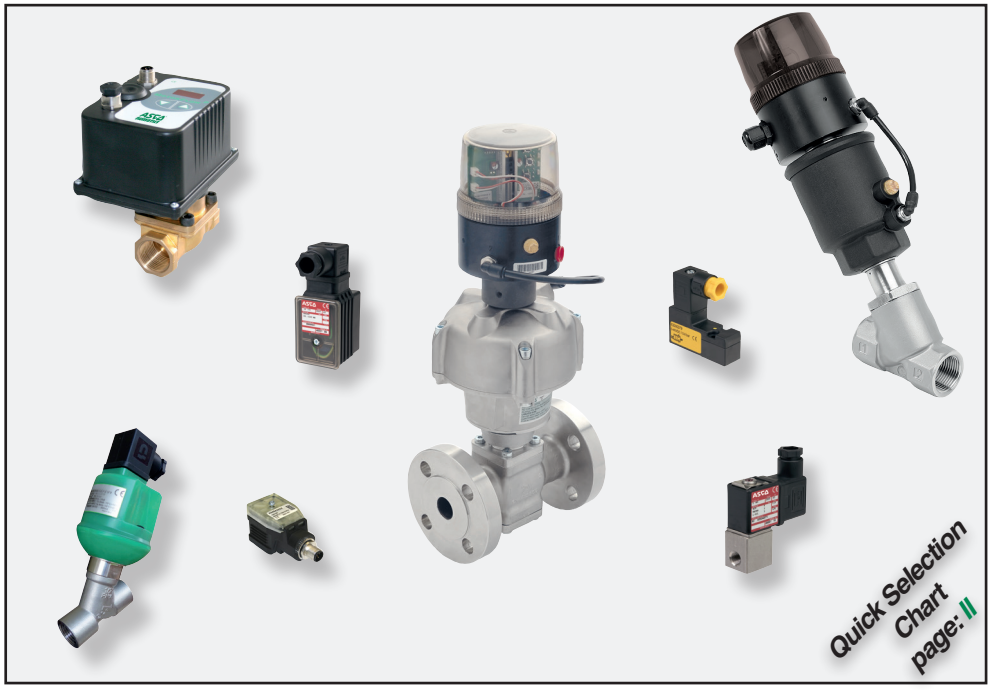
PROPORTIONAL VALVES

Product Index



Function	Δ P min. (bar)	Δ P max. (bar)	Temperature min. (°C)	Temperature max. (°C)		Pipe connections	Series	Page
PROPORTIONAL MOTORISED VALVES								
-	0	6	-10	+90/+145	Proportional motorised valves	3/8..3/4	290	1
PROPORTIONAL VALVES								
SYNTHETIC BODY								
2/2 NC-NO	0	8	0	+60	Piezotronic (CNOMO, size 15)	pad mount (M5/1/8/instant fittings)	630	5
BRASS BODY								
2/2 NC	0	12	0	+60	Posiflow	M5, pad mount	202	7
	0	8	0	+50	Posiflow	1/8	202	9
	0	16	-10	+90	Posiflow	1/4 - 3/8	202	11
	0,3	10	-10	+90	Posiflow	3/8 - 1/2	203	13
2/2	0	10	- 5	+90	MotorFlow^{D}	3/4	610	31
BRONZE BODY								
2/2-3/2 NC	0	16	-10	+184	Threaded ports (1)	1/2..2 1/2	E290/E390	23
2/2 NC	0	16	-10	+184	Flanged (1)	DN 25..50	T290	23
STAINLESS STEEL BODY								
2/2 NC	0	8	0	+50	Posiflow	1/8	202	9
	0	16	-10	+90	Posiflow	1/4 - 3/8	202	11
	0	16	-10	+184	Threaded ports / Clamp / Butt welding (1)	1/2..2 1/2 - DN 15..65	E290/S390	23
2/2 NC-3/2 U	0	40	-10	+233	Threaded ports (1)	1/2..2	E298/E398	27
	0	40	-10	+233	Flanged (1)	DN 15..50	T298/T398	27
	0	40	-10	+233	Socket welding ends (1)	DN 15..50	W298/W398	27
ALUMINIUM BODY								
2/2	0	8	0	+50	Flowtronic^{D}, proportional valves	1/4	607	21
ACCESSORIES								
Digital control unit for Posiflow solenoid valves							908	15
Electronic proportional control unit for Posiflow solenoid valves							908	17
Controller module for Posiflow proportional valves							603	19

(1) With: Positioner^{D}

(Potentially explosive atmospheres, see page: II)

All leaflets are available on: **www.asco.com**

Quick Selection Chart - **PROPORTIONAL VALVES**

pipe connections
- internal thread
- flanged
- butt welding
- pad mount, CNOMO size 15
- pad mount
- clamp

M5	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	pad mount	bronze	brass	aluminium	synthetic	stainless steel	st. steel, AISI 316L	all AISI 316L	orifice size (mm)	DN	min. operating pressure differential(bar)	max. operating pressure differential (bar) DC (=) air, inert gases	water, oil	vacuum	air, inert gases	aggressive fluids	air, inert gases	aggressive liquids	vacuum	hot water	steam ≤ 145°C	steam ≤ 184°C	max. allowable pressure (bar)	fluid temperature range (°C) min.	max. DC (=)	max.	power coil (W) DC (=)	series	I&M Sheet	page
PROPORTIONAL MOTORISED VALVES																																										
			■	■	■												■			10 ↓ 20	0	6 ↓ 4	10^{-2}	-	-	-	-	-	-	4	-	10	-10	+90	+145	14	**290**		**1**
2/2 SOLENOID VALVES - NORMALLY CLOSED (NC)																																									
■											c15				▨				-	-	0	8	-		-	-	-	-	-	-		-	-	0	+60	-	0,004	**630**		**5**
																						4	-		-	-	-	-	-	-		-	-							
■											⊥		▨						0,8	-	0	12	-	1	-	-	-	-	-	-		-		0	+60	-	2,6	**202**		**7**
																			2	-	0	2,5	-	1	-	-	-	-	-	-		-	-							
	■												▨			▨			1,2	-	0	8	5	1	-	-	-	-	-	-		-	-	0	+50	-	6,3	**202**		**9**
																			3,2	-	0	2,5	2,5	1	-	-	-	-	-	-		-	-							
		■											▨			▨			1,2	-	0	16	16	1	-	-	-	-	-	-		-	-	-10	+90	-	8	**202**		**11**
																			7,1	-	0	1	1	1	-	-	-	-	-	-		-	-							
			■										▨			▨			3,2	-	0	4	4	1	-	-	-	-	-	-		-	-							
																			7,1	-	0	1	1	1	-	-	-	-	-	-		-	-							
			■	■									▨						12,5	-	0,3	-	10	-	-	-	-	-	-	-		-	-	-10	+90	-	8	**203**		**13**
MOTORISED CONTROL VALVE 2/2 - MOTORFLOW^D																																									
					■								▨						15	-	0	10	10	-0,9	-	-	-	-	-	-		-	-	-5	+90	-	10	**610**		**31**
2/2 SOLENOID VALVES - NORMALLY OPEN (NO)																																									
■											c15				▨				-	-	0	8	-		-	-	-	-	-	-		-	-	0	+60	-	0,004	**630**		**5**
																						4	-		-	-	-	-	-	-		-	-							
2/2 VALVES - NORMALLY CLOSED (NC) - FLOWTRONIC^D/ POSITIONER^D																																									
		■												▨						6	0	8	-	-	-	-	-	-	-	-	-		-	8	0	-	+50		**607**		**21**
			■	■	■	■	■	■	■	■		▨				▨		▨		15 ↓ 65	0	-	-	-	16 ↓ 10				10^{-2} mbar	16 ↓ 10		10	16	-10	-	+184	-	**E290**		
			■	■	■	■	■	■	■	■						▨		▨			0	-	-	-													**S290**	■	**23**
						■	■	■	■	■		▨								25 ↓ 50	0	-	-	-	16 ↓ 10	-	16 ↓ 10	-									**T290**		
				■	■	■	■	■	■	■						▨		▨		15 ↓ 65	0	-	-	-	-	-	-	-	-	-	-	40	-10	-	+233	-	**E298**		
				■	■	■	■	■	■	■						▨		▨																			**T298**	■	**27**
				■	■	■	■	■	■	■						▨		▨																			**W298**		
3/2 VALVES - NORMALLY CLOSED (NC) - POSITIONER^D																																									
				■	■	■	■	■	■	■		▨								15 ↓ 50	0	-	-	-	16 ↓ 10	-	16 ↓ 10	-	-	16 ↓ 10		10	16	-10	-	+184	-	**E390**	■	**23**
3/2 VALVES - UNIVERSAL (U) - POSITIONER^D																																									
				■	■	■	■	■	■	■						▨		▨		15 ↓ 65	0	-	-	-	-	-	-	-	-	-	-	40	-10	-	+233	-	**E298**		
				■	■	■	■	■	■	■						▨		▨																			**T298**	■	**27**
				■	■	■	■	■	■	■						▨		▨																			**W298**		

page	series	power coil (W) DC (=)	group II gas / dusts zones 2 - 22 3 GD Ex nA	zones 1 - 21 2 G Ex db 2 D Ex tb	zones 1 - 21 2 G Ex e mb 2 D Ex tb EM (MXX)	zones 1 - 21 2 G Ex e mb 2 D Ex tb WSEM (MXX)	zones 1 - 21 2 G Ex mb 2 D Ex mb PV (EMXX)	zones 0 - 20
7	**202**	2,6						
9	**202**	6,3						
11	**202**	8						
13	**203**	8			(1)	(1)	(1)	

operators (See Explosionproof Solenoids section)

(1) Contact us.

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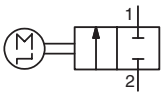
PROPORTIONAL MOTORISED VALVES

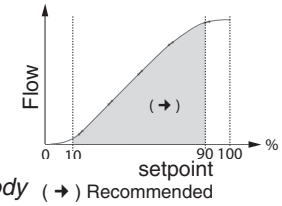
stainless steel body
threaded ports, 3/8 - 1/2 - 3/4



2 way
Series
290

FEATURES

- *Long service life*
- *Variable flow proportional to the control signal*
- *Ready-to-use valve*
- *High flow due to angled seat design*
- *Anti-waterhammer design (fluid entry under the disc)*
- *Actuator rotatable through 360°*
- *In option closing of the valve in case of power failure*
- *Fluid isolation between motorised actuator and valve body*
- *LED indicators for valve status display*
- *Valve tight at closing position (FCI 70-2 class V)*
- *Vacuum operation up to 10^{-2} mbar*
- *The valves satisfy Pressure Equipment Directive 2014/64/EU, article 4.3*
- *The proportional motorised valves comply with the essential requirements of EMC Directive 2014/30/EU (EN-IEC 61000-6-2 et EN-IEC 61000-6-4)*
- *The valves satisfy all relevant EU Directives and with the provisions of the Directive RoHS 2*

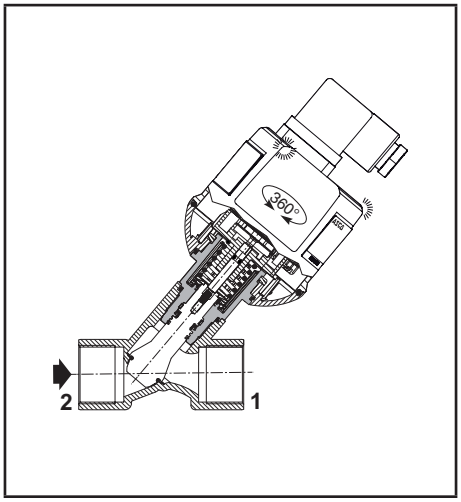


(→) Recommended working area

CONSTRUCTION

Differential pressure	See «SPECIFICATIONS» [1 bar =100 kPa]
Maximum allowable pressure	10 bar
Ambient temperature range	-10°C to +50°C -10°C to +40°C (for steam at 145°C)
Maximum viscosity	600 cSt (mm²/s)
Actuating time	< 1,3 s (full opening) < 1,3 s (full closing)

fluids (✳)	temperature range (TS)	seal materials (✳)
air and gas groups 1 & 2 water, oil, liquids groups 1 & 2	-10°C to +90°C	NBR (nitrile)
steam	up to +145°C	FPM (fluoroelastomer)



CONSTRUCTION

MATERIALS IN CONTACT WITH FLUID

(✳) Ensure that the compatibility of the fluids in contact with the materials is verified

	NBR / PBT «K»	FPM / 316L «X»
Valve body	AISI 316L	AISI 316L
Stuffing box housing	PBT, GF reinforced	AISI 316L
Stem valve	AISI 316L	AISI 316L
Stuffing box packing	NBR	FPM
Wiper seal	NBR	FPM
Disc seal	NBR	FPM

OTHER MATERIALS

Top cover operator	Translucent polyamide (PA)

ELECTRICAL CHARACTERISTICS

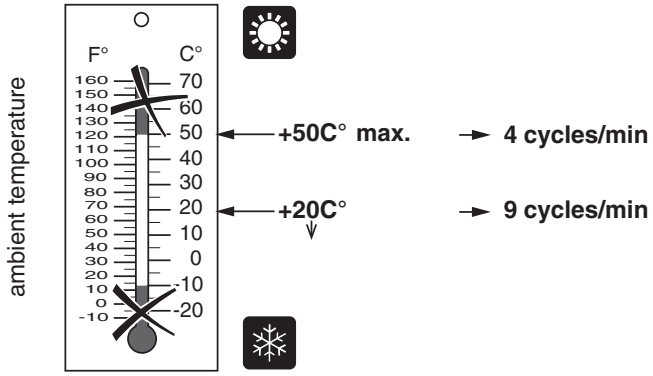
Connector	Spade plug (cable Ø 6-10 mm)
Connector specification	ISO 4400 / EN 175301-803, form A
Motor consumption	12 W in operation, < 2 W holding phase/set point position Max. peak current: 0,7 A
Visualisation valve (switching)	LED
Electrical enclosure protection	IP65 (EN 60529)
Standard voltages	DC (=) : 24V ±10 %, max. ripple 5%
Setpoint	0-10 V (input resistance = 10 kΩ) 4-20 mA (input resistance = 500 Ω)
Flow regulation characteristics	Linearity ±5%; hysteresis < 5%; accuracy <3%; sensitivity < 3%; repeatability <3%

(✳) Ensure that the compatibility of the fluids in contact with the materials is verified.

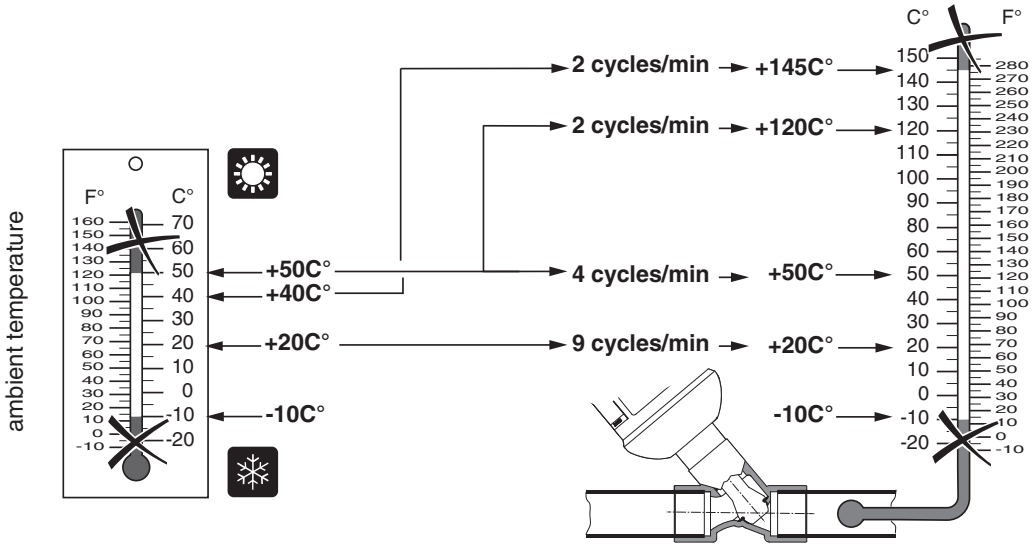
(1) Contact us.

