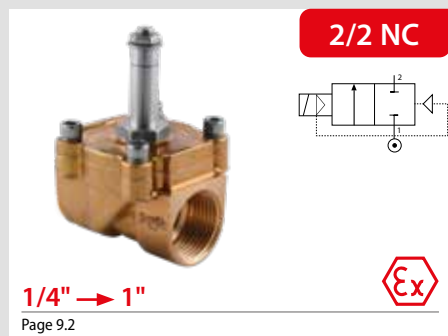




Series 03F

Coils & Connectors



GUIDED DIAPHRAGM SOLENOID VALVES WITH BRASS BODY



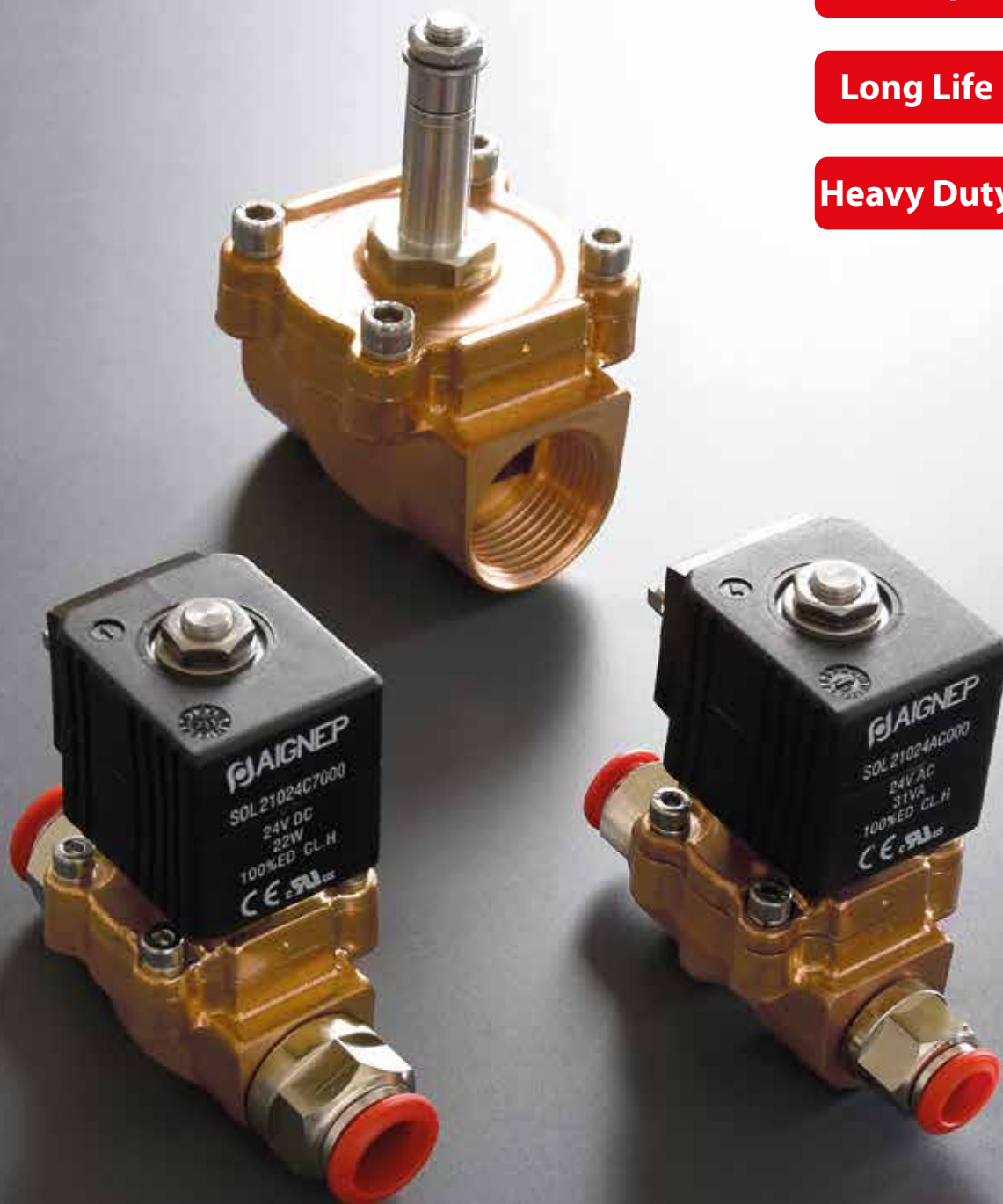
II 2 G/D Ex h

C **UL** US
CSA C22.2

$\Delta P = 2 \text{ psi}$

Long Life

Heavy Duty



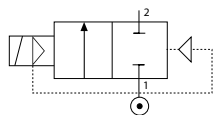
Series 03F

Series 03F

GUIDED DIAPHRAGM SOLENOID VALVES - $\Delta P = 2$ psi

2/2 NC

1/4" → 1"



$\Delta P = 2$ psi

Long Life

Heavy Duty



Component Parts and Materials

- 1 Body: Brass CW617N
- 2 Seals: NBR - EPDM - FKM
- 3 Armature tube: Stainless steel
- 4 Fixed and mobile core: Stainless steel AISI 430FR
- 5 Springs: Stainless steel



General features - 03F

- Recommended horizontal mounting position
- Operator kit Ø 13 mm
- ATEX II 2G/D Ex h certification
- Coils: Class H - - CSA C22.2



Maximum allowable pressure

363 psi (25 bar)



Compatibility and materials table

Page 0.13 - 0.14



Room temperature with coil class H

+14°F +176°F
-10°C +80°C



Applications

- Water, Neutral liquids, Oils
- Car washes, Washing systems
- Industrial processes, Tank draining
- Air and Inert gases
- Vacuum, Packaging
- Oxygen, Steam, Medical, Sterilizers



Ordering codes

Series	Port size	Functions	Orifice inch (mm)	Sealing materials	Version	Thread	Suitable coils	
0 3 F	0 3	1	1 0	N	0	N	C	A
	03 = 1/4"	1 = 2/2 NC	10 = 25/64 (10)	N = NBR	0 = Standard	N = NPTF	C = C series - SOL20	A = 12V DC
	04 = 3/8"		14 = 35/64 (14)	E = EPDM			D = D series - SOL20	B = 24V DC
	05 = 1/2"		18 = 45/64 (18)	V = FKM			E = E series - SOL21	1 = 24V AC
	07 = 3/4"		25 = 1 (25)					2 = 110V AC
	09 = 1"							3 = 220V AC

Valves and coils are supplied separately.
Upon commercial agreements can be supplied assembled.

