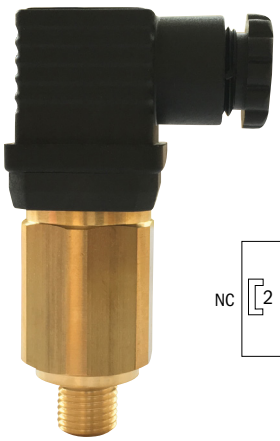
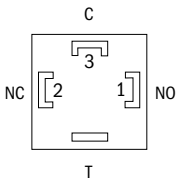
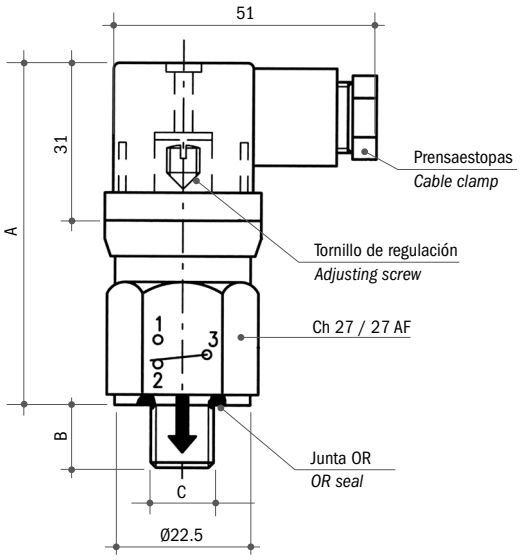
# VSM VACUOSTATOS CON CONTACTO CONMUTADO Y HISTÉRESIS REGULABLE
## *Adjustable vacuum switches with SPDT contacts and adjustable hysteresis*





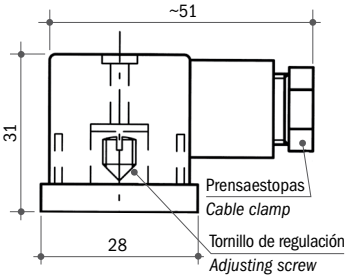

| | | | |
|---|---|---|---|
| Corriente máx. | 250 Vca | *Max. voltage* | *250 Vac* |
| Intensidad de corriente | 6 (2) A | *Current* | *6 (2) A* |
| Contactos eléctricos | SPDT | *Electrical contacts* | *SPDT* |
| Histéresis regulable | 10% ÷ 30% del valor calibrado | *Adjustable hysteresis* | *10% - 30% of set-point* |
| Rango de temperatura | -30°C...+140°C (según membrana o junta) | *Temperature range* | *-30°C to +140°C (according to diaphragm/seal material)* |
| N° max. de ciclos a 25°C | 120/1' (membrana) | *Max. cycle rate at 25°C* | *120/min. (diaphragm type)* |
| N° max. de ciclos a 25°C | 60/1' (pistón) | *Max. cycle rate at 25°C* | *60/min. (piston type)* |
| Protección | IP 65 DIN 40050 ver página 56 | *Protection* | *IP 65 DIN 40050 see page 56* |
| Conector PG09 o PG11 | DIN 43650 | *PG09 or PG11 connector* | *DIN 43650* |
| Vida mecánica | $10^6$ ciclos | *Mechanical life* | *$10^6$ operations* |
| Par de apriete recomendado | Max. 5 Kgm. ver página 3 | *Recommended tightening torque* | *Max. 5 Kgm. see page 3* |

## CONEXIONES ELÉCTRICAS DISPONIBLE / *AVAILABLE ELECTRICAL CONNECTIONS*

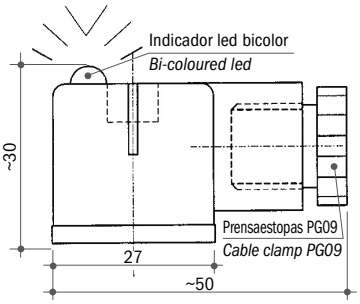
**PROTECCIÓN IP 65**
***IP 65 PROTECTION***

**PROTECCIÓN IP 54**
***IP 54 PROTECTION***

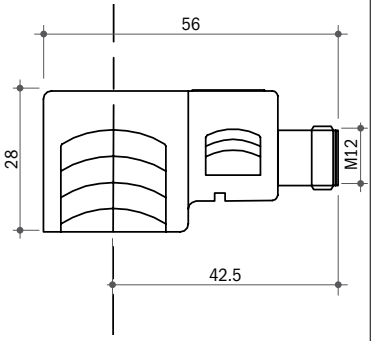
**Conector DIN 40050**
***DIN 40050 connector***



