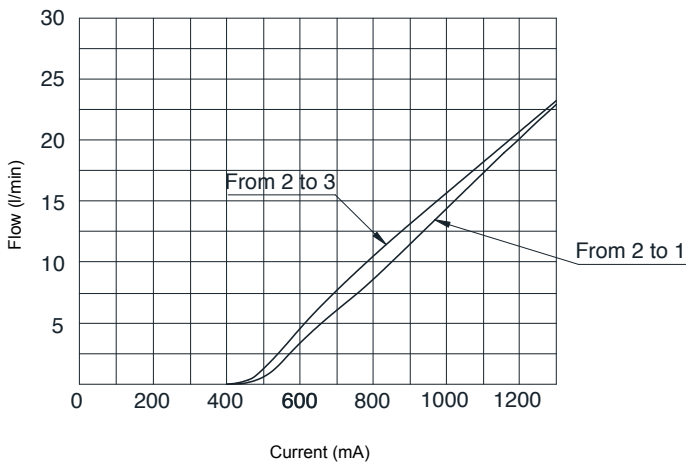
**HYDRAULIC SYMBOL**



**PERFORMANCE**

**Flow vs. Current**

Coil 12 VDC - 130 Hz PWM - Oil 26 cSt (121 SSU) @ 50°C (104°F)



**VALVE SPECIFICATIONS**

|  |  |
|--|--|
| Flow Range                                   | See curves for various versions          |
| Max System Pressure                          | 3500 PSI (241 bar)                       |
| Leakage                                      | 15 cu-in/min<br>250 cc/min bar @ 210 bar |
| Hysteresis                                   | ±5%                                      |
| Viscosity Range                              | 36 to 3000 SSU (3 to 647 cSt)            |
| Filtration                                   | ISO 18/16/13                             |
| Media Operating Temp. Range                  | -30°C / +100°C                           |
| Operating Fluid Media                        | General Purpose Hydraulic Fluid          |
| Cartridge Torque Requirements                | 25 ft-lbs (34 Nm)                        |
| Coil Nut Torque Requirements                 | 2-3 ft-lbs (3-4 Nm)                      |
| Cavity                                       | DELTA 4W                                 |
| Cavity Tools Kit<br>(form tool, reamer, tap) | 40500002                                 |

**COIL SPECIFICATIONS**

|                                |                              |
|--------------------------------|------------------------------|
| Current Supply Characteristics | PWM (Pulse Width Modulation) |
| Rated Current Range            | 400-1400 mA                  |
| PWM or Super-Imposed           |                              |
| Dither Frequency               | 100-200 Hz                   |
| Coil Resistance (12 VDC)       | 7.2 Ohm ±5% at 68°F (20°C)   |

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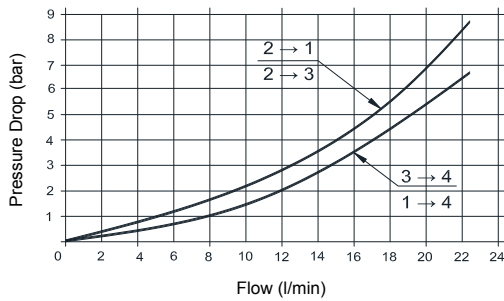


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**DIMENSIONS**

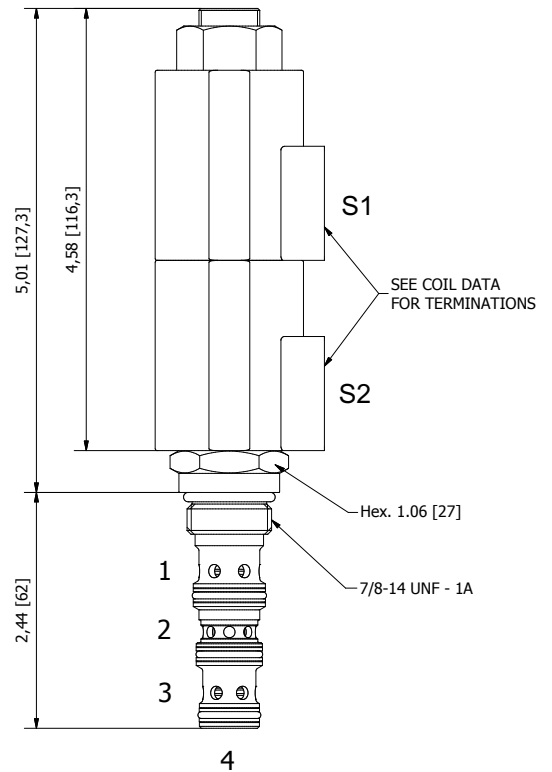
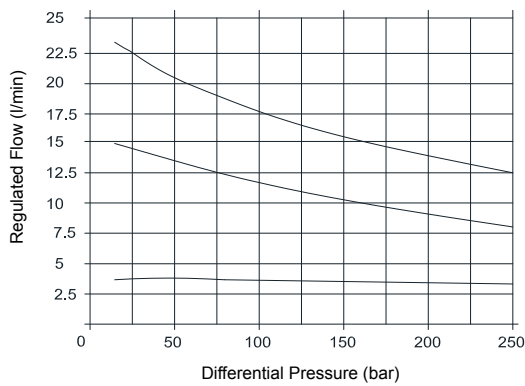
**Pressure Drop vs. Flow**

