

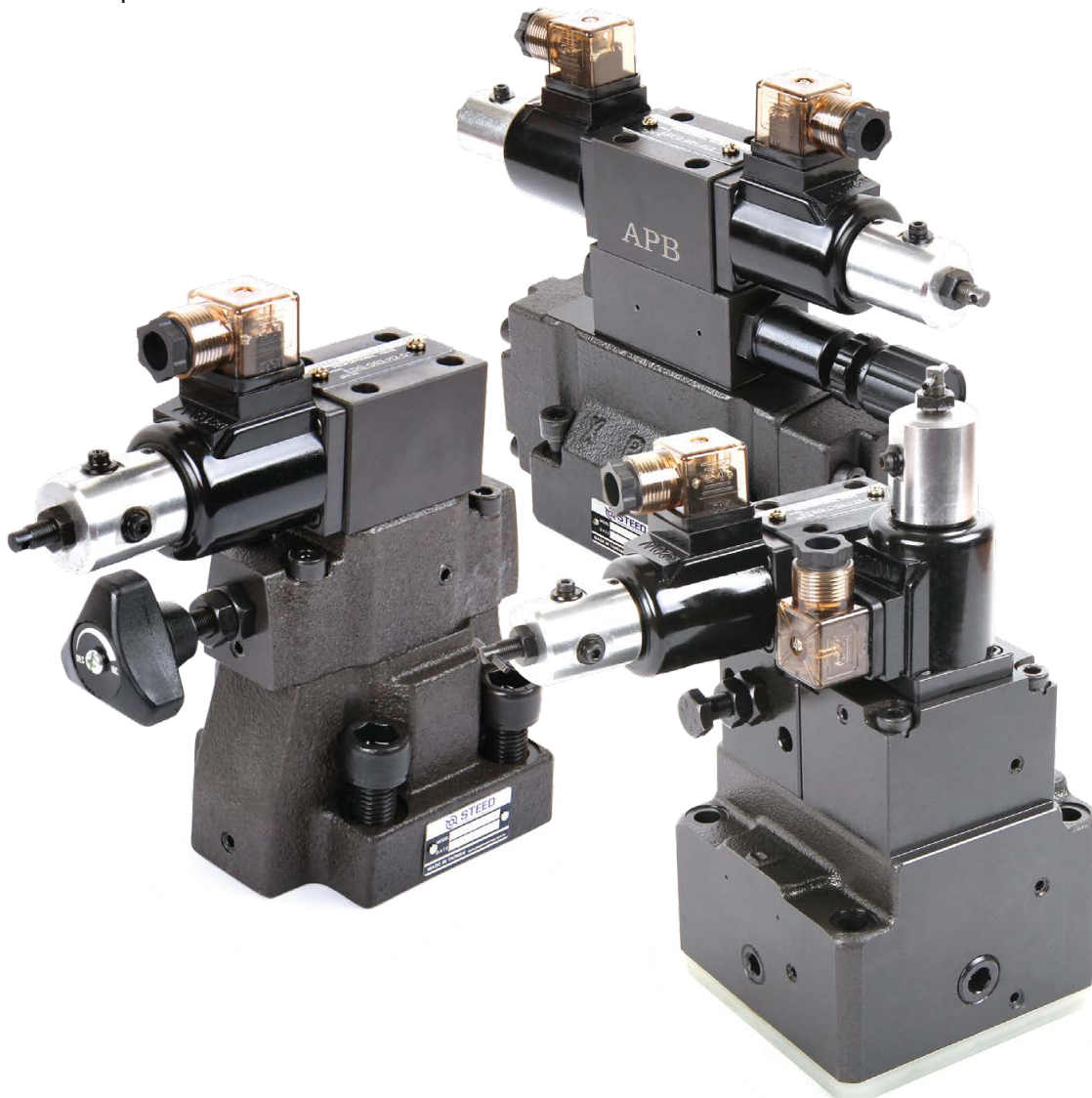
# Proportional Valve

Electro-Hydraulic Proportional Pilot Relief Valve

Electro-Hydraulic Proportional Flow & Directional Control Valve

Electro-Hydraulic Proportional Relief & Flow Control Valve

Electronic Amplifier P-C Board





## Electro-Hydraulic Proportional Pilot Relief Valve

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## Electronic Amplifier P-C Board

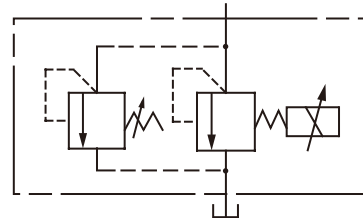
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# EDG-G01

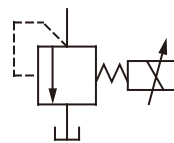


## SYMBOLS

With safety valve



Without safety valve



## ORDER CODES

**EDG** - **G01** - **H2** - **D1** - **R**

1            2            3            4            5

1	Model Name	EDG	
2	Thread Connection	G01	1/4"
3	Pressure Adjusting Range	C1	10~143 kgf/cm <sup>2</sup> ( 1.0~14 Mpa )
		H2	15.3~214 kgf/cm <sup>2</sup> ( 1.5~21 Mpa )
		3	15.3~286 kgf/cm <sup>2</sup> ( 1.5~28 Mpa )
		4	20~357 kgf/cm <sup>2</sup> ( 2.0~35 Mpa )
4	Coil Resistance	D1	10Ω
		D2	20Ω
5	Safety Valve	R	with safety valve
		none	without safety valve

## HANDLING

### 1. Air Bleeding

To enable proper pressure control, loosen the air vent when starting up the pump in order to drain any air from the pump, and fill the inside of the solenoid with hydraulic operational fluid. The position of the air vent can change by loosening the M4 screw and rotating the cover.

### 2. Mounting Method

Mounting on a vertical surface causes minimum pressure to increase by 2 kgf/cm<sup>2</sup> (0.2 Mpa).

### 3. Manual Pressure Adjusting Screw

For the initial adjustment or when there is no input current to the valve due to an electrical problem or some other reason, valve pressure can be increased by rotating the manual adjustment screw clockwise (rightward). Normally, the manual adjusting screw should be rotated back fully to the left (counterclockwise) and secured with the lock nut.

### 4. Minimum Relief Flow Rate

A small flow rate can cause setting pressure to become unstable. Use a flow rate of at least 0.3 l/min.

### 5. Load Capacity

When using this valve to control direct circuit pressure, make sure the load volume (P port side volume) is at least 40 cm<sup>3</sup>.

### 6. Bundled Accessories (Valve Mounting Bolts)

M5 x L45 (4pcs) Tightening torque: 51~72 kgf/cm<sup>2</sup>

### 7. Use an operational fluid that conforms to the both of the following.

Oil temperature: -20 to 70°C. Viscosity: 12 to 400 mm<sup>2</sup>/s.  
The recommended viscosity range is 15 to 60 mm<sup>2</sup>/s.

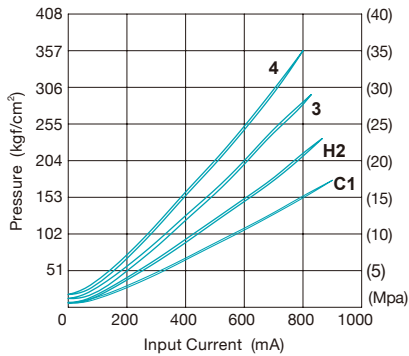
## MODEL SPEC.

<b>Model</b>	<b>EDG-G01</b>
<b>Max. Flows</b>	1.2 l/min
<b>Pressure Adjusting Range</b>	C1 : 10~143 kgf/cm <sup>2</sup> ( 1.0~14Mpa ) H2 : 15.3~214 kgf/cm <sup>2</sup> ( 1.5~21Mpa ) 3 : 15.3~286 kgf/cm <sup>2</sup> ( 1.5~28Mpa ) 4 : 20~357 kgf/cm <sup>2</sup> ( 2.0~35Mpa )
<b>Rated Current</b>	800 mA
<b>Coil Resistance</b>	10Ω or 20Ω ( 20°C )
<b>Magnetic Hysteresis</b>	<3%
<b>Repeatability</b>	<1%
<b>Amplifier No.</b>	TW2085, TW2085-2
<b>Weight</b>	1.6 kg

