



Explosion Proof

22 mm & 30 mm Coils

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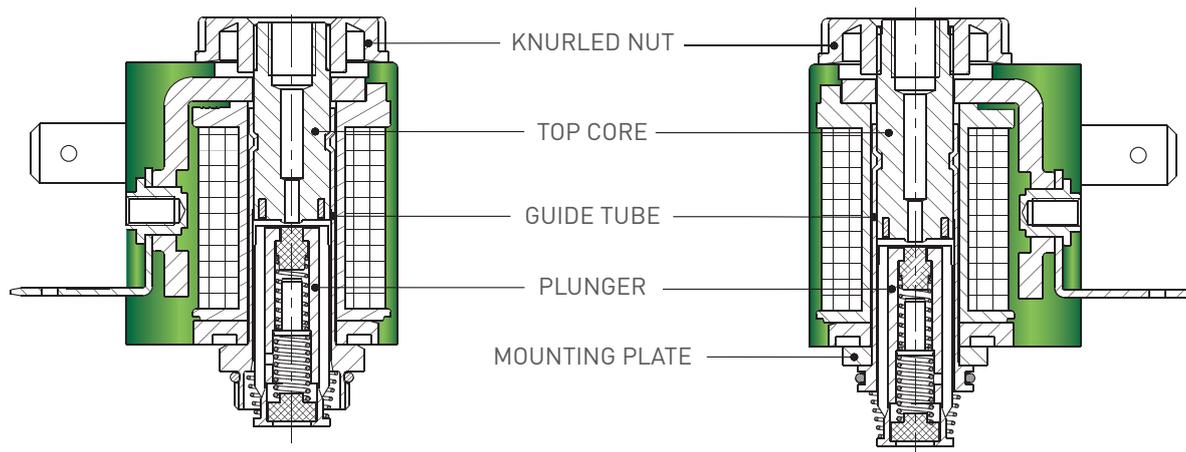
Amisco has completed its range of products developing different kind of coils for potentially explosive areas (zone 1 and 2, 21 and 22 – group II - category 2 and 3), that fulfils the requirements of directive 2014/34/UE.

All coils feature:

- **heat resistant bobbin moulded with 30% glass filled thermoplastic polyamide or polybutylene terephthalate**
- **class H wire 200°C according to IEC 60317-13**
- **built-in magnetic yoke made by low carbon iron**
- **encapsulation with high quality specially designed glass filled nylon**
- **for category 2 product, a special thermal-fuse is integrated in the coil for the protection of the system.**

The coils can be equipped with the suitable plunger guide tube or even in combination with a complete pilot valve. In this case refer to 22mm 30mm pilot valve system catalogue.

The coil is fastened to the solenoid operator by means of a knurled nut, for ease of change over without interrupting the pneumatic circuit.



3009 Ex m

2014/34/UE ATEX 

The coil 3009M Exm is developed to fit all Amisco standard operators: 3/2, 2/2 way, NC or NO, threaded or flange types. All main voltages are available. For other technical specifications see below and next page.

The protection is assured by a thermal fuse that, in case of damage, disconnects the coil from power.

The product is developed to be used in ambient temperature range from -20°C to +50°C, and it has a power consumption of 2.5W for type T6 (with coil surface temperature max 85°C), 3W for type T5 (with coil surface temperature max 100°C) and 3.8W for type T4 (with coil surface temperature max 135°C).

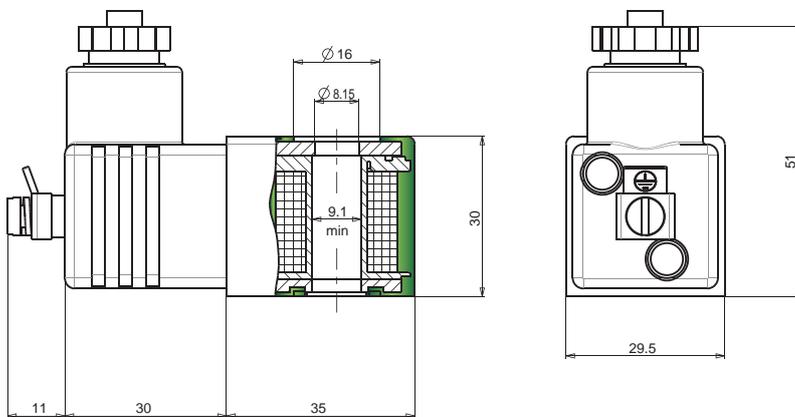
The type 3009M Ex m coil is supplied with different length of cable: 1.2, 3, 5 and 10 meters.