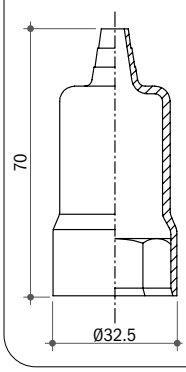

**Conector transparente con led bicolor rojo/verde**
***Transparent connector with red/green bi-coloured led***
**Tipo**
***Type*** **CLB**




**Conector M12**
***M12 connector***




**COD. 30013**
**Tipo / *Type*** **CAP. 12**



# VSM VACUOSTATOS CON CONTACTO CONMUTADO Y HISTÉRESIS REGULABLE
## *Adjustable vacuum switches with SPDT contacts and adjustable hysteresis*

### CODIFICACIÓN DE PRODUCTO / *HOW TO ORDER*

| VSM | 1 | W | V | R18 | T450G |
|---|---|---|---|---|---|

| Modelo / *Model* |
|---|
| VSM |

| Rango / *Range* |
|---|
| 1 - 2 |

| Cuerpo / *Body* |
|---|
| B - W |

| Membrana / *Diaphragm* |
|---|
| Ver tabla membranas/juntas<br>*See diaphragm/seal table* |

| Opciones / *Options* |
|---|
| G - SG - T... - T...D - T...F... |

| "C" | Rosca / *Thread* | "B" |
|---|---|---|
| R18 | G 1/8 BSPP cilíndrica / *Parallel* | 10 |
| R14 | G 1/4 BSPP cilíndrica / *Parallel* | 12 |
| M12 | M12x1.5 cilíndrica / *Parallel* | 12 |

### INFORMACIÓN CÓDIGOS DE PRODUCTO / *ORDERING INFORMATION*

| **VSM...** | Vacuostato con contactos SPDT a membrana | | |
|---|---|---|---|
| **Material cuerpo** | B | Latón | |
| | W | Acero inoxidable 316 | |
| **Membranas disponibles/ juntas** | N | NBR (standard) | (-5°C...+90°C) |
| | NT | HNBR | (-25°C...+140°C) |
| | V | FKM | (-5°C...+90°C) |
| | S | Silicona | (-30°C...+120°C) |
| | C | Neopreno | (-10°C...+90°C) |
| | E | EPDM | (-20°C...+110°C) |
| **Roscas disponibles** | R18 | G 1/8 BSPP cilíndrica | |
| | R14 | G 1/4 BSPP cilíndrica | |
| | M12 | M12x1.5 cilíndrica | |
| **Opciones** | G | Contactos dorados para baja tensión | |
| | SG | Desgrasado para oxígeno | |
| | T... | Tarado en ascenso al valor deseado (ej. T500 tarados en ascenso a -500 mbar) | |
| | T...D | Tarado en descenso al valor deseado (ej. T750D tarados en descenso a –750 mbar) | |
| | T...F... | Calibración del vacuostato y del diferencial si >10% máx. 30% valor efectivo (ej., T400 F100 calibración en subida a -400mbar con diferencial de 100 mbar) | |

**SEGÚN SE DEFINE EN LA DIRECTIVA 2014/30/CE.**

| ***VSM...*** | *Diaphragm vacuum switch with SPDT contacts* | | |
|---|---|---|---|
| ***Body material*** | *B* | *Brass* | |
| | *W* | *S.s. 316* | |
| ***Available diaphragm/ seal*** | *N* | *NBR (standard)* | *(-5°C to +90°C)* |
| | *NT* | *HNBR* | *(-25°C to +140°C)* |
| | *V* | *FKM* | *(-5°C to +90°C)* |
| | *S* | *Silicone* | *(-30°C to +120°C)* |
| | *C* | *Neoprene* | *(-10°C to +90°C)* |
| | *E* | *EPDM* | *(-20°C to +110°C)* |
| ***Available threads*** | *R18* | *G 1/8 BSPP parallel* | |
| | *R14* | *G 1/4 BSPP parallel* | |
| | *M12* | *M12x1.5 parallel* | |
| ***Options*** | *G* | *Gold-plated contacts for low current* | |
| | *SG* | *Degreased for applications with oxygen* | |
| | *T...* | *Set-point rising to the required value (ex. T500 rising set-point adjustment at –500 mbar)* | |
| | *T...D* | *Set-point falling to the required value (ex. T750D falling set-point adjustment at –750 mbar)* | |
| | *T...F...* | *Set-point and hysteresis at the required value if > 10% max. 30% of set-point (ex. T400F100 set-point at -400 mbar with hysteresis at 100 mbar)* | |