Coil 12 VDC - 130 Hz PWM - Oil 26 cSt (121 SSU) @ 50°C (104°F)



**Pressure Compensation from Inlet to Work Port**

Coil 12 VDC - 130 Hz PWM - Oil 26 cSt (121 SSU) @ 50°C (104°F)



(for bodies style and sizes see section "Accessories")

**ORDERING INFORMATION**

Approximate Coil Weight: .47 lbs (.21 kg)

**EG-S4M** - - - -

**OPTIONS**  
Buna Standard **B0** Up to 22 l/min

**BODIES**  
**Blank** Without Body  
**N** 3/8" BSP Ports  
**S** #6 SAE Ports

**VOLTAGE**  
**12** 12 VDC  
**24** 24 VDC

**"L" COIL TERMINATION**

**HC** DIN 43650 (Hirschmann)  
**DT** Deutsch-Integral DT04-2P

**NOTES:** for other seals, consult factory.

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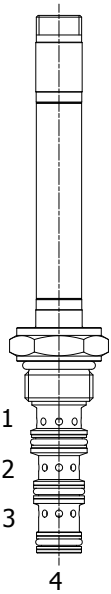


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**EQ-S4P 4 WAY 3 POSITION, CYLINDER SPOOL, PROPORTIONAL DIRECTIONAL VALVE**



**DESCRIPTION**

8 size, 3/4-16 thread, "Power" series, solenoid operated, 4 way 3 position, Cylinder Spool, proportional directional valve.

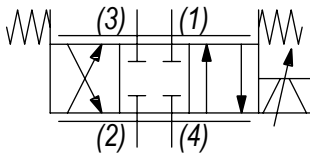
**OPERATION**

EQ-S4P, when de-energized, blocks flow to all ports. When coil (S1) is energized, flow is allowed from (3) to (4), and from (2) to (1). When coil (S2) is energized, flow is allowed from (3) to (2), and from (4) to (1). Flow is proportional to the current applied to the coil. A compensator must be used to create a pressure compensated flow control function.

**FEATURES**

- Hardened parts for long-life.
- Industry common cavity.
- Excellent linearity and low hysteresis characteristics.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations available.
- Unitized, molded coil design.
- Continuous duty rated solenoid.

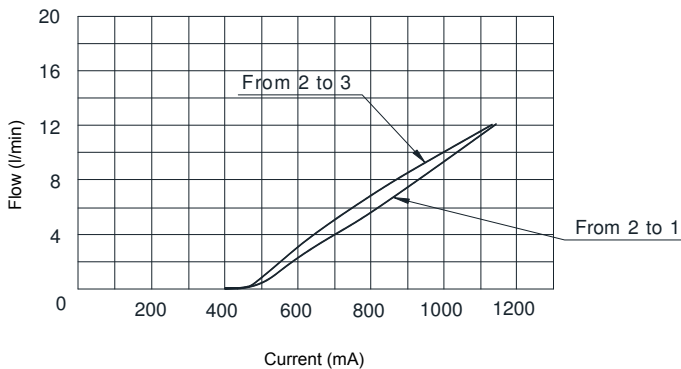
**HYDRAULIC SYMBOL**



**PERFORMANCE**

**Flow vs. Current**

Coil 12 VDC - 130 Hz PWM - Oil 26 cSt (121 SSU) @ 50°C (104°F)



