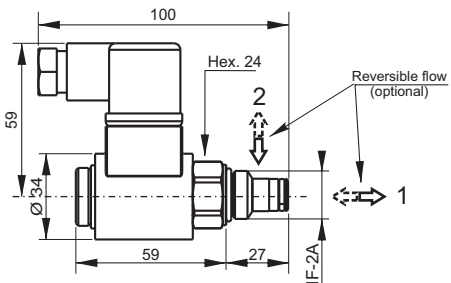
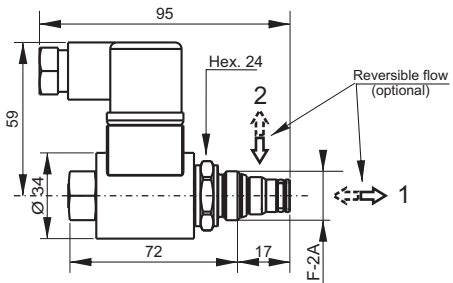
SAE08 PILOT OPERATED 2/2 SINGLE LOCKING POPPET SOLENOID VALVES



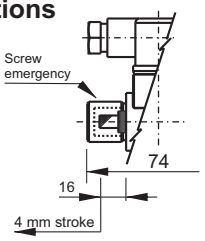
Normally closed

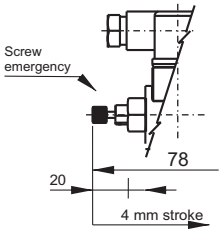


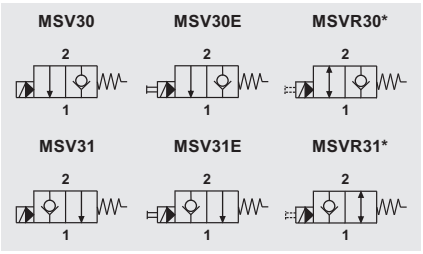
Normally open



Options







Main features

Max press.	up to 350 bar
Max flow	up to 30 l/min
Weight	0,11 Kg (without coil)
Internal leakage	5 drops/min at 350 bar
Response time	30 ms (energizing) 50ms (de-energizing)
Duty cycle	ED 100%
Voltage	+/- 10% nominal voltage
Environment temperature	-15 ÷ +50°C
Fluid temperature	-30 - +80°C
Filtration	ISO 4406
Tightening torque	25Nm
Cavity	SAE08-2

Spare part code

MSV — **Pilot Operated 2-way Single Locking Valve**

- — **Options:**
R = with reversible flow

30 — **Operation:**
30 = normally closed
31 = normally open

0 — **Emergency override:**
0 = no emergency (std)
E = emergency

0000 — **Supply voltage:**
0000 = no coil (std)
see coils table

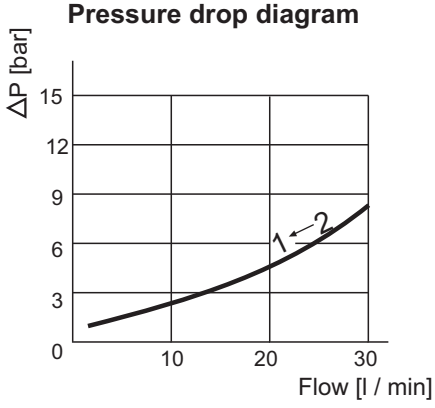
Assembly code

A (MSV30) **Voltage**
B (MSV30E) **Voltage**
Q (MSV31) **Voltage**
C (MSV31E) **Voltage**

Ex: A12DC

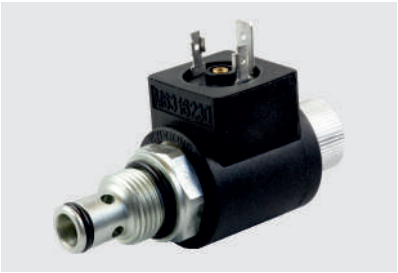
Supply Voltage	Coils Coil code	Connector code
12DC	M6306012	KA132000B1
24DC	M6306024	KA132000B1
48DC	M6306048	KA132000B1
24AC	M6316024	KA132000B1
115AC	M63160115	KA132000B1
230AC	M63160230	KA132000B1