**Note:** Value when a STEED amplifier TW2085-2 is used (with dithering).

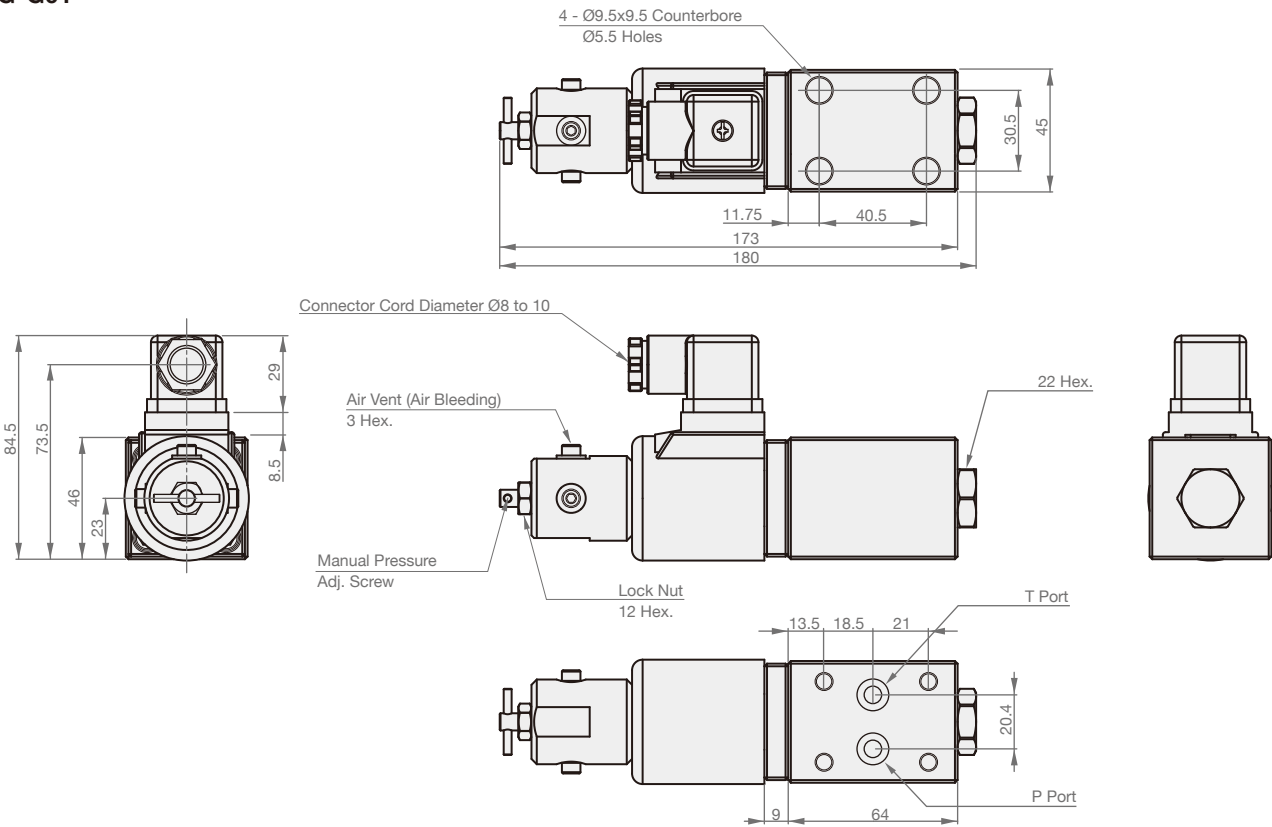
## PERFORMANCE CURVES

### ► Input Current - Pressure Characteristics

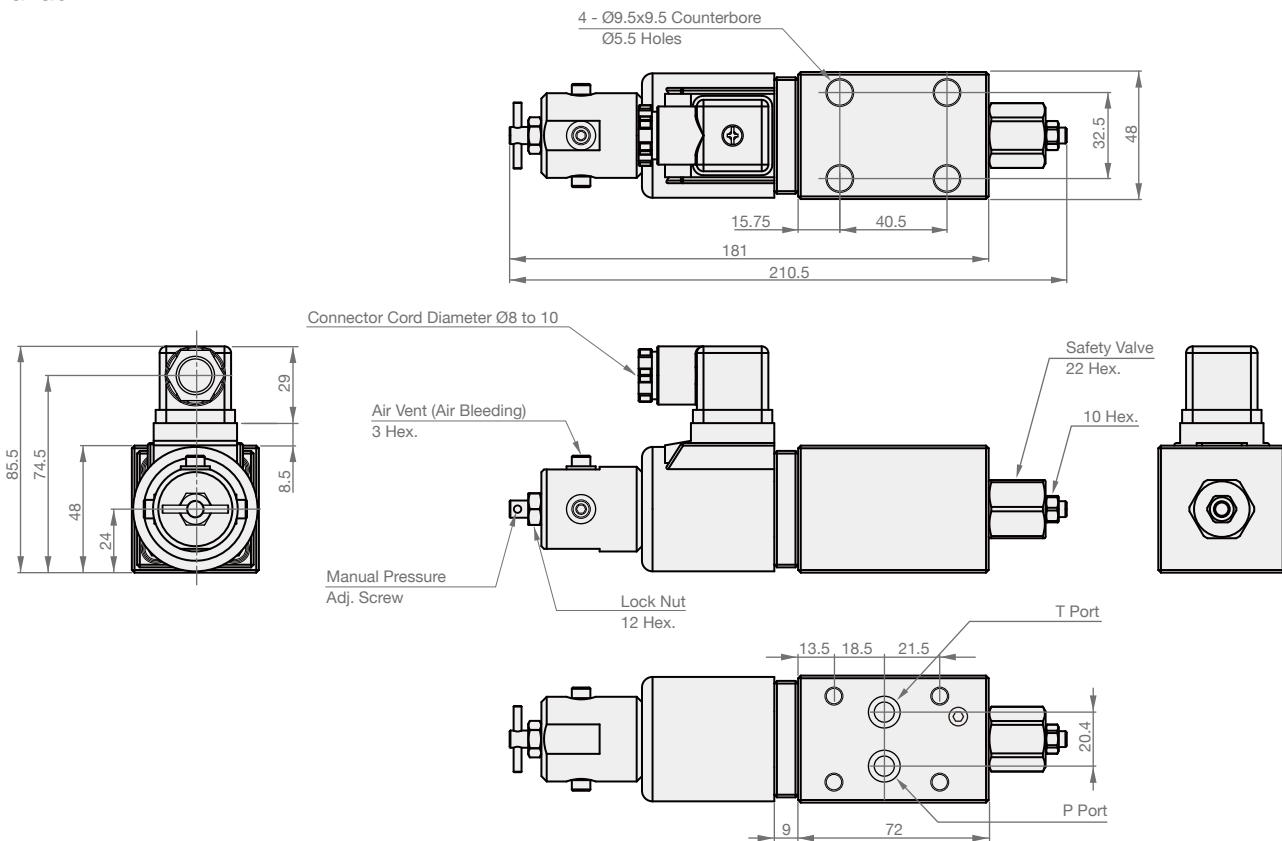


\* Hydraulic Operational Fluid Viscosity 32mm<sup>2</sup>/s

► **EDG-G01**



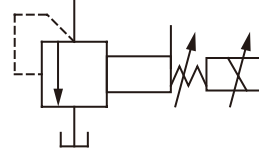
► **EDG-G01-R**



# EBG-G03, G06



## SYMBOLS



## ORDER CODES

**EBG** - **G03** - **H2** - **D2**

1                      2                      3                      4

1	▶ Model Name	EBG	
2	▶ Thread Connection	G03	3/8"
		G06	3/4"
3	▶ Pressure Adjusting Range	C1	10~143 kgf/cm <sup>2</sup> ( 1.0~14 Mpa )
		H2	15.3~214 kgf/cm <sup>2</sup> ( 1.5~21 Mpa )
		3	15.3~286 kgf/cm <sup>2</sup> ( 1.5~28 Mpa )
		4	20~357 kgf/cm <sup>2</sup> ( 2.0~35 Mpa )
4	▶ Coil Resistance	D1	10Ω
		D2	20Ω

## HANDLING

### 1. Air Bleeding

To enable proper pressure control, loosen the air vent when starting up the pump in order to bleed any air from the pump, and fill the inside of the solenoid with hydraulic operational fluid.

### 2. Manual Pressure Adjusting Screw

For the initial adjustment or when there is no input current to the valve due to an electrical problem or some other reason, valve pressure can be increased by rotating the manual adjusting screw clockwise (rightward). Normally, the manual adjusting screw should be rotated back fully to the left (counterclockwise) and secured with the lock nut.

### 3. Tank Port Back Pressure

Make sure that tank port back pressure is as small as possible; no greater than 2.0 kgf/cm<sup>2</sup> (0.2 Mpa).

### 4. Safety Valve Setting Pressure

The safety valve is set to maximum adjustment pressure plus 15.3 to 20.4 kgf/cm<sup>2</sup> (1.5 to 2.0 Mpa). When actually using the valve, adjust in accordance with actual pressure.

### 5. Bundled Accessories (Valve Mounting Bolts)

Model No.	Bolt Size	Q'ty
EBG-G03	M12 L35	4
EBG-G06	M16 L45	4

### 6. Use an operational fluid that conforms to the both of the following.

Oil temperature: -20 to 70°C. Viscosity: 12 to 400 mm<sup>2</sup>/s.  
The recommended viscosity range is 15 to 60 mm<sup>2</sup>/s.

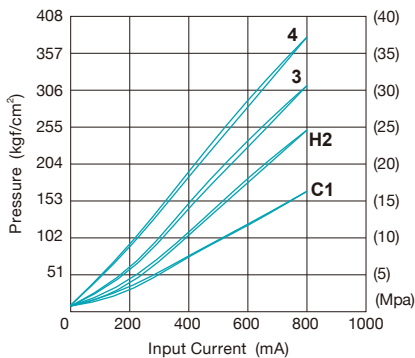
## MODEL SPEC.

Model	EBG-G03	EBG-G06
Max. Flows	100 l/min (26.4 gpm)	200 l/min (52.8 gpm)
Pressure Adjusting Range	C1 : 10~143 kgf/cm <sup>2</sup> ( 1.0~14Mpa ) H2 : 15.3~214 kgf/cm <sup>2</sup> ( 1.5~21Mpa ) 3 : 15.3~286 kgf/cm <sup>2</sup> ( 1.5~28Mpa ) 4 : 20~357 kgf/cm <sup>2</sup> ( 2.0~35Mpa )	
Rated Current	800mA	
Coil Resistance	20Ω (20°C)	
Magnetic Hysteresis	<3%	
Repeatability	<1%	
Amplifier No.	TW2085, TW2085-2	
Weight	6.6 kg	7.8 kg

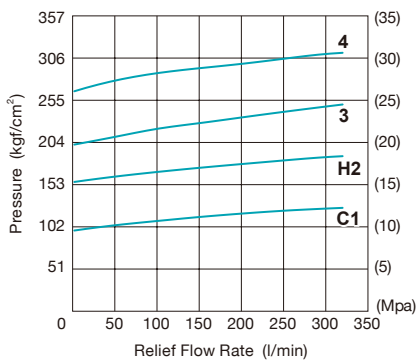
**Note:** Value when a STEED amplifier TW2085-2 is used (with dithering).

## PERFORMANCE CURVES

### ► Input Current - Pressure Characteristics



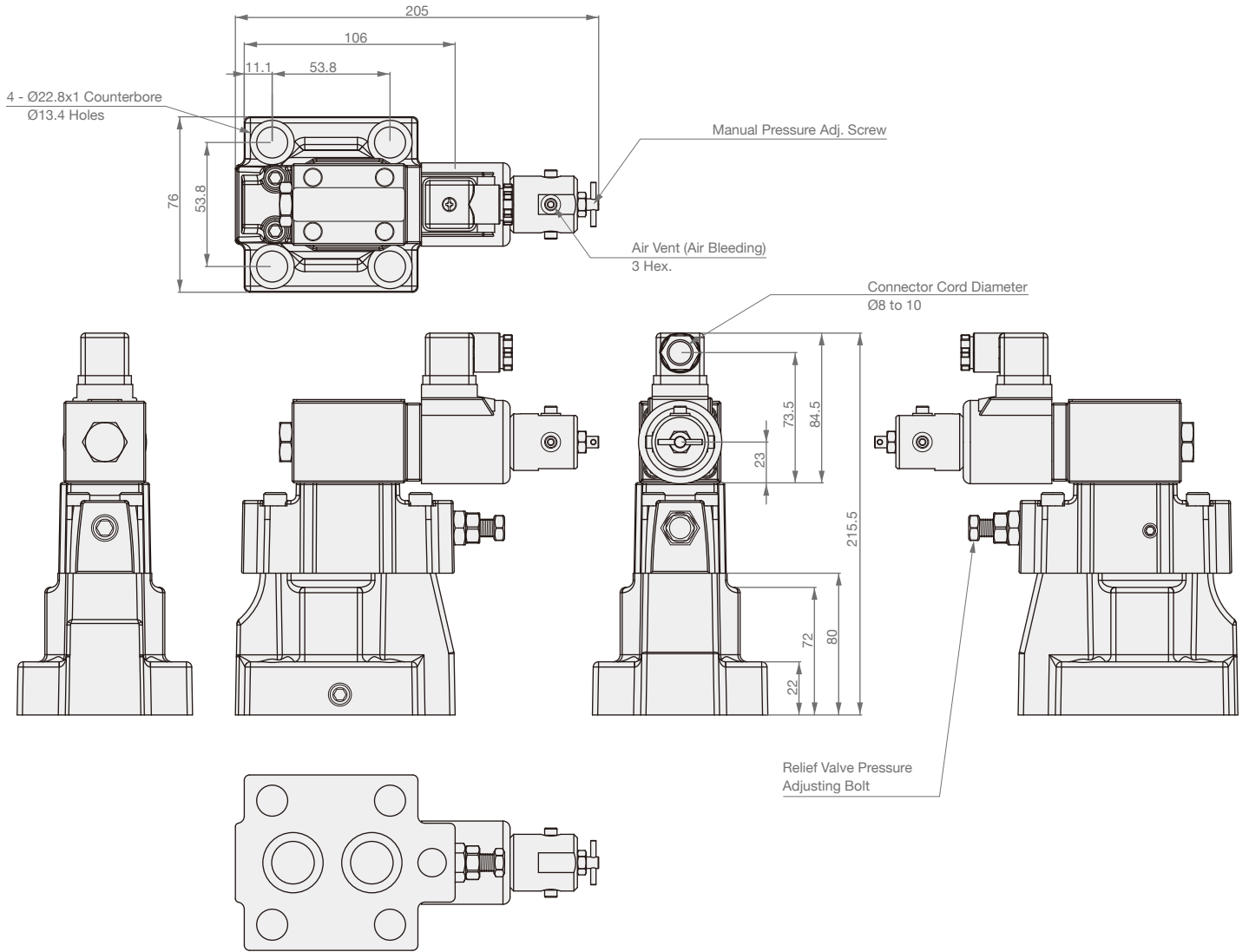
### ► Flow Rate - Pressure Characteristics



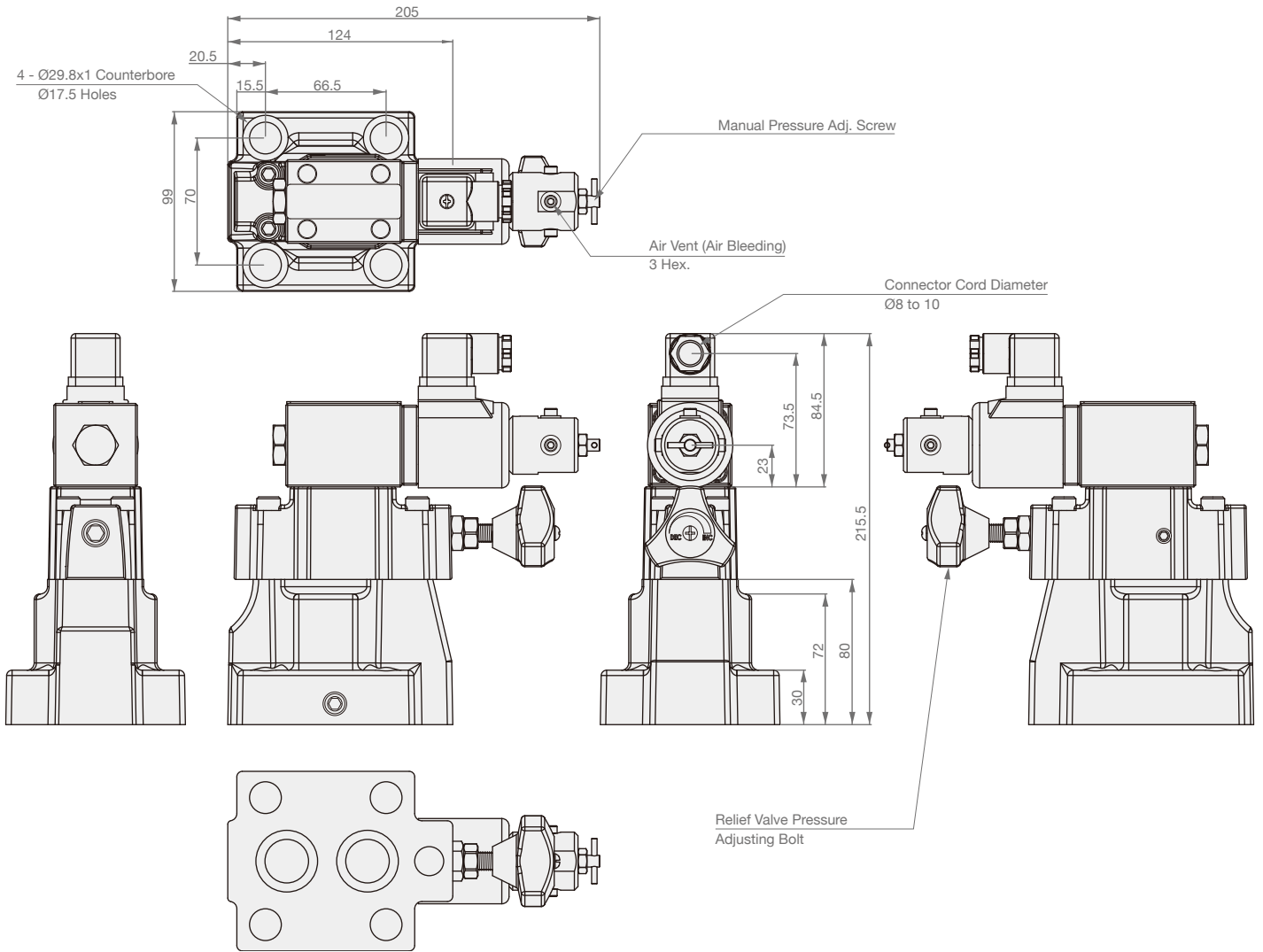
\* Hydraulic Operational Fluid Viscosity 32mm<sup>2</sup>/s



► EBG-G03



► EBG-G06



# EDFG-G01



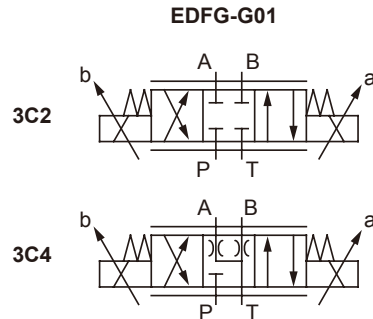
## ORDER CODES

EDFG - G01 - 3C2

1 2 3

1	Model Name	EDFG	
2	Thread Connection	G01	1/4"
3	Spool Type	3C2	
		3C4	

## SYMBOLS



## HANDLING

### 1. Air Bleeding

In order to ensure stable control, loosen the air vent and bleed air from the valve before starting operation.