Two new certifications have been achieved for the coil 3009M: IECEx and CCCEX.

Ec-Type Examination Certificate number: TÜV IT 13 ATEX 030 X.

IECEx Certificate of Conformity: IECEx IMQ 22.0004X.

CCCEX Certificate: 2022122307114909.



	CE marking of conformity
0722	Number of Notified body who checks the production (Cat. 2 - Directive 2014/34/UE)
	Specific marking of Explosion Protection.
II	Group II - Electrical apparatus for places with a potentially explosive atmosphere, other than mines susceptible to fire damp.
Ex	The symbol Ex which indicates that the electrical apparatus corresponds to one of the protection type (EN 60079 - 0; EN 60079 - 0; GB 3836.1).
mb	Type of protection for gas - encapsulation "m", level "mb".
tb	Type of protection for explosive dust atmospheres - protection by enclosure.
IIC	Electrical equipment of group II is subdivided according to the nature of the explosive gas atmospheres - IIC, a typical gas is hydrogen.
IIIC	Electrical equipment of Group III is subdivided according to the nature of the explosive dust atmospheres - IIIC, conductive dust.
Tx	Temperature class: T4/T5/T6 for Gas.
Tx °C	Maximum surface temperature T130°C/T95°C/T80°C for Dust.
Gb	Equipment protection level [EPL] for explosive gas atmospheres.
Db	Equipment protection level [EPL] for explosive dust atmospheres.
IP66	Degree of Protection [IEC 60529].
TÜV IT 13 ATEX 030	EU-Type Examination Certificate number.
IECEx IMQ 22.0004	IECEx Certificate number.
X	Specific condition of use.
	China Compulsory Certification.
Ex	The symbol Ex which indicates that the electrical apparatus corresponds to one of the protection types (GB 3836.1).

Zone	Category	Description
1 and 2	2G	Equipment in this category is intended for use in areas in which explosive atmospheres caused by air/gas mixture are likely to occur.
21 and 22	2D	Equipment in this category is intended for use in areas in which explosive atmospheres caused by air/dust mixture are likely to occur.

3009 Ex dm 2014/34/UE ATEX

The coil is certified by TÜV in thermal class T6 (with coil surface temperature max 85°C), T5 (with coil surface temperature max 100°C) or T4 (with coil surface temperature max 135°C).

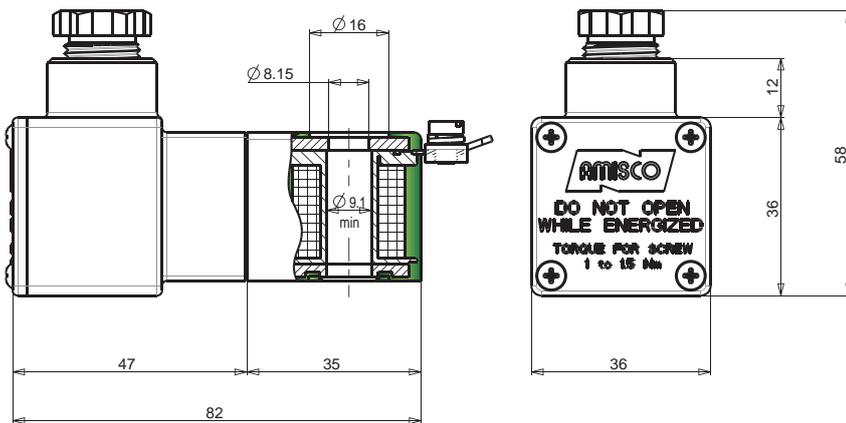
Ec-Type Examination Certificate number: TÜV IT 13 ATEX 040X.

The protection is assured by a thermal fuse that, in case of damage, disconnects the coil from power.

The product is developed to be used in ambient temperature range from -20°C to +50°C, and it has a power consumption of 2.5W for type T6, 3W for type T5 and 3.8W for type T4.

The coil fits all Amisco standard operators: 3/2, 2/2 way, NC or NO, threaded or flange types.

All main voltages are available. For other technical specifications see below and next page.