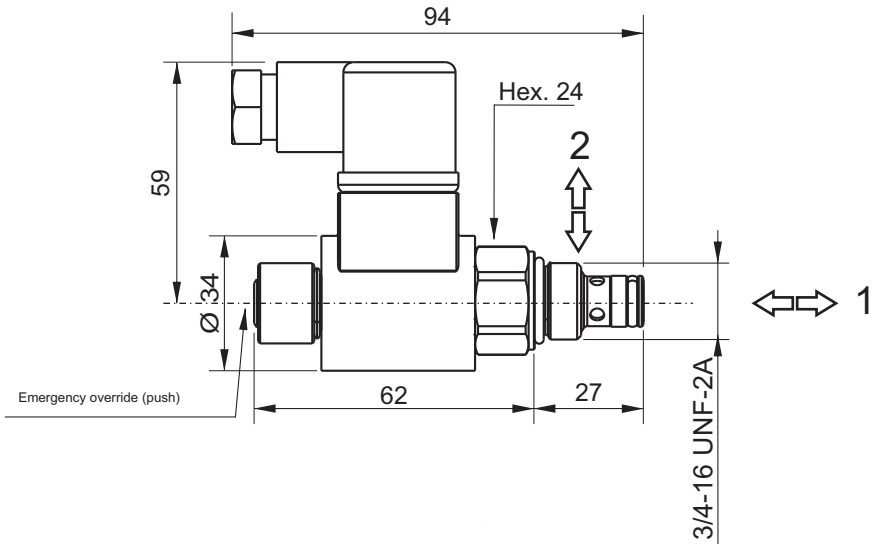
Pressure drop diagram

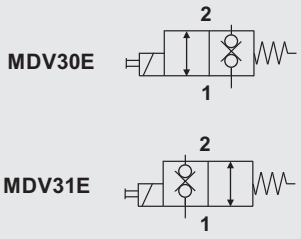


Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

SAE08 DIRECT OPERATED 2/2 DOUBLE LOCKING POPPET SOLENOID VALVES







Main features

Max press.	up to 250 bar
Max flow	up to 40 l/min
Weight	0,11 Kg
Internal leakage	5 drops/min at 350 bar
Response time	30 ms (energizing) 50ms (de-energizing)
Duty cycle	ED 100%
Voltage	+/- 10% nominal voltage
Environment temperature	-15 ÷ +50°C
Fluid temperature	-30 - +80°C
Filtration	ISO 4406
Tightening torque	25Nm
Cavity	SAE08-2

Spare part code

MDV — **Two-way double locking solenoid valve**

30 — **Operation:**
30 = normally closed
31 = normally open

E — **Option:**
E = emergency (std)

0000 — **Supply voltage:**
0000 = no coil (std)
see coils table

Assembly code

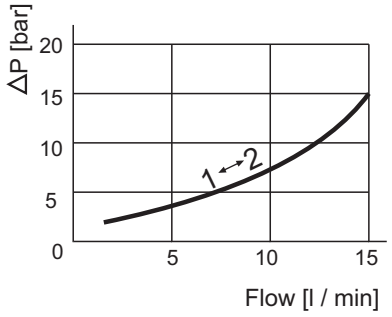
D (MDV30E) **Voltage**
M (MDV31E) **Voltage**

Ex: D12DC

Coils

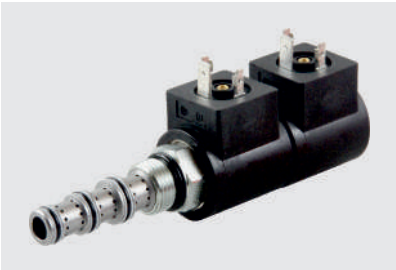
Supply Voltage	Coil code	Connector code
12DC	M14040001	KA132000B1
24DC	M1404002	KA132000B1
24AC	M1404002	KA132000B1
115AC	M1404004	KA132000B1
230AC	M1404005	KA132000B1