OPERATING CONDITIONS
RECOMMENDATION FOR MAXIMUM DUTY CYCLE

NBR / PBT «K» version



FPM / 316L «X» version



OPTIONS

Fail closed (closing of the valve in case of power failure)

SPECIFICATIONS

piping (ISO 6708)		flow coefficient Kvs (100% opening)		operating pressure differential (bar)			operator diameter	thread type	dimensions / type (2)	15-DIGIT PRODUCT CODE	
pipe size	DN			min.	max.					basic code	voltage code
					air, water, oil (*)	steam					24 V/DC
		(m^3/h)	(l/min)				(mm)				
Motorised valve, entry under the disc (4-20 mA) - NBR / PBT «K» version											
3/8	10	2,7	45	0	6	-	67	G*	1	**E290CP2V0K4MA**	**V1**
1/2	15	3,8	63	0	5	-	67	G*	1	**E290CP3V0K4MA**	
3/4	20	6	100	0	4	-	67	G*	1	**E290CP4V0K4MA**	
Motorised valve, entry under the disc (0-10 V) - NBR / PBT «K» version											
3/8	10	2,7	45	0	6	-	67	G*	1	**E290CP2V0K00V**	**V1**
1/2	15	3,8	63	0	5	-	67	G*	1	**E290CP3V0K00V**	
3/4	20	6	100	0	4	-	67	G*	1	**E290CP4V0K00V**	
Motorised valve, entry under the disc (4-20 mA) - FPM / 316L «X» version											
3/8	10	2,7	45	0	6	4	67	G*	1	**E290CP2V0X4MA**	**V1**
1/2	15	3,8	63	0	5	4	67	G*	1	**E290CP3V0X4MA**	
3/4	20	6	100	0	4	4	67	G*	1	**E290CP4V0X4MA**	
Motorised valve, entry under the disc (0-10 V) - FPM / 316L «X» version											
3/8	10	2,7	45	0	6	4	67	G*	1	**E290CP2V0X00V**	**V1**
1/2	15	3,8	63	0	5	4	67	G*	1	**E290CP3V0X00V**	
3/4	20	6	100	0	4	4	67	G*	1	**E290CP4V0X00V**	

(2) For dimensions, see drawing(s) for each construction type on the following page(s).

(*) Ensure that the compatibility of the fluids in contact with the materials is verified.

Configurator - CAD Files

15-DIGIT PRODUCT CODE

E	290	C	P	4	V	0	K	4MA	V1

Pipe thread
E = ISO 228/1 & ISO 7/1 (combination thread)
8 = NPT (on request)

Product series
290

Revision letter
C = Initial release

Fonction
P = Proportional

DN
2 = DN 10
3 = DN 15
4 = DN 20

Motorised operator dia.
V = Ø 67 mm

Voltage
V1 = 24 V DC - class B

4MA= 4-20 mA - Setpoint
00V = 0-10 V - Setpoint
FC4 = EFC + 4-20 mA (1)
FC0 = EFC + 0-10 V (2)

Materials
K = AISI 316L body,
SS 316L stem,
PBT stuffing box & NBR
X = AISI 316L body,
SS 316L stem,
AISI 316L stuffing box & FPM

Port
0 = 2 way

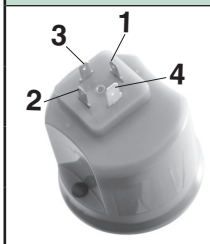
(1) Closing of the valve in case of power failure. Set point 4-20 mA.
(2) Closing of the valve in case of power failure. Set point 0-10 V.

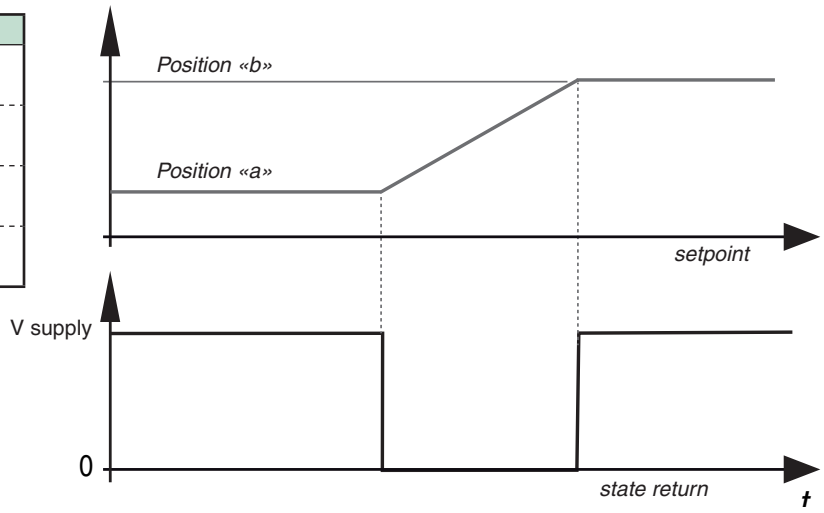
INSTALLATION

- The valves can be mounted in any position without affecting operation
- Pipe connections (G*) have standard combination thread according to ISO 228/1 and ISO 7/1
- Other pipe connections are available on request
- Installation/maintenance instructions are included with each valve
- LED indicators for operating status display

status	valve OPEN	green
	valve CLOSED	orange
	valve moves to open	green flashing
	valve moves to close	green flashing

WIRING DC

24 V ±10 % / DC		
	1	24 V / DC
	2	0 V
	3	setpoint (0-10 V or 4-20 mA)
	4	feedback signal (24 V switch)

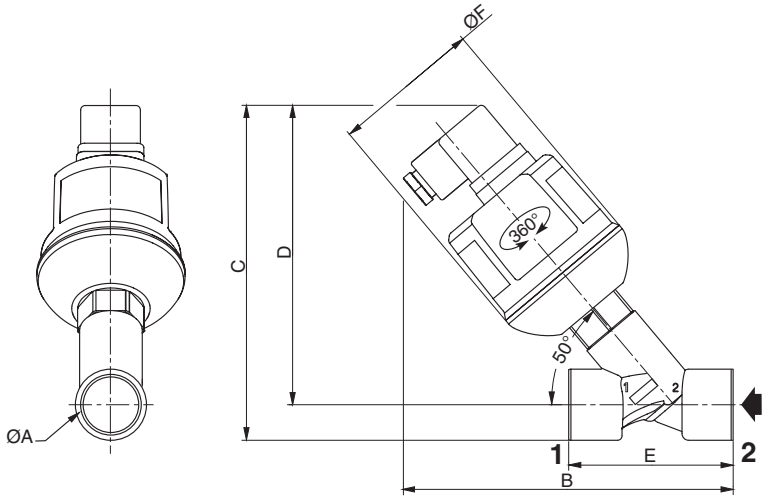


DIMENSIONS (mm), WEIGHT (kg)

Configurator - CAD Files

TYPE 01

DC version
67 mm motorised operator
Fluid entry: under the disc at 2
ISO 4400 connector

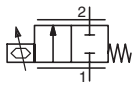


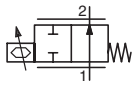
type	Ø A	B	C	D	E	Ø F	weight (1)	
							NBR / PBT «K»	FPM / 316L «X»
DC version								
01	3/8	135	141	129	55	67	0,40	0,45
	1/2	142	145	131	65	67	0,45	0,55
	3/4	150	152	136	75	67	0,55	0,65

(1) Incl. connector.

PROPORTIONAL MINI PIEZO-VALVES PIEZOTRONIC

ISO 15218 (CNOMO, size 15) interface
pad mounting body, M5 subbase

NC 

NO 

FEATURES

- *Miniature, ultra-low power consumption (0,004 W), almost no heat dissipation*
- *Pad mounting proportional mini piezo-valves available with single subbase M5*
- *Variable flow, proportional to the control signal*
- *No wearing parts: practically unlimited service life*
- *No inductive peaks when switching: no circuit protection necessary*
- *Valves do not require a minimum operating pressure*
- *The solenoid valves satisfy all relevant EU directives*

GENERAL

Differential pressure See «SPECIFICATIONS» [1 bar = 100 kPa]
Pneumatic base ISO 15218 (CNOMO E06.36.120N, size 15)
Response time 8 - 15 ms

fluids (∗)	temperature range (TS)	seal materials (∗)
air, inert gas filtered at 5 µm, unlubricated, condensate free, dew point -10°C	0°C to +60°C	NBR (nitrile)

MATERIALS IN CONTACT WITH FLUID

(∗) Ensure that the compatibility of the fluids in contact with the materials is verified

Body PPS
Internal parts Piezo ceramics, brass
Seals NBR
Subbases Brass or aluminium

ELECTRICAL CHARACTERISTICS

Connector Spade plug (cable Ø 6-7 mm)
Connector specification DIN 43650, 9,4 mm, form C
or 2 leads outlet AWG 28, length 1 m
Electrical safety IEC 335
Electrical enclosure protection Moulded IP65 (EN 60529)
Standard voltages (U_N) DC (=) : 0 to 40 V

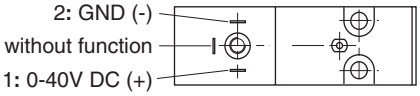
holding current	power ratings				ambient temperature range (TS)	type (1)
	inrush ~	holding ~		hot/cold =		
(mA)	(VA)	(VA)	(W)	(W)	(C°)	
< 100	-	-	-	0,004	0 to +60	01-02

Voltage regulation 0 - 40 V DC
Flow regulation characteristic Hysteresis < 10 to 15%

ELECTRICAL CONNECTION

(Polarized piezo valve)

Version with spade plug connection:



Version with 2 leads:
red wire: +
black wire: -

SPECIFICATIONS

connection	flow coefficient Kv		operating pressure differential (bar)			holding power (W)		catalogue number			
			min.	max. (PS) air (∗)				without manual operator		with impulse manual operator	
								connector	leads	connector	leads
	(m³/h)	(l/min)		~	=	~	=	=	=	=	=
NC - Normally closed											
pad mounting	0,005	0,086	0	-	8	-	0,004	**63000075**	**63000035**	**63000079**	**63000039**
	0,007	0,12	0	-	4	-	0,004	**63000076**	**63000036**	**63000080**	**63000040**
NO - Normally open											
pad mounting	0,005	0,086	0	-	8	-	0,004	**63000077**	**63000037**	**63000081**	**63000041**
	0,007	0,12	0	-	4	-	0,004	**63000078**	**63000038**	**63000082**	**63000042**

SUBBASES (2)

pipe size	mounting type	description	catalogue number	
			aluminium	brass
Single subbase, ISO 15218 (CNOMO E06.36.120N, size 15)				
M5	individual mounting	M5 lateral connection	**88263002**	**30300001**

(1) Refer to the dimensional drawings on the following page.
(2) Multiple subbases, contact us.

BCAE Industrial Automation
青岛秉诚自动化设备有限公司
地址：中国·青岛市重庆南路99号海尔云街甲3号楼7F
服务热线：4006-918-365
网址：http://www.asco.store
传真：(86-532)585-10-365
Email：sales@bechinas.com

OPTIONS

- Connector with cable length of 2 m (www.asco.com)

INSTALLATION

- The solenoid valves can be mounted in any position without affecting operation
- Mounting on single subbases
- Unlike the on/off type, the proportional version is not equipped with electronics. Please check for correct polarity when connecting the valve. The piezo element will be damaged if the polarity of the connections is inversed. The control system of the user must be used for charging and discharging.

Important note: The peak current must be limited by serial resistor greater than 30 ohms

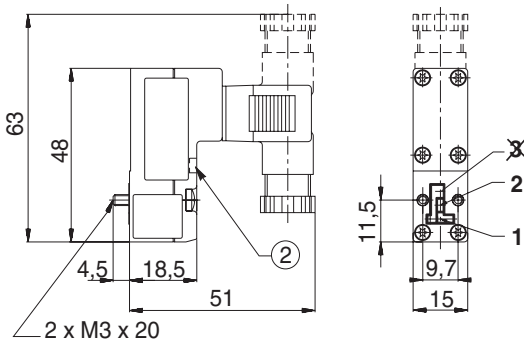
- Installation/maintenance instructions are included with each valve

DIMENSIONS (mm), WEIGHT (kg)

TYPE 01

IEC 335 / DIN 43650
IP65

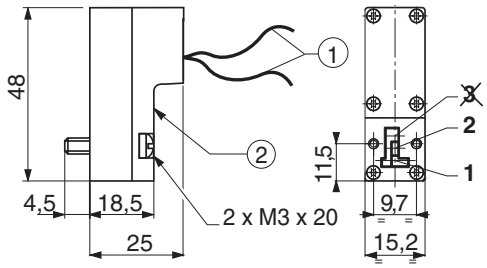
63000075/76/77/78/79/80/81/82

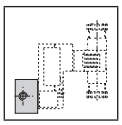


TYPE 02

IEC 335
IP65

63000035/36/37/38/39/40/41/42

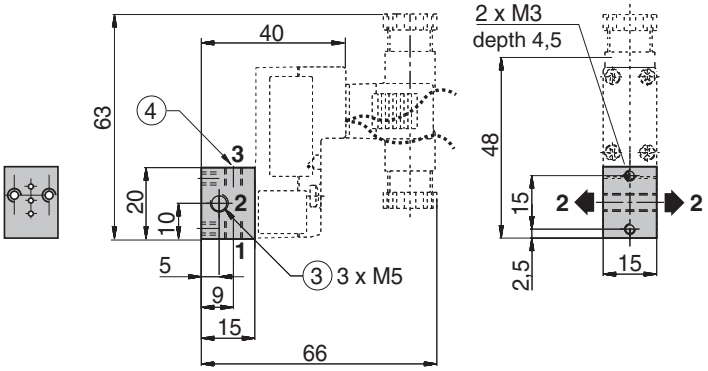


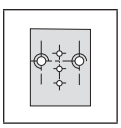


SINGLE SUBBASE M5

Aluminium or brass

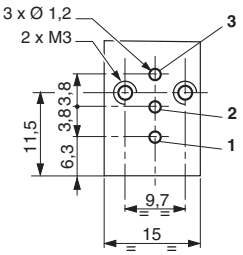
88263002 - 30300001





SUBBASE MOUNTING PATTERN

ISO 15218/CNOMO E06.36.120N, size 15



type	catalogue number	weight
01	63000075/76/77/78/79/80/81/82	0,040
02	63000035/36/37/38/39/40/41/42	0,032
-	88263002	0,012
-	30300001	0,034

(1) 2 leads AWG 28, length 1 m
(2) Manual operator location
(3) Outlet (2) can be connected on the left or on the right of subbase; close the unused port with a Ø M5 plug (supplied)
(4) Port (3) not used (to be provided with protection)

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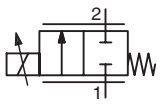
青岛秉诚自动化设备有限公司
地址：中国·青岛市重庆南路99号海尔云街甲3号楼7F
服务热线：4006-918-365
网址：http://www.asco.store
传真：(86-532)585-10-365
Email：sales@bechinas.com

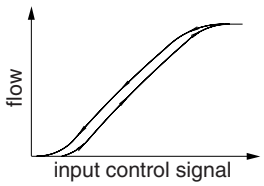
PROPORTIONAL SOLENOID VALVE
POSIFLOW
direct operated
pad mounting body, M5 subbase

NC



FEATURES

- *Proportional solenoid valves for mounting on single subbase with threaded M5 port connections*
- *Variable flow, proportional to the control signal*
- *Valves do not require a minimum operating pressure*
- *Valves can be mounted in any position*
- *The solenoid valves satisfy all relevant EU directives*



GENERAL

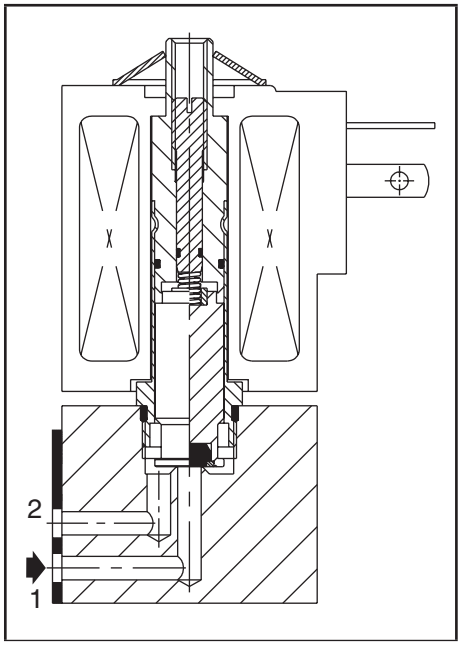
Differential pressure See «SPECIFICATIONS» [1 bar =100 kPa]

fluids (∗)	temperature range (TS)	seal materials (∗)
air, inert gas	0°C to +60°C	FPM (fluoroelastomer)

MATERIALS IN CONTACT WITH FLUID

(∗) Ensure that the compatibility of the fluids in contact with the materials is verified

Body	Brass
Core tube	Brass
Core and plugnut	Stainless steel
Springs	Stainless steel
Seat	Brass
Seals	FPM