	Specific marking of explosion protection.
II	Group II - Electrical apparatus for places with a potentially explosive atmosphere, other than mines susceptible to fire dump.
2	Category 2 – see the board below.
G	Explosive gas atmospheres.
D	Explosive atmosphere in the presence of combustible dust.
Ex	The symbol Ex which indicates that the electrical apparatus corresponds to one of the protection type (EN 60079-0).
d	Type of protection for gas – enclosure “d”.
mb	Type of protection for gas – encapsulation “m”, level “mb”.
tb	Type of protection for explosive dust atmospheres – protection by enclosure.
IIC	Electrical equipment of Group II is subdivided according to the nature of the explosive gas atmospheres – IIC, a typical gas is hydrogen.
IIIC	Electrical equipment of Group III is subdivided according to the nature of the explosive dust atmospheres – IIIC, conductive dust.
Tx	Temperature Class: T4/T5/T6 for Gas and T130°C/T95°C/T80°C for Dust.
Gb	Equipment protection level [EPL] for explosive gas atmospheres.
Db	Equipment protection level [EPL] for explosive dust atmospheres.

Category	Description
2G	Equipment in this category is intended for use in areas in which explosive atmospheres caused by air/gas mixture are likely to occur.
2D	Equipment in this category is intended for use in areas in which explosive atmospheres caused by air/dust mixture are likely to occur.

SOLENOID SYSTEM

Coil EVI 3009 Ex m & 3009 Ex dm T6

Electrical terminations	Code	Characteristics	DC			AC (50 Hz)	AC (60 Hz)
II2G Ex mb IIC T6 Gb II2D Ex tb IIIC T80°C Db	3009M...	Rated power DC	W	2,5			
		Inrush power AC	VA				
II2G Ex dmb IIC T6 Gb II2D Ex tb IIIC T80°C Db	30XDM...	Rated power AC	VA				
		Coil temperature rise	°C	25			
		Copper temperature rise	°C	35			

Coil EVI 3009 Ex m & 3009 Ex dm T5

Electrical terminations	Code	Characteristics	DC			AC (50 Hz)	AC (60 Hz)
II2G Ex mb IIC T5 Gb II2D Ex tb IIIC T95°C Db	3009M...	Rated power DC	W	3			
		Inrush power AC	VA			4,8	4
II2G Ex dmb IIC T5 Gb II2D Ex tb IIIC T95°C Db	30XDM...	Rated power AC	VA			3,2	2,7
		Coil temperature rise	°C	35		15	10
		Copper temperature rise	°C	40		30	25

Coil EVI 3009 Ex m & 3009 Ex dm T4

Electrical terminations	Code	Characteristics	DC			AC (50 Hz)	AC (60 Hz)
II2G Ex mb IIC T4 Gb II2D Ex tb IIIC T130°C Db	3009M...	Rated power DC	W			3,8	
		Inrush power AC	VA				
II2G Ex dmb IIC T4 Gb II2D Ex tb IIIC T130°C Db	30XDM...	Rated power AC	VA				
		Coil temperature rise	°C		50		
		Copper temperature rise	°C		55		

Operator S9

Operator	Code	Characteristics	DC			AC (50 Hz)	AC (60 Hz)
3/2 NC Flange 3/2 NC Thread	09L... 09F...	Inlet orifice Ø	mm	1,1	1,2	1,5	1,5
		Exhaust orifice	mm	1,45	1,45	1,45	1,45
	Working pressure	bar	0÷10	0÷10	0÷10	0÷10	0÷10
2/2 NC Flange 2/2 NC Thread	09L... 09F...	Inlet orifice Ø	mm	1,2	1,2	1,5	1,5
		Working pressure	bar	0÷10	0÷10	0÷10	0÷10
3/2 NO Flange 3/2 NO Thread (Top inlet)	09L... 09F...	Inlet orifice Ø	mm	1,45	1,45	1,45	1,45
		Working pressure	bar	0÷7	0÷7	0÷10	0÷10
3/2 NO Thread (bottom inlet)	09F...	Inlet orifice Ø	mm	1,1	1,2		
		Working pressure	bar	0÷10	0÷10		

EVI 7

Our standard EVI 7 can be supplied under Atex certification for Zone 2 and 22 (Directive 99/92/CE).

The coil is also in conformity with 2014/34/UE for electrical apparatus of group II, category 3.

GAS: Ex ec IIC Tx Gc

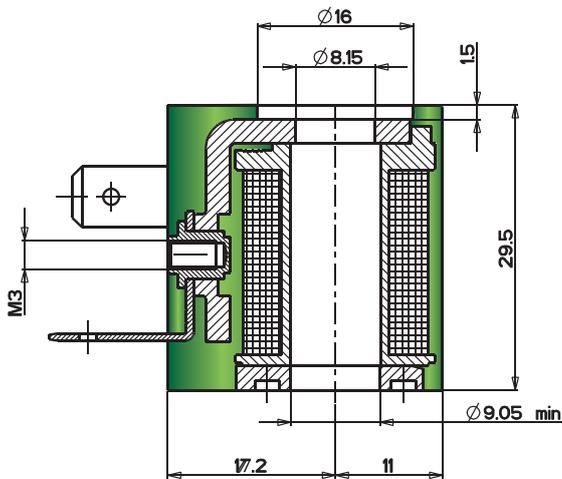
DUST: Ex tc IIIC Tx°C Dc

The available internal hole is $\varnothing 9$. For different internal diameter, please contact Amisco.