### 2. T Port Piping

When configuring piping, ensure that the T port is filled with operational fluid.

### 3. Manual Adjusting Screw

For the initial adjustment or when there is no input current to the valve due to an electrical problem or some other reason, the valve can be operated and valve pressure can be increased by rotating the manual adjustment screw clockwise (rightward). Normally, the manual adjusting screw should be rotated back fully to the left (counterclockwise).

### 4. Valve Mounting Orientation

Install the valve so the spool axis line is horizontal.

### 5. Combining with a Pressure Compensation Valve

Use of the optional pressure compensation kit is recommended when higher precision flow rate control is required or in high-pressure applications.

### 6. If pilot pressure exceeds 92 kgf/cm<sup>2</sup> (9 Mpa) use a modular type P port reduction valve (MBRV-02-P-1) at a setting of 20 kgf/cm<sup>2</sup> (2 Mpa).

### 7. On a system that requires large brake pressure during deceleration or a system that uses a vertical cylinder, equip a counter balance valve. Use a single rod, if the rod exit is not slowed sufficiently, use a counter balance valve on the rod.

### 8. Maintain hydraulic operational fluid contamination so it is at least Class 9.

### 9. Bundled Accessories (Valve Mounting Bolts)

Model No.	Bolt Size	Q'ty
EDFG-G01	M5 L45	4

### 10. Use an operational fluid that conforms to the both of the following.

Oil temperature: -20 to 70°C. Viscosity: 12 to 400 mm<sup>2</sup>/s. The recommended viscosity range is 15 to 60 mm<sup>2</sup>/s.

## MODEL SPEC.

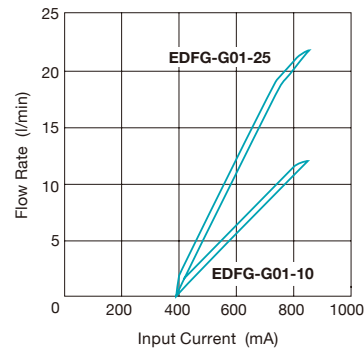
<b>Model</b>	<b>EDFG-G01</b>
<b>Max. Operational Pressure</b>	225 kgf/cm <sup>2</sup> (25 Mpa)
<b>Rated Flow</b>	10/20 l/min
<b>Allowable Back Pressure</b>	25.5 kgf/cm <sup>2</sup> (2.5 Mpa)
<b>Rated Current</b>	850 mA
<b>Coil Resistance</b>	20Ω (20°C)
<b>Magnetic Hysteresis</b>	<5%
<b>Repeatability</b>	0.04 sec
<b>Amplifier No.</b>	TW9820, TW9820-2
<b>Weight</b>	2.2 kg

### Note:

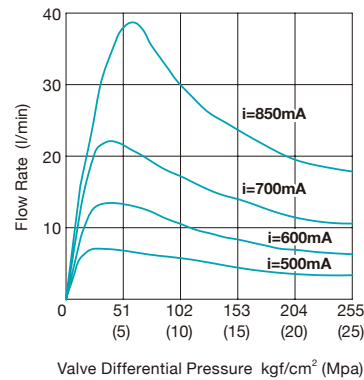
1. Value when pressure drop volume to P → A and P → B is ΔP = 10 kgf/cm<sup>2</sup> (1.0 Mpa).
2. Indicates maximum throughput volume value between each port.
3. Indicates differential between the pilot port and tank port, or drain port.
4. Value when 0.1 second is assumed for the response time from zero to the rated flow volume.
5. Value when a STEED amplifier TW9820-2 is used (with dithering).
6. Response time is typical value for a supply pressure of 143 kgf/cm<sup>2</sup> (14 Mpa) and fluid temperature of 40°C (kinematic viscosity: 40 mm<sup>2</sup>/s).

## PERFORMANCE CURVES

### ► Input Current - Pressure Characteristics



### ► Pressure - Flow Rate Characteristics

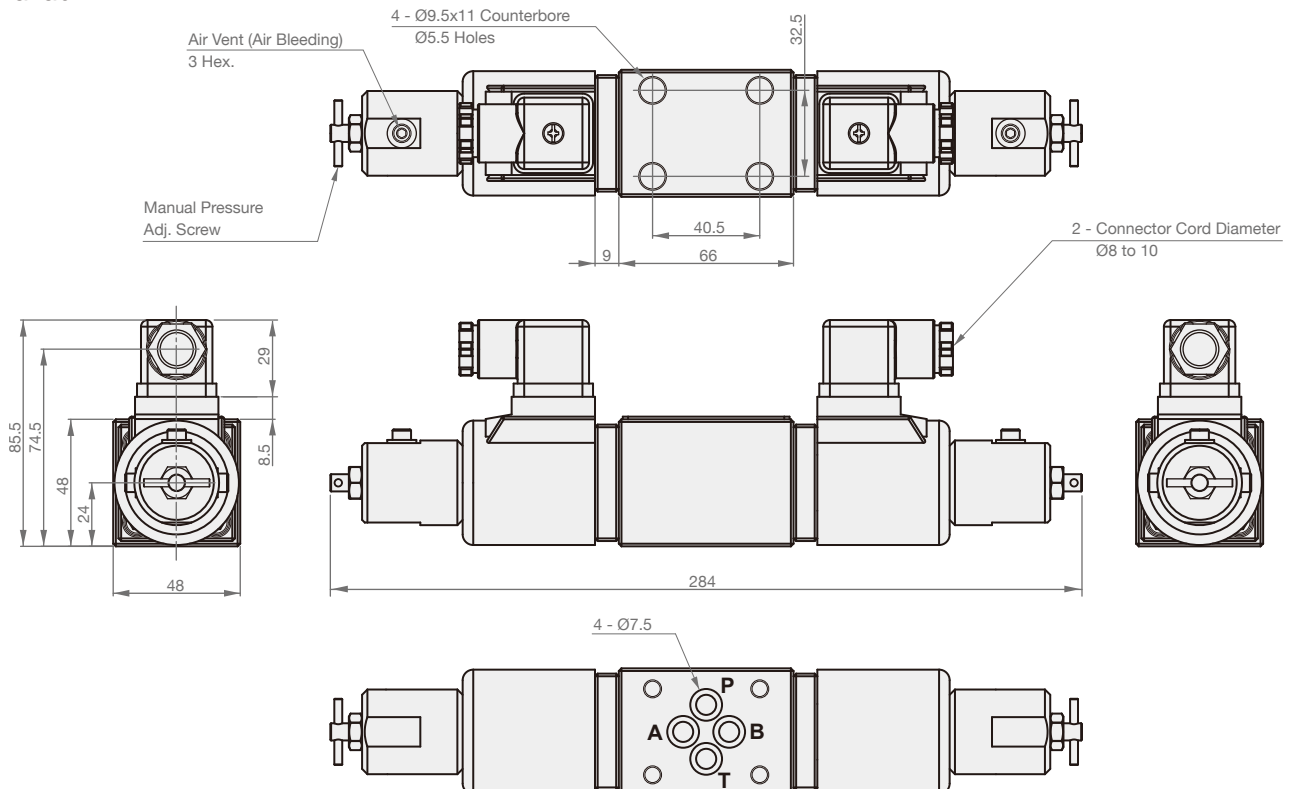


\* Hydraulic Operational Fluid Viscosity 32mm<sup>2</sup>/s

## DIMENSION

( UNIT : mm )

### ► EDFG-G01



# EDFG-G03, G04, G06



\* The modular reducing valve (MBRV-02-P) is not including.

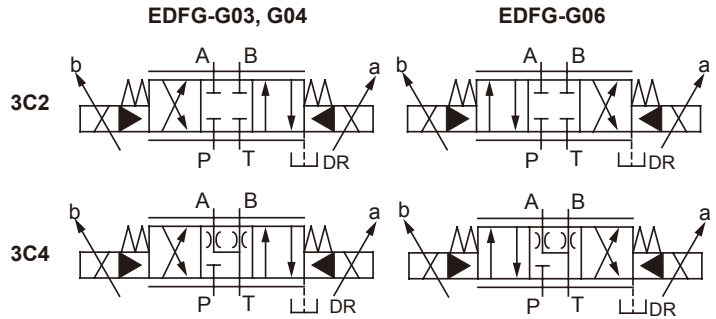
## ORDER CODES

**EDFG** - **G03** - **3C2** - **XY**

1                      2                      3                      4

1	Model Name	EDFG	
2	Thread Connection	G03	3/8"
		G04	1/2"
		G06	3/4"
3	Spool Type	3C2	
		3C4	
4	Drain Type	XY	external pilot and external drain
		none	internal pilot and internal drain

## SYMBOLS



## HANDLING

### 1. Air Bleeding

In order to ensure stable control, loosen the air vent and bleed air from the valve before starting operation.

### 2. T Port Piping

When configuring piping, ensure that the T port (pilot valve T port for the G03, G04, and G06 sizes) is filled with operational fluid.

### 3. Manual Adjusting Screw

For the initial adjustment or when there is no input current to the valve due to an electrical problem or some other reason, the valve can be operated and valve pressure can be increased by rotating the manual adjustment screw clockwise (rightward). Normally, the manual adjusting screw should be rotated back fully to the left (counterclockwise).

### 4. Valve Mounting Orientation

Install the valve so the spool axis line is horizontal.

### 5. Combining with a Pressure Compensation Valve

Use of the optional pressure compensation kit is recommended when higher precision flow rate control is required or in high-pressure applications.

6. If pilot pressure (EDFG-G03, G04, G06) exceeds 92 kgf/cm<sup>2</sup> (9 Mpa) use a modular type P port reduction valve (MBRV-02-P-1) at a setting of 20 kgf/cm<sup>2</sup> (2 Mpa).

7. On a system that requires large brake pressure during deceleration or a system that uses a vertical cylinder, equip a counter balance valve. Use a single rod, if the rod exit is not slowed sufficiently, use a counter balance valve on the rod.

8. Maintain hydraulic operational fluid contamination so it is at least Class 9. Use of a G01 modular filter (absolute: 8µm) is also helpful.

### 9. Bundled Accessories (Valve Mounting Bolts)

Model No.	Bolt Size	Q'ty
EDFG-G03	M6 L35	4
EDFG-G04	M6 L45	2
	M10 L50	4
EDFG-G06	M120 L60	6

### 10. Use an operational fluid that conforms to the both of the following.

Oil temperature: -20 to 70°C. Viscosity: 12 to 400 mm<sup>2</sup>/s. The recommended viscosity range is 15 to 60 mm<sup>2</sup>/s.

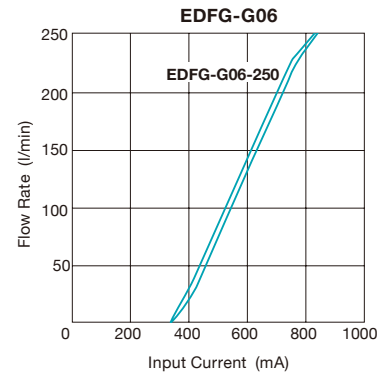
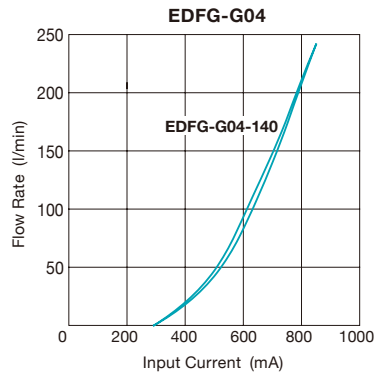
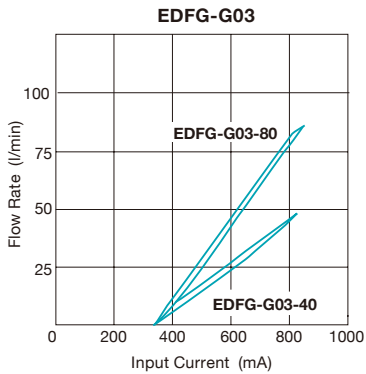
## MODEL SPEC.