ELECTRICAL CHARACTERISTICS

Coil insulation class	F
Connector	Spade plug (cable Ø 4-6 mm)
Connector specification	DIN 43650, 9,4 mm, form C
Electrical safety	IEC 335
Electrical enclosure protection	Moulded IP65 (EN 60529)
Standard voltages (2)	DC (=) : 12V, 24V (Other voltages on request)

prefix option	voltage	current consumption	power ratings				operator ambient temperature range (TS) (2)	type (1)
			inrush ~	holding ~		hot/cold =		
	(V) =	(mA)	(VA)	(VA)	(W)	(W)	(C°)	
SC	12	max. 175	-	-	-	3 / 2,6	0 to +60	01
	24	max. 125						

Voltage regulation (3) 0 - 24 V DC
24 V DC pulse width modulated (1000 Hz)

Flow regulation characteristics (2) Hysteresis < 5%; Repeatability < 3% ; Sensitivity < 2%

SPECIFICATIONS

pipe size	orifice size	flow coefficient Kv		operating pressure differential (bar)			power coil (W)	catalogue number
				min.	max. (PS)			
					vacuum	air (∗)		
	(mm)	(m^3/h)	(l/min)		=	=	=	(=)
NC - Normally closed, pad mounting body (solenoid valve alone)								
pad mounting	0,8	0,02	0,3	0	1	12	2,6	**SCS202A101V**
	1,2	0,05	0,8	0	1	7	2,6	**SCS202A102V**
	1,6	0,08	1,3	0	1	4	2,6	**SCS202A103V**
	2	0,1	1,7	0	1	2,5	2,6	**SCS202A104V**
NC - Normally closed, pad mounting body, solenoid valve with M5 subbase (4)								
M5	0,8	0,02	0,3	0	1	12	2,6	**SCE202A105V**
	1,2	0,05	0,8	0	1	7	2,6	**SCE202A106V**
	1,6	0,08	1,3	0	1	4	2,6	**SCE202A107V**
	2	0,1	1,7	0	1	2,5	2,6	**SCE202A108V**

(1) Refer to the dimensional drawings on the following page.
(2) Percentage of max value with 24 V DC, P.W.M. 1000 Hz.
(3) For electronic proportional control unit, please contact us.
(4) Solenoid valve supplied with single subbase with threaded M5 port connections, catalogue number: **30300001**

OPTIONS

- Solenoid operators for use in zone 22, category 3, to ATEX Directive 2014/34/EU, on request
- Electronic proportional control unit [catalogue number: **E908A004** (www.asco.com)]
  - analog input control signals: 0 - 10 V DC, 0 - 20 mA or 4 - 20 mA
  - coil current (= flow rate) adjustable to required control signals
  - switch-off function at less than 2% of maximum input control signal
  - adjustable ramp control
  - adjustable frequency
  - output current independent of coil resistance (temperature) and supply voltage variations
- Other pipe connections are available on request

INSTALLATION

- The solenoid valves can be mounted in any position without affecting operation
- For details on single subbase with threaded M5 port connections, contact us (catalogue number: **30300001**)
- Installation/maintenance instructions are included with each valve

ORDERING EXAMPLES:

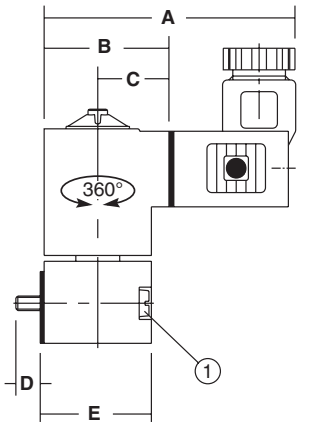
SC	S	202 **A** 105	**V**	24V / DC
SC	E	202 **A** 105	**V**	24V / DC

prefix
pipe thread
basic number
voltage
suffix

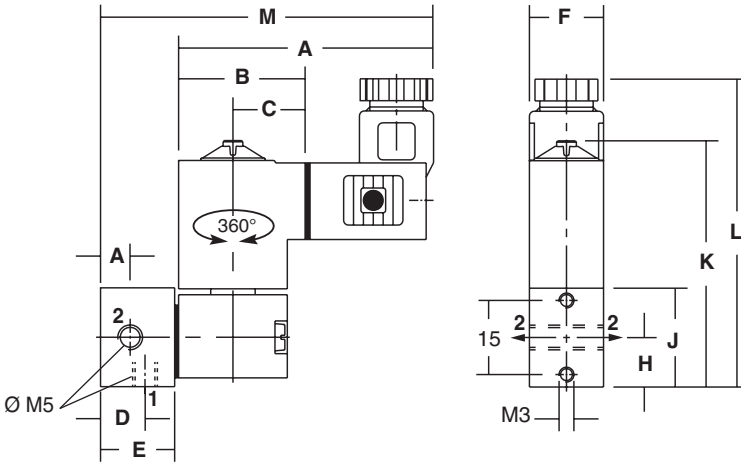
DIMENSIONS (mm), WEIGHT (kg)

TYPE 01
Prefix "SC" Solenoid
Epoxy moulded
IEC 335 / DIN 43650
IP65

SCS202A101V/102V/103V/104V



SCE202A105V/106V/107V/108V



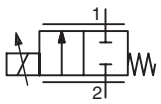
(1) 2 M3 x 25 mounting screws

type	prefix option	catalogue number	A	B	C	D	E	F	G	H	J	K	L	M	weight (1)
01	SC	SCS202A101V/102V/103V/104V	53	25,6	14,8	5	22,8	15	8,2	3	6,8	48	61	9,7	0,95
		SCE202A105V/106V/107V/108V	53	25,6	14,8	9	15	15	6	10	20	52	65	68	1,25 (2)

(1) including coil and connector.
(2) with subbase

All leaflets are available on: **www.asco.com**

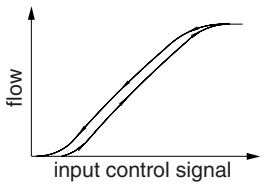
PROPORTIONAL SOLENOID VALVE
POSIFLOW
direct operated
1/8

NC 

2/2
Series
202

FEATURES

- *Variable flow, proportional to the control signal*
- *Valves do not require a minimum operating pressure*
- *Valves can be mounted in any position*
- *The solenoid valves satisfy all relevant EU directives*



GENERAL

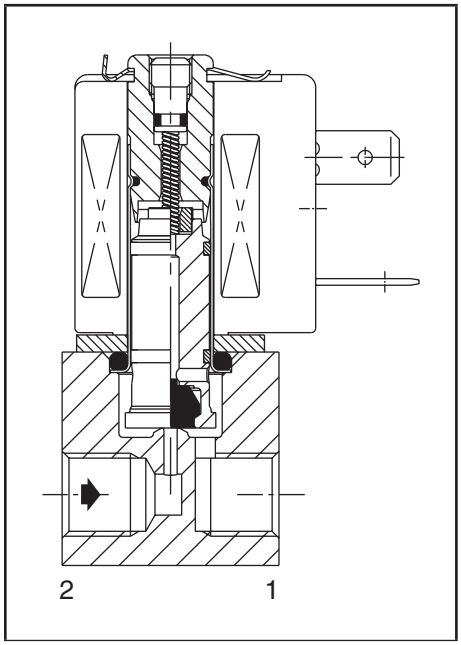
Differential pressure See «SPECIFICATIONS» [1 bar =100 kPa]
Maximum viscosity 50 cSt (mm²/s)

fluids (∗)	temperature range (TS)	seal materials (∗)
air, inert gas, water, oil	0°C to +50°C	FPM (fluoroelastomer)

MATERIALS IN CONTACT WITH FLUID

(∗) Ensure that the compatibility of the fluids in contact with the materials is verified

	Brass body	Stainless steel body
Body	Brass	AISI 303
Core tube	Stainless steel	Stainless steel
Core and plugnut	Stainless steel	Stainless steel
Springs	Stainless steel	Stainless steel
Riderring	PTFE	PTFE
Seat	Brass	Stainless steel
Seals	FPM	FPM
Disc	FPM	FPM
Breaker piece	Stainless steel	Stainless steel



ELECTRICAL CHARACTERISTICS

Coil insulation class F
Connector Spade plug (cable Ø 6-8 mm)
Connector specification DIN 43650, 11 mm, industry standard B
Electrical safety IEC 335
Electrical enclosure protection Moulded IP65 (EN 60529)
Standard voltages DC (=) : 24V (Other voltages on request)

prefix option	operating current	power ratings inrush ~	power ratings holding ~		power ratings hot/cold =	operator ambient temperature range (TS) (2)	replacement coil =	type (1)
	(mA)	(VA)	(VA)	(W)	(W)	(C°)	24 V DC	
SC	100 - 450	-	-	-	8,6 / 6,3	0 to +40	-	01

Voltage regulation 0 - 24 V DC
24 V DC pulse width modulated (400 Hz)

Flow regulation characteristics (2) Hysteresis < 5%; Repeatability < 1% ; Sensitivity < 1%

SPECIFICATIONS

pipe size	orifice size	flow coefficient Kv		operating pressure differential (bar) min.	max. (PS) vacuum	air (∗)	water (∗)	oil (∗)	power coil (W)	catalogue number brass	catalogue number stainless steel	options EPDM	options PTFE	
G	(mm)	(m³/h)	(l/min)		=	=	=	=	=	=	=			
NC - Normally closed														
1/8	1,2	0,05	0,7	0	1	8	5	5	6,3	**SCG202A201V**	**SCG202A205V**	**E**	**T**	**-**
	1,6	0,07	1,1	0	1	6	4	4	6,3	**SCG202A202V**	**SCG202A206V**	**E**	**T**	**-**
	2,4	0,13	2,2	0	1	4	3	3	6,3	**SCG202A203V**	**SCG202A207V**	**E**	**T**	**-**
	3,2	0,18	2,9	0	1	2,5	2,5	2,5	6,3	**SCG202A204V**	**SCG202A208V**	**E**	**T**	**-**

(1) Refer to the dimensional drawings on the following page.
(2) Percentage of max. value with 24 V DC, P.W.M. 400 Hz, supply at constant differential pressure.

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青岛秉诚自动化设备有限公司
地址：中国.青岛市重庆南路99号海尔云街甲3号楼7F
服务热线：4006-918-365
网址：http://www.asco.store
传真：(86-532)585-10-365
Email：sales@bechinas.com

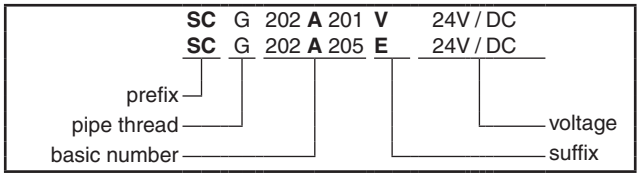
OPTIONS

- Valves can also be supplied with NBR (nitrile), EPDM (ethylene propylene) and PTFE seals and discs
- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 2014/34/EU, on request
- Electrical enclosures according to “NEMA” standards are available
- Mounting brackets
- Electronic proportional control unit [catalogue number: **E908A003** (www.asco.com) / **X90850164500100-0200** (www.asco.com)]
  Features:
  - analog input control signals: 0 - 10 V DC, 0 - 20 mA or 4 - 20 mA
  - coil current (= flow rate) adjustable to required control signals
  - switch-off function at less than 2% of the maximum control function
  - adjustable ramp control
  - adjustable frequency
  - output current independent of coil resistance and supply voltage variations
  - housed in: a box with spade plug connector according to ISO 4400 / IP65
- Other pipe connections are available on request

INSTALLATION

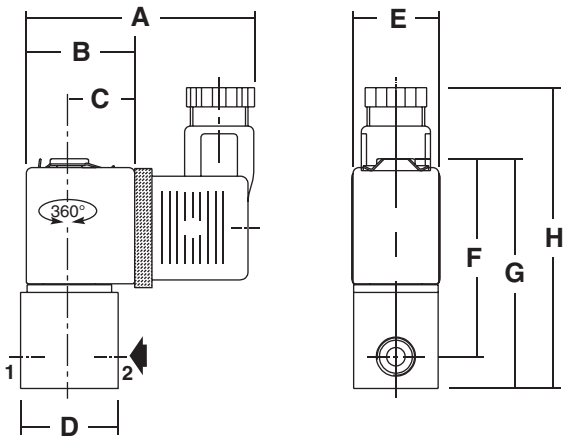
- The solenoid valves can be mounted in any position without affecting operation
- Solenoid valves have 2 mounting holes in body
- Threaded pipe connection is standard: G = G (ISO 228/1)
- Installation/maintenance instructions are included with each valve

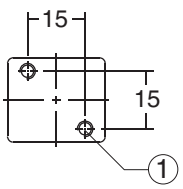
ORDERING EXAMPLES:



DIMENSIONS (mm), WEIGHT (kg)

TYPE 01
Prefix “SC” Solenoid
Epoxy moulded
IEC 335 / DIN 43650
IP65





type	prefix option	A	B	C	D	E	F	G	H	X	weight (1)
01	SC	59	28	17	25	22	52	60	78	-	0,2

(1) including coil and connector.

All leaflets are available on: **www.asco.com**

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青岛秉诚自动化设备有限公司
地址：中国.青岛市重庆南路99号海尔云街甲3号楼7F
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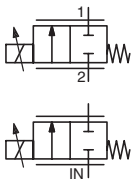
PROPORTIONAL SOLENOID VALVE
POSIFLOW
direct operated
1/4 - 3/8

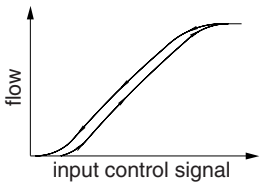
NC



2/2
Series
202

FEATURES

- *Variable flow, proportional to the control signal*
- *Valves do not require a minimum operating pressure*
- *Valves can be mounted in any position*
- *The solenoid valves satisfy all relevant EU directives*



GENERAL

Differential pressure See «SPECIFICATIONS» [1 bar =100 kPa]
Maximum viscosity 21 cSt (mm²/s)

fluids (⁎)	temperature range (TS) (2)	seal materials (⁎)
air, inert gas, water, oil	-10°C to +90°C	FPM (fluoroelastomer)

MATERIALS IN CONTACT WITH FLUID

(⁎) Ensure that the compatibility of the fluids in contact with the materials is verified

	Brass body	Stainless steel body
Body	Brass	AISI 303 SS
Core tube	Stainless steel	Stainless steel
Core and plugnut	Stainless steel	Stainless steel
Springs	Stainless steel	Stainless steel
Riderring	PTFE	PTFE
Seat	Brass	Stainless steel
Seal, disc	FPM	FPM
Breaker piece	Stainless steel	Stainless steel

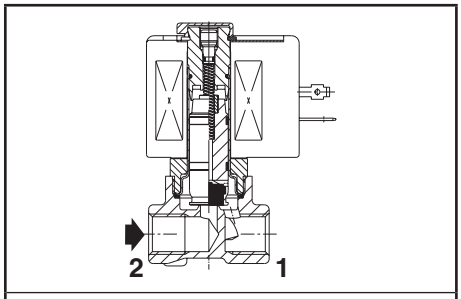
ELECTRICAL CHARACTERISTICS

Coil insulation class F
Connector Spade plug (cable Ø 6-10 mm)
Connector specification ISO 4400 / EN 175301-803, form A
Electrical safety IEC 335
Electrical enclosure protection Moulded IP65 (EN 60529)
Standard voltages DC (=) : 24V (Other voltages on request)

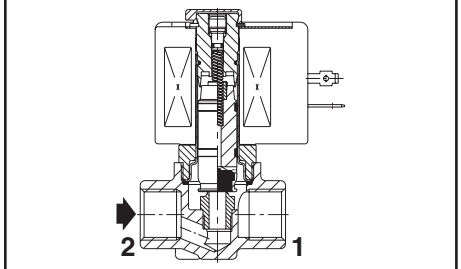
prefix option	operating current	power ratings inrush ~	power ratings holding ~		power ratings hot/cold =	operator ambient temperature range (TS) (2)	replacement coil =	type (1)
	(mA)	(VA)	(VA)	(W)	(W)	(C°)	24 V DC	
SC	100 - 500	-	-	-	11 / 8	-10 to +75	400429-040	01

Voltage regulation 0 - 24 V DC
24 V DC pulse width modulated (300 Hz)

Flow regulation characteristics (3) Hysteresis < 5% ; Repeatability < 3 % ; Sensitivity < 2 %



1/4 (brass body)



3/8 (brass body)

SPECIFICATIONS

pipe size		orifice size	flow coefficient Kv		operating pressure differential (bar) min.	max. (PS) vacuum	max. (PS) air, water, oil (⁎)	power coil (W)	catalogue number brass (=) air / inert gas	brass (=) liquids	stainless steel (=) air / inert gas	stainless steel (=) liquids	options EPDM	CR	PTFE
		(mm)	(m³/h)	(l/min)		=	=	=							
NC - Normally closed															
1/4	G	1,2	0,05	0,8	0	1	16	8	SCG202A001V	SCG202A051V	-	-	E	J	T
	NPT								-	-	SCB202A011V	SCB202A061V	E	J	T
	G	2,4	0,12	2	0	1	8	8	SCG202A002V	SCG202A052V	-	-	E	J	T
	NPT								-	-	SCB202A012V	SCB202A062V	E	J	T
	G	3,2	0,24	4,0	0	1	4	8	SCG202A003V	SCG202A053V		-	E	J	T
	NPT									-	SCB202A013V	SCB202A063V	E	J	T
	G	4,0	0,42	7,0	0	1	2,5	8	SCG202A004V	SCG202A054V		-	E	J	T
	NPT									-	SCB202A014V	SCB202A064V	E	J	T
	G	5,6	0,72	12,0	0	1	1,4	8	SCG202A006V	SCG202A056V		-	E	J	T
	NPT									-	SCB202A016V	SCB202A066V	E	J	T
	G	7,1	0,90	15,0	0	1	1	8	SCG202A007V	SCG202A057V		-	E	J	T
	NPT									-	SCB202A017V	SCB202A067V	E	J	T
3/8	Rp	3,2	0,24	4,0	0	1	4	8	SCE202A023V	SCE202A073V	-	-	E	J	T
	NPT								-	-	SCB202A033V	SCB202A083V	E	J	T
	Rp	4,0	0,42	7,0	0	1	2,5	8	SCE202A024V	SCE202A074V	-	-	E	J	T
	NPT								-	-	SCB202A034V	SCB202A084V	E	J	T
	Rp	5,6	0,72	12,0	0	1	1,4	8	SCE202A026V	SCE202A076V	-	-	E	J	T
	NPT								-	-	SCB202A036V	SCB202A086V	E	J	T
	Rp	7,1	0,90	15,0	0	1	1	8	SCE202A027V	SCE202A077V	-	-	E	J	T
	NPT								-	-	SCB202A037V	SCB202A087V	E	J	T

(1) Refer to the dimensional drawings on the following page.
(2) Damage may occur when liquids solidify above the specified minimum temperature.
(3) Percentage of max. value with 24 V DC, P.W.M. 300 Hz, supply at constant differential pressure.