The product is developed to be used in ambient temperature range from -10°C to $+50^{\circ}\text{C}$, and it has a power consumption up to 4.2W for DC version and 5VA for AC version.

The coil fits all Amisco standard operators: 3/2, 2/2 way, NC or NO, threaded or flange types.

All main voltages are available. For other technical specifications see below and next page.



CE	Marking for Product included in EC product Directives.
Ex	Specific marking of explosion protection.
II	Group II - Electrical apparatus for places with a potentially explosive atmosphere, other than mines susceptible to fire dump.
3	Category 3.
G	Explosive gas atmospheres.
D	Explosive atmosphere in the presence of combustible dust.
Ex	The symbol Ex indicates that the electrical apparatus corresponds to one of the protection type reported in EN 60079-0.
ec	Type of protection for explosive gas atmospheres - increased safety.
tc	Type of protection for explosive dust atmospheres – protection by enclosure.
IIC	Electrical equipment of Group II is subdivided according to the nature of the explosive gas atmospheres – IIC, a typical gas is hydrogen.
IIIC	Electrical equipment of Group III is subdivided according to the nature of the explosive dust atmospheres – IIIC, conductive dust.
Tx	Temperature class.
Gc	Equipment protection level [EPL] for explosive gas atmospheres.
Dc	Equipment protection level [EPL] for explosive dust atmospheres.
X	Specific conditions of use (see "Assembly conditions")

SOLENOID SYSTEM

for 2/2 and 3/2 way Normally Closed and Normally Open valves

Coil EVI 7/9 Ex T5 (100°C)

Electrical terminations	Part Number	Characteristics	DC		AC (50 Hz)		AC (60 Hz)		
Terminals AMP 6,3x0,8 width 11mm	0709S... AX	Rated power DC	W	3	4,2				
		Inrush power AC	VA			7,5		6,5	
		Rated power AC	VA			5		4,2	
		Coil temperature rise @ 50°C ambient	°C	35	45	45		35	
		Copper temperature rise @ 50°C ambient	°C	40	50	55		45	

Operator S9

Operator	Part Number	Characteristics							
3/2 NC Flange 3/2 NC Thread	09L.. 09F..	Inlet orifice Ø	mm	1,2	1,4		1,2		1,2
		Exhaust orifice	mm	1,45	1,45		1,45		1,45
		Working pressure	bar	0÷10	0÷10		0÷10		0÷10
2/2 NC Flange 2/2 NC Thread	09L.. 09F..	Inlet orifice Ø	mm	1,2	1,4		1,2		1,2
		Working pressure	bar	0÷10	0÷10		0÷10		0÷10
3/2 NO Flange 3/2 NO Thread (Top inlet)	09L.. 09F..	Inlet orifice Ø	mm	1,45	1,45		1,45		1,45
		Working pressure	bar	0÷7	0÷7		0÷7		0÷7
3/2 NO Thread (bottom inlet)	09F..	Inlet orifice Ø	mm	1,2					
		Working pressure	bar	0÷10					

Other electrical connection are available – contact Amisco for more details.

EVI 30

Our standard EVI 30 can be supplied under Atex certification for Zone 2 and 22 (Directive 99/92/CE).

The coil is also in conformity with 2014/34/UE for electrical apparatus of Group II, category 3.