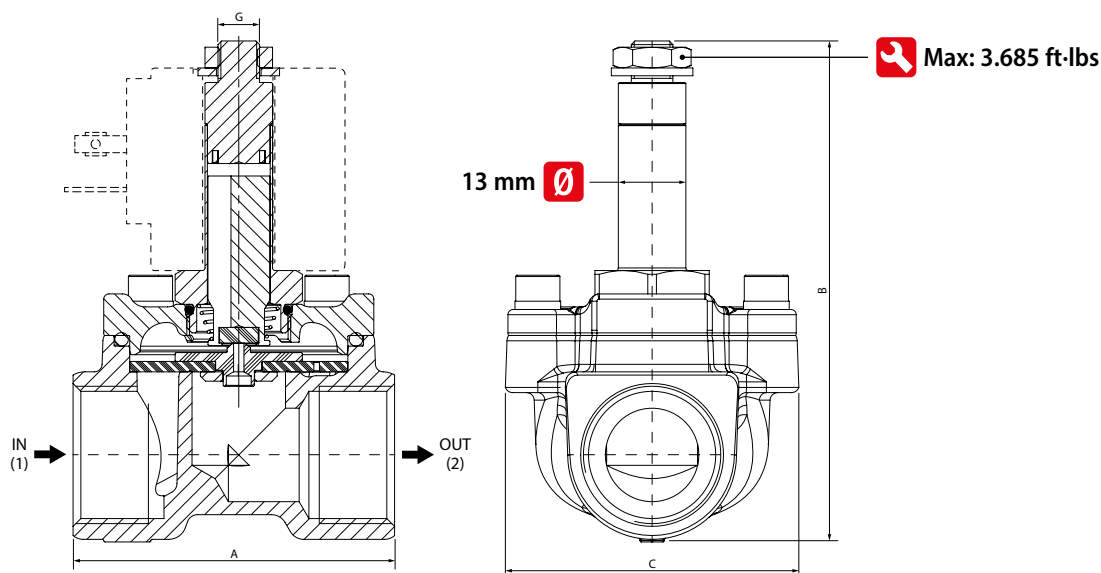
Code	Sealing materials	Port size	Ø Orifice	Viscosity	Cv (Kv)	Differential pressure (OPD)		
①	①	NPTF	inch (mm)	cSt	gpm (m³/h)	psi (bar)		
						Min	Max DC	Max AC
03F 03 1 10 _ 0 N	N = NBR +14°F +194°F (-10°C +90°C) V = FKM +14°F +284°F (-10°C +140°C) E = EPDM +14°F +284°F (-10°C +140°C)	1/4"	25/64 (10)	25	1.84 (1.58)	2 (0.15)	-	261 (18)
							87 (6)	290 (20)
							232 (16)	363 (25)
03F 04 1 12 _ 0 N		3/8"	35/64 (14)	25	2.73 (2.34)	2 (0.15)	-	261 (18)
							87 (6)	290 (20)
							232 (16)	363 (25)
03F 05 1 12 _ 0 N		1/2"	35/64 (14)	25	2.75 (2.36)	2 (0.15)	-	261 (18)
							87 (6)	290 (20)
							232 (16)	363 (25)
03F 07 1 18 _ 0 N		3/4"	45/64 (18)	25	4.75 (4.08)	2 (0.15)	-	261 (18)
							87 (6)	290 (20)
							232 (16)	363 (25)
03F 09 1 25 _ 0 N	1"	1 (25)	25	7.72 (6.63)	2 (0.15)	-	232 (16)	
						58 (4)	290 (20)	
						174 (12)	363 (25)	

Power		Coils	
DC	AC	Size	Series
W	VA	mm	C - Page 17.4 D - Page 17.5 E - Page 17.6
-	14	30	C - SOL20
14	21	30	D - SOL20
22	31	36	E - SOL21
-	14	30	C - SOL20
14	21	30	D - SOL20
22	31	36	E - SOL21
-	14	30	C - SOL20
14	21	30	D - SOL20
22	31	36	E - SOL21
-	14	30	C - SOL20
14	21	30	D - SOL20
22	31	36	E - SOL21
-	14	30	C - SOL20
14	21	30	D - SOL20
22	31	36	E - SOL21

① Select seal material

With steam: **EPDM - P max = 36 psi (2.5 bar)**

Coil not included



Size	A inch (mm)	B inch (mm)	C inch (mm)	G
1/4"	1.732 (44)	3.307 (84)	1.574 (40)	M8 x 1
3/8"	2.047 (52)	3.582 (91)	1.830 (46.5)	M8 x 1
1/2"	2.047 (52)	3.582 (91)	1.830 (46.5)	M8 x 1
3/4"	2.440 (62)	3.799 (96.5)	2.224 (56.5)	M8 x 1
1"	2.854 (72.5)	4.133 (105)	2.598 (66)	M8 x 1