OPTIONS

- Valves can also be supplied with NBR (nitrile), EPDM (ethylene-propylene), CR (chloroprene / neoprene) and PTFE seals and discs
- Waterproof enclosure with embedded screw terminal coil according to protection class IP67, CEE-10
- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 2014/34/EU, on request
- Electrical enclosures according to “NEMA” standards are available
- Mounting brackets
- Electronic proportional control unit [catalogue number: **E908A001** (www.asco.com) / **X90850164500100-0200** (www.asco.com)]
  Features:
  - analog input control signals: 0 - 10 V DC, 0 - 20 mA or 4 - 20 mA
  - coil current (= flow rate) adjustable to required control signals
  - switch-off function at less than 2% of the maximum control function
  - adjustable ramp control
  - adjustable frequency
  - output current independent of coil resistance and supply voltage variations
  - housed in: a box with spade plug connector according to ISO 4400 / IP65
- Other pipe connections are available on request

INSTALLATION

- The solenoid valves can be mounted in any position without affecting operation
- Brass and NPT 3/8 stainless steel solenoid valves have 2 mounting holes in body
- NPT 1/4 stainless steel valves are standard supplied with mounting brackets
- Threaded pipe connection is standard: E = Rp (ISO 7/1) ; G = G (ISO 228/1) ; B = NPT (ANSI 1.20.3)
- Installation/maintenance instructions are included with each valve

ORDERING EXAMPLES:

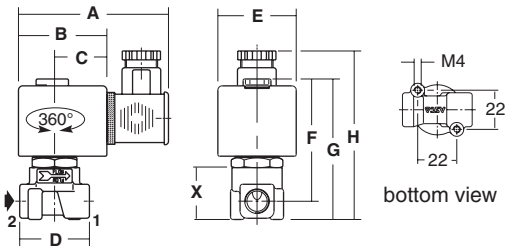
SC	G	202 **A** 001	**V**	24V / DC
SC	B	202 **A** 011	**V**	24V / DC

prefix
pipe thread
basic number
voltage
suffix

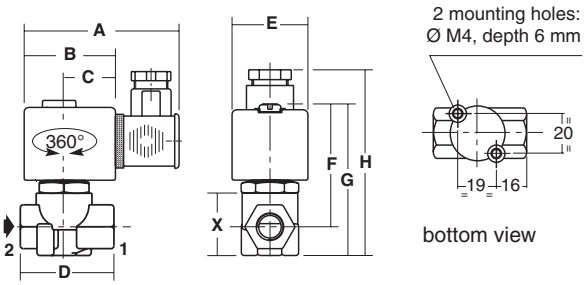
DIMENSIONS (mm), WEIGHT (kg)

TYPE 01
Prefix “SC” Solenoid
Epoxy moulded
IEC 335 / ISO 4400
IP65

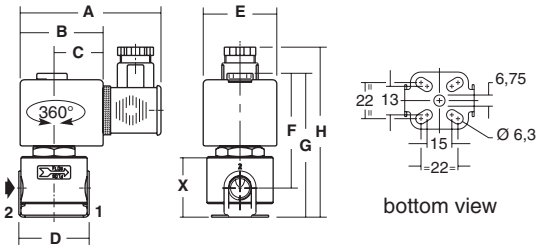
SCG202A001V/002V/003V/004V/006V/007V
SCB202A051V/052V/053V/054V/056V/057V



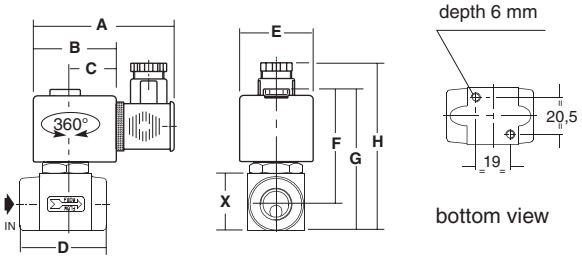
SCE202A023V/024V/026V/027V
SCE202A073V/074V/076V/077V



SCG202A011V/012V/013V/014V/016V/017V
SCB202A061V/062V/063V/064V/066V/067V



SCB202A033V/034V/036V/037V
SCB202A083V/084V/086V/087V



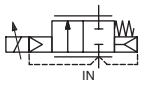
type	prefix option	catalogue number	A	B	C	D	E	F	G	H	X	weight (1)
01	SC	SCG202A001V/002V/003V/004V/006V/007V/051V/052V/053V/054V/056V/057V	85	50	30	40	45	68	79	95	30	0,50
		SCG202A011V/012V/013V/014V/016V/017V/061V/062V/063V/064V/066V/067V	80	50	30	42	45	60	79	95	37	0,60
		SCE202A023V/024V/026V/027V/073V/074V/076V/077V	80	50	30	48	45	68	82	97	32	0,50
		SCB202A033V/034V/036V/037V/083V/084V/086V/087V	80	50	30	51	45	68	81	97	31	0,65

(1) including coil and connector.

All leaflets are available on: **www.asco.com**

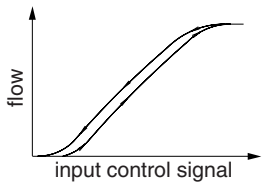
PROPORTIONAL SOLENOID VALVE
POSIFLOW
pilot operated
3/8 - 1/2

NC



FEATURES

- *Open loop proportional valves for automatic flow control of water and other non-corrosive liquids*
- *Special valve design to reduce pressure surges to a minimum, preventing waterhammer and ensuring noise-free closing*
- *The solenoid valves satisfy all relevant EU directives*



GENERAL

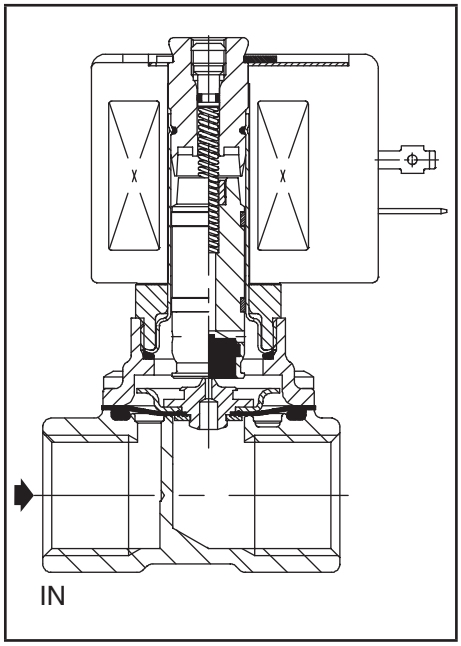
Differential pressure See «SPECIFICATIONS» [1 bar =100 kPa]
Maximum viscosity 40 cSt (mm²/s)

fluids (⁎)	temperature range (TS) (1)	seal materials (⁎)
water, oil	-10°C to +90°C	NBR (nitrile)

MATERIALS IN CONTACT WITH FLUID

(⁎) Ensure that the compatibility of the fluids in contact with the materials is verified

Body Brass
Core tube Stainless steel
Core and plugnut Stainless steel
Springs Stainless steel
Riderring PTFE
Seals, diaphragm NBR
Disc FPM
Breaker piece Stainless steel



ELECTRICAL CHARACTERISTICS

Coil insulation class F
Connector Spade plug (cable Ø 6-10 mm)
Connector specification ISO 4400 / EN 175301-803, form A
Electrical safety IEC 335
Electrical enclosure protection Moulded IP65 (EN 60529)
Standard voltages DC (=) : 24V (Other voltages on request)

prefix option	operating current	power ratings inrush ~	power ratings holding ~		power ratings hot/cold =	operator ambient temperature range (TS) (2)	replacement coil =	type (1)
	(mA)	(VA)	(VA)	(W)	(W)	(C°)	24 V DC	
SC	100 - 500	-	-	-	11 / 8	-20 to +75	400429-040	01

Voltage regulation 0 - 24 V DC
24 V DC pulse width modulated (300 Hz)

Flow regulation characteristics (3) Hysteresis < 7,5 % ; Repeatability < 3 % ; Sensitivity < 2 %

SPECIFICATIONS

pipe size	orifice size	flow coefficient Kv		operating pressure differential (bar) min.	max. (PS) vacuum	max. (PS) oil (⁎)	power coil (W)	catalogue number	options FPM		
	(mm)	(m³/h)	(l/min)		=	=	=	(=)			
NC - Normally closed											
3/8	12,5	2,1	35	0,3	10	10	8	**SCG203B001**	V	-	-
1/2	12,5	2,1	35	0,3	10	10	8	**SCG203B002**	V	-	-

(1) Refer to the dimensional drawings on the following page.
(2) Damage may occur when liquids solidify above the specified minimum temperature.
(3) Percentage of max. value with 24 V DC, P.W.M. 300 Hz, supply at constant differential pressure.

OPTIONS

- Valves can also be supplied with FPM (fluoroelastomer) seals and discs
- Waterproof enclosure with embedded screw terminal coil according to protection class IP67, CEE-10
- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 2014/34/EU, on request
- Electrical enclosures according to “NEMA” standards are available
- Mounting brackets
- Electronic proportional control unit [catalogue number: **E908A001** (www.asco.com) / **X90850164500100-0200** (www.asco.com)]
  Features:
  - analog input control signals: 0 - 10 V DC, 0 - 20 mA or 4 - 20 mA
  - coil current (= flow rate) adjustable to required control signals
  - switch-off function at less than 2% of the maximum control function
  - adjustable ramp control
  - adjustable frequency
  - output current independent of coil resistance and supply voltage variations
  - housed in: a box with spade plug connector according to ISO 4400 / IP65

INSTALLATION

- The solenoid valves can be mounted in any position without affecting operation. For optimum performance mount solenoid vertical and upright
- Threaded pipe connection is standard: G = G (ISO 228/1)
- Installation/maintenance instructions are included with each valve

SPARE PARTS KITS

catalogue number	spare parts kit no.	
	~	=
SCG203B001/B002	-	**C132856**

(1) Standard prefixes/suffixes are also applicable to kits.
- Not available

ORDERING EXAMPLES:

SC G 203 **B** 001 24V / DC
SC G 203 **B** 002 **V** 24V / DC

prefix
pipe thread
basic number
voltage
suffix

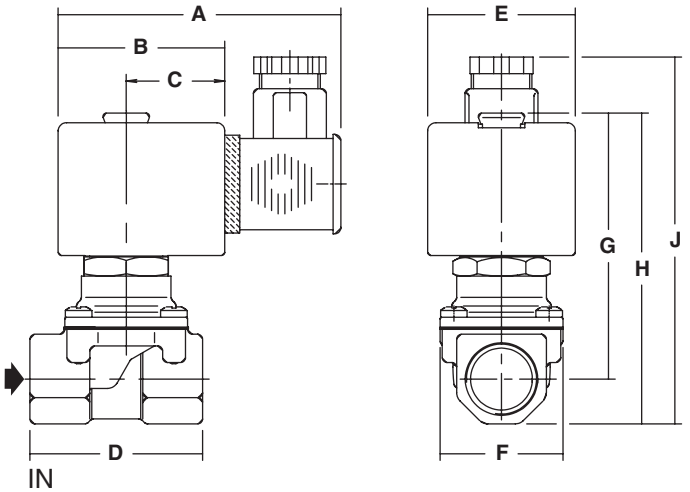
ORDERING EXAMPLES KITS:

C132856(1)
C132856 **V**

basic number
suffix

DIMENSIONS (mm), WEIGHT (kg)

TYPE 01
Prefix “SC” Solenoid
Epoxy moulded
IEC 335 / ISO 4400
IP65



type	prefix option	catalogue number	A	B	C	D	E	F	G	H	J	X	weight (2)
01	SC	SCG203B001	85	50	30	52	45	37	80	94	105	-	0,65
		SCG203B002											0,6

(2) including coil and connector.

DIGITAL CONTROL UNIT
for proportional solenoid valves

Series
908

FEATURES

- *Converts analog input control signals to coil current of a proportional solenoid valve by means of pulse width modulation*
- *LED-Display integrated in the connector*
- *Adjustable UP/DOWN ramp control*
- *Output coil current independent of coil resistance (temperature) and supply voltage variations*
- *The electronic circuit is integrated in a standard housing according to DIN EN 175301-803, form A*
- *Parameter setting via PC interface and programming adapter or, optionally, via the switches integrated in the connector*

GENERAL

Nominal voltage	12/24 V DC
Maximum current	1,2 A / 2,5 A

CONSTRUCTION

Housing	PA
Cover	PA
Screw	Zinc plated steel
Seals	NBR

ELECTRICAL CHARACTERISTICS

Connector	M12, 5 pins
Connector specification	DIN EN 175301-803, form A
Electrical safety	IEC 335
Electrical enclosure protection	IP65 (EN 60529)
Supply voltage	12V ... 30 V DC (incl. ripple)

max. full load current (I_{FL})	input control signal		ambient temperature range
	U_c =	I_c	
(mA)	(V)	(mA)	(C°)
1200/2400	0 - 10	4 - 20	-20 to +65

Ramp time	Selectable ON/OFF, adjustable from 50 ms to 5 s, UP/DOWN
Adjustable switch frequency	60 - 1500 Hz

SPECIFICATIONS

catalogue number: proportional valves for digital control unit	type (1)	setpoint	catalogue number	
			control unit	adapter
202A001V to 202A087V 203B001V and 203B002V 60200001, 60200002, 60200004	**01**	0 - 10 V	**X90850164500100**	-
		4 - 20 mA	**X90850164500200**	
202A201V to 202A208V 202A510V to 202A513V	**02**	0 - 10 V	**X90850164500100** +	**833-064154**
		4 - 20 mA	**X90850164500200**	

(1) Refer to the dimensional drawings on the following page.