***IN COMPLIANCE WITH DIRECTIVE 2014/30/CE.***

### CARACTERÍSTICAS GENERALES / *GENERAL SPECIFICATIONS*

| MODELO<br>*MODEL* | CAMPO DE TRABAJO PRESIÓN RELATIVA<br>*ADJUSTMENT RELATIVE PRESSURE RANGE*<br>mbar | DIMENSIONES "A"<br>*DIMENSIONS "A"*<br>mm | MÁX. PRESIÓN SOPORTADA<br>*MAX. STATIC PRESSURE*<br>bar | | PRECISION 25°C<br>*TOLERANCE AT 25°C*<br>mbar | EJECUCIÓN<br>*EXECUTION* |
|---|---|---|---|---|---|---|
| | | | LATÓN<br>*BRASS* | ACERO INOXIDABLE 316<br>*S.S. 316* | | |
| VSM 1 | -100 / -500 | 75 | 20 | | ±50 | Membrane<br>*Diaphragm* |
| VSM 2 | -500 / -900 | | 20 | | ±80 | |
| VSM 1 W | -100 / -500 | | | 20 | ±50 | |
| VSM 2 W | -500 / -900 | | | 20 | ±80 | |

Elettrotec se reserva el derecho de realizar cambios técnicos en los productos o interrumpir la producción sin previo aviso. El contacto del interruptor de presión puede dañarse si se somete a golpes fuertes o vibraciones elevadas. Es responsabilidad del usuario verificar la idoneidad de nuestros productos para cada aplicación en particular (por ejemplo, la verificación de la compatibilidad de materiales) y el uso solo puede ser apropiado si se demuestra en pruebas de campo. La información técnica de este catálogo se basa en pruebas realizadas durante el desarrollo del producto y en valores recopilados empíricamente. Puede que no sean aplicables en todos los casos.

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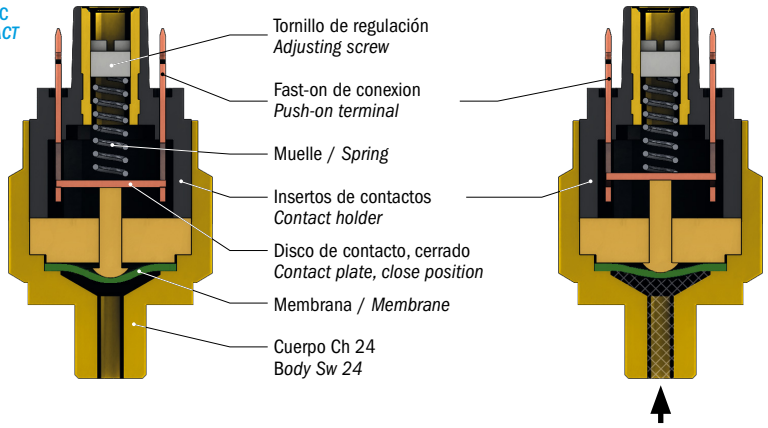
# DATOS TÉCNICOS GENERALES
# *GENERAL TECHNICAL DATA*