Model	EDFG - G03	EDFG - G04	EDFG - G06
Max. Operational Pressure	225 kgf/cm <sup>2</sup> ( 25 Mpa )		
Rated Flow	40/80 l/min	140 l/min	250 l/min
Pilot Pressure	>10 kgf/cm <sup>2</sup> ( 1.0 Mpa )		
Pilot Flow	>2 l/min	>3 l/min	>5 l/min
Allowable Back Pressure	25.5 kgf/cm <sup>2</sup> ( 2.5 Mpa ) 214 kgf/cm <sup>2</sup> ( 21 Mpa )		
Rated Current	850 mA		
Coil Resistance	20Ω ( 20°C )		
Magnetic Hysteresis	<5%		
Repeatability	0.05 sec	0.08 sec	0.1 sec
Amplifier No.	TW9820, TW9820-2		
Weight	6.6 kg	7.8 kg	12.9 kg

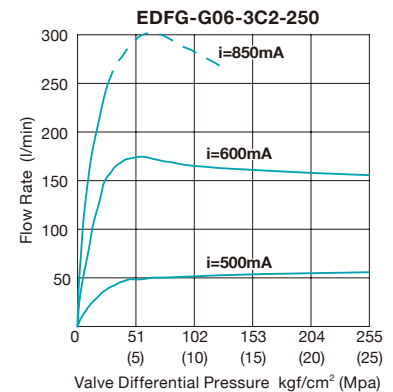
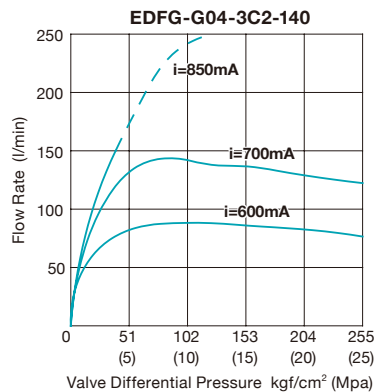
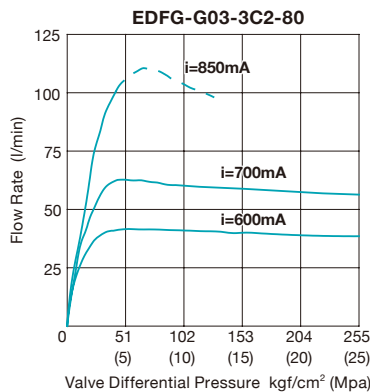
- Note:**
1. Value when pressure drop volume to P → A and P → B is ΔP = 10 kgf/cm<sup>2</sup> (1.0 Mpa).
  2. Indicates maximum throughput volume value between each port.
  3. Indicates differential between the pilot port and tank port, or drain port.
  4. Value when 0.1 second is assumed for the response time from zero to the rated flow volume.
  5. Value when a STEED amplifier TW9820-2 is used (with dithering).
  6. Response time is typical value for a supply pressure of 143 kgf/cm<sup>2</sup> (14 Mpa) and fluid temperature of 40°C (kinematic viscosity: 40 mm<sup>2</sup>/s).

## PERFORMANCE CURVES

### ► Input Current - Pressure Characteristics

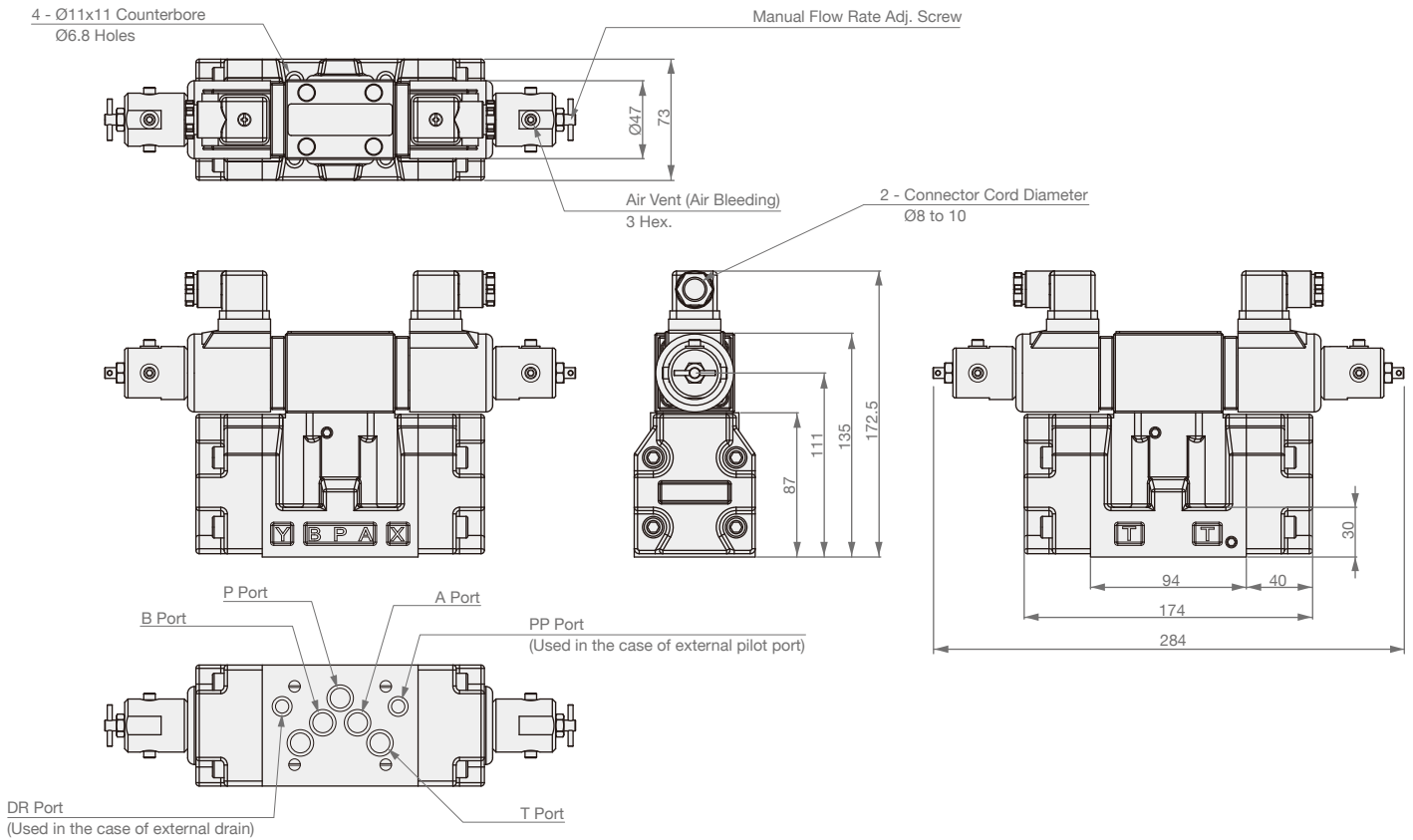


### ► Pressure - Flow Rate Characteristics

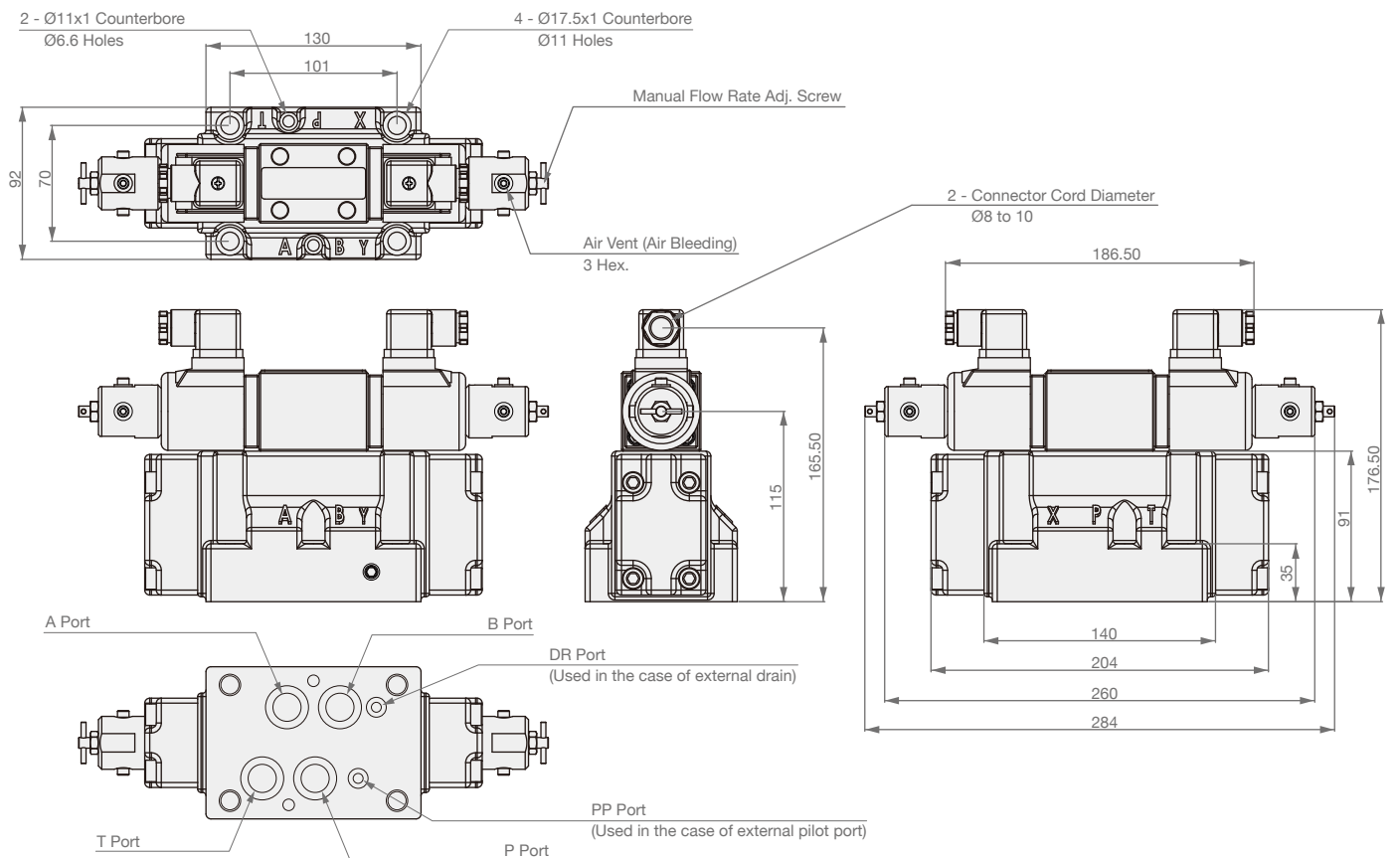


\* Hydraulic Operational Fluid Viscosity 32mm<sup>2</sup>/s

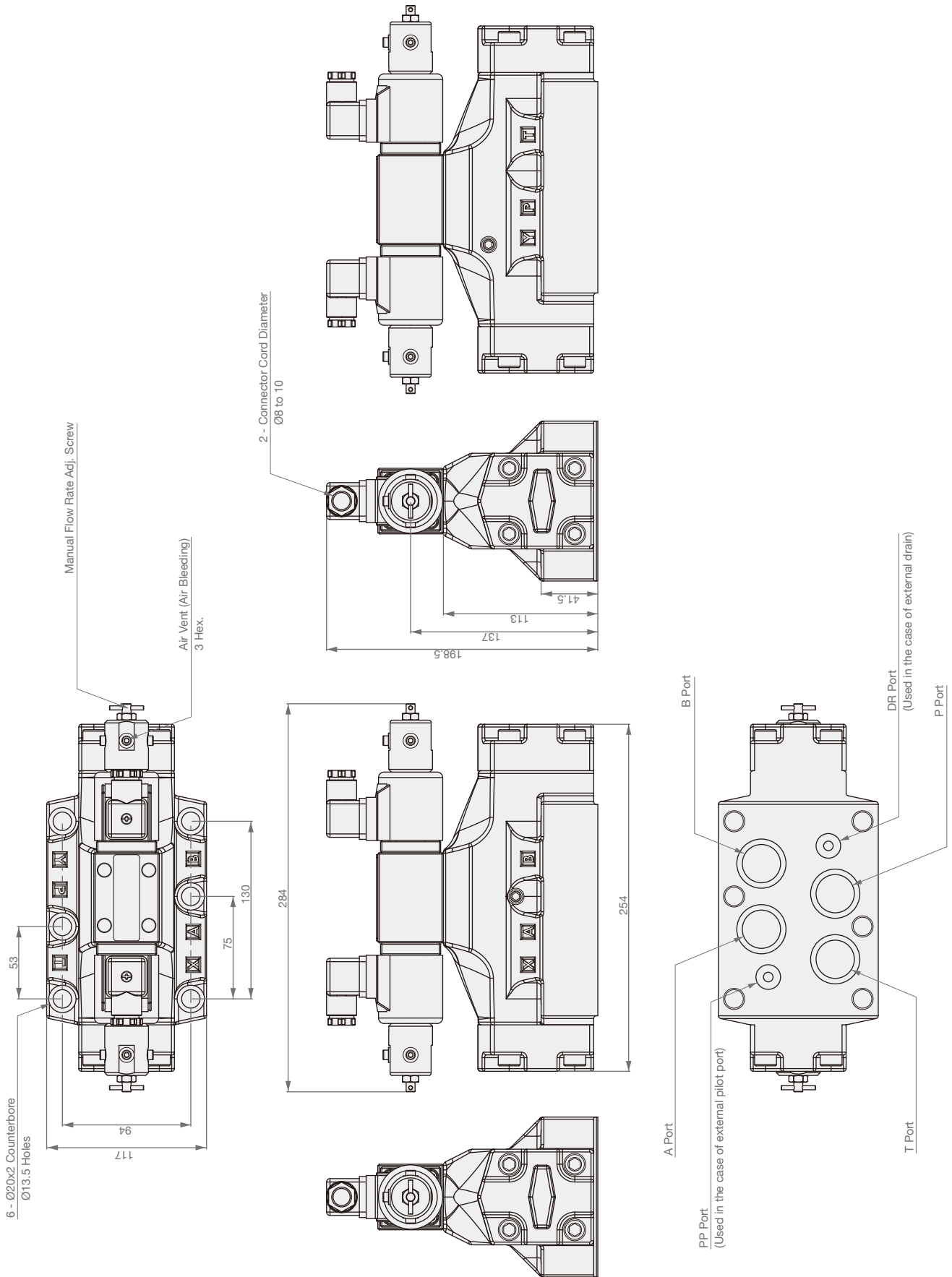
► EDFG-G03



► EDFG-G04



► EDFG-G06

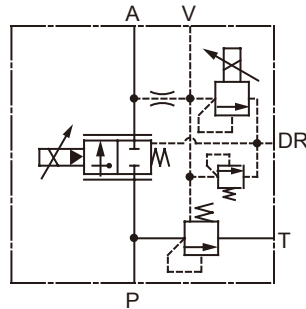




# EFBG-03, 06



## SYMBOLS



## HANDLING

### 1. Air Bleeding

In order to ensure stable control, loosen the air vent and bleed air from the valve before starting operation.