PROPORTIONAL VALVES SUITABLE FOR CONTROL APPLICATIONS

description	series	illustration	catalogue page
3-port proportional valve for pressure control	602		www.asco.com
Posiflow proportional solenoid valves	202 203		202 1/8 (www.asco.com) 202 1/4-3/8 (www.asco.com) 203 3/8-1/2 (www.asco.com)

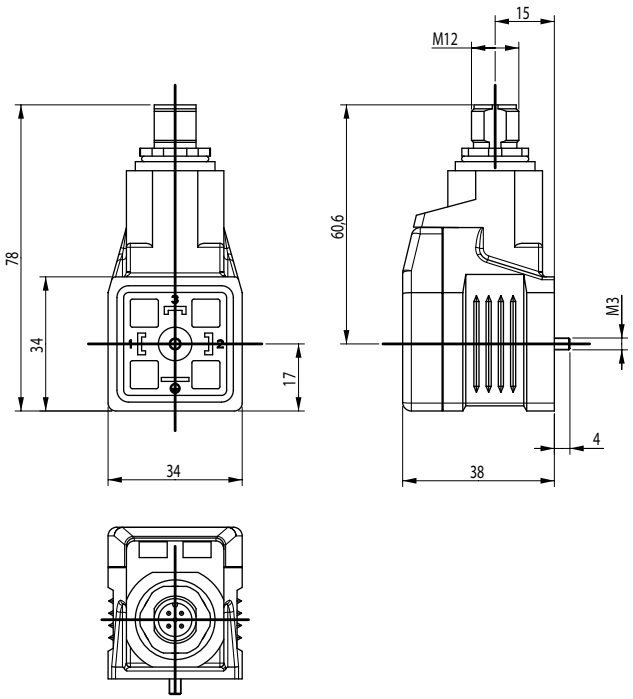
BCAE Industrial Automation
青岛秉诚自动化设备有限公司
地址：中国.青岛市重庆南路99号海尔云街甲3号楼7F
服务热线：4006-918-365
网址：http://www.asco.store
传真：(86-532)585-10-365
Email：sales@bechinas.com

INSTALLATION

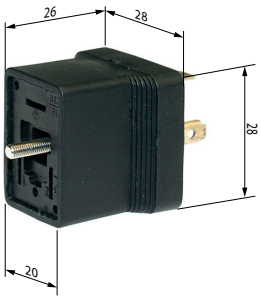
- The control unit can be mounted in any position without affecting operation

DIMENSIONS (mm), WEIGHT (kg)

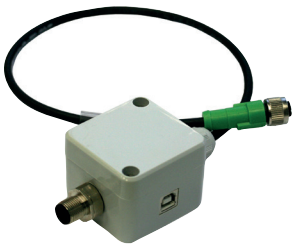
TYPE 01: CONTROL UNIT
0,075 kg



TYPE 02: ADAPTER
from Form A to Form B



PROGRAMMING ADAPTER



INPUT AND OUTPUT SIGNALS

Pin	Supply
1	Voltage supply (see “Electrical Characteristics”)
3	Analog ground 0 V (GND)
	Analog signals
2 4	Setpoint input (differential input) The range 0...100 % corresponds to an input voltage of 0...10 V or an input current of 4...20 mA (depending on version used).
	Communication
5	LIN Bus connection The parameters for the device can be set via this connection and our programming adapter.

ACCESSORIES

description	catalogue number
Straight M12 female connector, 5 pins, with screw terminals	**88100256**
Right-angle M12 female connector, 5 pins, with screw terminals	**88100725**
Supply cable 2 m, 2 x 0,25 mm², straight connector	**88100726**
Supply cable 2 m, 2 x 0,25 mm², right-angle connector	**88100727**
Supply cable 5 m, 6 x 0,56 mm², straight connector	**88100728**
Supply cable 5 m, 6 x 0,56 mm², right-angle connector	**88100729**
Supply cable 10 m, 6 x 0,56 mm², straight connector	**88100730**
Supply cable 10 m, 6 x 0,56 mm², right-angle connector	**88100731**
Adapter DIN EN 175301-803 from Form A to Form B for Type 02	**833-064154**
Programming adapter	**X90850164500300**

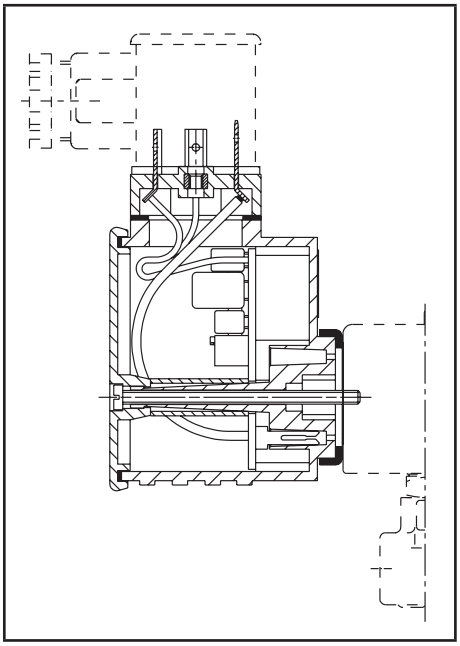
ELECTRONIC PROPORTIONAL CONTROL UNIT

for proportional POSIFLOW solenoid valves

Series **908**

FEATURES

- *Converts analog input control signals to coil current of a proportional solenoid valve by means of pulse width modulatiion*
- *Switch-off function at less then 2% of the maximum control signal*
- *Adjustable ramp control*
- *Output coil current independent of coil resistance (temperature) and supply voltage variations*
- *Min. and max. output coil current adjustable to required input control signal*
- *The electronic circuit is integrated in a housing connectable to a 3-terminal spade plug coil connector according to ISO 4400/ EN 175301-803, form A, DIN 43650, 11 mm, industry standard B or DIN 43650, 9,4 mm, industry standard B*



GENERAL

Nominal voltage	24 V DC
Maximum current	1100 mA

CONSTRUCTION

Housing	PA
Cover	PA
Screw	Zinc plated steel
Seals	NBR

ELECTRICAL CHARACTERISTICS

Connector	Spade plug (cable Ø 6-10 mm)
Connector specification	ISO 4400 / EN 175301-803, form A (2)
Valve connection	With 3 terminal plug connection
Control unit: E908A001	ISO 4400 / EN 175301-803, form A
Control unit: E908A003	DIN 43650, 11 mm, industry standard B
Control unit: E908A004	DIN 43650, 9,4 mm, industry standard B (assembled to 200 mm cable)
Electrical safety	IEC 335
Electrical enclosure protection	IP65 (EN 60529)
Supply voltage	DC (=) : 24V ±10 % (U_N), max. ripple 10%

prefix option	max. full load current (I_{FL})	input control signal (selectable) U_c =	I_{cx}	I_c	power consumption (electronics)	unit ambient temperature range (2)	type (1)
	(mA)	(V)	(mA)	(mA)	(W)	(C°)	
-	1100	0 - 10	0 - 20	4 - 20	0,8	-10 to +75	01 - 02

Switch-off current	< 2 % of max. input control signal
Adjustable offset	Upwm 15 - 50 % E.D.
Adjustable full load	Upwm 30 - 100 % E.D.
Ramp time	Selectable on/off, adjustable 0,1 - 3 sec.
Adjustable switch frequency	40 - 700 Hz

SPECIFICATIONS

recommended for proportional valve types	type	catalogue number
202A001V to 202A087V 203B001V and 203B002V	**01**	**E908A001**
202A201V to 202A208V	**02**	**E908A003**
202A101V to 202A104V 202A105V to 202B108V	**01**	**E908A004**

(1) Refer to the dimensional drawings on the following page.

(2) The connector is supplied with each control unit. **Do not use the standard connector mounted on the POSIFLOW solenoid valves.**

PROPORTIONAL VALVES SUITABLE FOR CONTROL APPLICATIONS

description	series	illustration	catalogue page
3-port proportional valve for pressure control	602		www.asco.com
Posiflow proportional solenoid valves	202 203		202 1/8 (www.asco.com) 202 1/4-3/8 (www.asco.com) 203 3/8-1/2 (www.asco.com)

ELECTRONIC CONTROL UNIT FOR POSIFLOW SOLENOID VALVES SERIES 908

OPTIONS

- ASCO can offer any adaption or modification to the control unit to meet special requests from the users' field

INSTALLATION

- The control unit can be mounted in any position without affecting operation
- The connector to ISO 4400 / EN 175301-803, form A, is supplied with each unit
- Catalogue number E908A004: The 4-terminal connector to ISO 4400 / EN 175301-803, form A, is supplied with each unit. The outlet to the solenoid valve is fitted with a 200 mm long cable with a connector to DIN 43650, 9,4 mm, industry standard B
- Installation and maintenance istructions are included with each control unit

ORDERING EXAMPLES:

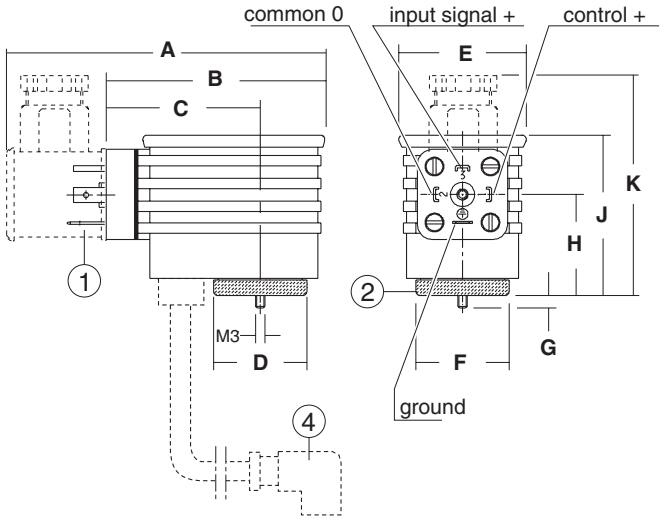
E 908 **A** 001
E 908 **A** 003

pipe thread
basic number

DIMENSIONS (mm), WEIGHT (kg)

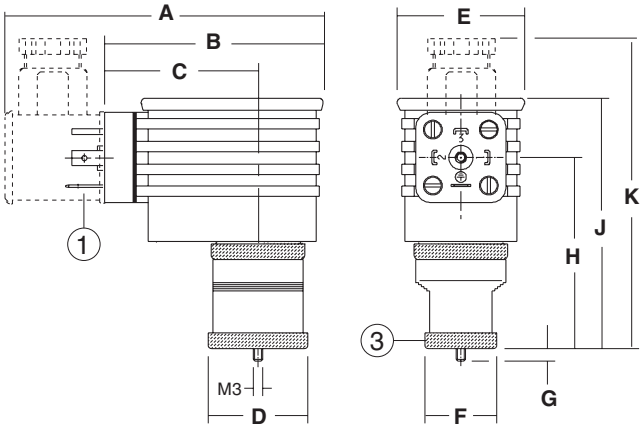
TYPE 01
POSIFLOW control unit
IEC 335 / ISO 4400
IP65

E908A001 - E908A004



TYPE 02
POSIFLOW control unit
IEC 335 / ISO 4400
IP65

E908A003

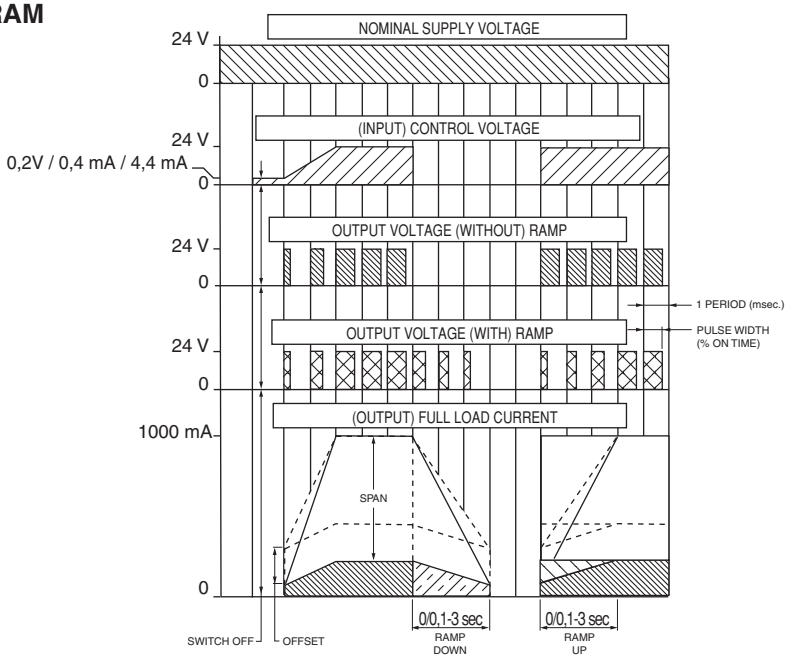


type	catalogue number	A	B	C	D	E	F	G	H	J	K	weight (1)
01	E908A001/004	98	70	48	30	41	30	4	32	51,5	70	0,1
02	E908A003	98	70	48	32	41	23	4	61	80	98	0,1

(1) Weight without connector.

① Supply, 4 terminals, ISO 4400/EN 175301-803, form A
Solenoid valve connection:
② 3 terminals, ISO 4400/EN 175301-803, form A
③ 3 terminals, DIN 43650, 11 mm, industry standard B
④ 3 terminals, DIN 43650, 9,4 mm, industry standard B

VOLTAGE-CURRENT / TIME DIAGRAM



BCAE Industrial Automation
青岛秉诚自动化设备有限公司
地址：中国.青岛市重庆南路99号海尔云街甲3号楼7F
服务热线：4006-918-365
网址：http://www.asco.store
传真：(86-532)585-10-365
Email：sales@bechinas.com

CONTROL^{D} CONTROL DEVICE

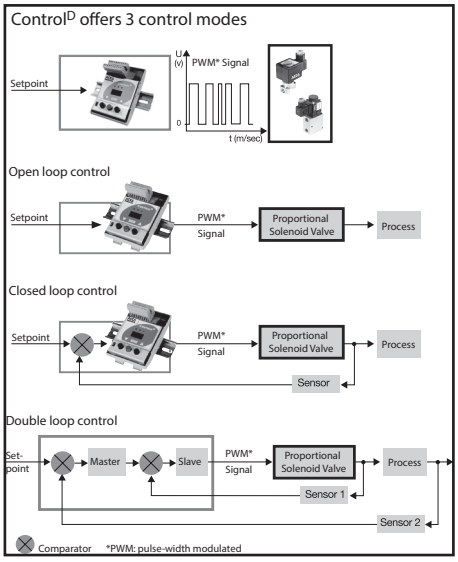
for proportional solenoid valve control

Series **603**

FEATURES

- *Control device for **PWM** (pulse-width modulated) proportional solenoid valve control*
- *Designed for open-loop, closed-loop and **double-loop** (cascaded) control*
- *Suitable for the control of flow, pressure, temperature, force etc.*
- *Integrated display and LEDs*
- *Control parameters adjustable via software (DigiCom, USB interface)*
- *Auto-Adapt function/button for automatic adjustment of the CONTROL^{D} control device to the control valve*

A special feature of the CONTROL^{D} is the "ASCO-DigiCom" software supplied for optimum adjustment over PC. Setpoint and feedback values can be viewed at the same time. Other functions are valve diagnostics, parameter setting and maintenance.



