

SPECIAL FLUIDS

CRYOGENIC

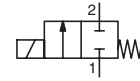
Product Index



Function	ΔP		Temperature		Pipe connections	Series	Page	
	min. (bar)	max. (bar)	min. (°C)	max. (°C)				
BRASS BODY								
NC	0	9	-196	+60	Cryogenic fluids	1/8 - 1/4 - 3/8	262-263	1
NC	0	9	-196	+90	Cryogenic fluids	1/2 - 3/4	222LT	5
NC	0	70	-60	+60	CO ₂ liquid / gas	1/8	264	7

pipe connections ☒ - internal thread										body material		max. operating pressure differential (bar)										fluid temperature range		power coil		series	page						
M5	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	brass	brass (nickel plated)	orifice size (mm)	min. operating pressure differential (bar)	AC (~)					DC (=)							min.	max.	AC (~)	DC (=)		
															CO ₂ liquid / gas	cryogenic fluids					CO ₂ liquid / gas	cryogenic fluids					(°C)		(W)				
NORMALLY CLOSED (NC)																																	
☒												☒		3,2	0	-	-	-	-	-	10,7	-	-	-	-	-	11,6	-196	+60	10,1	11,6	263	1
	☒											☒		5,6	0	-	-	-	-	-	10,7	-	-	-	-	-	11,6	-196	+60	10,1	11,6	262	
		☒										☒		5,6	0	-	-	-	-	-	6,9	-	-	-	-	-	22,6	-196	+60	17,1	22,6	263	
			☒									☒		3,2	0	-	-	-	-	-	10,7	-	-	-	-	-	11,6	-196	+60	10,1	11,6	263	
				☒								☒		5,6	0	-	-	-	-	-	6,2	-	-	-	-	-	22,6	-196	+60	17,1	22,6	263	
					☒							☒		7,1	0	-	-	-	-	-	4	-	-	-	-	-	22,6	-196	+60	17,1	22,6	263	
						☒						☒		16	0	-	-	-	-	-	9	-	-	-	-	(1)	-196	+90	16,7	-	222LT	5	
							☒					☒		19	0	-	-	-	-	-	9	-	-	-	-	(1)	-196	+90	16,7	-	222LT	5	
	☒											☒		1,2	0	-	-	70	-	-	-	-	-	-	-	-	-60	+60	13,8	15,3	264	7	
												☒		2,4	0	-	-	20	-	-	-	-	-	-	-	-	-60	+60	13,8	15,3	264	7	

(1) Contact us.



FEATURES

- The solenoid valves will withstand the severe service encountered in controlling cryogenic fluids, such as liquid oxygen (-183°C), liquid argon (-186°C) and liquid nitrogen (-196°C)
- All valves are degreased, cleaned, tested and packed to keep them free from moisture. In addition liquid oxygen (LOX) valves are "black light" tested to check for any hydrocarbons
- Valves do not require a minimum operating pressure
- Compliance with UL and CSA standards
- The solenoid valves satisfy all relevant EU directives

GENERAL

Differential pressure See «SPECIFICATIONS» [1 bar =100 kPa]
Maximum viscosity 65 cSt (mm²/s)
Response time 5 - 25 ms

fluids (*)	temperature range (TS)	seal materials (*)
cryogenic fluids	-196°C to +60°C	PTFE



GENERAL

MATERIALS IN CONTACT WITH FLUID

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

Body	Brass
Shading coil	Copper
Core tube	Stainless steel, AISI 305
Core and plugnut	Stainless steel, AISI 430F
Springs	Stainless steel, AISI 302
Seal	Lead-clad copper
Disc	PTFE

ELECTRICAL CHARACTERISTICS

Coil insulation class	F (AC) or H (DC)
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 - 48V
(Other voltages and 60 Hz on request)	AC (~) : 24V - 48V - 115V - 230V/50 Hz

operator ambient temperature range (TS) (°C)	power ratings				replacement coil ⁽¹⁾	
	inrush ~ (VA)	holding ~ (VA)	holding ~ (W)	hot/cold = (W)	~ 230 V/50 Hz	= 24 V DC
-40 to +55	50 70	25 40	10,1 17,1	8,5/11,6 15,1/22,6	238613-059 238613-159	238913-006 238913-106

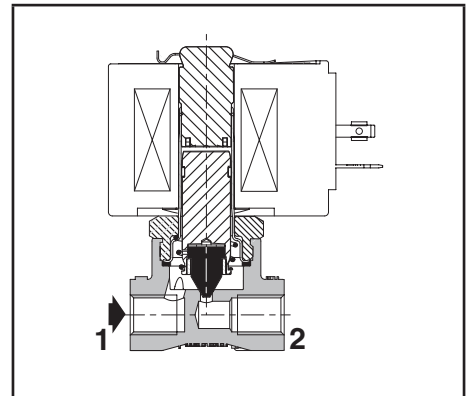
⁽¹⁾ All 238 basic numbers are UL & CSA approved and marked with the UR (recognised component) & CSA logos.