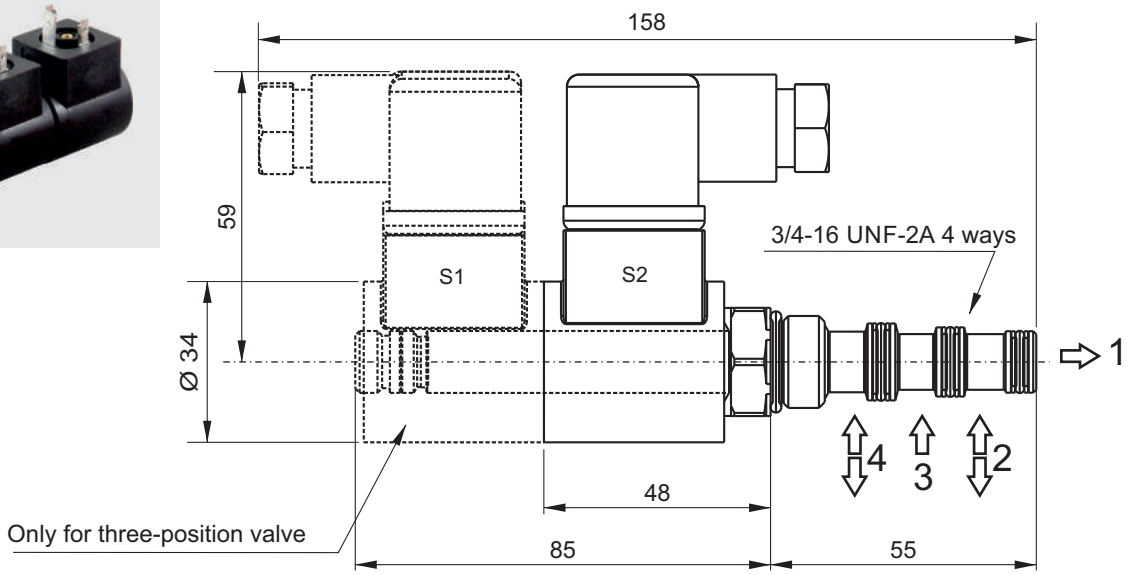
Pressure drop diagram



Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

SAE08-4 DIRECT OPERATED 4/3 OR 4/2 DIRECTIONAL SPOOL SOLENOID VALVES





Main features

Max press.	210 bar
Max flow	11,5 l/min
Weight	0,37 Kg (1 solenoid) 0,64 Kg (2 solenoids)
Internal leakage	278 cc/min at 210 bar
Minimum pull-in voltage	85% of nominal
Duty cycle	ED 100%
Voltage	+/- 10% nominal voltage
Environment temperature	-15 ÷ +50°C
Fluid temperature	-30 - +80°C
Filtration	ISO 4406
Tightening torque	25Nm
Cavity	SAE08-4

Spare part code

MSV4V — **4/3 or 4/2 directional spool solenoid valve**

A2 — **Spool configuration:** see below table

00 — **Option:** 00 = std

0000 — **Supply voltage:** 0000 = no coil (std) see coils table

Assembly code

4VA2 Voltage

Ex: 4VA2 24DC

Coils

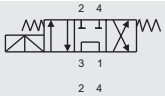
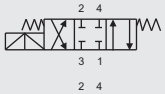
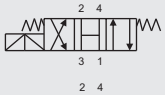
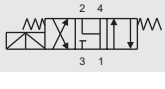
Supply Voltage	Coil code	Connector code
12DC	M6306012	KA132000B1
24DC	M6306024	KA132000B1
24AC	M6316024	KA132000B1
115AC	M63160115	KA132000B1
230AC	M63160230	KA132000B1

Spools

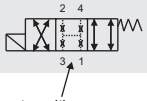
Code



Double solenoid

A2	
B2	
C2	
E2	

Single solenoid

A11C	

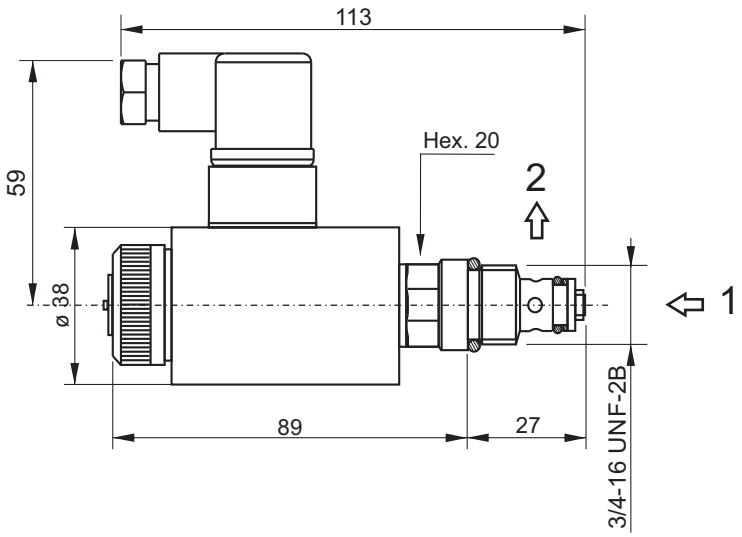
transition

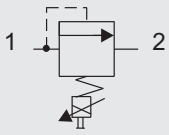
Valve code	Code marked on solenoid head
A2	**A**
B2	**C**
C2	**B**
E2	**D**