**VALVE SPECIFICATIONS**

|  |  |
|--|--|
| Flow Range                                   | See curves for various versions          |
| Max System Pressure                          | 3500 PSI (241 bar)                       |
| Leakage                                      | 10 cu-in/min<br>160 cc/min bar @ 210 bar |
| Hysteresis                                   | ±5%                                      |
| Viscosity Range                              | 36 to 3000 SSU (3 to 647 cSt)            |
| Filtration                                   | ISO 18/16/13                             |
| Media Operating Temp. Range                  | -30°C / +100°C                           |
| Operating Fluid Media                        | General Purpose Hydraulic Fluid          |
| Cartridge Torque Requirements                | 18 ft-lbs (26 Nm)                        |
| Coil Nut Torque Requirements                 | 2-3 ft-lbs (3-4 Nm)                      |
| Cavity                                       | POWER 4W                                 |
| Cavity Tools Kit<br>(form tool, reamer, tap) | 40500029                                 |

**COIL SPECIFICATIONS**

|                                |                              |
|--------------------------------|------------------------------|
| Current Supply Characteristics | PWM (Pulse Width Modulation) |
| Rated Current Range            | 400-1400 mA                  |
| PWM or Super-Imposed           |                              |
| Dither Frequency               | 100-200 Hz                   |
| Coil Resistance (12 VDC)       | 6.85 Ohm ±5% at 68°F (20°C)  |

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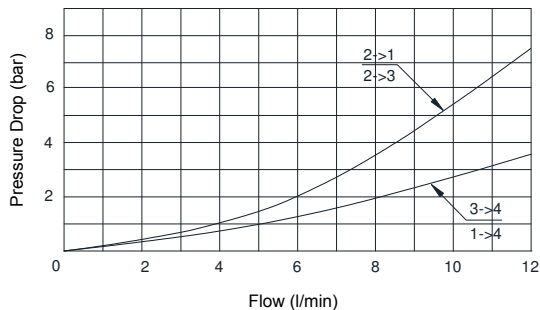


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**DIMENSIONS**

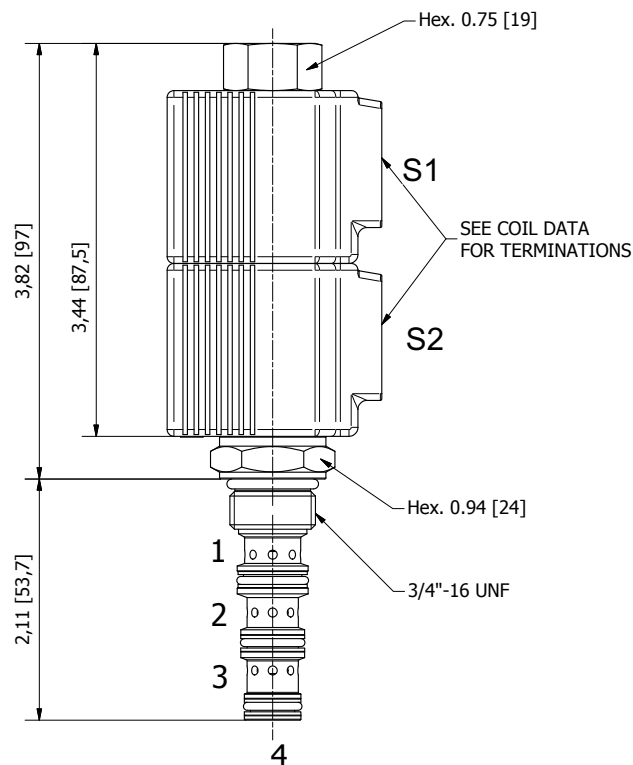
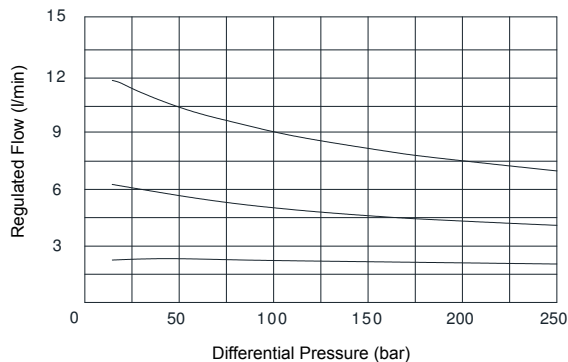
**Pressure Drop vs. Flow**

Coil 12 VDC - 130 Hz PWM - Oil 26 cSt (121 SSU) @ 50°C (104°F)



**Pressure Compensation from Inlet to Work Port**

Coil 12 VDC - 130 Hz PWM - Oil 26 cSt (121 SSU) @ 50°C (104°F)