OPTIONS

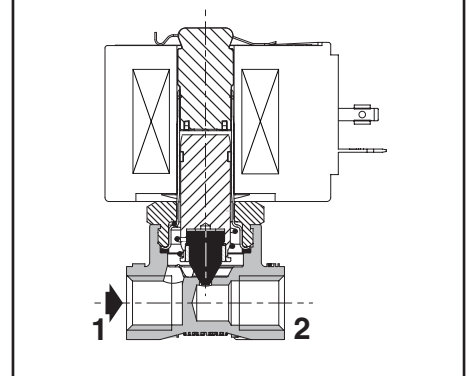
Seals and disc (*) ⁽²⁾ (fluid temperature range)	PTFE: -196°C to +66°C (coil class F) -196°C to +49°C (coil class H)
Connector with visual indication and peak voltage suppression or with cable length of 2 m (www.asco.com)	

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

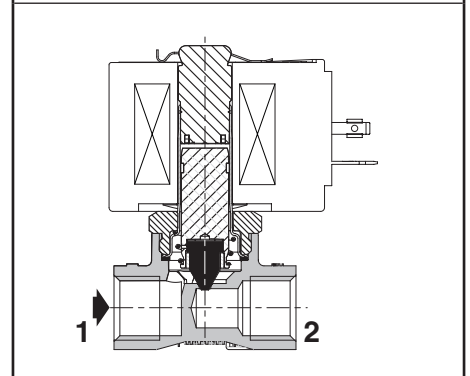
⁽²⁾ The minimum ambient temperature of the solenoid valve is determined by the limitations of minimum temperature indicated.



NC function (263 - 1/8)



NC function (262 - 1/4)



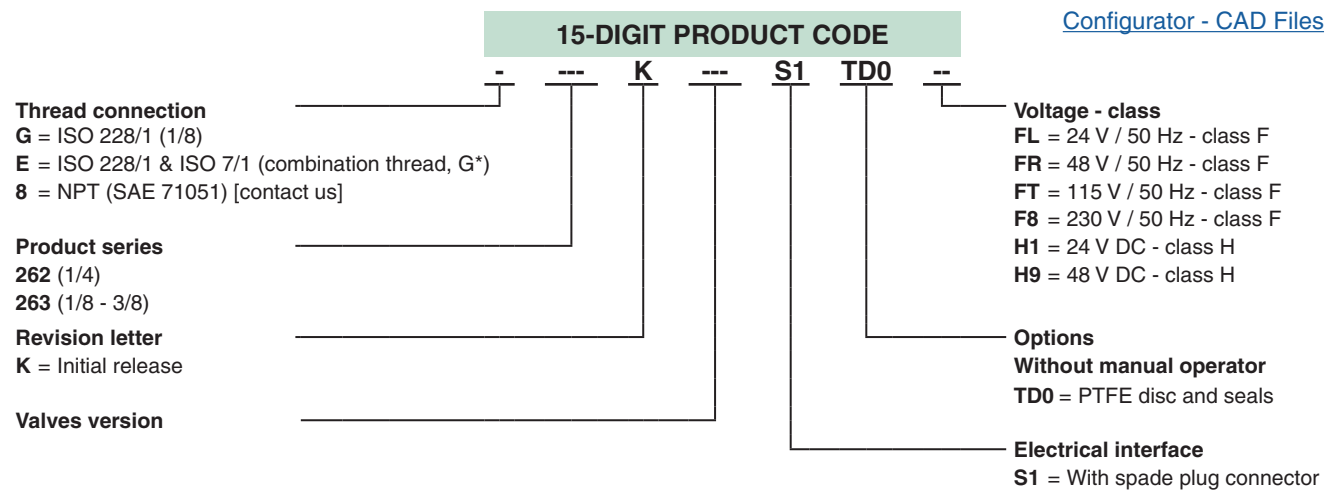
NC function (263 - 3/8)