SAE08 PROPORTIONAL PRESSURE RELIEF VALVE



CE





Main features

Max press.	350 bar
Max flow	2 l/min
Weight	0,46 Kg
PWM	120Hz
Hysteresis	5%
Duty cycle	ED 100%
Voltage	+/- 10% nominal voltage
Environment temperature	-15 ÷ +50°C
Fluid temperature	-30 - +80°C
Filtration	ISO 4406
Tightening torque	25Nm
Cavity	SAE08-2

Note: Supplying current to the coil from 0 to I max (see diagram), a proportional pressure variation is obtained on port P.

Spare part code

VMPC — **Direct acting proportional relief valve**

2 — **Nominal size:**
2 = 2 l/min

C — **Working range:**
A = 10 ÷ 80 bar
C = 40 ÷ 250 bar

E — **Options:**
E = emergency (std)

0000 — **Supply voltage:**
- 0000 = no coil
- 12DC
- 24DC

see coils table

Assembly code

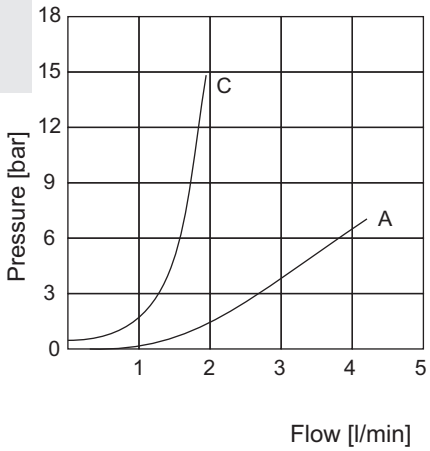
P* Voltage**

where *** stands for max setting pressure [bar]. eg. P25012DC

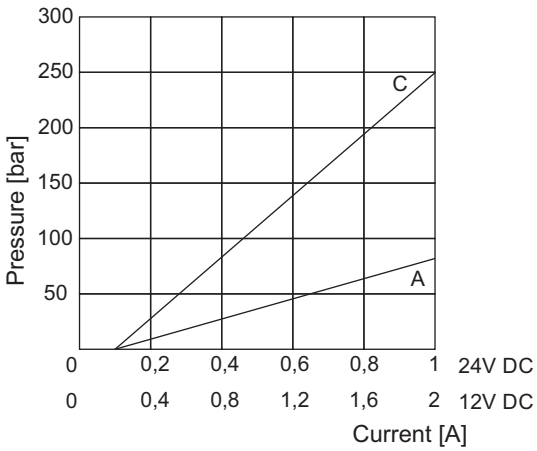
Coils

Supply Voltage	Coil code	Connector code
12DC	98001190	KA132000B1
24DC	98002190	KA132000B1

Pressure drop diagram



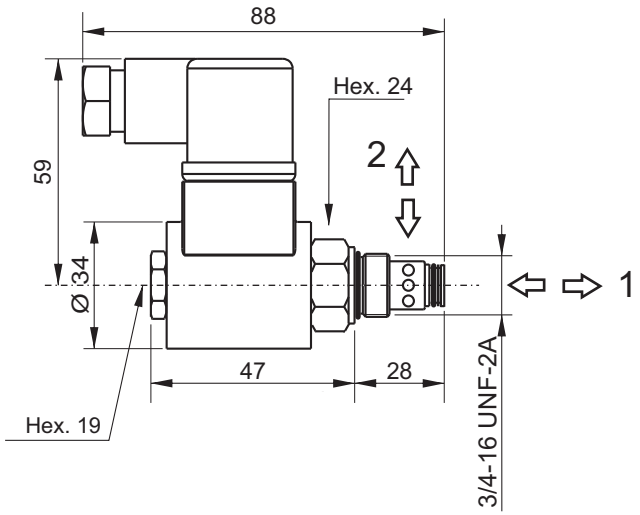
Pressure vs current

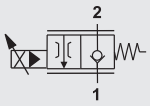


Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature.