GAS: Ex ec IIC Tx Gc

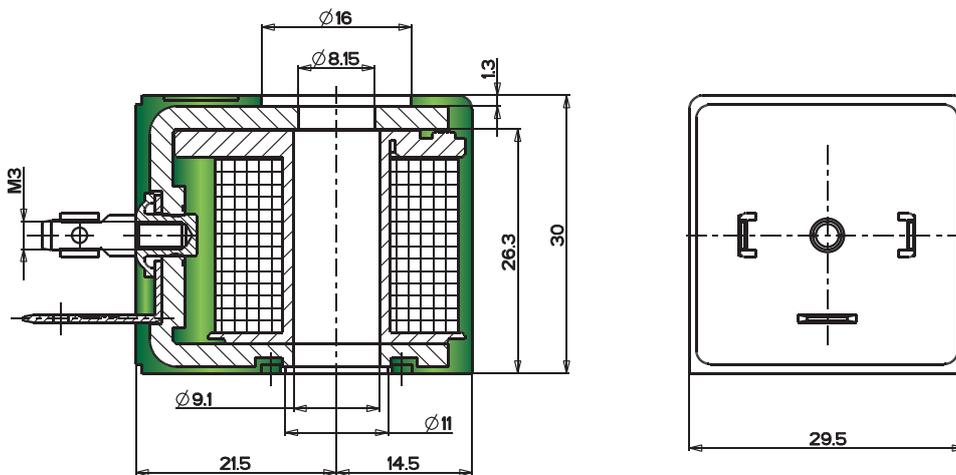
DUST: Ex tc IIIC Tx Dc

The available internal hole is $\varnothing 9$. For different internal diameter, please contact Amisco.

The product is developed to be used in ambient temperature range from -10°C to $+50^{\circ}\text{C}$, and it has a power consumption up to 4.5W for DC version and 5VA for AC version.

The coil fits all Amisco standard operators: 3/2, 2/2 way, NC or NO, threaded or flange types.

All main voltages are available. For other technical specifications see below and next page.



CE	Marking for Product included in EC product Directives.
Ex	Specific marking of explosion protection.
II	Group II - Electrical apparatus for places with a potentially explosive atmosphere, other than mines susceptible to fire dump.
3	Category 3.
G	Explosive gas atmospheres.
D	Explosive atmosphere in the presence of combustible dust.
Ex	The symbol Ex indicates that the electrical apparatus corresponds to one of the protection type reported in EN 60079-0.
ec	Type of protection for explosive gas atmospheres - increased safety.
tc	Type of protection for explosive dust atmospheres - protection by enclosure.
IIC	Electrical equipment of Group II is subdivided according to the nature of the explosive gas atmospheres - IIC, a typical gas is hydrogen.
IIIC	Electrical equipment of Group III is subdivided according to the nature of the explosive dust atmospheres - IIIC, conductive dust.
Tx	Temperature class.
Gc	Equipment protection level [EPL] for explosive gas atmospheres.
Dc	Equipment protection level [EPL] for explosive dust atmospheres.
X	Specific conditions of use (see "Assembly conditions")

SOLENOID SYSTEM

for 2/2 and 3/2 way Normally Closed and Normally Open valves

Coil EVI 30/9 Ex T6 (85°C)

Electrical terminations	Part Number	Characteristics	DC		AC (50 Hz)		AC (60 Hz)	
Terminals DIN 43650 A	3009D...AX	Rated power DC	W	2				
		Inrush power AC	VA			5,5		4,5
		Rated power AC	VA			3		2,5
		Coil temperature rise @ 50°C ambient	°C	20		20		15
		Copper temperature rise @ 50°C ambient	°C	25		25		20

Coil EVI 30/9 Ex T5 (100°C)

Electrical terminations	Part Number	Characteristics	DC		AC (50 Hz)		AC (60 Hz)	
Terminals DIN 43650 A	3009D...AX	Rated power DC	W	4,5				
		Inrush power AC	VA			9		7,5
		Rated power AC	VA			5		4,2
		Coil temperature rise @ 50°C ambient	°C	35		35		30
		Copper temperature rise @ 50°C ambient	°C	50		45		35

Operator S9

Operator	Part Number	Characteristics							
3/2 NC Flange 3/2 NC Thread	09L.. 09F..	Inlet orifice Ø	mm	1,2	1,5	1,2	1,5	1,2	1,5
		Exhaust orifice	mm	1,45	1,45	1,45	1,45	1,45	1,45
		Working pressure	bar	0÷10	0÷10	0÷10	0÷10	0÷10	0÷10
2/2 NC Flange 2/2 NC Thread	09L.. 09F..	Inlet orifice Ø	mm	1,2	1,5	1,2	1,5	1,2	1,5
		Working pressure	bar	0÷10	0÷10	0÷10	0÷10	0÷10	0÷10
3/2 NO Flange 3/2 NO Thread (Top inlet)	09L.. 09F..	Inlet orifice Ø	mm	1,45	1,45	1,45	1,45	1,45	1,45
		Working pressure	bar	0÷7	0÷10	0÷7	0÷10	0÷7	0÷10
3/2 NO Thread (bottom inlet)	09F..	Inlet orifice Ø	mm	1,2					
		Working pressure	bar	0÷10					

Other electrical connection are available – contact Amisco for more details.



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