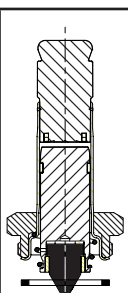
SPECIFICATIONS

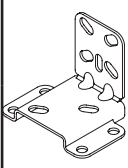
pipe size	orifice size (mm)	flow coefficient Kv (m³/h)(l/min)		operating pressure differential (bar)		power coil (W)		thread type	dimensions / type (1)	15-DIGIT PRODUCT CODE						
				min.	max. (PS)					brass	voltage code					
					cryogenic fluids (*)						24 V/50 Hz	48 V/50 Hz	115 V/50 Hz	230 V/50 Hz	24 V/DC	48 V/DC
				~	=	~	=									
WITHOUT MANUAL OPERATOR																
NC - Normally closed																
1/8	3,2	0,3	5	0	10,7	5,2	10,1	11,6	G	01	G263K240S1TD0					
1/4	3,2	0,3	5	0	10,7	5,2	10,1	11,6	G*	01	E262K232S1TD0					
	5,6	0,63	10,5	0	6,9	2,9	17,1	22,6	G*	01	E262K114S1TD0					
	7,1	0,76	12,7	0	4	1,9	17,1	22,6	G*	01	E262K212S1TD0					
3/8	3,2	0,3	5	0	10,7	5,2	10,1	11,6	G*	02	E263K232S1TD0					
	5,6	0,63	10,5	0	6,2	2,9	17,1	22,6	G*	02	E263K206S1TD0					
	7,1	0,76	12,7	0	4	1,9	17,1	22,6	G*	02	E263K210S1TD0					

(1) 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.



	SPARE PARTS KITS CODE (*)				
	AC (~)		DC (=)		
		PTFE		PTFE	
	G263K240				
	E262K232				
	E262K114				
	E262K212	M200056	TD0	M200057	TD0
	E263K232				
	E263K206				
	E263K210				

		ACCESSORIES CODE
	Mounting bracket Steel version (AISI 1010 / 1.1121)	M200094A00
	Mounting bracket Stainless steel version (AISI 304 / 1.4301)	M200095A00

INSTALLATION

- The solenoid valves can be mounted in any position without affecting operation
- Solenoid valves have 2 mounting holes in body
- Thread connection "E" applicable for 1/4, 3/8 have standard thread according to ISO 228/1 and ISO 7/1. Thread connection "G" applicable for 1/8, have standard thread according to ISO 228/1
- Thread connection "8" have standard thread = NPT (SAE 71051)
- Installation/maintenance instructions are included with each valve

DIMENSIONS (mm), WEIGHT (kg)

[Configurator - CAD Files](#)

