

FEATURES

- Three-way solenoid valves with orifice and pipe connections in valve body enabling convenient installation
- 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 5 - 20 ms

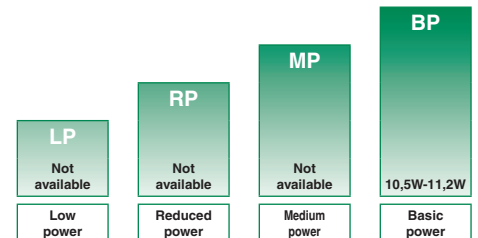
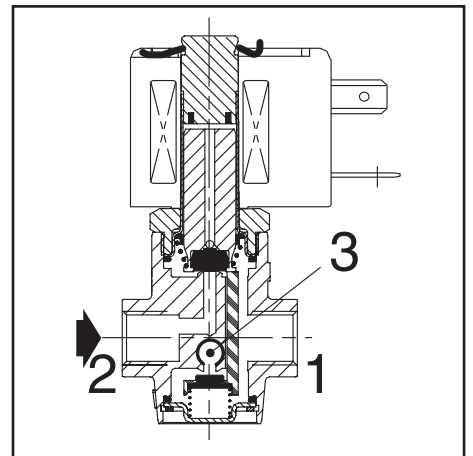
fluids (*)	temperature range (TS)	seal materials (*)
water, air, inert gas, oil	- 25°C to + 80°C	NBR (nitrile) VMQ (silicone)



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	Stainless steel - plastic
Springs	Stainless steel
Seats	Brass
Disc holder and core guide	POM
Discs	NBR(FPM or EPDM)
O'rings	VMQ
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	
				min.	max. (PS)					ATEX / IECEx						
					air/water/oil (*)					Ex d	Ex emb	Ex mb	-	IP65		
(*)	(mm)	(m ³ /h)	(l/min)		~	=	~	=	NF	EM	PV	-	SC	brass	stainless st.	
NC - Normally closed																
1/4	2,0	0,11	1,8	0	16	16	10,5	11,2	●	●	●	-	●	❖370A016	❖370A046	
1/4	2,7	0,20	3,3	0	10	10	10,5	11,2	●	●	●	-	●	❖370A017	❖370A047	
1/4	3,8	0,30	5,0	0	5	5	10,5	11,2	●	●	●	-	●	❖370A018	❖370A048	
U - Universal																
1/4	2,0	0,11	1,8	0	8	8	10,5	11,2	●	●	●	-	●	❖370A026	❖370A056	
1/4	2,7	0,20	3,3	0	5	5	10,5	11,2	●	●	●	-	●	❖370A027	❖370A057	
1/4	3,8	0,30	5,0	0	2	2	10,5	11,2	●	●	●	-	●	❖370A028	❖370A058	
NO - Normally open																
1/4	2,0	0,11	1,8	0	10	10	10,5	11,2	●	●	●	-	●	❖370A021	❖370A051	
1/4	2,7	0,20	3,3	0	7	7	10,5	11,2	●	●	●	-	●	❖370A022	❖370A052	
1/4	3,8	0,30	5,0	0	3	3	10,5	11,2	●	●	●	-	●	❖370A023	❖370A053	

❖ Select B for NPT ANSI 1.20.3
 Select E for ISO (228/1 and ISO 7/1)

● Available feature

- Not available

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⁾
N	F						Flameproof - Aluminium (EN/IEC 60079-1, 60079-31)*	-	-	-	● ⁽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⁾
W	S		N	F			Flameproof - 316L SS (EN/IEC 60079-1, 60079-31)*	-	-	-	● ⁽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)	-	-	-	●
N	V				FPM (fluoroelastomer) and parts cleaned for oxygen service	-	-	-	●
V					FPM (fluoroelastomer)	-	-	-	●
			M	S	Screw type manual operator	-	-	-	●
			M	O	Brass version: Push type manual operator	-	-	-	●

OPTIONS & ACCESSOIRES

catalogue number	spare parts kit n ⁽²⁾		screw type manual operator
	~	=	
❖370A061/062/063	-	C140043	C140048
❖370A016/017/018	C140044	C140044	C140048
❖370A046/047/048	C140044	C140044	C140072
❖370A064/065/066	-	C140046	C140048
❖370A026/027/028	C140047	C140047	C140048
❖370A056/057/058	C140047	C140047	C140072
❖370A021/022/023	C140045	C140045	C140048
❖370A051/052/053	C140045	C140045	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	370	A	046	MS	230V / 50 Hz
SCHT	B	370	A	018		230V / 50 Hz
WS	E	370	A	048	MS	24V / DC
WP	B	370	A	017		24V / DC
EM	B	370	A	018	MO	230V / 50 Hz

prefix — pipe thread — basic number — voltage — suffix

ORDERING EXAMPLES KITS:

C140044	⁽³⁾
C140043	V
C140047	E

basic number — suffix

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: E370A016

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:

EME370A016MS 230 V / 50 Hz

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) (C°)	safety code	electrical enclosure protection (EN 60529)	replacement coil / kit		type (2)	
	inrush ~ (VA)	holding ~ (VA)	hot/cold = (W)				~ 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	05-06
NF/WSNF	55	23	10,5	-	[-60] ⁽¹⁾ -40 to +25/40/60	II2G Ex d IIC Gb T6/T5/T4, II2D Ex tb IIIC Db	IP66/67, alu./SS	400405-117	-	03-04
NF/WSNF	-	-	-	9/11,2	[-60] ⁽¹⁾ -40 to +40/60/75	II2G Ex d IIC Gb T6/T5/T4, II2D Ex tb IIIC Db	IP66/67, alu./SS	-	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	05-06
PV	55	23	10,5	9/11,2	-40 to +65	II2G Ex mb IIC Gb T3(-)/T4(-), II2D Ex mb IIIC Db	IP67, moulded	- ⁽³⁾	- ⁽³⁾	07-08

- Not available
- (1) The certified minimum temperature of this operator
- (2) Refer to the dimensional drawings on pages 4 to 6
- (3) Multiple coil kits available under ATEX/IECEX, contact us

ELECTRICAL CONNECTIONS

prefix	connection
SC	Spade plug connector with cable gland EN175301-803A (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.
NF, WSNF	1/2" NPT threaded cable entry. Enclosures are supplied without cable gland.
PV	Moulded-in cable, standard length 2 m

ADDITIONAL OPTIONS

- Mounting holes on stainless steel version: 2 ØM4, 7 mm depth, TPL23012
- Other pipe threads are available on request
- Ex mb/mD (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)
- Ex d Prefix "NF/WSNF" enclosure is provided with a 1/2" NPT threaded entry hole, M20 x 1,5 (prefix "ET") is optional. These are supplied without cable gland

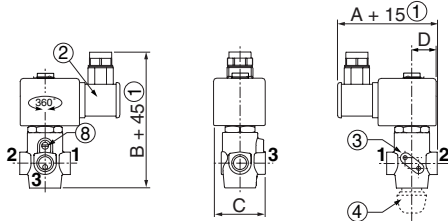
DIMENSIONS (mm), WEIGHT (kg)



TYPE 01:

Epoxy moulded
SC: IEC 335 / ISO 4400

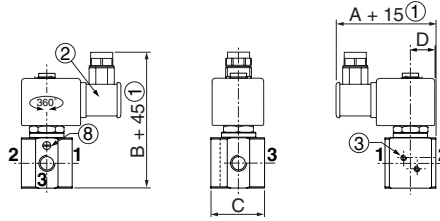
370A016 / 017 / 018 / 026 / 027 / 028
370A021 / 022 / 023



TYPE 02:

Epoxy moulded
SC: IEC 335 / ISO 4400

370A046 / 047 / 048 / 056 / 057 / 058
370A051 / 052 / 053



Pressure inlet:

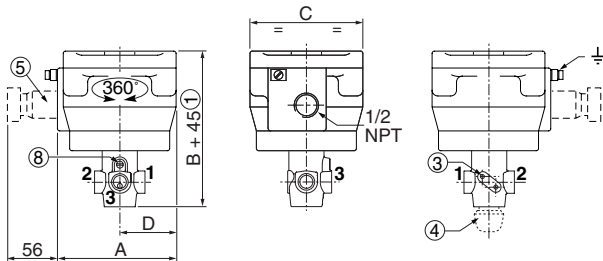
- Function U = any port Ports 1, 2 and 3 : 1/4
- Function NC = Port 2
- Function NO = Port 3



TYPE 03:

Aluminium, epoxy coated / AISI 316L SS
NF/WSNF: EN/IEC 60079-1, 60079-31

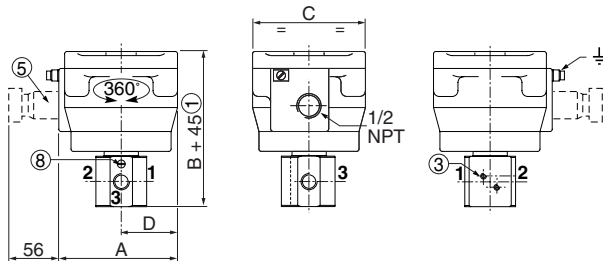
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370A021 / 022 / 023



TYPE 04:

Aluminium, epoxy coated / AISI 316L SS
NF/WSNF: EN/IEC 60079-1, 60079-31

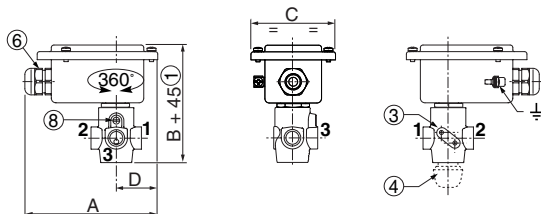
370A046 / 047 / 048 / 056 / 057 / 058
370A051 / 052 / 053



TYPE 05:

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

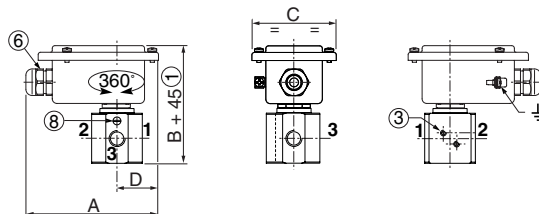
370A016 / 017 / 018 / 026 / 027 / 028
370A021 / 022 / 023



TYPE 06:

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

370A046 / 047 / 048 / 056 / 057 / 058
370A051 / 052 / 053



DIMENSIONS (mm), WEIGHT (kg)



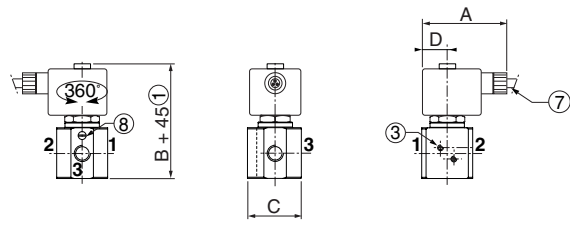
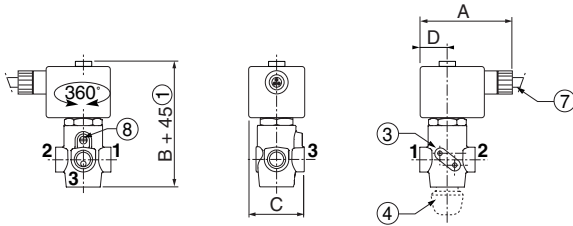
TYPE 07:
Epoxy encapsulated
PV: EN/IEC 60079-18

370A016 / 017 / 018 / 026 / 027 / 028
370A021 / 022 / 023



TYPE 08:
Epoxy encapsulated
PV: EN/IEC 60079

370A046 / 047 / 048 / 056 / 057 / 058
370A051 / 052 / 053



type	prefix option	power level	A	B	C	D	weight ⁽¹⁾
01	SC	Basic Power	85,5	116	44	21	0,600
02	SC	Basic Power	85,5	116	45	21	0,820
03	NF	Basic Power	102	136	97	48,5	1,700
03	WSNF	Basic Power	102	136	97	48,5	3,000
04	NF	Basic Power	102	136	97	48,5	1,920
04	WSNF	Basic Power	102	136	97	48,5	3,220
05	WP/WS/EM/WSEM	Basic Power	120	109	77	38	0,850
06	WP/WS/EM/WSEM	Basic Power	120	109	77	38	1,070
07	PV	Basic Power	75	96,4	45	21,5	0,648
08	PV	Basic Power	75	96,4	45	21,5	0,868

⁽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 Option: Mounting 2 ØM4, 7 mm depth, TPL 23012 on stainless steel version
- ④ Push type manual operator, suffix MO
- ⑤ Ex d certified cable gland (on request)
- ⑥ Cable gland for unarmoured cable with 6 to 12 mm dia. sheath
- ⑦ Three-core cable, length 2 m
- ⑧ Screw type manual operator, suffix (MS)

SECTIONAL DRAWING