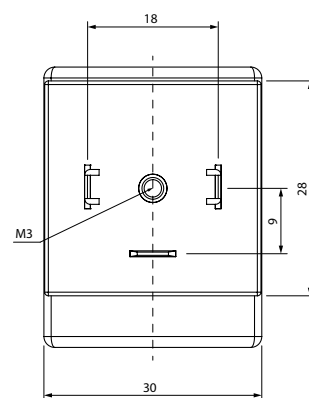
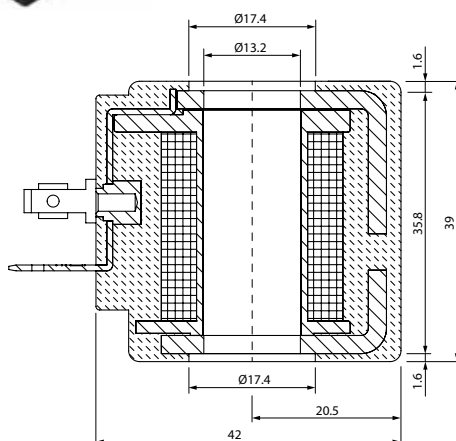
SERIES C

COIL

30 mm 

13 mm 

ED 100% 



UL 429 & CSA C22.2 NO. 139-13

The dimensions are in millimeters (mm)

Reference	Code	Voltage	Power	Voltage tolerance	Ambient temperature	
					Min	Max
CA	SOL20012C5000	12V DC	8 W	±10 %	+14°F (-10°C)	+176°F (+80°C)
CB	SOL20024C5000	24V DC	8 W	±10 %		
C1	SOL20024AA000	24V AC / 50-60 Hz	14 VA	±10 %		
C2	SOL20110AA000	110V AC / 50-60 Hz	14 VA	±10 %		
C3	SOL20220AA000	220V AC / 50-60 Hz	14 VA	±10 %		

INSULATION
CLASS

H
EN 60085

ENCAPSULATION
MATERIAL

RYNITE®

ELECTRICAL
CONNECTIONS

FORM A
EN 175301-803
(EX DIN 43650)

AMBIENT
TEMPERATURE

+14°F +176°F
(-10°C +80°C)

PROTECTION
DEGREE

IP67
IEC 60529
with connector IP67

OPTIONS

Other voltages/powers on request

SERIES D

COIL

30 mm



13 mm

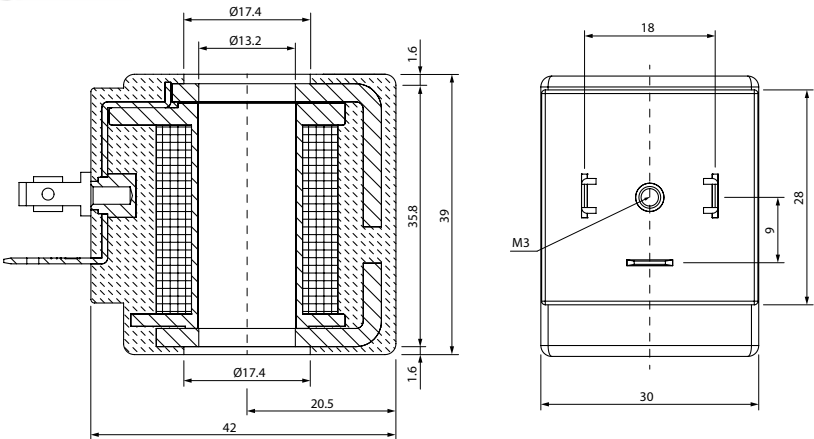


ED 100%





UL 429 & CSA C22.2 NO. 139-13



The dimensions are in millimeters (mm)

Reference	Code	Voltage	Power	Voltage tolerance	Ambient temperature	
					Min	Max
DA	SOL20012C6000	12V DC	14 W	±10 %	+14°F (-10°C)	+176°F (+80°C)
DB	SOL20024C6000	24V DC	14 W	±10 %		
D1	SOL20024AB000	24V AC / 50-60 Hz	21 VA	±10 %		
D2	SOL20110AB000	110V AC / 50-60 Hz	21 VA	±10 %		
D3	SOL20220AB000	220V AC / 50-60 Hz	21 VA	±10 %		