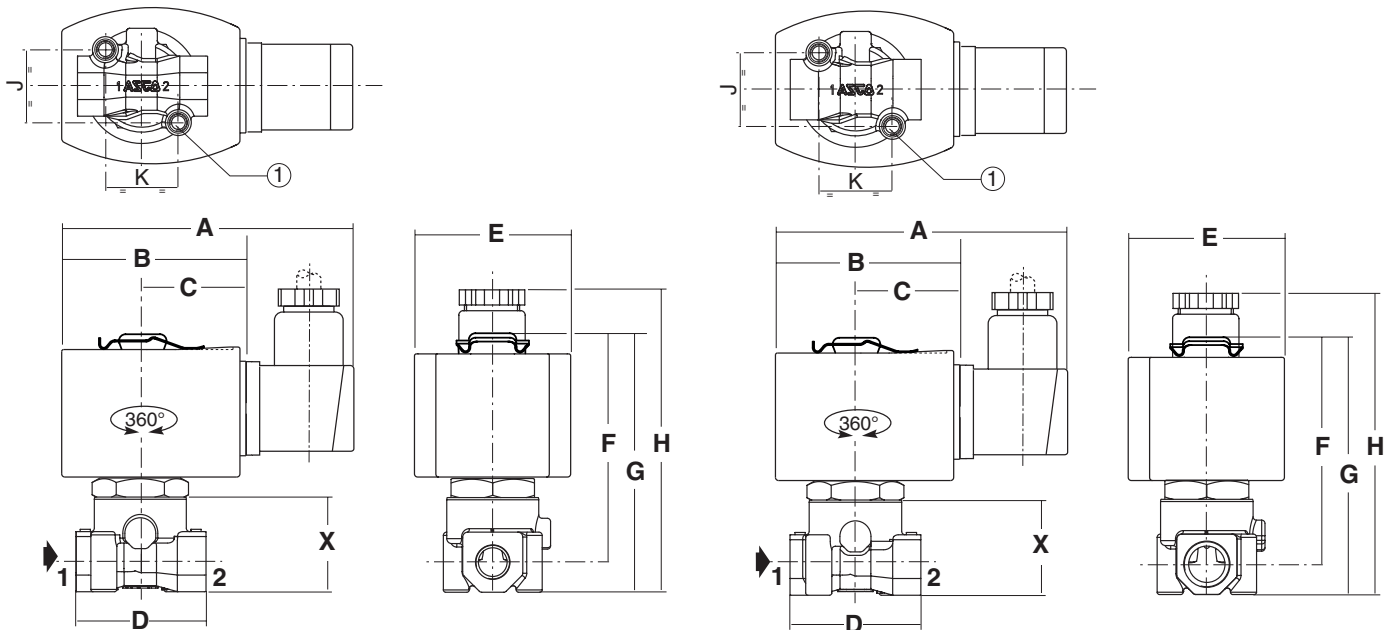


TYPE 01

Electrical interface "S1"
 Epoxy moulded
 IEC 335 / ISO 4400
 IP65

1/8 power coil 10,1 W / 11,6 W

1/4 power coil 10,1 W / 11,6 W - 17,1 W / 22,6 W



type	pipe size	A	B	C	D	E	F	G	H	X	weight ⁽¹⁾
01	1/8	95	57	33	40	50	69	78	93	29	0,54
	1/4	95	57	33	40	50	69	78	93	29	0,58

① 2 mounting holes:
 M5 dia., depth 7,5 mm (1/8-1/4)

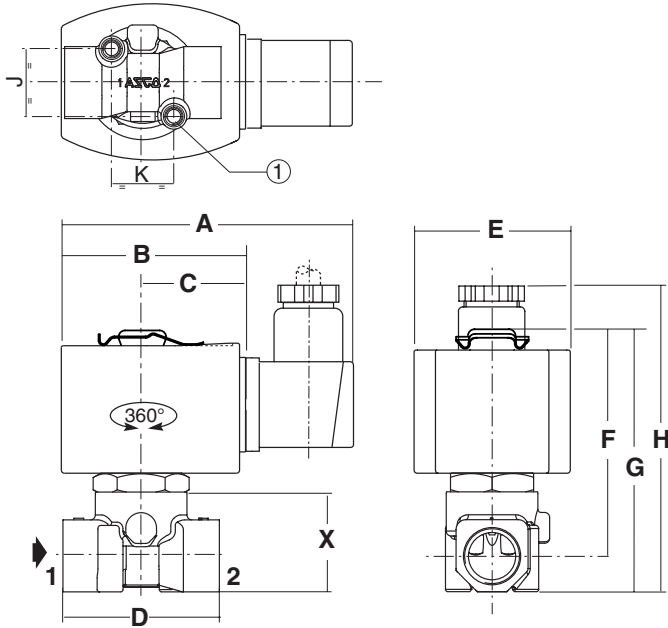
⁽¹⁾ Incl. coil(s) and connector(s).



TYPE 02

Electrical interface "S1"
Epoxy moulded
IEC 335 / ISO 4400
IP65

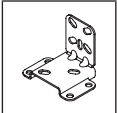
3/8 power coil 10,1 W / 11,6 W - 17,1 W / 22,6 W



type	pipe size	A	B	C	D	E	F	G	H	X	weight ⁽¹⁾
02	3/8	95	59	34	48	50	69	80	95	31	0,61

① 2 mounting holes:
M5 dia., depth 6 mm (3/8)