SAE08 2/2 SINGLE LOCKING POPPET PROPORTIONAL FLOW CONTROL VALVE







Main features

Max press.	210 bar
Max flow	22 l/min
Weight	0,1 Kg (without coil)
PWM	120Hz
Hysteresis	5% (10% above 85% Imax)
Duty cycle	ED 100%
Voltage	+/- 10% nominal voltage
Environment temperature	-15 ÷ +50°C
Fluid temperature	-40 - +120°C
Filtration	ISO 4406
Tightening torque	30Nm
Cavity	SAE08-2

Spare part code

CSPC — **Proportional flow control valve**

15 — **Nominal size:**
15 = 15 l/min

0 — **Option:**
0 = no option

0000 — **Supply voltage:**
- 0000 = no coil (std)
- 12DC
- 24DC

see coils table

Assembly code

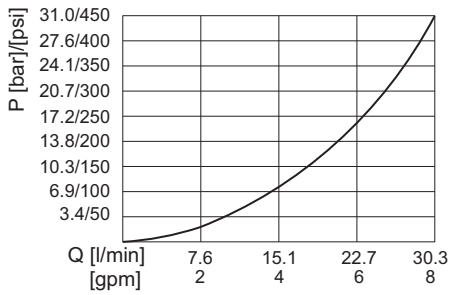
T* Voltage**

eg: T12DC

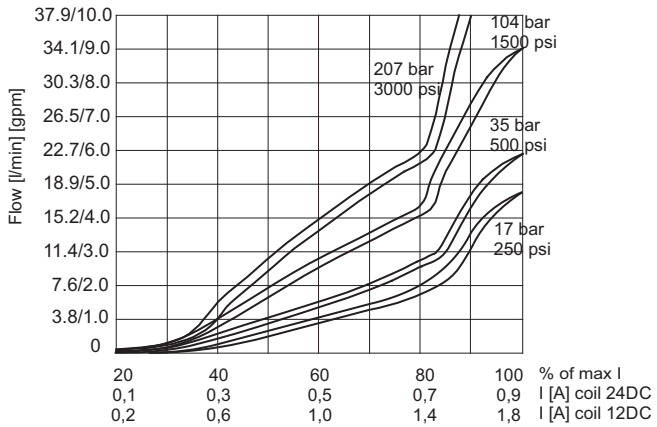
Coils

Supply voltage	Coil code	Connector code
12DC	M6306012	KA132000B1
24DC	M6306024	KA132000B1

Pressure Drop 2 > 1 with fully open valve



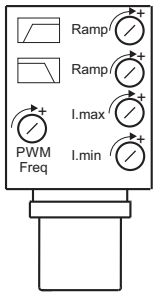
Flow vs current at different pressure drops

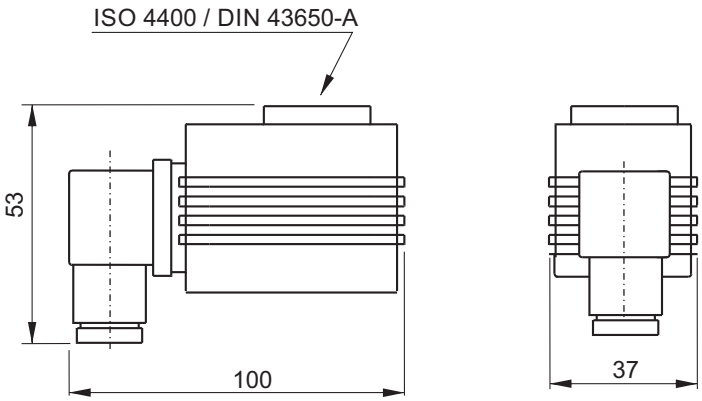


Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C.
Pressure drop may change depending on fluid viscosity and temperature.