(for bodies style and sizes see section "Accessories")

**ORDERING INFORMATION**

Approximate Coil Weight: .47 lbs (.21 kg)

**EQ-S4P - - - -**

**OPTIONS**

- Buna Standard **B0** Up to 8 l/min
- Buna Standard **C0** Up to 12 l/min

**BODIES**

- Blank** Without Body
- N** 3/8" BSP Ports
- S** #6 SAE Ports

**VOLTAGE**

- 12** 12 VDC
- 24** 24 VDC

**"PJ" COIL TERMINATION**

- JH** DIN 43650 (Hirschmann)
- JD** Deutsch-Integral DT04-2P
- JA** AMP Superseal
- JJ** AMP Jr. Timer

**NOTES:** for other seals, consult factory.

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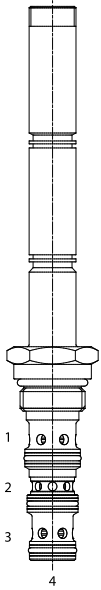


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**EG-S4P 4 WAY 3 POSITION, CYLINDER SPOOL, PROPORTIONAL DIRECTIONAL VALVE**



**DESCRIPTION**

10 size, 7/8-14 thread, "Delta" series, solenoid operated, 4 way 3 position, Cylinder Spool, proportional directional valve.

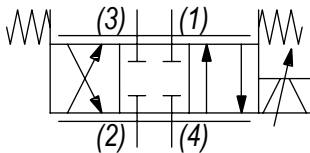
**OPERATION**

EG-S4P, when de-energized, blocks flow to all ports. When coil (S1) is energized, flow is allowed from (3) to (4), and from (2) to (1). When coil (S2) is energized, flow is allowed from (3) to (2), and from (4) to (1). Flow is proportional to the current applied to the coil. A compensator must be used to create a pressure compensated flow control function.

**FEATURES**

- Hardened parts for long-life.
- Industry common cavity.
- Excellent linearity and low hysteresis characteristics.
- Cartridges are voltage interchangeable.
- Optional coil voltages and terminations available.
- Unitized, molded coil design.
- Continuous duty rated solenoid.

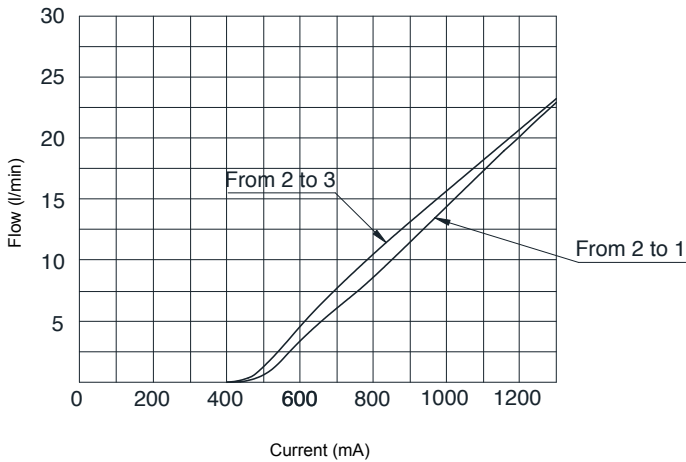
**HYDRAULIC SYMBOL**



**PERFORMANCE**

**Flow vs. Current**

Coil 12 VDC - 130 Hz PWM - Oil 26 cSt (121 SSU) @ 50°C (104°F)



**VALVE SPECIFICATIONS**

|  |  |
|--|--|
| Flow Range                                   | See curves for various versions          |
| Max System Pressure                          | 3500 PSI (241 bar)                       |
| Leakage                                      | 15 cu-in/min<br>250 cc/min bar @ 210 bar |
| Hysteresis                                   | ±5%                                      |
| Viscosity Range                              | 36 to 3000 SSU (3 to 647 cSt)            |
| Filtration                                   | ISO 18/16/13                             |
| Media Operating Temp. Range                  | -30°C / +100°C                           |
| Operating Fluid Media                        | General Purpose Hydraulic Fluid          |
| Cartridge Torque Requirements                | 25 ft-lbs (34 Nm)                        |
| Coil Nut Torque Requirements                 | 2-3 ft-lbs (3-4 Nm)                      |
| Cavity                                       | DELTA 4W                                 |
| Cavity Tools Kit<br>(form tool, reamer, tap) | 40500002                                 |