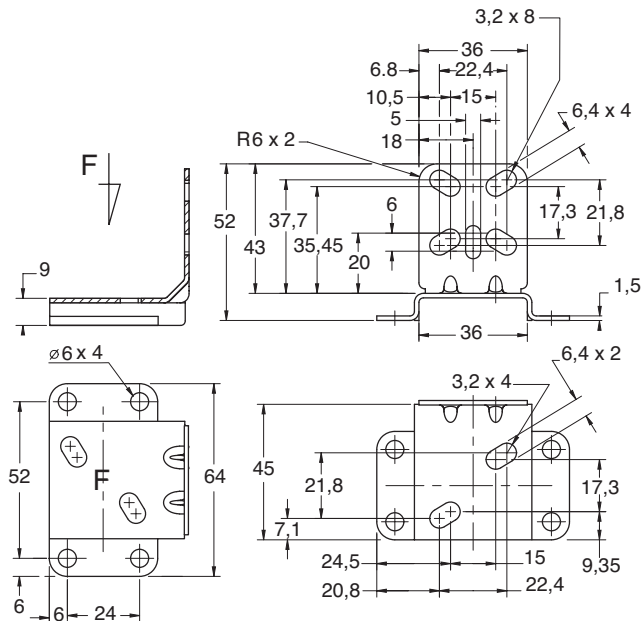
⁽¹⁾ Incl. coil(s) and connector(s).



Mounting bracket

Steel or stainless steel

M200094A00 / M200095A00

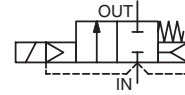




SOLENOID VALVES

pilot operated
hung piston, for cryogenic service
1/2 - 3/4

NC



2/2
Series
222LT

FEATURES

- The solenoid valves will withstand the severe service encountered in controlling cryogenic fluids, such as liquid oxygen (-183°C), liquid argon (-186°C) and liquid nitrogen (-196°C)
- Hung piston construction
- Valves do not require a minimum operating pressure
- Reliable control in low pressure, high flow systems
- All valves are degreased, cleaned, tested and packed to keep them free from moisture. In addition liquid oxygen (LOX) valves are "black light" tested to check for any hydrocarbons
- The solenoid valves satisfy all relevant EU directives

GENERAL

Differential pressure 0 - 9 bar [1 bar = 100 kPa]
Response time 75 - 100 ms

fluids (*)	temperature range (TS)	seal materials (*)
cryogenic fluids	- 196°C to + 90°C	PTFE

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
Piston	Brass
Seat	Brass
Seals	PTFE
Piston rings	PTFE carbon filled
Core disc	PTFE reinforced
Piston disc	PTFE
Shading coil	Copper

ELECTRICAL CHARACTERISTICS

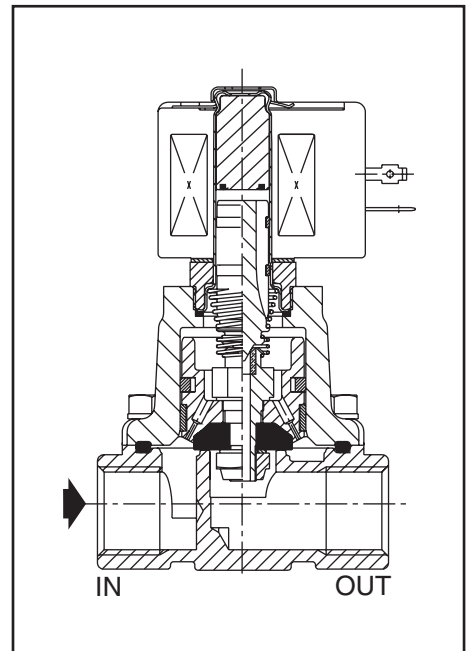
Coil insulation class	H
Connector	Spade plug (cable Ø 6-10 mm)
Connector specification	ISO 4400 / EN 175301-803, form A
Electrical safety	IEC 335
Electrical enclosure protection	Moulded IP65 (EN 60529)
Standard voltages	DC (=) : Contact us
(Other voltages and 60 Hz on request)	AC (~) : 24V - 48V - 115V - 230V / 50 Hz

prefix option	power ratings				operator ambient temperature range (TS) (C°)	replacement coil		type ⁽¹⁾
	inrush ~	holding ~		hot/cold =		~	=	
	(VA)	(VA)	(W)	(W)		230 V/50 Hz	-	
SC	78	35	16,7	-	-20 to +75	400426-217	-	01

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

SPECIFICATIONS

pipe size	orifice size	flow coefficient Kv		operating pressure differential (bar)			power coil (W)		catalogue number	options						
				min.	max. (PS)		~	=		~	-	-	-	-		
					cryogenic fluids (*)											
Rp	(mm)	(m³/h)	(l/min)													
NC - Normally closed																
1/2	16	3,3	55	0		9	16,7	-	SCE222E002LT	-	-	-	-			
3/4	19	5,1	85	0		9	16,7	-	SCE222F003LT	-	-	-	-			