VPC - PLUG IN ELECTRONIC AMPLIFIER FOR PROPORTIONAL SOLENOID VALVES







Main features

Supply voltage	12 / 24V DC
Voltage input signal range	10 V
Max current range	2,5A
PWM (optionally adjustable)	120 Hz (50 ÷ 400 Hz)
Ramp adjustment (independent)	5%
Input impedance	100 kohm
Voltage	+/- 10% nominal voltage
Weight	0,11 kg
Normatives	EN50081-1/EN50082-2 (89/336 CEE electromagnetic comp.) 73/23/CEE / 96/68/CEE (low voltage)
Notes	Closed current loop included (does not change with temperature)

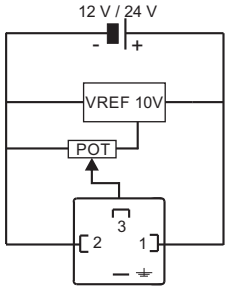
Spare part code

VPC — **Electronic amplifier for solenoid valves**

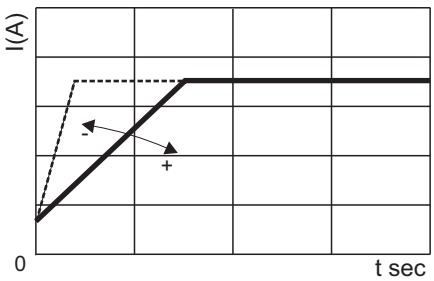
00 — **Options**

Suitable for:
- CSPC15**** proportional flow control valve
- VMPC2**** proportional pressure relief valve
- other proportional valves

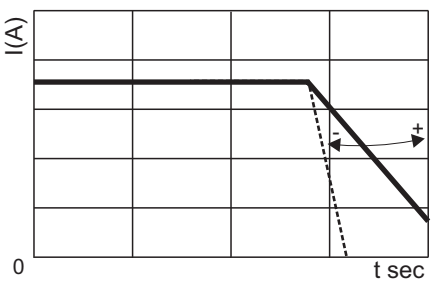
Electric circuit



Ramp adjustment (up)



Ramp adjustment (down)

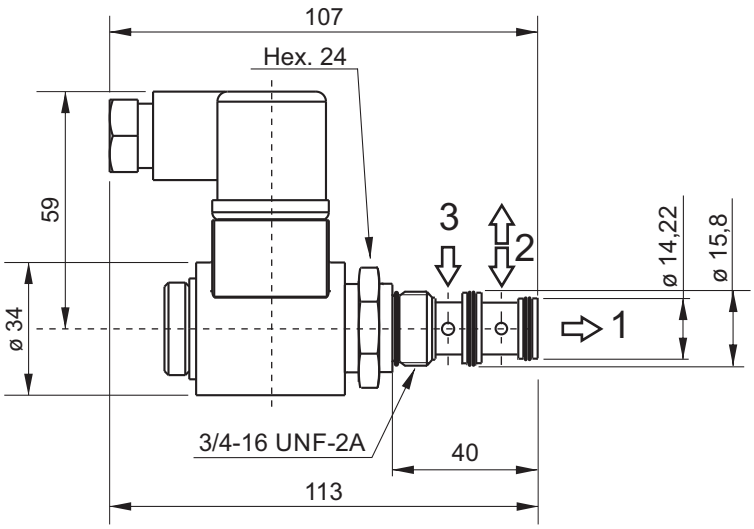


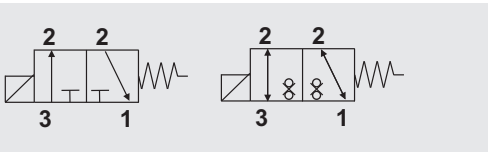
Instruction for use:

1) turn the “I MIN” trimmer fully counterclockwise;
2) adjust the external voltage input signal to the desired initial regulating (flow or pressure) value;
3) turn “I MIN” trimmer in a clockwise direction until valve just starts regulating;
4) adjust the external voltage input signal to the max value and adjust “I MAX” trimmer until the valve regulates the maximum flow or pressure on the hydraulic system.
Independent current to temperature variations.

MSV3V - DIRECT OPERATED 3/2 WAY DIRECTIONAL SPOOL SOLENOID CARTRIDGE







Main features

Max pressure	210 bar
Max flow	12 l/min (20 l/min without block)
Weight	0,35 Kg (with coil)
Coil insulation	Class H
Electric connection	DIN 43650-A / ISO 4400
Protection class	IP 65 / DIN 40050
Duty cycle	ED 100%
Voltage required	+/- 10% nominal voltage
Torque recommended	30 Nm
Fluid temperature	-25 ÷ +70°C

Spare part code

MSV3V — **Three-way direct acting solenoid valve**

40 — **Spool type:**
40 = std
50 = no leakage poppet

0 — **Options:**
0 = no options (std)

0000 — **Supply voltage:**
0000 = no coil (std)
see coils table

Pressure drop diagram

