SOLENOID VALVES

direct operated
core disc
1/4

NC
U
NO

3/2
Series
374

FEATURES

- *Compact valve intended for single-acting actuator control*
- *Epoxy moulded coil for general service applications*
- *Coils interchangeable without dismantling the valve*
- *Valves do not require a minimum operating pressure*
- *The solenoid valves satisfy all relevant EU directives*

GENERAL

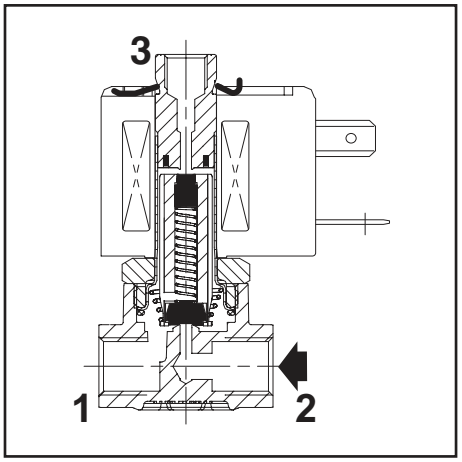
Differential pressure See "SPECIFICATIONS" [1 bar =100 kPa]
Maximum viscosity 40 cSt (mm²/s)
Response time 8 - 20 ms

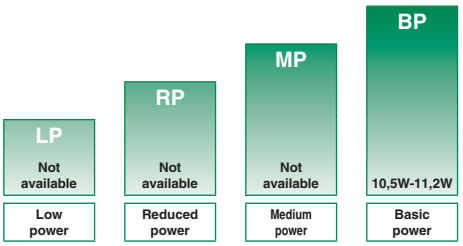
fluids (✶)	temperature range (TS)	seal materials (✶)
water, air, inert gas, oil	- 25°C to + 80°C	NBR (nitrile)

MATERIALS IN CONTACT WITH FLUID

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

Body Brass or AISI 316L (1.4404)
Internal parts, springs Stainless steel
Seat Brass and stainless steel
Seals NBR
Core guide CA
Shading coil Copper





POWER LEVELS - cold electrical holding values (watt)

SPECIFICATIONS

pipe size	orifice size	flow coefficient Kv				operating pressure differential (bar)			power level BP		prefix optional solenoids					basic catalogue number	
		2 → 1		1 → 3		min.	max. (PS) air/water/oil (✶)				ATEX / IECEx -	ATEX / IECEx Ex emb	ATEX / IECEx Ex mb	ATEX / IECEx -	IP65		
(❖)	(mm)	(m³/h)	(l/min)	(m³/h)	(l/min)		~	=	~	=	-	EM	PV	-	SC	brass	stainless st.
NC - Normally closed																	
1/4	2,0	0,11	1,8	0,15	2,5	0	16	16	10,5	11,2	-	●	●	-	●	❖374A016	❖374A046
1/4	2,7	0,22	3,6	0,15	2,5	0	10	10	10,5	11,2	-	●	●	-	●	❖374A017	❖374A047
1/4	3,8	0,32	5,3	0,15	2,5	0	5	5	10,5	11,2	-	●	●	-	●	❖374A018	❖374A048

❖ Select **B** for NPT ANSI 1.20.3 or select **E** for ISO (228/1 and ISO 7/1) ● Available feature - Not available

800019GB-2016/R01

SPECIFICATIONS

pipe size	orifice size	flow coefficient Kv				operating pressure differential (bar)					power level BP		prefix optional solenoids					basic catalogue number	
		2 → 1		1 → 3		min.	max. (PS) air (✶)		max. (PS) water/oil (✶)				ATEX / IECEx -	ATEX / IECEx Ex emb	ATEX / IECEx Ex mb	ATEX / IECEx -	IP65		
(❖)	(mm)	(m³/h)	(l/min)	(m³/h)	(l/min)		~	=	~	=	~	=	-	EM	PV	-	SC	brass	stainless st.
U - Universal																			
1/4	2,7	0,22	3,6	0,15	2,5	0	8	4	4	4	10,5	11,2	-	●	●	-	●	❖374A027	❖374A057
1/4	3,8	0,32	5,3	0,15	2,5	0	4	2	4	2	10,5	11,2	-	●	●	-	●	❖374A028	❖374A058
NO - Normally open																			
1/4	2,5	0,22	3,6	0,15	2,5	0	10	10	10	10	10,5	11,2	-	●	●	-	●	❖374A022	❖374A052