GENERAL

Ambient temperature	-20°C to +50°C

CONSTRUCTION

Body	PA (polyamide)
Degree of protection	IP20
Electrical connection	Pluggable terminal block (0,08 - 1,5 mm²)
Mounting	DIN-EN 50022 rail

ELECTRICAL CHARACTERISTICS

Supply voltage	(U_N)	24 V DC ±10 %, max. ripple 10 %
	or	12 V DC +15 % -5 %, max. ripple 10 %
Max. current of proportional solenoid valve		2 A
Setpoint input		0 - 10 V DC, 0 - 20 mA, 4 - 20 mA
Sensor input		0 - 10 V DC, 0 - 20 mA, 4 - 20 mA
Feedback output		0 - 10 V, 0 / 4 - 20 mA
Ramp		ON/OFF adjustable between 0,1 and 20 seconds
Adjustable switching frequency		20 to 2000 Hz

SPECIFICATIONS

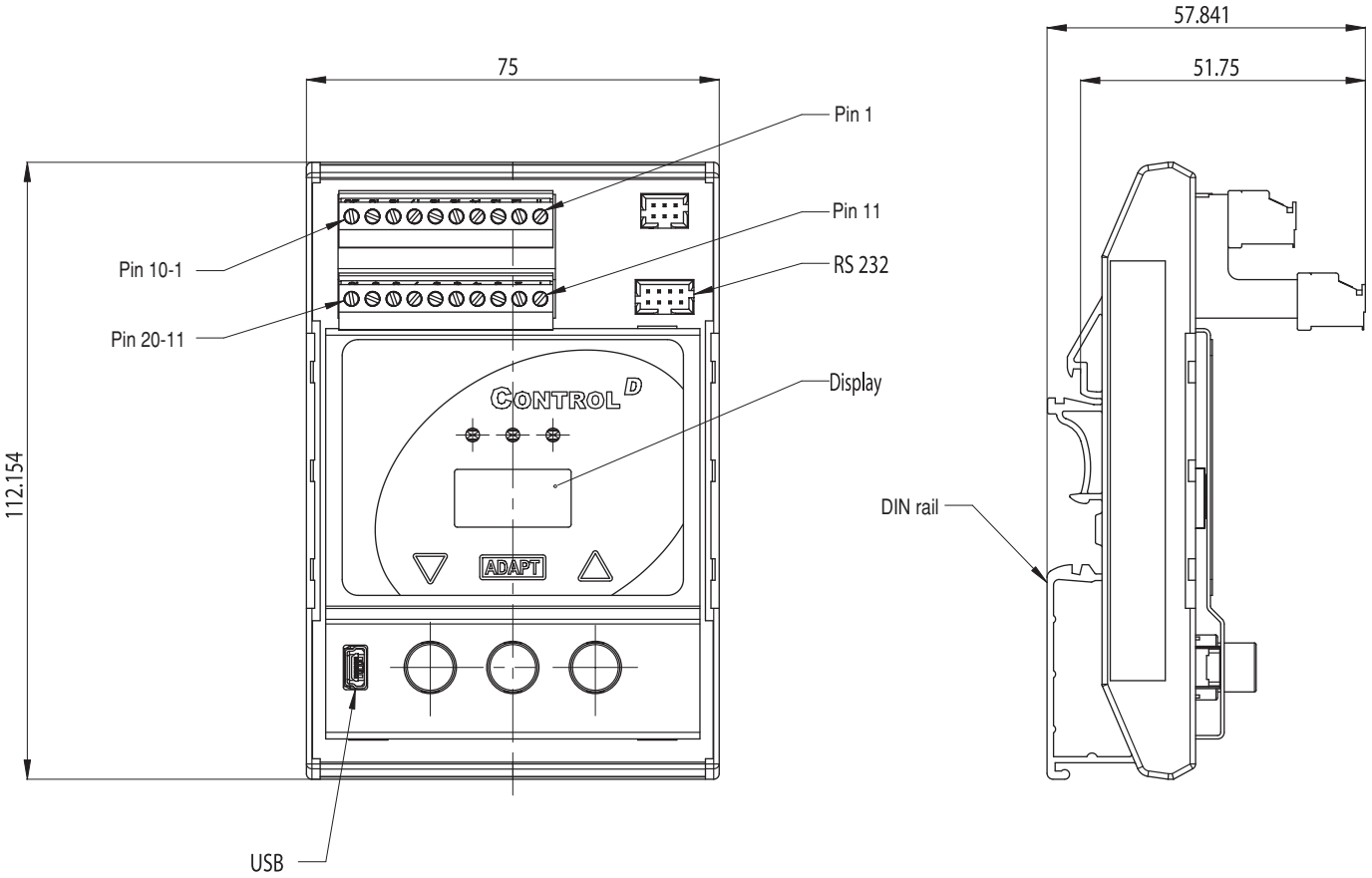
description	catalogue number
CONTROL^{D} control device - 12 V DC	**60300117**
CONTROL^{D} control device - 24 V DC	**60300118**

PROPORTIONAL VALVES SUITABLE FOR CONTROL APPLICATIONS

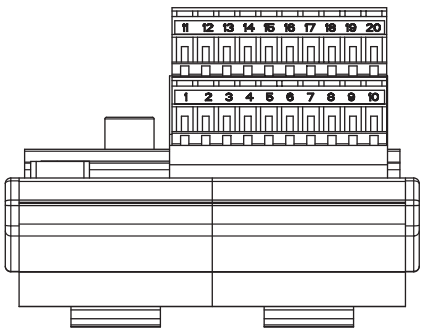
description	series	illustration	catalogue page
3-port proportional valve for pressure control	602		www.asco.com
Posiflow proportional solenoid valves	202 203		202 1/8 (www.asco.com) 202 1/4-3/8 (www.asco.com) 203 3/8-1/2 (www.asco.com)

DIMENSIONS (mm), WEIGHT (kg)

weight: 0,153 kg



CONNECTOR PINNING



pin	description	pin	description
1	V DC IN/ + supply	11	Setpoint
2	GND IN/ ground	12	GND setpoint
3	Protective earth PE	13	Digital input
4	Frequency input	14	GND Digital input
5	Sensor supply voltage +	15	Valve / coil connection
6	Analog input 1	16	GND valve
7	GND sensor supply voltage	17	Digital output
8	Sensor supply voltage +	18	GND Digital output
9	Analog input 2	19	GND Analog output
10	GND sensor supply voltage	20	Analog output

ACCESSORIES

description	catalogue number
"ASCO-DigiCom" CONTROL^{D} software on CD-ROM (supplied with the controller)	**88100893**
USB cable for CONTROL^{D} to PC connection (to be ordered separately)	**88100894**

PROPORTIONAL VALVES FLOWTRONIC^{D}

with control loop for fast flow control
tapped body, 1/4 - 3/8 - 1/2

2 ports
Series
607

FEATURES

- *The FLOWTRONIC^{D} consists of a fast, direct-acting 2-port proportional valve, a pressure sensor unit and digital control electronics*
- *Especially designed for applications placing extreme dynamic demands on flow control*
- *Control and maintenance of constant and even flow, irrespective of outside influences*
- *Precise measurement of flow with two sensors*
- *Adaptable to different applications due to the use of digital control electronics that can be configured by PC over a USB interface*
- *Auto-tune function and ASCO FlowCom PC software provide for quick and easy start-up*
- *Diagnosis over integrated LEDs or the ASCO FlowCom PC software*

GENERAL

Fluid	Air or neutral gases, filtered at 50 µm, without condensate, lubricated or not
Minimum allowable pressure	4 bar
Maximum allowable pressure (MAP)	8 bar
Control range	5 - 2000 l/min (ANR), consult us for other ranges
Fluid temperature	0°C to +50°C
Ambient temperature	0°C to +40°C
Setpoint - analog	0 - 10 V (100 kΩ), 0/4 to 20 mA (resistance 250 Ω)
Feedback - analog	0 - 10 V, 0/4 to 20 mA (max. load 500 Ω)
Flow accuracy	
Hysteresis	± 3%
Linearity	± 3%
Repeatability	± 1,5%
Calibration conditions	
Ambient temperature	22,5°C ±2,5°C
Fluid	Air
Dynamic performance	
Response time	< 200 ms
Other features	Auto-tune, error display by LED

CONSTRUCTION

Body	Aluminium
Internal parts	Aluminium, stainless steel and brass
Seals	NBR (nitrile)

ELECTRICAL CHARACTERISTICS

nominal diameter DN	voltage *	max. power (W)	max. current (mA)	insulation class	degree of protection	electrical connection
2, 3, 5 and 6	24 V = +/-10%	30	1250	H	IP65	- 5 pin M12 connector - USB connection with 4 pin M12 connector
8		44	1800			

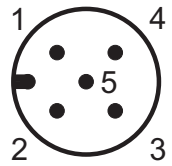
* Max. ripple: 10 %

SPECIFICATIONS

pipe size	DN	flow (1)	max. inlet pressure	catalogue number					
				with display			without display		
				setpoint / output feedback			setpoint / output feedback		
G		(l/min - ANR)	(bar)	0 - 10 V	0 - 20 mA	4 - 20 mA	0 - 10 V	0 - 20 mA	4 - 20 mA
1/4	2	5 - 50	8	60701073	60701081	60701089	60701074	60701082	60701090
	3	10 - 100	8	60701055	60701063	60701071	60701056	60701064	60701072
		12 - 300	8	60701019	60701027	60701035	60701020	60701028	60701036
	5	20 - 500	8	60701001	60701009	60701017	60701002	60701010	60701018
3/8	6	50 - 1000	8	60701037	60701045	60701053	60701038	60701046	60701054
1/2	8	100 - 2000	8	60701091	60701099	60701107	60701092	60701100	60701108

(1) Measurement without flow restriction at the outlet.

CONNECTOR PINNING / CABLE WIRING

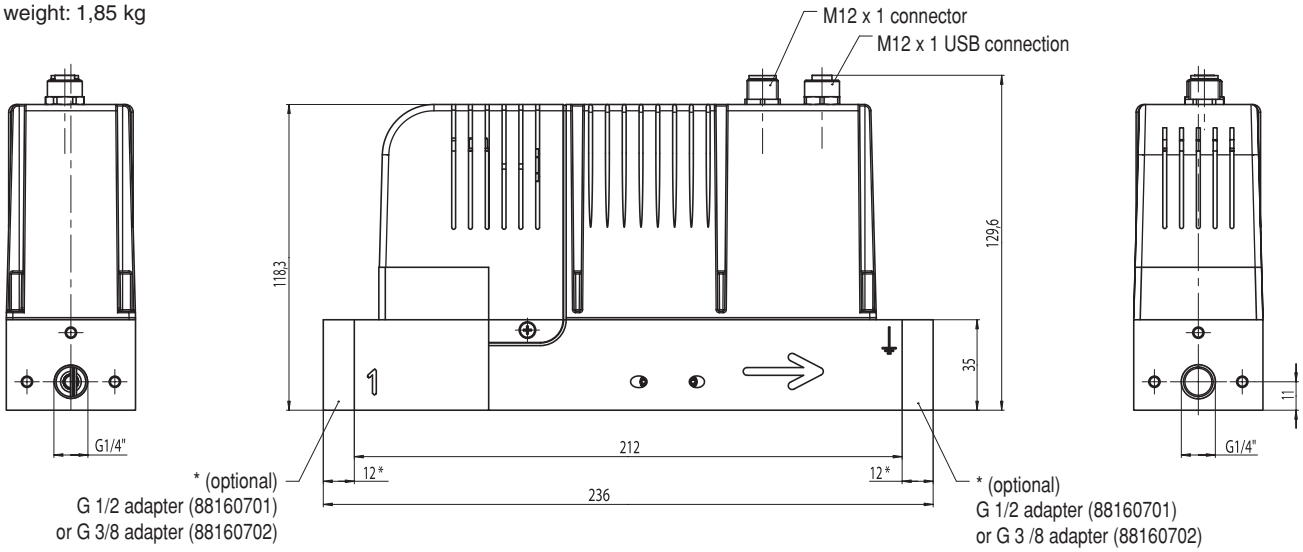


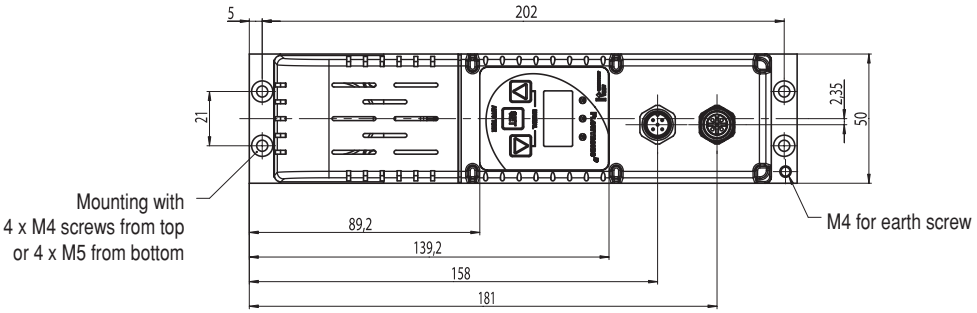
pin	description	5-wire cable (2m)	6-wire cable (5m, 10m)
1	24V voltage supply	brown	brown
2	Analog setpoint input	white	white
3	Supply ground	blue	green
	Analog ground ❇		yellow
4	Analog output (feedback)	black	pink
5	Digital output (pressure switch)	grey	grey
Body	EMC shield	shield	shield

❇) A 6-wire cable with separate analog ground is used for cable lengths over 2 m to set off the voltage drop for the setpoint.

DIMENSIONS (mm), WEIGHT (kg)

weight: 1,85 kg





ACCESSORIES

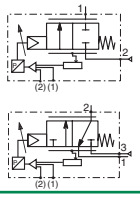
description	catalogue number
FLOWTRONIC^{D} software "ASCO-FlowCom-Light" - CD-ROM	**88100895**
FLOWTRONIC^{D} software "ASCO-FlowCom-Expert" - CD-ROM	**88100896**
USB cable for connection of FLOWTRONIC^{D} to PC	**88100897**
Straight M12 female connector, 5 pins, with screw terminals	**88100256**
Supply cable 2 m, 5 x 0,25 mm², straight connector	**88100726**
Supply cable 5 m, 6 x 0,56 mm², straight connector	**88100728**
Supply cable 10 m, 6 x 0,56 mm², straight connector	**88100730**

PROPORTIONAL VALVES WITH POSITIONER^{D}

pressure operated

all standard connection types

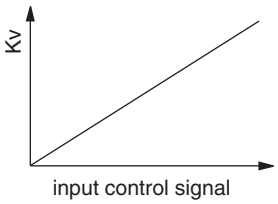
NC



2 way
3 way
Series
290/390

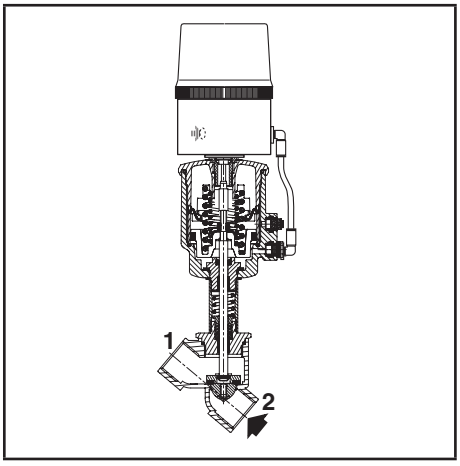
FEATURES

- *Precise, quick-acting and robust valve suitable for use in outside industrial environments*
- *Exceptional long service life*
- *Variable flow proportional to the control signal*
- *Real-time control*
- *Ready-to-use valve*
- *The positioner can be directly connected to an external sensor (double loop control)*
- *Power saving function and no air consumption when position is reached*
- *Manual valve operator*
- *LED indicators for valve status display*



GENERAL

Differential pressure	0 to 16 bar [1 bar =100 kPa]
Maximum allowable pressure	16 bar
Ambient temperature range	0°C to +50°C
Maximum viscosity	600 cSt (mm²/s)
Pilot fluid	Air or inert gas, filtered 25 µm, unlubricated, condensate-free and water-free (observe the pressure dew point) (6)
Pilot pressure	4 to 8 bar
Pilot fluid temperature	0°C to +50°C
Response time	See Pressure Operated Valves (2/2), page 7 (www.asco.com)
Fluids	For type, temperature and materials compatibility, see the catalogue pages for the standard valves See Pressure Operated Valves (2/2), 290 Series - (3/2), 390 Series

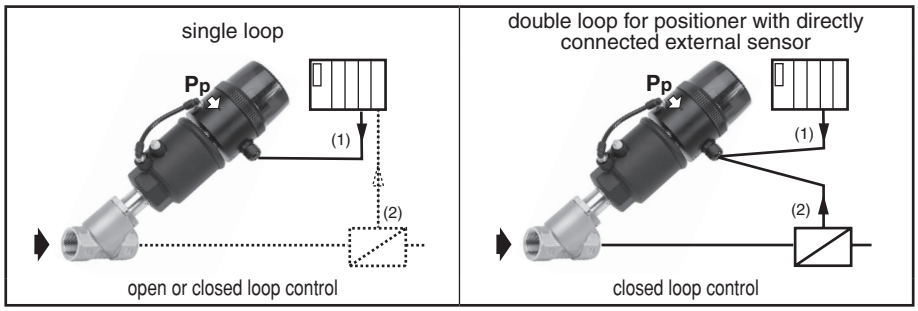


ELECTRICAL CHARACTERISTICS

Setpoint reached output	ON/OFF, 24 V PNP / max. 500 mA
Analog position feedback signal	0-10 V / 4-20 mA
Analog setpoint	0-10V (R_{in} = 200 kΩ); 4-20 mA (R_{in} = 250 Ω)
Nominal supply voltage	24 V DC ± 10%, max. ripple 10%
Power	7,6 W (3,6 W, setpoint reached)
Connection	Screw terminals, cable gland (cable Ø 5-10 mm) or connection M12 (CNOMO E03.62.520.N)
Degree of protection	IP66 (EN 60529)
Electromagnetic compatibility	EMC 2004/108/EC
Regulation characteristics	Hysteresis < 2% ; Accuracy < 2 % ; Repeatability < 1 %

CONSTRUCTION

Valve construction	See Pressure Operated Valves (2/2) - (3/2)
Valve disc (2/2)	Profiled disc, stainless steel and PTFE
Valve disc (3/2)	Standard disc
Positioner body	Aluminium anodised
Cable gland	Plastic (cable Ø 5-10 mm)
Cover	PA 12, transparent



(1) Setpoint
(2) Value measured by the process sensor

SPECIFICATIONS (NC valves, fluid entry under the disc)

analog setpoint	suffix for proportional valve and positioner (3) delivered assembled							
	fail in last position (4)				fail close (5)			
	2 way		3 way (7)		2 way		3 way (7)	
	cable gland	M12	cable gland	M12	cable gland	M12	cable gland	M12
Positioner^{D}, single loop								
0 - 10 V DC	**PDB64**	**PDB68**	**B64**	**B68**	**PDB66**	**PDB70**	**B66**	**B70**
4 - 20 mA	**PDB65**	**PDB69**	**B65**	**B69**	**PDB67**	**PDB71**	**B67**	**B71**
Positioner^{D}, double loop								
0 - 10 V DC	-	-	-	-	**PDB72**	**PDB74**	**B72**	**B74**
4 - 20 mA	-	-	-	-	**PDB73**	**PDB75**	**B73**	**B75**

(3) Place the indicated suffix after the catalogue number of the valve selected.
(4) Valve disc remains in its last position on loss of power.
(5) Valve returns to closed position on loss of power.
(6) The actuator exhaust air is used to ventilate the electronics housing.
(7) Top orifice of this version is not tight, for the tight version contact us.