### 2. Manual Adjusting Screw

For the initial adjustment or when there is no input current to the valve due to an electrical problem or some other reason, pressure or flow rate can be increased by rotating the manual adjustment screw clockwise (rightward). Normally, this adjusting screw should be returned completely to its original position and secured with the lock nut.

### 3. Drain Port

Minimum control pressure is increased by drain port back pressure, so be sure to connect the drain port directly to the fluid tank at a point that is below the oil surface.

### 4. Safety Valve Setting Pressure

For a safety valve without an electro-hydraulic proportional pilot relief valve, safety valve pressure is set to minimum pressure 35.7 kgf/cm<sup>2</sup> (3.5Mpa max.) In the case of a safety valve with an electrohydraulic proportional pilot relief valve, the safety valve setting pressure is set to the minimum adjustment pressure plus 15.3 kgf/cm<sup>2</sup> (1.5Mpa). When actually using the valve, adjust in accordance with hydraulic circuit pressure.

### 5. Minimum Relief Flow Rate During Pressure Control

Setting pressure can become unstable when the relief flow rate to the valve's T port is small. Because of this, use a relief flow rate of at least 10 l/min with a nominal diameter of 03 or 06.

### 6. Valve Mounting Orientation

When an electro-hydraulic proportional pilot relief valve main valve is mounted on a vertical surface with the pilot relief valve part facing downwards make it difficult to bleed air from the pilot relief valve. Because of this, you should not use this type of mounting orientation.

### 7. Bundled Accessories (Valve Mounting Bolts)

Model No.	Bolt Size	Q'ty
EFBG-03	M10 L75	2
	M10 L90	2
EFBG-06	M16 L100	2
	M16 L135	2

### 8. Use an operational fluid that conforms to the both of the following.

Oil temperature: -20 to 70°C. Viscosity: 12 to 400 mm<sup>2</sup>/s.  
The recommended viscosity range is 15 to 60 mm<sup>2</sup>/s.

## ORDER CODES

**E**FBG - **03** - **125** - **C** - **R2**

1                      2                      3                      4                      5

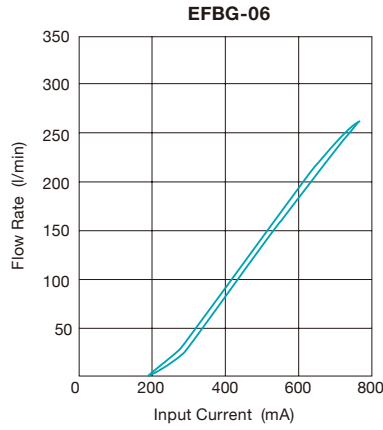
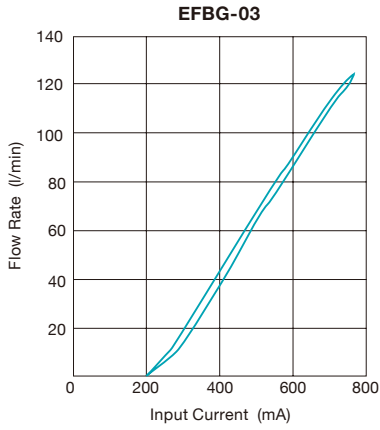
1	▶ Model Name	EFBG	
2	▶ Thread Connection	03	3/8"
		06	3/4"
3	▶ Max. Flow	125	125 l/min
		250	250 l/min
4	▶ Max. Operational Pressure	C	140 kgf/cm <sup>2</sup>
		H	255 kgf/cm <sup>2</sup>
5	▶ Pressure Control Range	R1	12.2~71 kgf/cm <sup>2</sup> (1.2~7 Mpa)
		R2	14.3~143 kgf/cm <sup>2</sup> (1.4~14Mpa)
		R3	16.3~214 kgf/cm <sup>2</sup> (1.6~21Mpa)
		R4	16.3~255 kgf/cm <sup>2</sup> (1.6~25Mpa)

Model		EFBG-03	EFBG-06
Max. Operational Pressure		255 kgf/cm <sup>2</sup> ( 25 Mpa )	
Max. Flows		125 l/min	250 l/min
Flowing System	Flow Adjusting Range	1~125 l/min	5~250 l/min
	Internal Resistance of This Valve	5.1 kgf/cm <sup>2</sup> ( 0.5 Mpa ) <note1>	7.1 kgf/cm <sup>2</sup> ( 0.7 Mpa ) <note1>
	Rated Current	800 mA	
	Coil Resistance	20Ω ( 20°C )	
	Magnetic Hysteresis	<3% <note2>	
	Repeatability	<1%	
Pressure System	Pressure Control Range	R1 : 12.2~71 kgf/cm <sup>2</sup> ( 1.2~7 Mpa ) R2 : 14.3~143 kgf/cm <sup>2</sup> ( 1.4~14 Mpa ) R3 : 16.3~214 kgf/cm <sup>2</sup> ( 1.6~21 Mpa ) R4 : 16.3~255 kgf/cm <sup>2</sup> ( 1.6~25 Mpa )	
	Max. Operational Pressure	C : 140 kgf/cm <sup>2</sup> H : 255 kgf/cm <sup>2</sup>	
	Allowable Back Pressure	<note1>	
	Rated Current	C : 700 mA H : 800 mA	
	Coil Resistance	20Ω ( 20°C )	
	Magnetic Hysteresis	<3%	
	Repeatability	<1%	
Amplifier No.	TW9820, TW9820-2		
Weight	14 kg	28 kg	

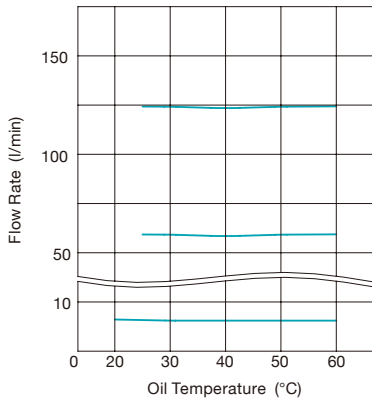
**Note:**

1. Indicates the pressure differential between the valve P port and A port. The left chart is complied with our standard electronic control circuit board TW9820-2, and is the single valve test result.
2. Value when a STEED amplifier TW9820-2 is used (with dithering).
3. These specifications apply to valves that include an electro-hydraulic proportional pilot relief valve.
4. The maximum adjustment pressure is 255 kgf/cm<sup>2</sup> (25 Mpa max.) for a valve that does not include an electro-hydraulic proportional pilot relief valve. Factory default is minimum output 35.7 kgf/cm<sup>2</sup> (3.5 Mpa max.) Set this value in accordance with the pressure of the hydraulic circuit being used.

► Input Current - Flow Rate Characteristics

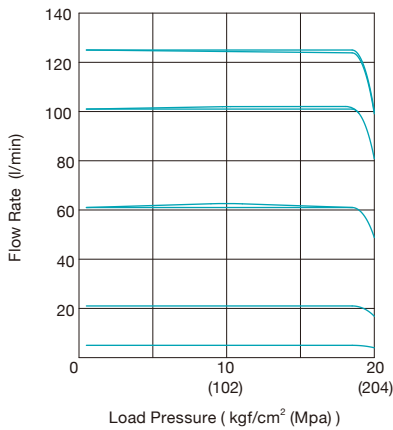


► Fluid Temperature - Control Flow Rate Characteristics



Load Pressure : 102kgf/cm<sup>2</sup> (10Mpa)  
 Operational Fluid : VG32  
 Fluid Temperature : 40°C  
 Value when a STEED amplifier TW9820-2 is used. (with dithering)

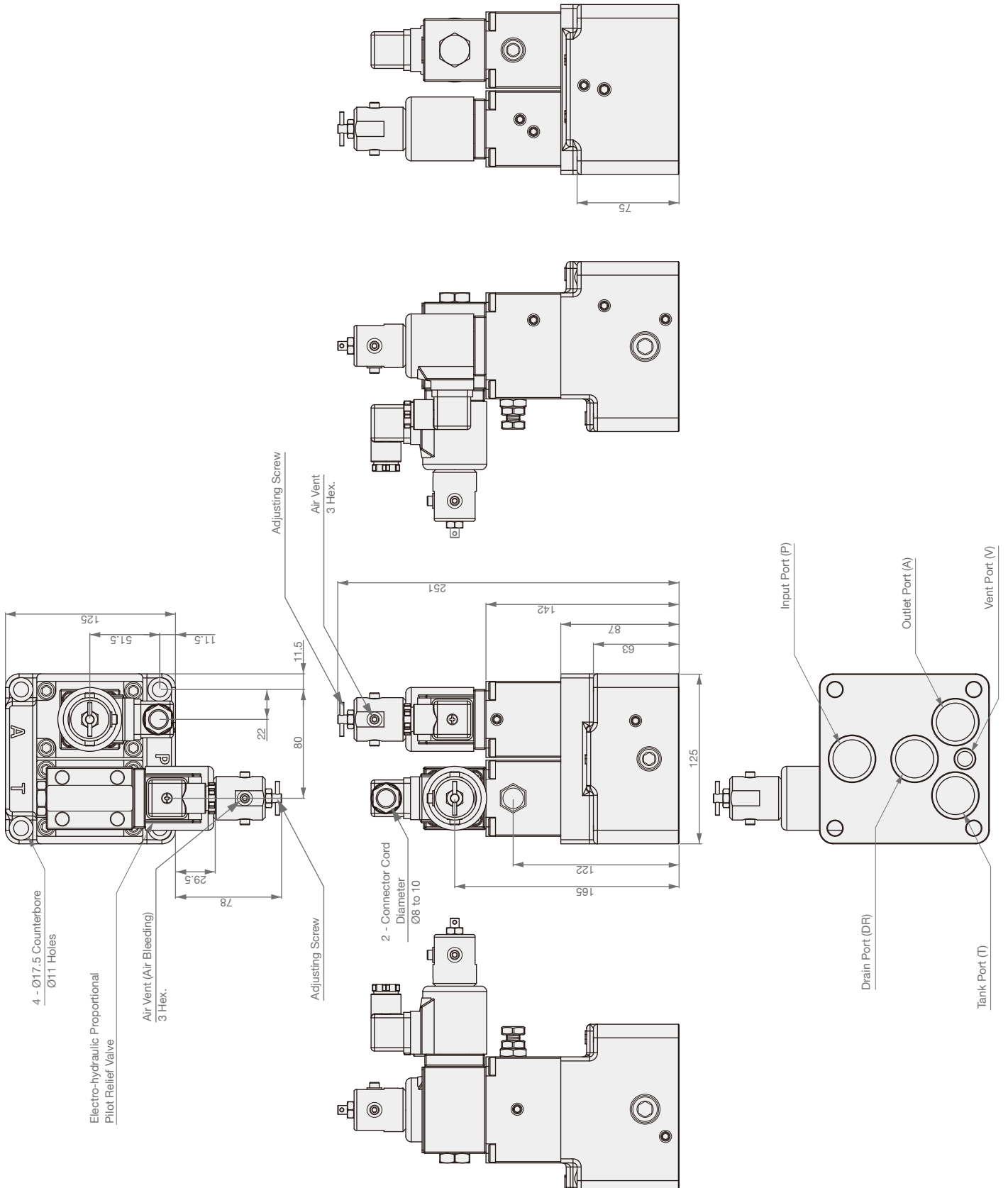
► Pressure - Control Flow Rate Characteristics