PREFIX TABLE

prefix							description	power level			
1	2	3	4	5	6	7		LP	RP	MP	BP
E	M						Waterproof IP66/67 - Metal enclosure (EN/IEC 60079-7,-18 and -31)*	-	-	-	●(1)
		E	T				Threaded conduit/hole (M20 x 1,5)	-	-	-	●(1)
P	V						Encapsulated epoxy moulded (EN/IEC 60079-18)*	-	-	-	●(1)
S	C						Solenoid with spade plug connector (EN/IEC 60730)	-	-	-	●(1)
W	P						Waterproof IP67 - Metal enclosure	-	-	-	●(1)
W	S						Waterproof IP67 - 316 SS enclosure	-	-	-	●(1)
W	S	E	M				Waterproof IP66/67 - 316 SS enclosure (EN/IEC 60079-7,-18 and -31)*	-	-	-	●(1)
		T					Threaded conduit (1/2" NPT)	-	-	-	●(1)
				H	T		Class H - High temperature	-	-	-	●(1)
						X	Other special constructions	-	-	-	●(1)

SUFFIX TABLE

suffix					description	power level			
1	2	3	4	5		LP	RP	MP	BP
E					EPDM (ethylene-propylene)	-	-	-	●
V					FPM (fluoroelastomer)	-	-	-	●
N	V				FPM (fluoroelastomer) and parts cleaned for oxygen service	-	-	-	●
		M	S		Screw type manual operator	-	-	-	●

PRODUCT SELECTION GUIDE

STEP 1

Select basic catalogue number, including pipe thread identification letter. Refer to the specifications tables on pages 1 and 2.

Example: E374A016

STEP 2

Select prefix (combination). Refer to the specifications table on page 1 and the prefix table on page 2, respect the indicated power level.

Example: EM

STEP 3

Select suffix (combination) if required. Refer to the suffix table on page 2, respect the indicated power level.

Example: MS

STEP 4

Select voltage. Refer to standard voltages on page 3.

Example: 230V / 50Hz

STEP 5

Final catalogue / ordering number.

Example:

EME374A016MS 230 V / 50 Hz

OPTIONS & ACCESSOIRES

catalogue number	spare parts kit n°(2) ~	spare parts kit n°(2) =	screw type manual operator
❖374A061/062/063	-	**C140037**	C140048
❖374A016/017/018	**C140038**	**C140038**	C140048
❖374A046/047/048	**C140038**	**C140038**	C140072
❖374A027/028	**C140042**	**C140042**	C140048
❖374A057/058	**C140042**	**C140042**	C140072
❖374A022	**C140039**	**C140039**	C140048
❖374A052	**C140039**	**C140039**	C140072

❖ Select **B** for NPT ANSI 1.20.3 or select **E** for ISO (228/1 and 7/1)
● Available feature
- Not available
* ATEX/IECEx valves using these solenoids are approved according to EN 13463-1 (non electrical)
(1) Power level 10,5/11,2: Available feature, see Specifications page 1
(2) Standard suffixes E and V are also applicable to kits
(3) Basic kit number applies to SC coil construction

ORDERING EXAMPLES VALVES:

SC	E	374 **A** 046	**MS**	230V / 50 Hz
SCHT	B	374 **A** 018		230V / 50 Hz
WS	E	374 **A** 048	**MS**	24V / DC
WP	B	374 **A** 022		24V / DC
EM	B	374 **A** 017	**MS**	230V / 50 Hz

prefix
pipe thread
basic number
voltage
suffix

ORDERING EXAMPLES KITS:

C140038 (3)	
C140038	**V**
C140037	**E**

basic number
suffix

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www.heatingandprocess.com

EXPLANATION OF TEMPERATURE RANGES OF SOLENOID VALVES

Valve temperature range	The valve temperature range **(TS)** is determined by the selected seal material, the temperature range for proper operation of the valve and sometimes by the fluid (e.g. steam)
Operator ambient temperature range	The operator ambient temperature range is determined by the selected power level and the safety code
Total temperature range	The temperature range of the complete solenoid valve is determined by the limitations of both temperature ranges above

ELECTRICAL CHARACTERISTICS

Coil insulation class F
Electrical safety IEC 335
Standard voltages DC (=) 24V - 48V
AC (~) 24V - 48V - 115V - 230V/50Hz; other voltages and 60Hz are available on request

prefix option	power ratings				operator ambient temperature range (TS)	safety code	electrical enclosure protection (EN 60529)	replacement coil / kit		type [1]
	inrush ~	holding ~		hot/cold =				~	=	
	(VA)	(VA)	(W)	(W)	(C°)			230V/50 Hz	24V/DC	
Basic power (BP)										
SC	55	23	10,5	9/11,2	-40 to +75	EN 60730	IP65, moulded	400425-117	400425-142	01-02
WP/WS	55	23	10,5	9/11,2	-40 to +75	EN 60730	IP67, steel /SS	400405-117	400405-142	03-04
EM/WSEM	55	23	10,5	9/11,2	-40 to +40	II2G Ex e mb IIC Gb T3, II2D Ex tb IIIC Db	IP66/67, steel /SS	400909-117	400913-142	03-04
PV	55	23	10,5	9/11,2	-40 to +65	II2G Ex mb IIC Gb T3(~)/T4(=), II2D Ex mb IIIC Db	IP65, moulded	- [2]	- [2]	05-06

- Not available
[1] Refer to the dimensional drawings on pages 4 to 6
[2] Multiple coil kits available under ATEX, contact us

ELECTRICAL CONNECTIONS

prefix	connection
SC	Spade plug connector with cable gland EN 175301-803A (ISO 4400) for cables with an outer diameter from 6 to 10 mm.
WP, WS, EM, WSEM	M20 cable gland for cables with an outer diameter from 7 to 12 mm. With an internal and external facility for an earthing or bonding conductor.
PV	Moulded-in cable, standard length 2 m

ADDITIONAL OPTIONS

- Other pipe threads are available on request
- Ex mb (prefix "PV") solenoid can be supplied with various cable lengths
- Compliance with "UL", "CSA" and other local approvals available on request
- 1/2" NPT (prefix "T") and M20 x 1.5 (prefix "ET") conduits (aluminium or 316 SS) available for steel solenoid housing

INSTALLATION

- Multi language installation/maintenance instructions are included with each valve
- The solenoid valves can be mounted in any position without affecting operation
- Threaded pipe connection identifier is: B = NPT (ANSI 1.20.3); E = (ISO 228/1 and ISO 7/1)

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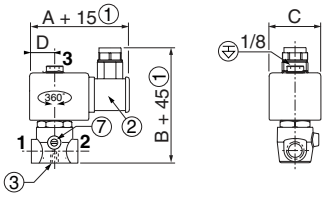
DIMENSIONS (mm), WEIGHT (kg)

TYPE 01:
Epoxy moulded
SC: IEC 335 / ISO 4400

374A016 / 374A017 / 374A018
374A027 / 374A028 / 374A022

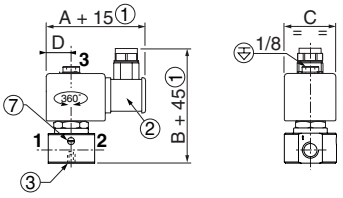


Pressure inlet:
- Function U = any port
- Function NC = Port 2
- Function NO = Port 3