**COIL SPECIFICATIONS**

|                                |                              |
|--------------------------------|------------------------------|
| Current Supply Characteristics | PWM (Pulse Width Modulation) |
| Rated Current Range            | 400-1400 mA                  |
| PWM or Super-Imposed           |                              |
| Dither Frequency               | 100-200 Hz                   |
| Coil Resistance (12 VDC)       | 7.2 Ohm ±5% at 68°F (20°C)   |

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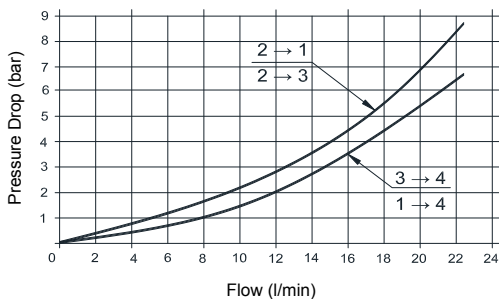


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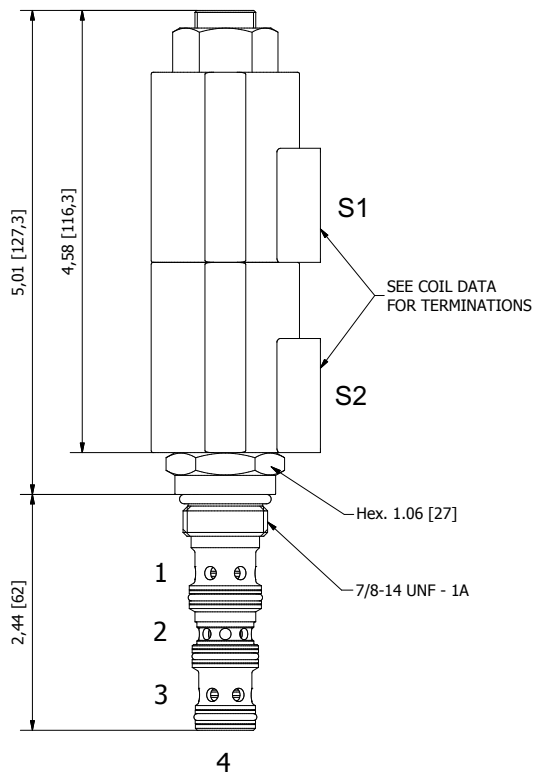
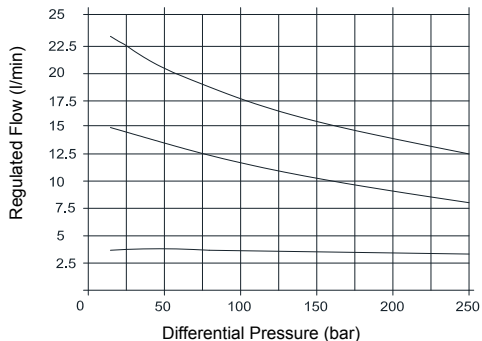
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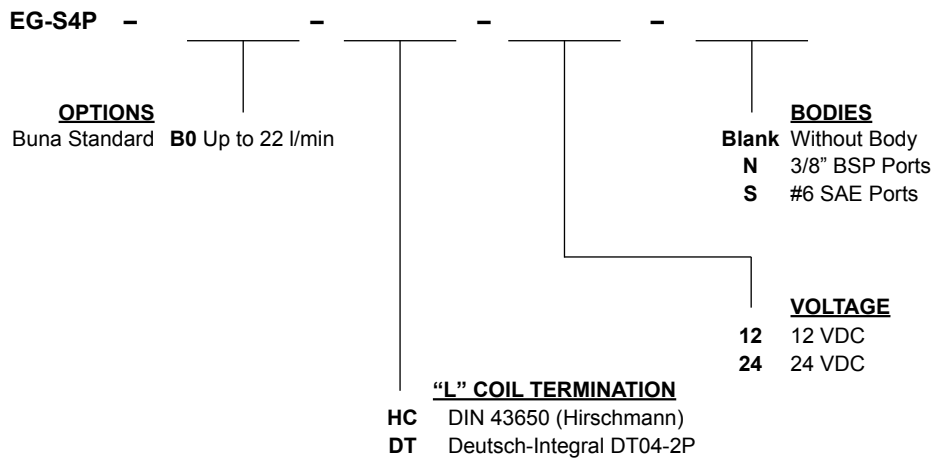
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