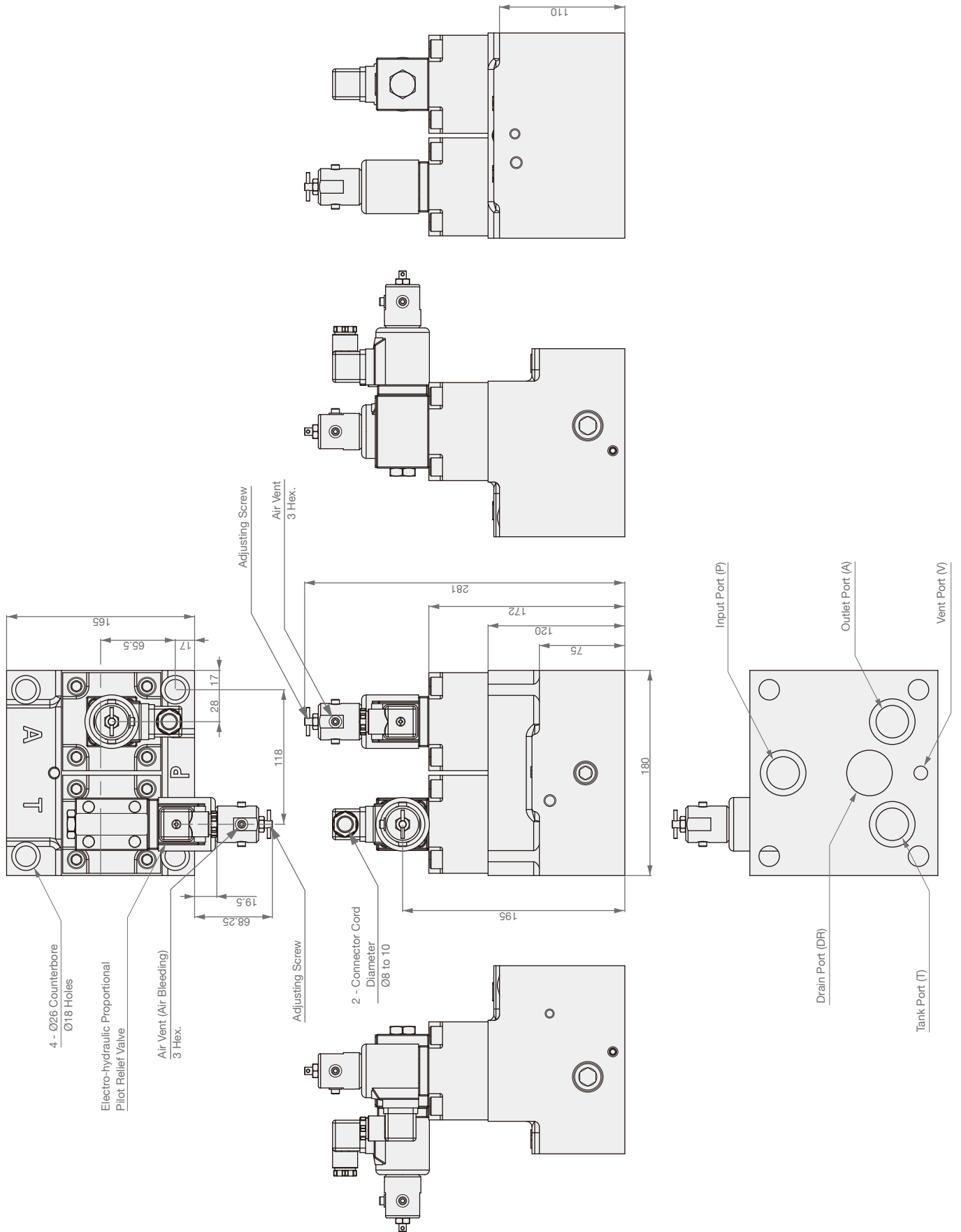
Electro-hydraulic Proportional Pilot Relief Valve Setting Pressure : 214.2kgf/cm<sup>2</sup> (21Mpa)  
 Operational Fluid : VG32  
 Fluid Temperature : 40°C  
 Value when a STEED amplifier TW9820-2 is used.(with dithering)

\* Hydraulic Operational Fluid Viscosity 32mm<sup>2</sup>/s

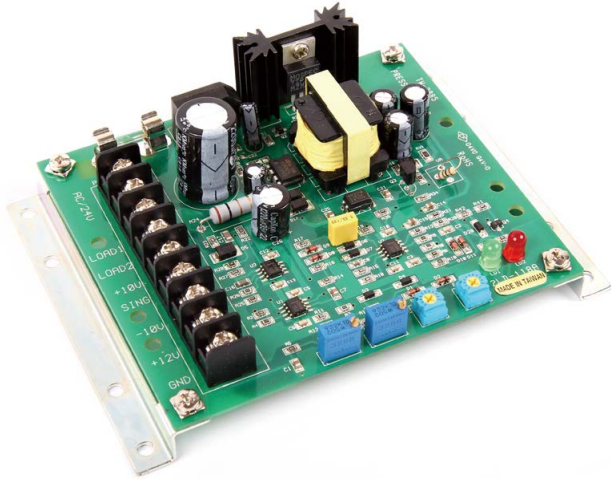
► EFBG-03



► EFBG-06



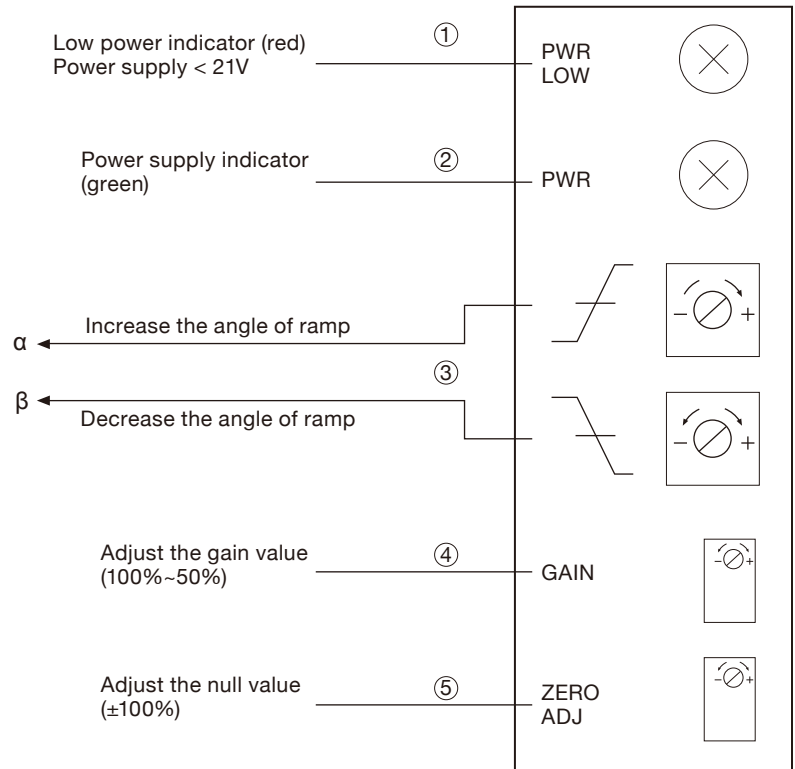
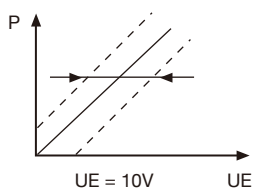
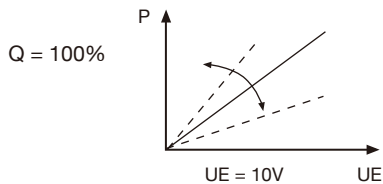
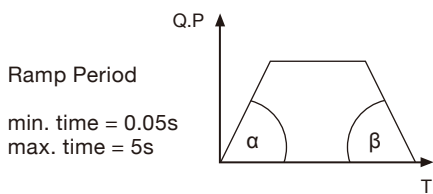
# TW2085

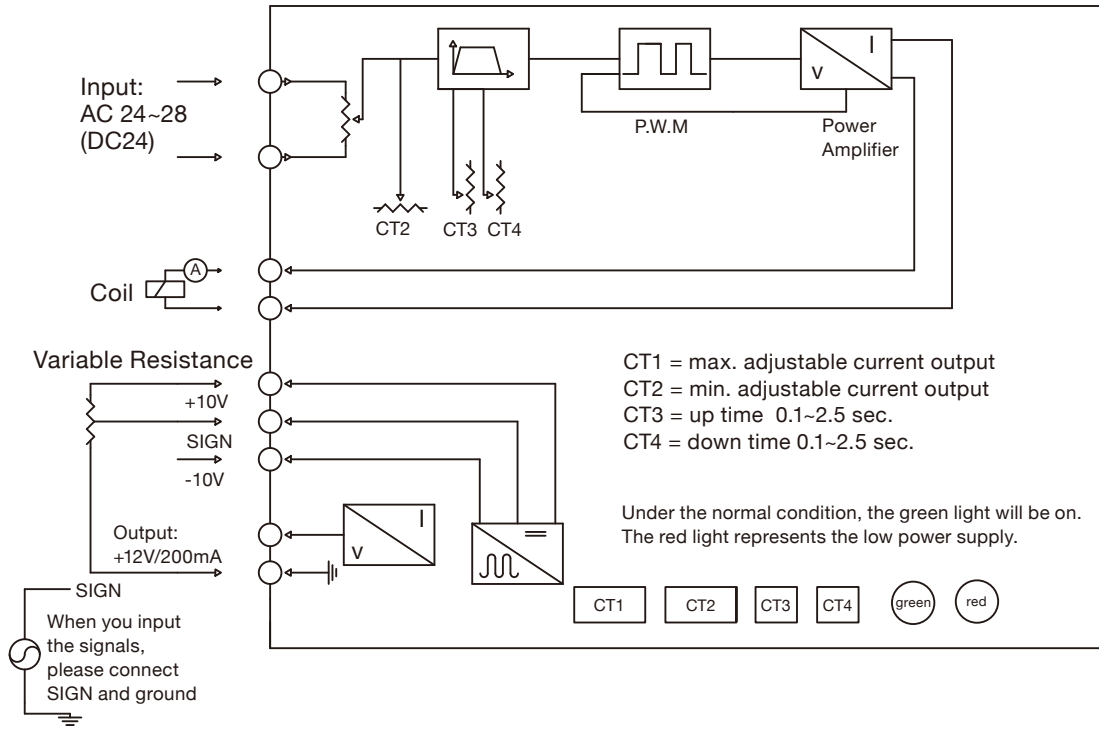


## MODEL SPEC.

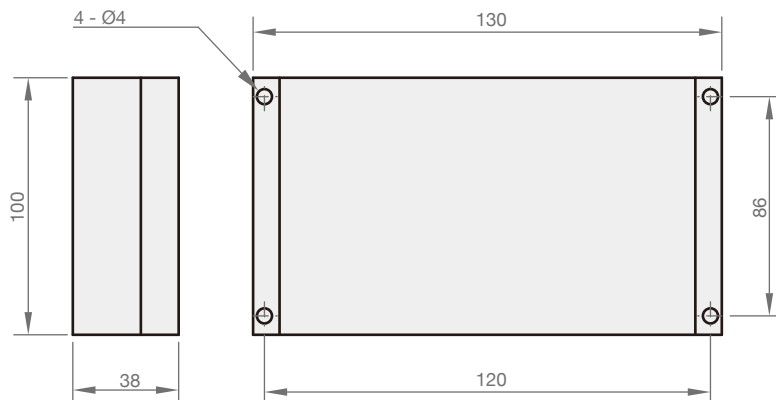
Model	TW2085
Supply Voltage	AC28V ± 20% DC24V
Fuse	2A
Load Coil Resistance	10Ω / 20Ω ( 20°C )
Input Control Voltage	0V ~ +9V
Max. Current Output Range	0 ~ 850 mA
Pilot Current Adjusting Range	0 ~ 150 mA
Up Ramp Period	0.1 ~ 2.5 sec
Down Ramp Period	0.1 ~ 2.5 sec
Temperature Drift	0.1mA / 1°C
Work Temperature	0 ~ 50°C
Max. Power Requirement	15VA
Weight	0.21 kg

## INSTRUCTION

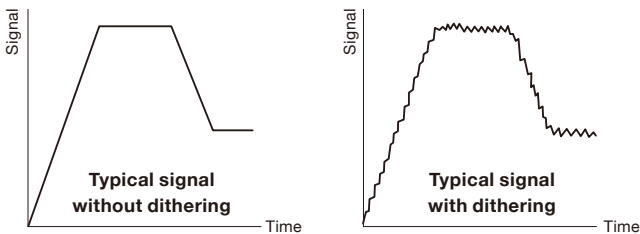
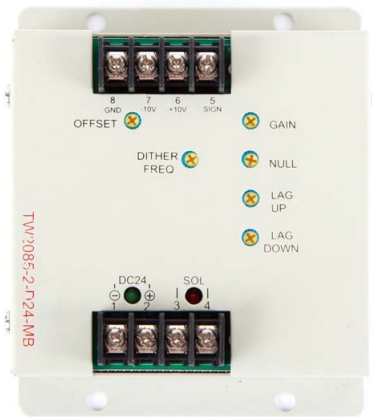