Ports 1 and 2 : 1/4
Port 3 : 1/8

TYPE 02:
Epoxy moulded
SC: IEC 335 / ISO 4400

374A046 / 374A047 / 374A048
374A057 / 374A058 / 374A052

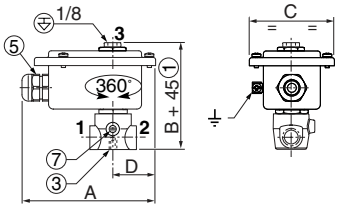


Pressure inlet:
- Function U = any port
- Function NC = Port 2
- Function NO = Port 3

Ports 1 and 2 : 1/4
Port 3 : 1/8

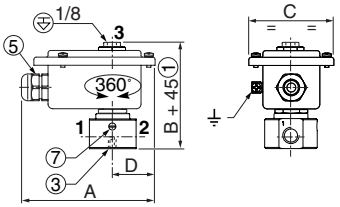
TYPE 03:
Metal, epoxy coated / AISI 316 SS
WP/WS: IEC 335
EM/WSEM: EN/IEC 60079-7+18+31

374A016 / 374A017 / 374A018
374A027 / 374A028 / 374A022



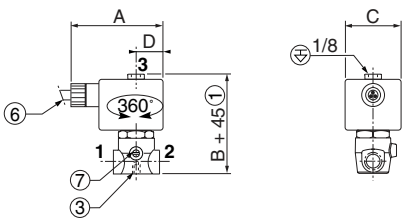
TYPE 04:
Metal, epoxy coated / AISI 316 SS
WP/WS: IEC 335
EM/WSEM: EN/IEC 60079-7+18+31

374A046 / 374A047 / 374A048
374A057 / 374A058 / 374A052



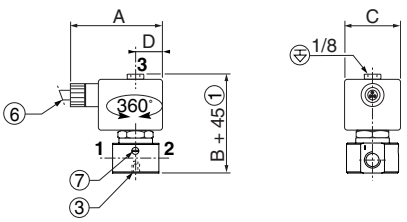
TYPE 05:
Epoxy encapsulated
PV: EN/IEC 60079-18

374A016 / 374A017 / 374A018
374A027 / 374A028 / 374A022



TYPE 06:
Epoxy encapsulated
PV: EN/IEC 60079-18

374A046 / 374A047 / 374A048
374A057 / 374A058 / 374A052



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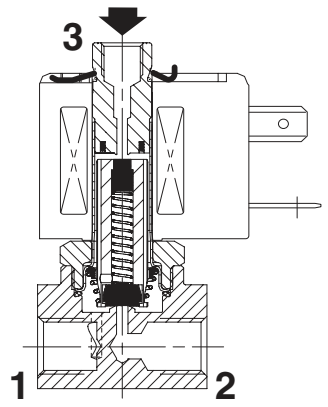
DIMENSIONS (mm), WEIGHT (kg)

type	prefix option	power level	A	B	C	D	weight (1)
01	SC	Basic Power	85,5	98	45	21	0,510
02	SC	Basic Power	85,5	98	45	21	0,560
03	WP / WS / EM / WSEM	Basic Power	120	95	77	38	0,760
04	WP / WS / EM / WSEM	Basic Power	120	95	77	38	0,810
05	PV	Basic Power	75	79,4	45	21,5	0,558
06	PV	Basic Power	75	79,4	45	21,5	0,608

(1) Incl.coil(s) and connector(s)

1. Extra length for disassembly, depending on model
2. Connector rotatable by 90° increments (cable Ø 6 - 10 mm)
3. Mounting 2 ØM4, 7 mm depth
4. Ex d certified cable gland (on request)
5. Cable gland for unarmoured cable with 6 to 12 mm dia. sheath
6. Three-core cable, length 2 m
7. Screw type manual operator, suffix (MS)

SECTIONAL DRAWING



Execution: Stainless Steel AISI 316L

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