OPTIONS

- Waterproof enclosure with embedded screw terminal coil according to protection class IP67, CEE-10
- Compliance with “UL”, “CSA” and other local approvals available on request
- Other pipe connections are available on request
- Connector with visual indication and peak voltage suppression or with cable length of 2 m (www.asco.com)

INSTALLATION

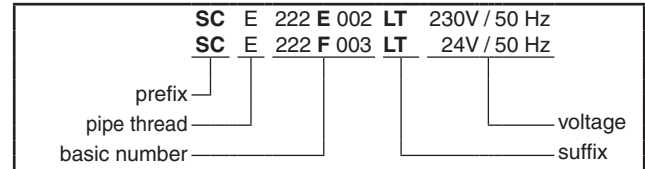
- The solenoid valves must be mounted vertical and upright
- Pipe connection identifier is E = Rp (ISO 7/1)
- Installation/maintenance instructions are included with each valve

SPARE PARTS KITS

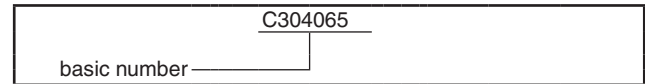
catalogue number	spare parts kit no.	
	~	=
SCE222E002LT	C304065LT	-
SCE222F003LT	C304065LT	-

- Not available

ORDERING EXAMPLES:



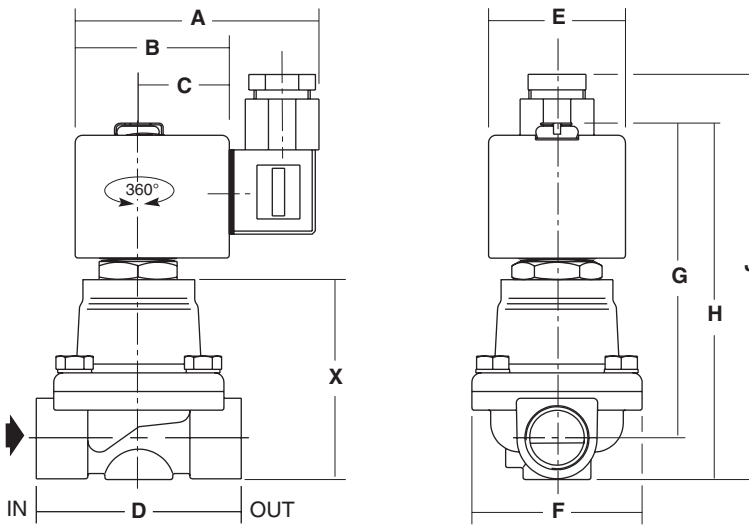
ORDERING EXAMPLES KITS:



DIMENSIONS (mm), WEIGHT (kg)

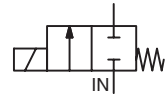


TYPE 01
 Prefix “SC” Solenoid
 Epoxy moulded
 IEC 335 / ISO 4400
 IP65



type	prefix option	catalogue number	A	B	C	D	E	F	G	H	J	X	weight ⁽¹⁾
01	SC	SCE222E002LT	80	50	30	70	45	59	104	119	131	69	1,1
		SCE222F003LT	80	50	30	73	45	58	108	125	137	75	1,2

⁽¹⁾ including coil and connector.



FEATURES

- The valves are designed for the control of liquid CO₂ in applications such as low temperature tumbling barrels, environmental test chambers and other cooling applications where constant low temperature control is essential
- Valves do not require a minimum operating pressure and have a high operating pressure as indicated
- Valve operation is not affected by mounting position
- The solenoid valves satisfy all relevant EU Directives

GENERAL

Differential pressure 0 - 70 bar [1 bar =100 kPa]
Maximum viscosity 65 cSt (mm²/s)
Response time 5 - 25 ms

fluids (*)	temperature range (TS)	seal materials (*)
CO ₂ , liquid / gas	- 60°C to + 60°C	UR (cast urethane)