DIMENSION



# TW2085-2

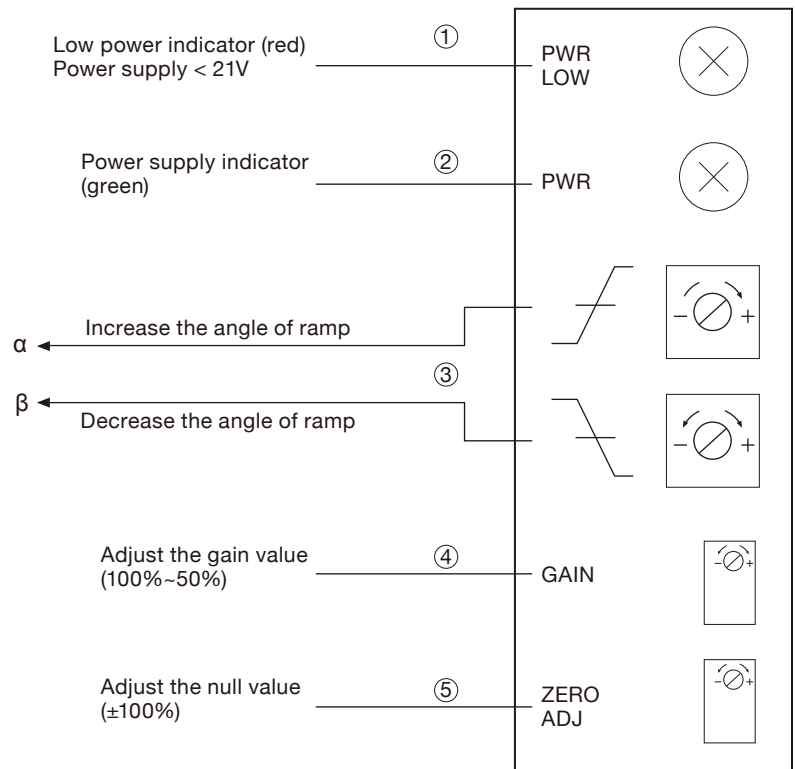
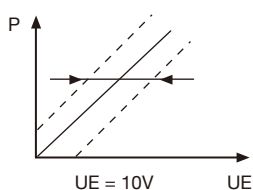
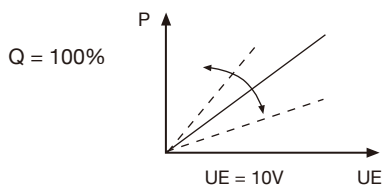
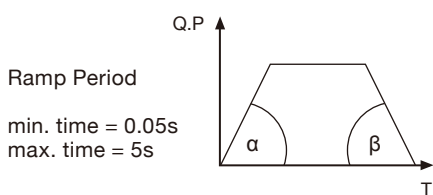


The effect used to vibrate a proportional valve spool is called dither. Dithering can offset the hysteresis. The dither frequency is specific to each valve and application, and the valve amplifier, or controller, will have an adjustable dither frequency. Hence, please purchase our amplifier together with the proportional valves.

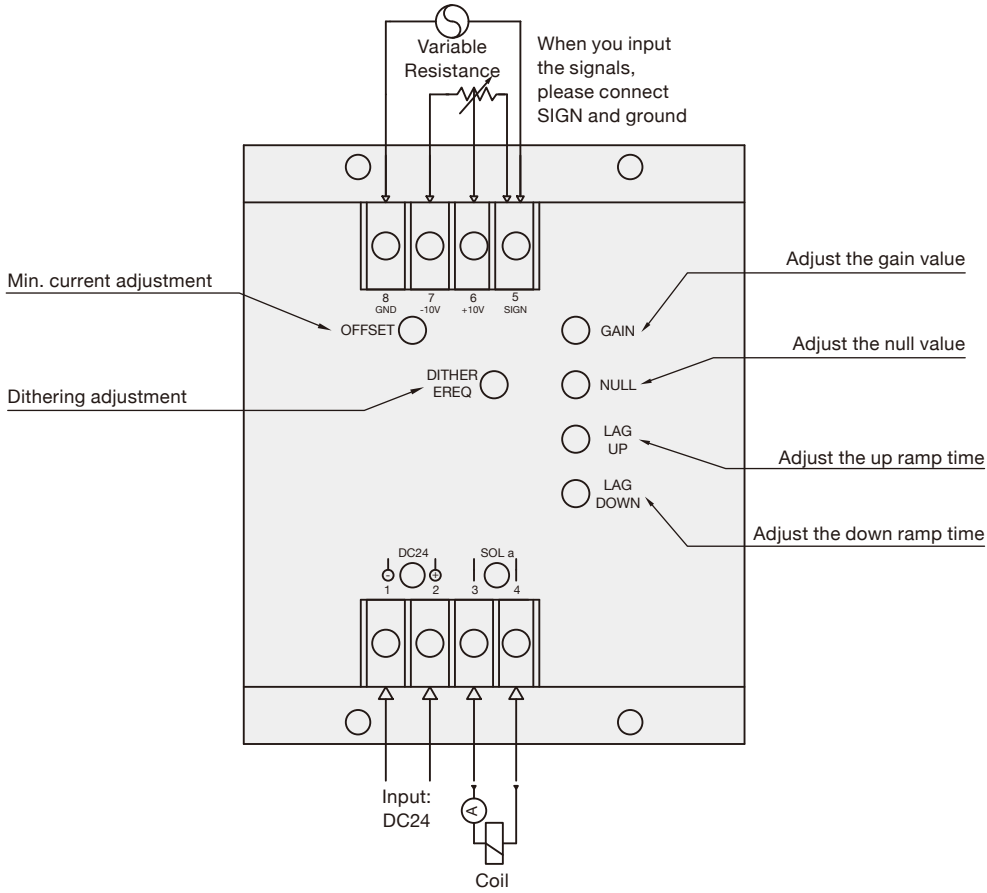
## MODEL SPEC.

Model	TW2085-2
Supply Voltage	DC24V
Fuse	2A
Load Coil Resistance	10Ω / 20Ω ( 20°C )
Input Control Voltage	0V ~ +9V
Max. Current Output Range	0 ~ 850 mA
Pilot Current Adjusting Range	0 ~ 150 mA
Up Ramp Period	0.1 ~ 2.5 sec
Down Ramp Period	0.1 ~ 2.5 sec
Temperature Drift	0.1mA / 1°C
Work Temperature	0 ~ 50°C
Max. Power Requirement	15VA
Weight	0.21 kg

## INSTRUCTION





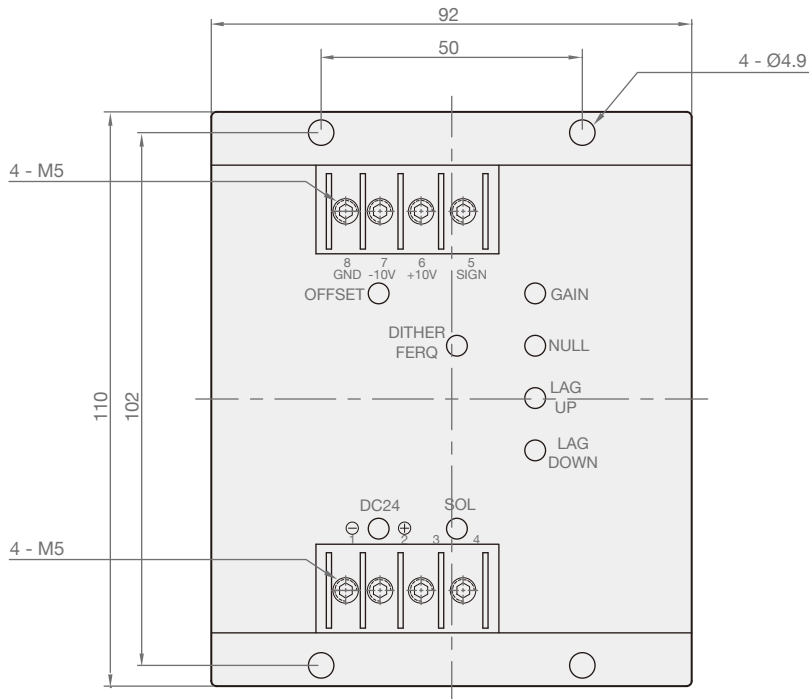


Wiring instruction		
1	Power supply voltage -	DC 24V
2	Power supply voltage +	DC 24V
3	Solenoid coil SOL	
4	Solenoid coil SOL	
5	Input signal terminal	
6	+10V	
7	-10V	
8	Ground	

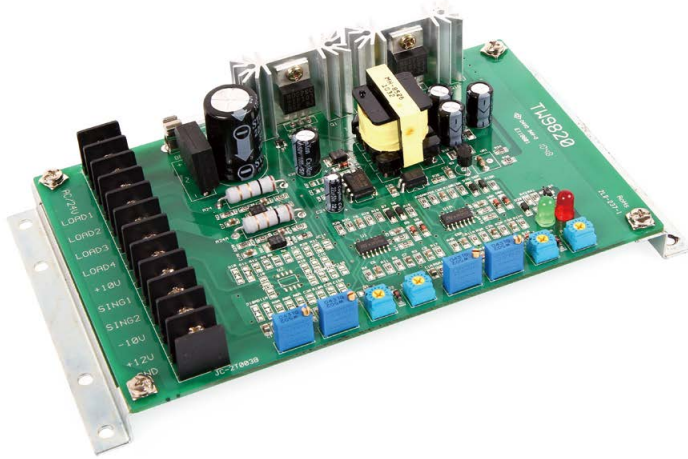
\* Terminal 5, 8 : Input signal terminals (0-10V)  
Terminal 5, 6, 7: Adjustable resistor terminals.

DIMENSION

( UNIT : mm )



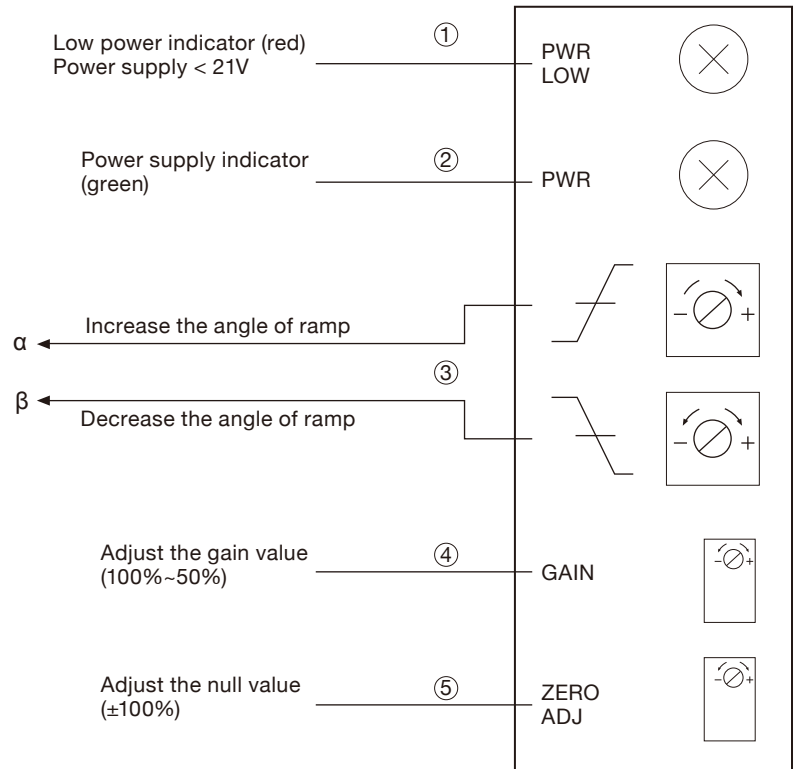
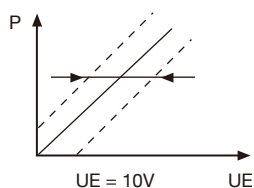
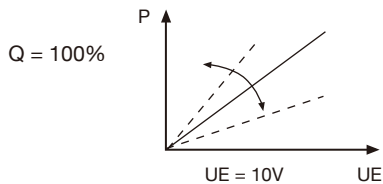
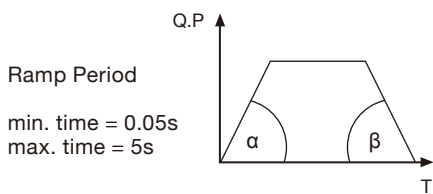
# TW9820