INSULATION CLASS	H EN 60085	ENCAPSULATION MATERIAL	RYNITE®	ELECTRICAL CONNECTIONS	FORM A EN 175301-803 (EX DIN 43650)
AMBIENT TEMPERATURE	+14°F +176°F (-10°C +80°C)	PROTECTION DEGREE	IP67 IEC 60529 with connector IP67	OPTIONS	Other voltages/powers on request

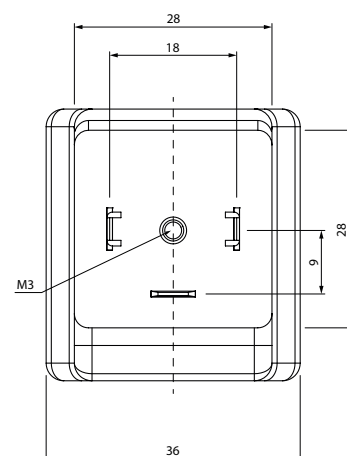
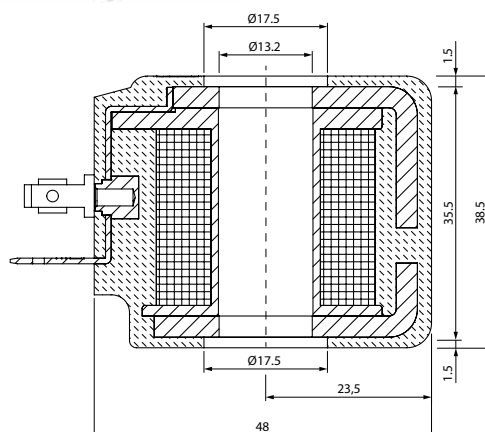
SERIES E

COIL

36 mm 

13 mm 

ED 100% 



UL 429 & CSA C22.2 NO. 139-13

The dimensions are in millimeters (mm)

Reference	Code	Voltage	Power	Voltage tolerance	Ambient temperature	
					Min	Max
EA	SOL21012C7000	12V DC	22 W	±10 %	+14°F (-10°C)	+176°F (+80°C)
EB	SOL21024C7000	24V DC	22 W	±10 %		
E1	SOL21024AC000	24V AC / 50-60 Hz	31 VA	±10 %		
E2	SOL21110AC000	110V AC / 50-60 Hz	31 VA	±10 %		
E3	SOL21220AC000	220V AC / 50-60 Hz	31 VA	±10 %		

INSULATION
CLASS

H
EN 60085

ENCAPSULATION
MATERIAL

RYNITE®

ELECTRICAL
CONNECTIONS

FORM A
EN 175301-803
(EX DIN 43650)

AMBIENT
TEMPERATURE

+14°F +176°F
(-10°C +80°C)

PROTECTION
DEGREE

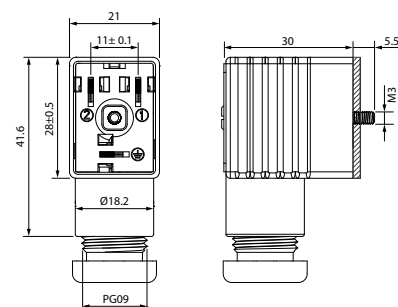
IP67
IEC 60529
with connector IP67

OPTIONS

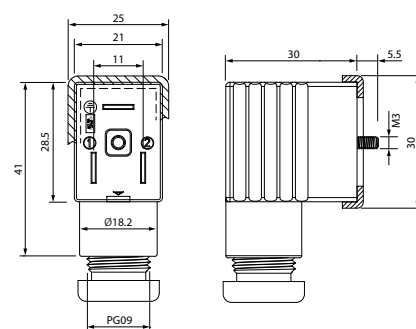
Other voltages/powers on request

CONNECTORS

22 mm



The dimensions are in millimeters (mm)



The dimensions are in millimeters (mm)