MATERIALS IN CONTACT WITH FLUID

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

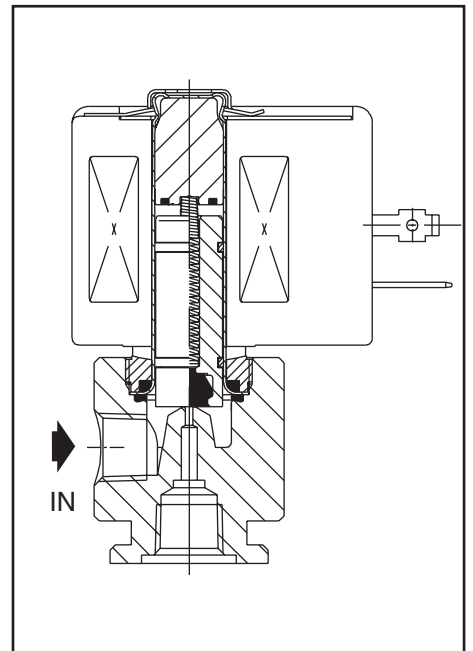
Body Brass (nickel plated)
Core tube Stainless steel
Core and plugnut Stainless steel
Spring Stainless steel
Seat Brass
Seals UR
Disc UR
Shading coil Copper

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 - 48V
 (Other voltages and 60 Hz on request) AC (~) : 24V - 48V - 115V - 230V / 50 Hz

prefix option	power ratings				operator ambient temperature range (TS) (C°)	replacement coil		type ⁽¹⁾
	inrush ~	holding ~		hot/cold =		~	=	
	(VA)	(VA)	(W)	(W)		230 V/50 Hz	24 V DC	
SC	37,6	28	13,8	9,5/15,3	-20 to + 50	400325-217	400325-242	01

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



SPECIFICATIONS

pipe size	orifice size	flow coefficient Kv		operating pressure differential (bar)				power coil (W)		catalogue number
				min.	max. (PS)		CO ₂ liquid / gas (*)			
					~	=				
NPT	(mm)	(m ³ /h)	(l/min)							~/=
NC - Normally closed										
1/8	1,2	0,05	0,83	0	70	70	13,8	15,3	SCB264D009 SCB264D010	
	2,4	0,17	2,83	0	20	20	13,8	15,3		

OPTIONS

- Waterproof enclosure with embedded screw terminal coil according to protection class IP67, CEE-10
- Compliance with “UL”, “CSA” and other local approvals available on request
- Other pipe connections are available on request
- Connector with visual indication and peak voltage suppression or with cable length of 2 m (www.asco.com)

INSTALLATION

- Install tubing with an inside diameter not larger than the valve orifice in the outlet port to locate the refrigeration point down stream of the valve and to prevent freezing of the expanding CO₂ inside the valve body
- The solenoid valves can be mounted in any position without affecting operation
- Valves are provided with a mounting flange and threaded connection in the outlet of the body
- Pipe connection identifier is B = NPT (ANSI 1.20.3)
- Installation/maintenance instructions are included with each valve

SPARE PARTS KITS

catalogue number	spare parts kit no.	
	~	=
SCB264D009/D010	C302850	C302854

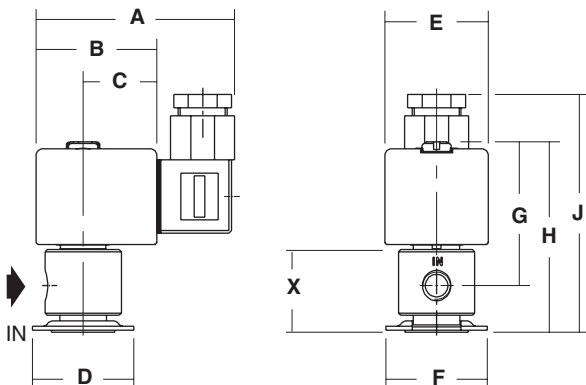
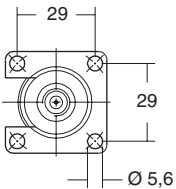
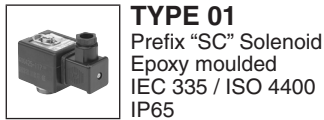
ORDERING EXAMPLES:

SC	B	264	D	009	230V / 50 Hz
SC	B	264	D	010	24V / DC
prefix	pipe thread	basic number			voltage
					suffix

ORDERING EXAMPLES KITS:

	C302850
basic number	

DIMENSIONS (mm), WEIGHT (kg)



type	prefix option	A	B	C	D	E	F	G	H	J	X	weight ⁽¹⁾
01	SC	75	45	27	38	39	38	55	71	88	31	0,4

⁽¹⁾ including coil and connector.