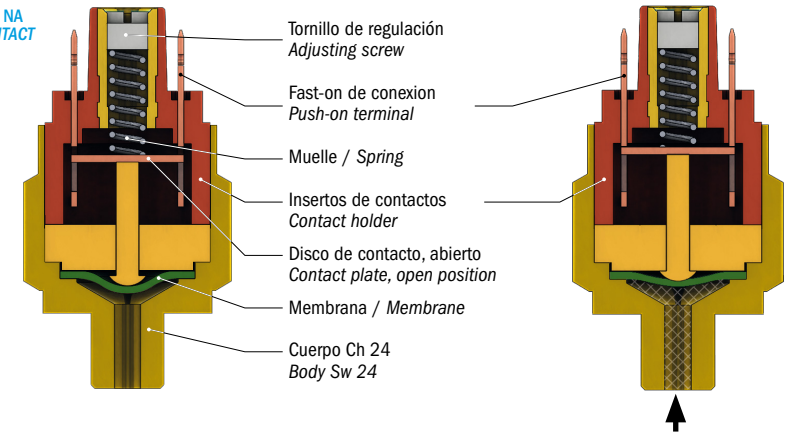
PRESOSTATO DE MEMBRANA, CONTACTO NC
*MEMBRANE PRESSURE SWITCH, NC CONTACT*




SIN PRESIÓN
*WITHOUT PRESSURE*

CON PRESIÓN
*WITH PRESSURE*

PRESOSTATO DE MEMBRANA, CONTACTO NA
*MEMBRANE PRESSURE SWITCH, NO CONTACT*




SIN PRESIÓN
*WITHOUT PRESSURE*

CON PRESIÓN
*WITH PRESSURE*

## PAR DE APRIETE RECOMENDADO / *RECOMMENDED TIGHTENING TORQUES*

| Latón / *Brass* | | Acero zincado / *Zinc plated steel* | | Acero inoxidable 316 / *S.s. 316* | |
|---|---|---|---|---|---|
| Rosca *Thread* | Par de apriete recomendado* *Recommended tightening torque* Nm | Rosca *Thread* | Par de apriete recomendado* *Recommended tightening torque* Nm | Rosca *Thread* | Par de apriete recomendado* *Recommended tightening torque* Nm |
| R18 | 17 | R18 | 22 | R18 | 24 |
| 18K | 17 | 18K | 22 | 18K | 24 |
| 18NPT | 17 | 18NPT | 22 | 18NPT | 24 |
| 5/8UNF | 30 | 5/8UNF | 40 | 5/8UNF | 45 |
| R12 | 40 | R12 | 55 | R12 | 60 |
| R14 | 25 | R14 | 35 | R14 | 40 |
| 14K | 25 | 14K | 35 | 14K | 40 |
| 14NPT | 25 | 14NPT | 35 | 14NPT | 40 |
| M10 | 18 | M10 | 25 | M10 | 30 |
| M12 | 23 | M12 | 32 | M12 | 35 |
| 10K | 18 | 10K | 25 | 10K | 30 |
| 34K | 50 | 34K | 70 | 34K | 80 |

## CONTACTOS ELÉCTRICOS / *ELECTRICAL CONTACTS APPLIED*

| Contactos / *Contacts* | | | Directiva DIN-EN-60947-5-1 *Standard DIN-EN-60947-5-1* | Símbolo IEC 60617 *Symbol IEC 60617* |
|---|---|---|---|---|
| **NA** | NA normalmente abierto *NO normally open* | *SPST (single pole, single throw)* | X | |
| **NC** | NC normalmente cerrado *NC normally closed* | *SPST (single pole, single throw)* | Y | |
| **SC** | SC contactos conmutado *CO change over (snap action)* | *SPDT (single pole, double throw)* | C | |

* Un para de apriete incorrecto puede afectar la vida mecánica del presostato. Variando el cuerpo del presostato, también varierá el par de apriete.

* *Improper torque may affect the mechanical life of the switch. The relevant legislation has been expressed in various ways. By varying the type of material used to make the switch body, will also vary the tightening torque.*

# VACUOSTATOS / *VACUUM SWITCHES*

| **PROTECCIÓNES ELECTRICAS / *ELECTRIC PROTECTIONS*** | | VCN | VCM | VS | VSM | VMC |
|---|---|---|---|---|---|---|
| **Página / *Page*** | | 57 | 59 | 61 | 63 | 65 |
| **Protección IP 54 / *IP 54 electric protection*** | CAP. 1 | ● | ● | | | |
| | CAP. 10 | ● | ● | | | |
| | CAP. 12 | | | | ● | |
| | CAP. 16 | | | ● | | |
| **Protección IP 65 / *IP 65 electric protection*** | CAP. 3 | | ● | | | |
| | CAP. 13 | | | ● | | |
| | Conector DIN 40050 / *DIN 40050 connector* | | | | ● | ● |
| **Protección IP 67 / *IP 67 electric protection*** | CAP. 14 + cables + conector / *CAP. 14 + flying leads + connector* | | | ● | | |
| | Conector M12 / *M12 connector* | | | ● | | |

| **DATOS TÉCNICOS / *TECHNICAL DATA*** | | VCN | VCM | VS | VSM | VMC |
|---|---|---|---|---|---|---|
| **Corriente de alimentacion / *Power supply*** | 12 Vca/cc | ● | ● | ● | ● | ● |
| | 24 Vca/cc | ● | ● | ● | ● | ● |
| | 48 Vca/cc | ● | ● | ● | ● | ● |
| | 110 Vca/cc | | | ● | ● | ● |
| | 220 Vca/cc | | | ● | ● | ● |
| | 250 Vca/cc | | | ● | ● | ● |
| **Corriente máx. / *Max. current*** | < 30 mA | ● | ● | ● | ● | ● |
| | 0.5 A | ● | ● | | | |
| | 3 A | | | | | ● |
| | 6 A | | | ● | ● | |
| **Contactos de plata / *Silver plated contacts*** | | ● | ● | ● | ● | ● |
| **Contactos dorados / *Gold plated contacts*** | | ● | ● | ● | ● | ● |
| **Histéresis fija / *Fixed hysteresis*** | | ● | ● | ● | | ● |
| **Histéresis regulable / *Adjustable hysteresis*** | | | | | ● | |
| **Cuerpo Ch 24 / *Body 24 AF*** | | ● | ● | ● | | |
| **Cuerpo Ch 27 / *Body 27 AF*** | | | | | ● | |

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