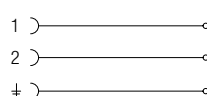
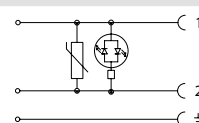
Code	Size mm	Colour	Characteristics
CON01 000 01	22	BLACK	2 PINS
CON02 024 00	22	TRANSPARENT	LED + VDR 0 - 24V
CON02 110 00	22	TRANSPARENT	LED + VDR 110V
CON02 250 00	22	TRANSPARENT	LED + VDR 220V
* CONU1 000 01	22	BLACK	2 PINS
* CONU2 024 00	22	TRANSPARENT	LED + VDR 0 - 24V
* CONU2 110 00	22	TRANSPARENT	LED + VDR 110V
* CONU2 250 00	22	TRANSPARENT	LED + VDR 220V

*: UL 1977 AND CAN/CSA C22.2 NO. 182.3

VDR: Fitted with varistors as surge protection device.



Wiring

CON01 000 01
CONU1 000 01

CON02 024 00 CON02 110 00 CON02 250 00
CONU2 024 00 CONU2 110 00 CONU2 250 00

ELECTRICAL
CONNECTIONS

FORM B - INDUSTRIAL
EN 175301-803
(EX DIN 43650)

PROTECTION
DEGREE

IP67
IEC 60529

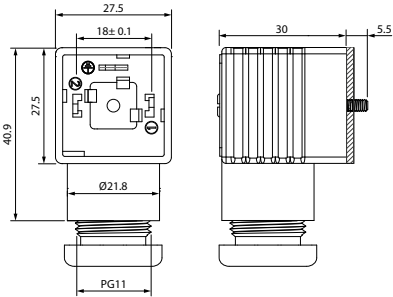
CABLE
DIAMETER

6 ÷ 8 mm
&
8 ÷ 11 mm

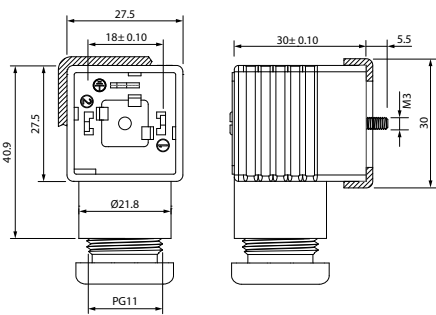
CONNECTORS

30-36 mm





The dimensions are in millimeters (mm)



The dimensions are in millimeters (mm)

Code	Size	Colour	Characteristics
	mm		
CON31 000 01	30 - 36	BLACK	2 PINS
CON32 024 00	30 - 36	TRANSPARENT	LED + VDR 0 - 24V
CON32 110 00	30 - 36	TRANSPARENT	LED + VDR 110V
CON32 250 00	30 - 36	TRANSPARENT	LED + VDR 220V
* CONU3 100 01	30 - 36	BLACK	2 PINS
* CONU3 202 40	30 - 36	TRANSPARENT	LED + VDR 0 - 24V
* CONU3 211 00	30 - 36	TRANSPARENT	LED + VDR 110V
* CONU3 225 00	30 - 36	TRANSPARENT	LED + VDR 220V

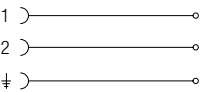
*: UL 1977 AND CAN/CSA C22.2 NO. 182.3

VDR: Fitted with varistors as surge protection device.

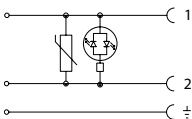


Wiring

CON31 000 01
CONU3 100 01



CON32 024 00 CON32 110 00 CON32 250 00
CONU3 202 40 CONU3 211 00 CONU3 225 00



ELECTRICAL
CONNECTIONS

FORM A
EN 175301-803
(EX DIN 43650)

PROTECTION
DEGREE

IP67
IEC 60529

CABLE
DIAMETER

6 ÷ 8 mm
&
8 ÷ 11 mm