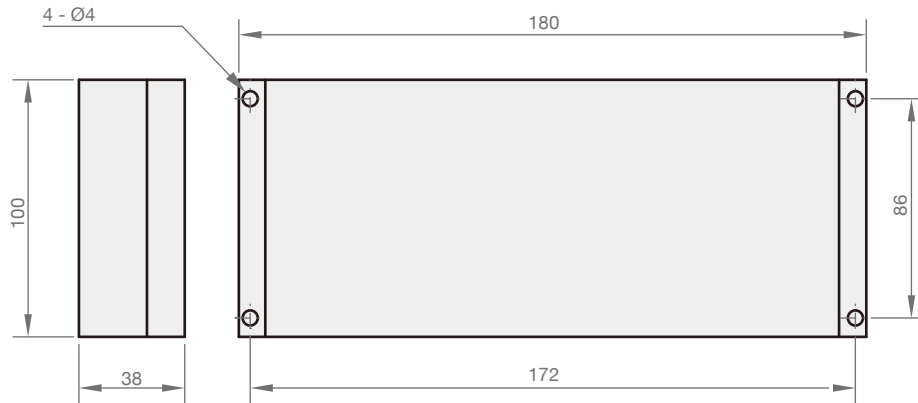
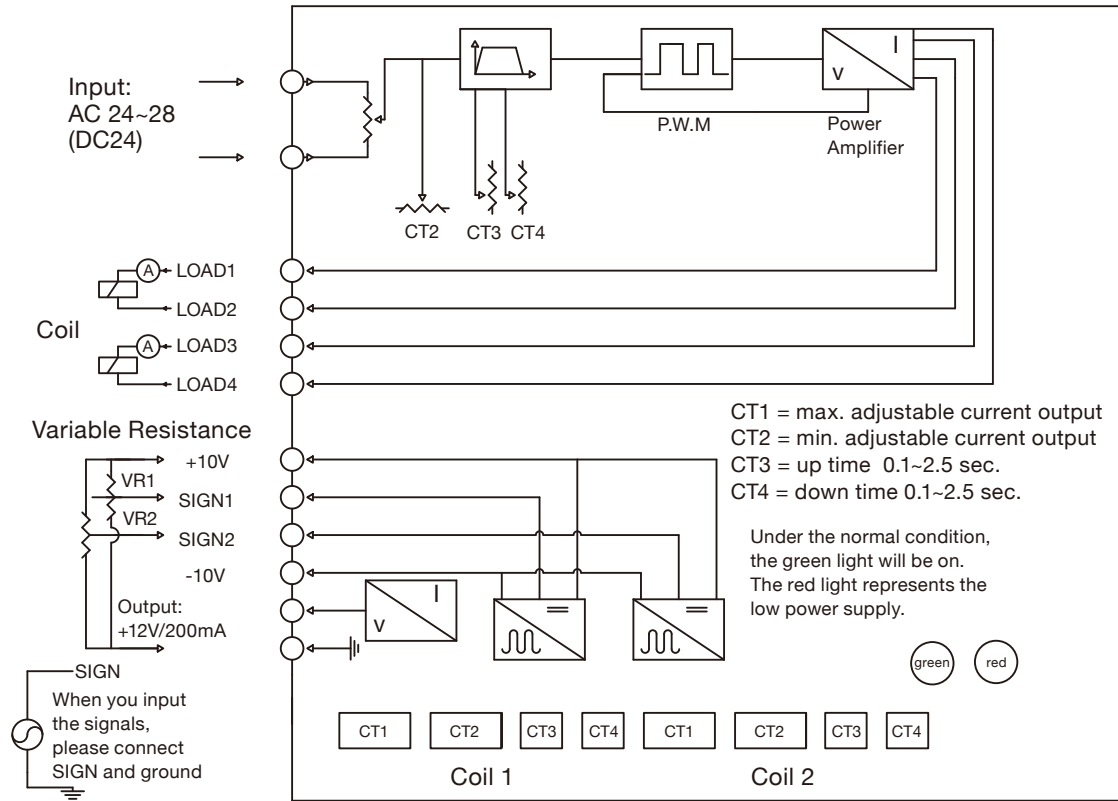


## MODEL SPEC.

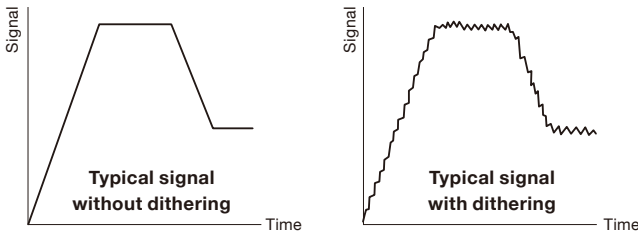
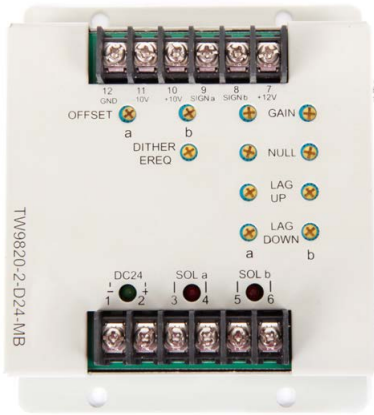
Model	TW9820
Supply Voltage	AC28V ± 20% DC24V
Fuse	2A
Load Coil Resistance	20Ω ( 20°C )
Input Control Voltage	0V ~ +9V
Max. Current Output Range	0 ~ 750 mA
Pilot Current Adjusting Range	0 ~ 150 mA
Up Ramp Period	0.1 ~ 2.5 sec
Down Ramp Period	0.1 ~ 2.5 sec
Temperature Drift	0.2mA / 1°C
Work Temperature	0 ~ 50°C
Max. Power Requirement	30VA
Weight	0.21 kg

## INSTRUCTION





# TW9820-2

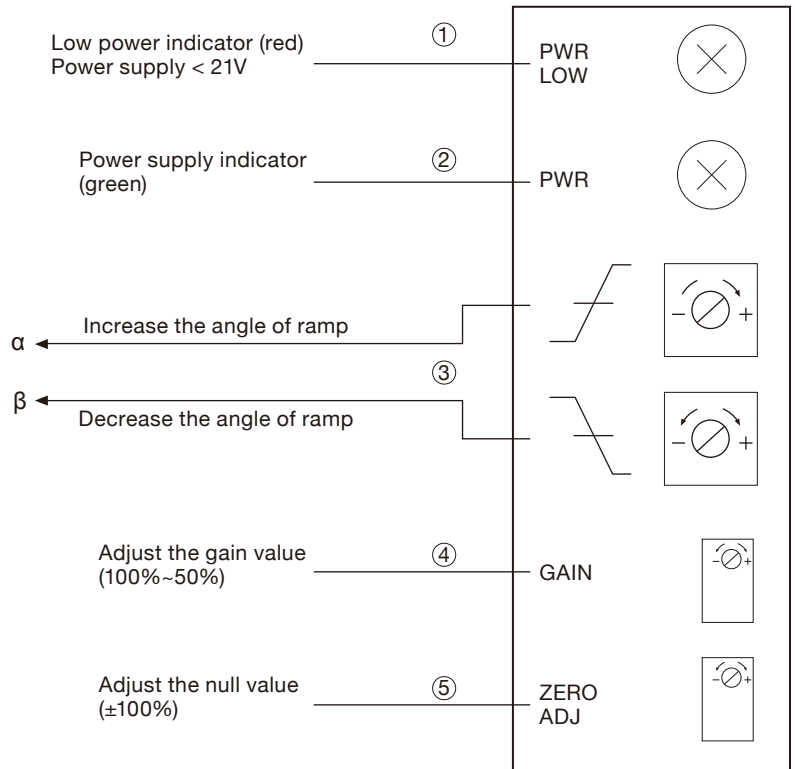
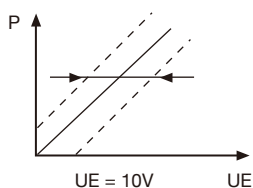
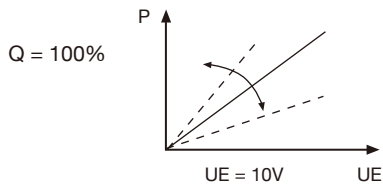
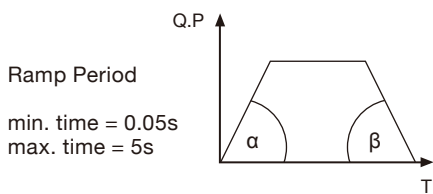


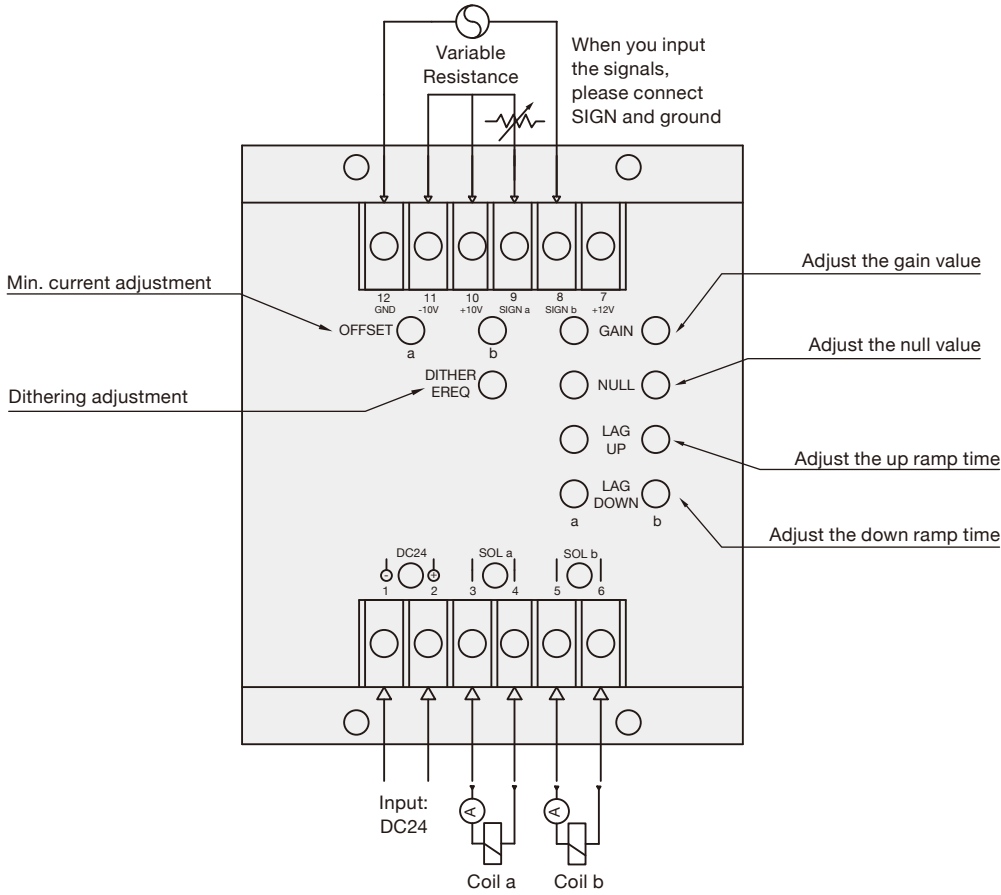
The effect used to vibrate a proportional valve spool is called dither. Dithering can offset the hysteresis. The dither frequency is specific to each valve and application, and the valve amplifier, or controller, will have an adjustable dither frequency. Hence, please purchase our amplifier together with the proportional valves.

## MODEL SPEC.

Model	TW9820-2
Supply Voltage	DC24V
Fuse	2A
Load Coil Resistance	20Ω ( 20°C )
Input Control Voltage	0V ~ +9V
Max. Current Output Range	0 ~ 750 mA
Pilot Current Adjusting Range	0 ~ 150 mA
Up Ramp Period	0.1 ~ 2.5 sec
Down Ramp Period	0.1 ~ 2.5 sec
Temperature Drift	0.2mA / 1°C
Work Temperature	0 ~ 50°C
Max. Power Requirement	30VA
Weight	0.21 kg

## INSTRUCTION

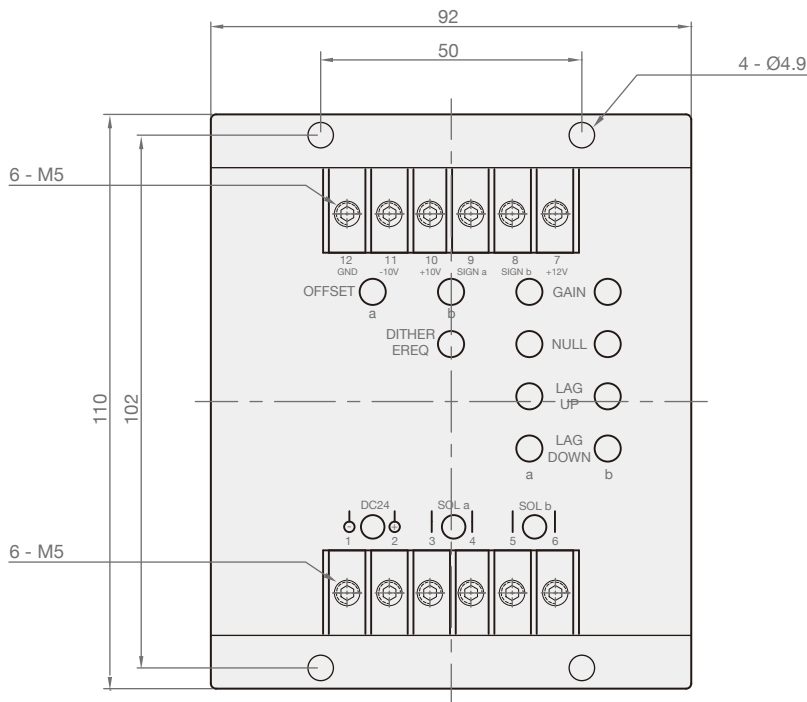




Wiring instruction		
1	Power supply voltage -	DC 24V
2	Power supply voltage +	DC 24V
3	Solenoid coil SOL a	
4	Solenoid coil SOL a	
5	Solenoid coil SOL b	
6	Solenoid coil SOL b	
7	+12V	
8	Input signal terminal b	
9	Input signal terminal a	
10	+10V	
11	-10V	
12	Ground	

\* Terminal 8/9, 12 : Input signal terminals (0-10V)  
Terminal 7, 8/9, 10: Adjustable resistor terminals.

DIMENSION







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