VALVE SPECIFICATIONS

pipe size (DN)	orifice size	pilot pressure (bar) min. 2 way (2)	pilot pressure (bar) min. 3 way	pilot pressure (bar) max. (1)	operator diameter	flow coefficient (Kv), programmable opening of proportional valve: 2 way, threaded — bronze / stainless steel [E290 (www.asco.com)] clamp / butt welding [S290 (www.asco.com)]		2 way, flanges — bronze [T290 (www.asco.com)]		3 way, threaded — bronze [E390 (www.asco.com)]	
	(mm)				(mm)	(m³/h)	(l/min)	(m³/h)	(l/min)	(m³/h)	(l/min)
NC - Normally closed, entry under the disc											
1/2 (15)	15	3 / 5	2 / 3	8	63	4,6	77	-	-	6	100
3/4 (20)	20	3 / 5	-	8	63	7,1	118	-	-	-	-
		-	3 / 5	8	63	-	-	-	-	9,6	160
1 (25)	25	3 / 5	3 / 5	8	63/90	15	250	11	183	16,2	270
1 1/4 (32)	32	3 / 5	5	8	63/90	21	350	14	233	24	400
		3 / 5	3 / 5	8	125	22	367	15	250	-	-
1 1/2 (40)	40	4	3 / 5	8	63/90	29	483	21	350	42,9	715
		4	5	8	125	44	733	32	533	42,9	715
2 (50)	50	4	5	8	63/90	40	667	26,5	442	52,8	880
		4	5	8	125	66	1100	44	733	52,8	880
2 1/2 (65)	65	4	-	8	90	72	1200	-	-	-	-
		4	-	8	125	84	1400	-	-	-	-

(1) For best control loop operation, we recommend the following pilot pressures:
max. 3 bar (valve with 1,5 bar operator) ; max. 5 bar (valve with 2,5 bar operator) ; max. 7 bar (valve with 4 bar operator)

(2) 3 bar (valve with 2,5 bar operator) ; 5 bar or 4 bar (valve with 4 bar operator)

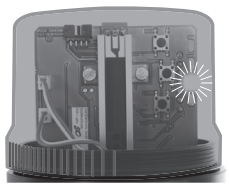
OPTIONS AND ACCESSORIES

- Standard 2/2 NC valve, fluid entry under the disc, with profiled disc only, use suffix PD, example: E290A016PD
- Female M12 connector: straight
  - 5 pins, with screw terminals, catalogue number: **88100256**
  - Supply cable 5 m, 5 x 0,25 mm², catalogue number: **88130212**
  - Supply cable 5 m, 6 x 0,5 mm², catalogue number: **88100728**
  - Supply cable 10 m, 6 x 0,5 mm², catalogue number: **88100730**
- APC software for modification of control parameters (software required for double loop control) available for download at: www.asco.com
- RS-232 converter, 2 m cable with 9 pin Sub-D connector for PC link, catalogue number **88100732**
- Oxygen service (except DN 65), pressure limited to 15 bar, temperature limited to + 60°C, suffix **N**
- Vacuum applications up to 1,33 10^{-3} mbar, suffix **VM**
- Other pipe connections are available on request

INSTALLATION

- Pilot port G 1/8 according to ISO 228/1
- Compatible with ASTM 1, 2 and 3 oils
- Installation/maintenance instructions are included with each valve
- LED indicators for operating status display and diagnostic functions (Unit can be rotated through 360° around the centreline of the valve operator)

status	hold position
	valve OPEN
	valve CLOSED
	valve moves to open
	valve moves to close
	positioner in initialisation mode
	positioner in manual mode
diagnostics	setpoint > 20,5 mA / 10,25 V
	setpoint < 3,5 mA
	positioner not initialised
	component error



Electrical connection:

Positioner^{D}, single loop

screw terminals

M12

1	+ 24 V DC, supply	1
2	GND supply	3
3	+ setpoint (0-10 V or 4-20 mA)	2
4	GND setpoint	3
6	disc position feedback	4
7	+ 24V ON/OFF output	5

Positioner^{D}, double loop

screw terminals

M12

1	+ 24 V DC, supply	1
2	GND supply	3
3	+ setpoint (0-10 V or 4-20 mA)	2
4	GND setpoint	3
5	external sensor input	4
7	+ 24V ON/OFF output	5

SPARE PARTS KITS

	spare parts kit no. Positioner^{D} only	
	cable gland (cable Ø 5-10 mm)	connection M12
Fail position maintained, single loop		
0-10 V	**60566108**	**60567108**
4-20 mA	**60566308**	**60567308**
Fail close, single loop		
0-10 V	**60566118**	**60567118**
4-20 mA	**60566318**	**60567318**
Fail close, double loop		
0-10 V	**60566418**	**60567418**
4-20 mA	**60566518**	**60567518**
Mounting kit		
all	**C140423**	**C140423**

pipe size (DN)	spare parts kit no.		
	bronze, stainless steel (E290) clamp / butt welding (S290)	bronze (T290)	bronze (E390)
Valve disc seals			
1/2 (15)	**C131204** (1)	-	**C140021** (1)
3/4 (20)	**C131205** (1)	-	**C140022** (1)
1 (25)	**C131206** (1)	**C140017** (1)	**C140023** (1)
1 1/4 (32)	**C131207** (1)	**C140018** (1)	**C140024** (1)
1 1/2 (40)	**C131208** (1)	**C140019** (1)	**C140025** (1)
2 (50)	**C131209** (1)	**C140020** (1)	**C140026** (1)
2 1/2 (65)	**C131622** (1)	-	-

(1) Standard suffix VM also applies to kits. (www.asco.com)
- Not available.

ORDERING EXAMPLES:

E 290 **A** 016 **PDB64**
E 390 **A** 016 **B64**
E 290 **A** 059 **PDB68**
E 290 **A** 102 **PDB71**

pipe thread
basic number
suffix

ORDERING EXAMPLES KITS:

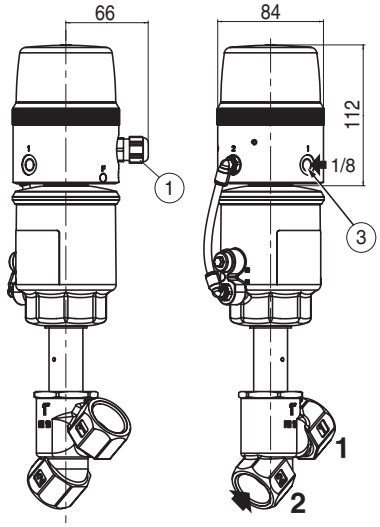
C131204
C140206
C140205 **VM**

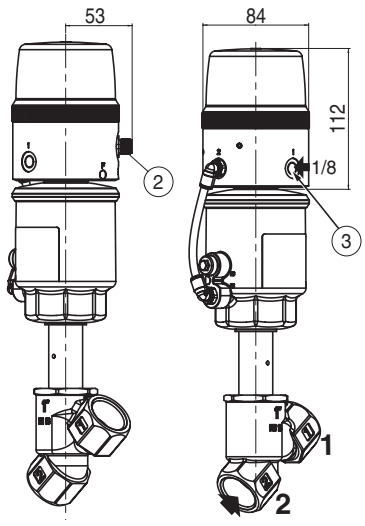
basic number
suffix

DIMENSIONS (mm), WEIGHT (kg)

TYPE 01
Enclosure with cable gland
63 to 125 mm operator
Fluid entry:
under the disc at 2

TYPE 02
Enclosure with M12 connection
63 to 125 mm operator
Fluid entry:
under the disc at 2





① M16 x 1,5 mm cable gland (cable Ø 5-10 mm)
② M12 connection
③ G 1/8 pilot connection

Weight of positioner without valve: 0,3 kg

BCAE Industrial Automation
青岛秉诚自动化设备有限公司
地址：中国.青岛市重庆南路99号海尔云街甲3号楼7F
服务热线：4006-918-365
网址：http://www.asco.store
传真：(86-532)585-10-365
Email：sales@bechinas.com

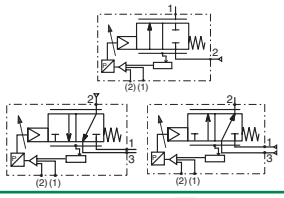
PROPORTIONAL VALVES WITH POSITIONER^{D}

pressure operated

stainless steel body, PN40, DN 15 to 50

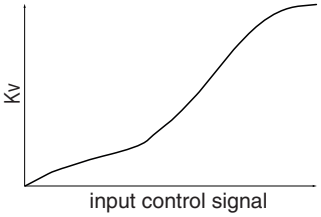
NC

U



2 way
3 way
Series
298/398

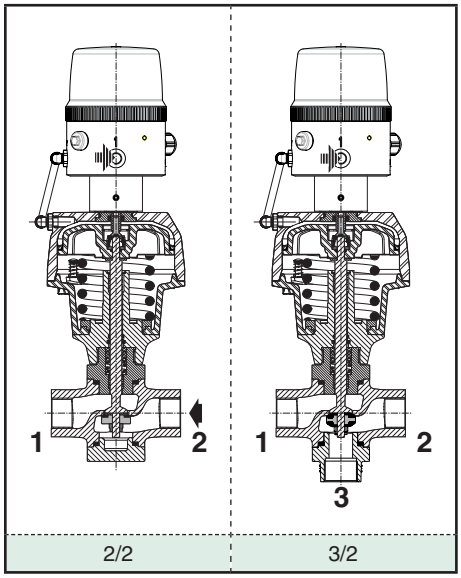
FEATURES



- *Ruggedly built valve, particularly recommended for use with steam, superheated water, corrosive fluids*
- *Exceptional long service life*
- *Variable flow exponential to the control signal*
- *LED indicators for valve status display*
- *Fast response time*
- *Vibration resistance according standard EN 60068-2-6*
- *Fail close function in case of power supply failure*
- *Easy commissioning, ready-to-use valve*
- *Power saving function and no air consumption when position is reached*
- *Manual valve operator*
- *The valves satisfy Pressure Equipment Directive 2014/64/EU*
- *The Positioner^{D} comply with the essential requirements of EMC Directive 2014/30/EU*

GENERAL

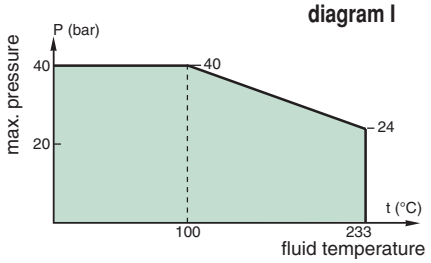
Differential pressure	40 bar [1 bar =100 kPa]
Maximum allowable pressure	40 bar
Fluid temperature range	-10°C to 233°C (disc seal: PEEK) [diagram I]
Ambient temperature range	0°C to +50°C [diagram II] [see the diagram II following fluids temperature]
Maximum viscosity	5000 cSt (mm²/s)
Pilot fluid	Air or inert gas, filtered 50 µm, unlubricated
Pilot pressure	4 to 8 bar
Pilot fluid temperature	0°C to 20°C



ELECTRICAL CHARACTERISTICS

Analog position feedback signal	0-10 V / 4-20 mA
Analog setpoint	0-10V (R_{in} = 200 kΩ); 4-20 mA (R_{in} = 250 Ω)
Nominal supply voltage	24 V DC ± 10%, max. ripple 10%
Power	7,6 W (3,6 W, setpoint reached)
Connection	Screw terminals, cable gland (cable Ø 5-10 mm) or connection M12 (CNOMO E03.62.520.N)
Degree of protection	IP66 (EN 60529)
Electromagnetic compatibility	EMC 2004/108/EC
Regulation characteristics	Hysteresis < 2% Accuracy < 2 % Repeatability < 1 %

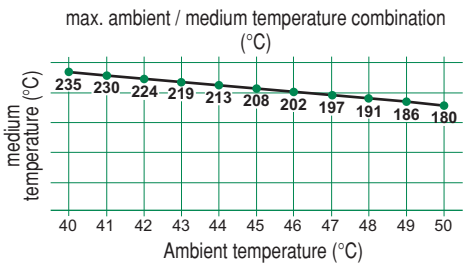
diagram I



CONSTRUCTION

MATERIALS IN CONTACT WITH FLUID (∗) Ensure that the compatibility of the fluids in contact with the materials is verified	
Body and plug	304 stainless steel
Stuffing box housing	304 stainless steel
Stem, disc	431 stainless steel
Stuffing box packing	PTFE chevrons
Disc seals	PEEK
Valve body seal	PEEK

diagram II



OTHER MATERIALS

Operator	Aluminium, nickel plated
Screws	Galvanized steel
Positioner body	Aluminium & Anodic oxydation
Positioner cover	Polyamide, PA 12

(∗) Ensure that the compatibility of the fluids in contact with the materials is verified.

OPTIONS

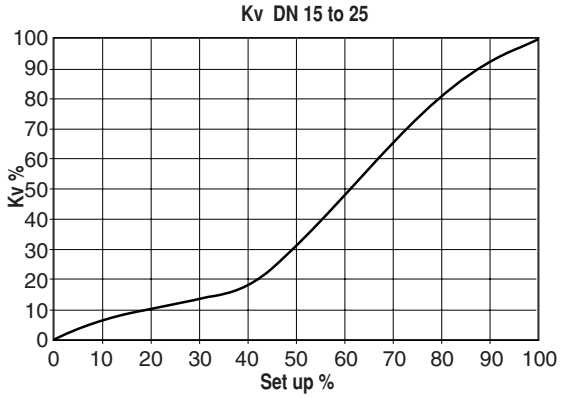
For use in explosive atmospheres to ATEX Directive 2014/34/EU (with a Sentronic on request)
Valve seat leakage class VI as defined by FCI-2 ANSI B16.104 or Class A or B following EN 12266-1, contact us
Double loop control on request
Female M12 connector: straight - 5 pins, with screw terminals, catalogue number: **88100256**
Female M12 connector: Supply cable 5 m, 5 x 0,25 mm², catalogue number: **88130212**
Female M12 connector: Supply cable 10 m, 6 x 0,5 mm², catalogue number: **88100730**
APC software for modification of control parameters available for download
RS-232 converter, 2 m cable with 9 pin Sub-D connector for PC link, catalogue number **88100732**

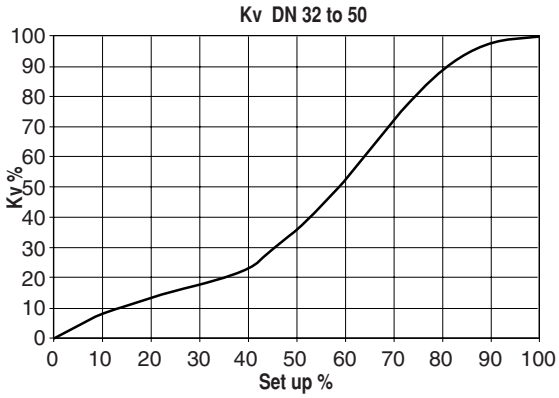
VALVE SPECIFICATIONS

pipe size	DN	orifice size	operator diameter	flow coefficient (Kv) of proportional valve										pilot pressure (bar)			max. differential pressure (1)
				2 way		3 way (2) mixer				3 way (2) distributor							
				2 → 1		3 → 2		1 → 2		2 → 3		2 → 1		min.		max. (1)	
		(mm)	(mm)	(m³/h)	(l/min)	(m³/h)	(l/min)	(m³/h)	(l/min)	(m³/h)	(l/min)	(m³/h)	(l/min)	2 way (2)	3 way		(bar)
1/2	15	15	80	3,5	58,3	3,3	54	4,4	73	3,5	59	4,6	78	4	4	8	40
3/4	20	20	100	6,3	105	8,0	133	7,4	123	8,1	136	7,7	129				
1	25	25	100	10,7	178,3	11,4	190	11,6	194	12,1	203	11,9	199				
1 1/4	32	32	150	15	250	18,9	316	16,6	278	17,9	299	16,6	278				
1 1/2	40	40	150	24	400	27	450	27	450	27	450	27	450				
2	50	50	200	40	666,6	51	850	51	850	51	850	51	850				

(1) Admissible differential pressure (for temperature of up to 100°C).
(2) Valve without profiled disc.

FLOW CHARACTERISTICS FOR 2 WAY VALVES





HOW TO ORDER

15-DIGIT PRODUCT CODE

Configurator - CAD Files

T	298	B	P	3	7	D	V	0GE	00

Connection
E = ISO 228/1 & ISO 7/1 (combination thread, G*)
8 = NPTF (ANSI B1.20.3)
T = Flanges
W = Socket Welded

Product series
298 (2 way)
398 (3 way)

Revision letter
B = New Stuffing Box and Disc Materials

Function
P = 2/2 Normally Closed with Proportional Disc
2 = 3/2 Universal

Diameter (mm)
3 = 15 mm
4 = 20 mm
5 = 25 mm
6 = 32 mm
7 = 40 mm
8 = 50 mm

Operator Dia. - Piloting Connection Dia.

7 = Ø80 mm - G 1/8 **8** = Ø80 mm - NPT 1/8 (1)	DN 15
D = Ø100 mm - G 1/8 **E** = Ø100 mm - NPT 1/8 (1)	DN 20 - DN 25
K = Ø150 mm - G 1/4 **L** = Ø150 mm - NPT 1/4 (1)	DN 32 - DN 40
M = Ø200 mm - G 1/4 **N** = Ø200 mm - NPT 1/4 (1)	DN 50

Options
0CG = Digital positioner Fail position maintained, single loop 0-10 V Cable gland
4CG = Digital positioner Fail position maintained, single loop 4-20 mA Cable gland
0M1 = Digital positioner Fail position maintained, single loop 0-10 V M12
4M1 = Digital positioner Fail position maintained, single loop 4-20 mA M12
0GE = Digital positioner Fail position closing, single loop 0-10 V Cable gland
4GE = Digital positioner Fail position closing, single loop 4-20 mA Cable gland
0ME = Digital positioner Fail position closing, single loop 0-10 V M12
4ME = Digital positioner Fail position closing, single loop 4-20 mA M12

Disc Seal Material
V = PEEK

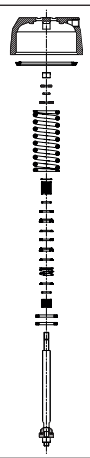
Port Type
Theaded ports
0 = 2 way
U = 3 way (ISO 228/1 & ISO 7/1)
8 = 3 way NPT (1)

Flanges
D = 2 way/3 way - Flanges DIN EN 1092-1 (ISO 7005) Standard
P = 2 way/3 way - Flanges ANSI Class 300
E = 3 way - Flanges DIN EN 1092-1 + Third way port threaded Gaz + Rp
S = 3 way - Flanges ANSI Class 300 + Third way port threaded NPT

Socket Welded
A = 2 way/3 way

(1) Connection = NPTF (ANSI B1.20.3) / Flanges ANSI Class 300

SPARE PARTS KITS CODE
PEEK disc version (✳)

2 way			3 way		
	DN 15 **NC**	**M29853148000100**		DN 15 **U**	**M39853148000300**
	DN 20 **NC**	**M29853148000400**		DN 20 **U**	**M39853148000600**
	DN 25 **NC**	**M29853148000700**		DN 25 **U**	**M39853148000900**
	DN 32 **NC**	**M29853148001000**		DN 32 **U**	**M39853148001200**
	DN 40 **NC**	**M29853148001300**		DN 40 **U**	**M39853148001500**
	DN 50 **NC**	**M29853148001600**		DN 50 **U**	**M39853148001800**

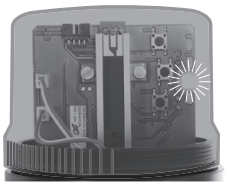
(✳) Ensure that the compatibility of the fluids in contact with the materials is verified.

BCAE Industrial Automation
青岛秉诚自动化设备有限公司
地址：中国.青岛市重庆南路99号海尔云街甲3号楼7F
服务热线：4006-918-365
网址：http://www.asco.store
传真：(86-532)585-10-365
Email：sales@bechinas.com

INSTALLATION

- Installation/maintenance instructions are included with each valve
- LED indicators for operating status display and diagnostic functions (Unit can be rotated through 360° around the centreline of the valve operator)

status	hold position
	valve OPEN
	valve CLOSED
	valve moves to open
	valve moves to close
	positioner in initialisation mode
	positioner in manual mode
diagnostics	setpoint > 20,5 mA / 10,25 V
	setpoint < 3,5 mA
	positioner not initialised
	component error



Electrical connection:

Positioner^{D}, single loop

screw terminals **M12**

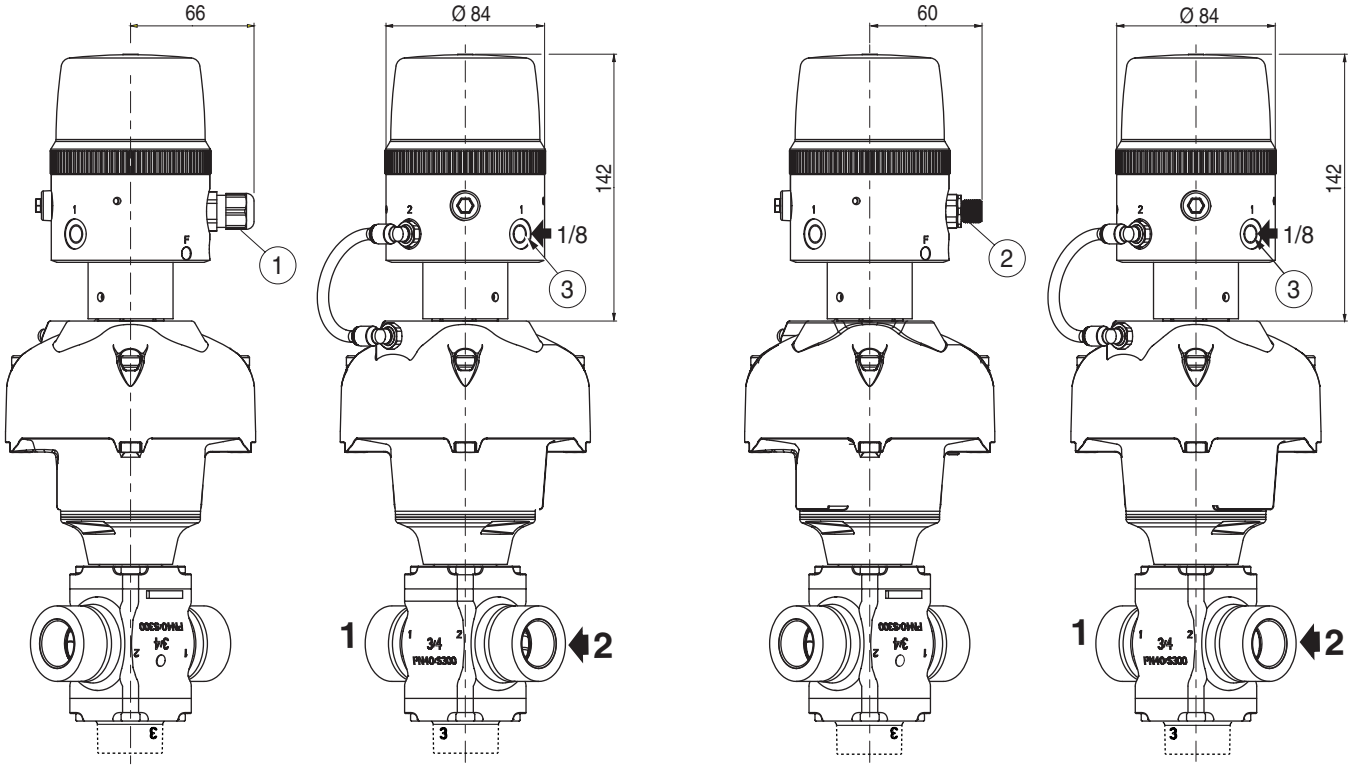
1	+ 24 V DC, supply	1
2	GND supply	3
3	+ setpoint (0-10 V or 4-20 mA)	2
4	GND setpoint	3
6	disc position feedback	4
7	+ 24V ON/OFF output	5

DIMENSIONS (mm), WEIGHT (kg)

Configurator - CAD Files

TYPE 01
Enclosure with cable gland
80 to 200 mm operators

TYPE 02
Enclosure with M12 connection
80 to 200 mm operators



① Presse-étoupe M16 x 1,5 mm (câble Ø 5-10 mm)
② Connexion M12
③ Raccordement pilote G 1/8

Masse du positionneur (sans la vanne) : 0,3 kg

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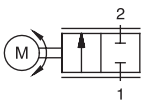
MOTORISED CONTROL VALVE

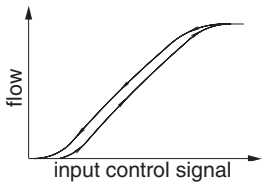
MotorFlow^{D}

3/4



2/2
Series
610

FEATURES



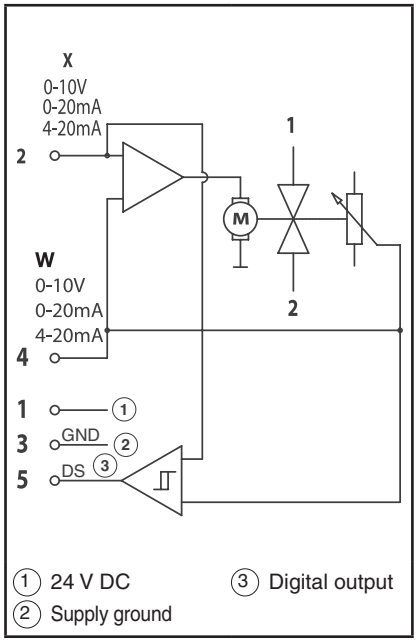
- *Variable valve opening (flow), proportional to the control signal*
- *Digital controller with two operating buttons and position indication*
- *Valves do not require a minimum operating pressure*
- *Low power consumption*
- *Wear-resistant ceramic control discs*
- *Insensitive to contamination*
- *Suitable for vacuum and overpressure applications*
- *Mechanical separation of electrical actuator from fluid-carrying parts*
- *Valve position maintained on loss of power*
- *Valves can be mounted in any position*
- *The solenoid valves satisfy all relevant EU directives*

CE

GENERAL

Differential pressure	-0,9 to +10 bar (usable in 0,1 bar abs. vacuum) [1 bar =100 kPa]
Ambient temperature range	0°C to +50°C
Maximum viscosity	80 cSt (mm²/s)
Actuating time	2 s

fluids (∗)	temperature range (TS) (1)	seal materials (∗)
air, inert gas, water, oil	-5°C to +90°C	oxide ceramics EPDM (ethylene-propylene)



MATERIALS IN CONTACT WITH FLUID

(∗) Ensure that the compatibility of the fluids in contact with the materials is verified

Body	Brass
Internal parts	POM, stainless steel
Seals	Oxide ceramics, EPDM

ELECTRICAL CHARACTERISTICS

Connector	5-pin female M12 connector
Electrical enclosure protection	IP65 (EN 60529)
Standard voltage	DC (=): 24V
Power consumption	6 W (max. 10 W at end of stroke)
Flow regulation characteristics (2)	Hysteresis < 3%; Repeatability < 2% ; Sensitivity < 2%

SPECIFICATIONS

pipe size	orifice size	flow coefficient Kv		operating pressure differential (bar)			setpoint	feedback output	catalogue number
				min.	max. (PS)				
					air, water (∗)	oil (∗)			
G	(mm)	(m³/h)	(l/min)		=	=			
3/4	15	3,5	58	-0,9	10	10	0-10 V	0-10 V	**6100011x**
								0-20 mA	**6100021x**
								4-20 mA	**6100031x**
							0-20 mA	0-10 V	**6100111x**
								0-20 mA	**6100121x**
								4-20 mA	**6100131x**
							4-20 mA	0-10 V	**6100211x**
								0-20 mA	**6100221x**
								4-20 mA	**6100231x**

(1) Damage may occur when liquids solidify above the specified minimum temperature.
(2) Values related to valve position.

controller structure	x
standard version (position controller)	0
External feedback input 0 - 10 V (double loop (cascade) control)	1
External feedback input 0 - 20 mA (double loop (cascade) control)	2
External feedback input 4 - 20 mA (double loop (cascade) control)	3
External frequency input NPN (after GND) (double loop (cascade) control)	4
External frequency input PNP (after +24 V) (double loop (cascade) control)	5

OPTIONS AND ACCESSORIES

- Female M12 connector:

			straight	right-angle
- 5 pins, with screw terminals,		catalogue number:	**88100256**	**88100725**
- Supply cable 2 m,	5 x 0,25 mm²,	catalogue number:	**88100726**	**88100727**
- Supply cable 5 m,	6 x 0,56 mm²,	catalogue number:	**88100728**	**88100729**
- Supply cable 10 m,	6 x 0,56 mm²,	catalogue number:	**88100730**	**88100731**

- Software tool for PC “ASCO-MotorCom” available for download at: www.asco.com
- RS-232 converter, 2 m cable with 9 pin Sub-D connector for PC link, catalogue number **88100732**

INSTALLATION

- The solenoid valves can be mounted in any position without affecting operation
- Threaded pipe connection is standard: G = G (ISO 228/1)
- Installation/maintenance instructions are included with each valve
- LED display

LED red = low voltage or overvoltage (blinking)
LED green = pressure switch
LED yellow = manual operation

- Electrical connection:

Male connector pinning (power supply)

M12

		5-wire cable (2 m)	6-wire cable (5 m, 10 m)
+ 24 V DC, supply	**1**	brown	brown
analog setpoint input	**2**	white	white
supply ground	**3**	blue	green
analog ground (1)			yellow
analog output (feedback)	**4**	black	pink
digital output (pressure switch)	**5**	grey	grey
EMC shield housing (2)		shield	shield

Female connector pinning (sensor)

M12

+ 24 V DC, supply	**1**
external feedback input	**2**
supply ground	**3**
frequency input	**4**
unused	**5**
EMC shield housing (2)	

(1) A 6-wire cable with separate analog ground is used for cable lengths over 2 m to set off the voltage drop for the setpoint.
(2) The housing of the M12 male connector/M12 female connector is connected to the valve body.

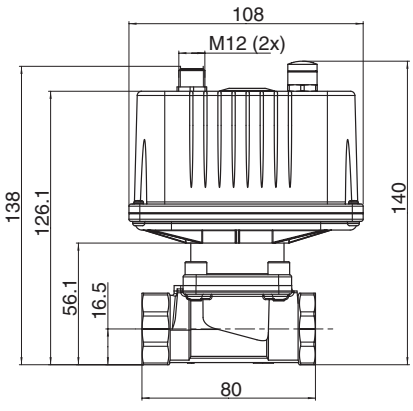
ORDERING EXAMPLES:

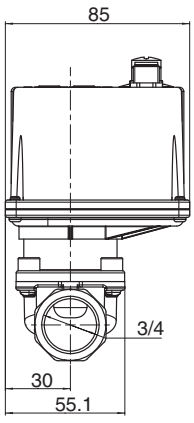
610 0 0 1 1 0
610 0 1 2 1 1
610 0 2 3 1 2

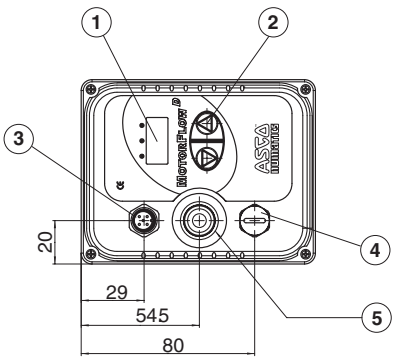
series
pipe thread
setpoint
feedback output
controller structure
digital output (pressure switch)

DIMENSIONS (mm), WEIGHT (kg)

IP65







weight
1,1

1. Valve opening display (0-100%)
2. Operating buttons (manual operation)
3. Power supply
4. Sensor input
5. Programming hole

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地址：中国.青岛市重庆南路99号海尔云街甲3号楼7F
服务热线：4006-918-365
网址：http://www.asco.store
传真：(86-532)585-10-365
Email：sales@bechinas.com