## **DATASHEET - MCS22**



Part no. MCS22 098019 Catalog No. **Alternate Catalog** MCS22 No. **EL-Nummer** 4356107

Pressure switch, 1W, 25bar

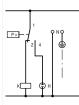
(Norway)



## **Delivery program**

| Note on use   |     | This product complies with Low-Voltage Directive 2014/35/EC and EMC Directive 2014/30/EC and meets the requirements in EN 60947-5-1. This product does not meet the rail industry's standard requirements. Accordingly, the user must review it separately for the specific application at hand. |
|---|-----|--|
| Product range   |     | Pressure switches with auxiliary contacts  |
| Degree of Protection  |     | IP65   |
| Contacts  |     | 1 changeover contact   |
| Cut-in pressure and cut-out pressure:<br>separate stepless adjustment.<br>All the intersection points within the diagram area can be set. |     |  |
|   |     | by<br>21.0<br>18<br>19<br>19<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10   |
|   |     | Min. switching differential: 0.7 bar   |
|   |     | Example:   |
|   |     | Cut-out pressure 17.5 bar  |
|   |     | Cut-in pressure 7.8 bar  |
|   |     | Variable switching differential  |
| Max. operating pressure   | bar | 25   |

#### Notes



#### Features:

- Pressure pipe flange R ¼"
- If required: pressure pipe flange R ½" IP65 in conjunction with V-M20 cable gland • •
- 1 Insulated protective conductor terminal
- ٠ 2 cable entry knockouts for M20
- Neoprene membrane, resistant to aging, air, engine oil, and water min. -25 °C, max. +80 °C

Cut-in and cut-out pressures are factory-preset as specified with type suffix:  $\rightarrow$ #203948

R ¼" corresponds to G ¼

R ½" corresponds to G ½ according to ISO 228-1

Auxiliary contact to IEC/EN 60947-1

## **Technical data**

| deneral             |              |     |                  |
|---------------------|--------------|-----|------------------|
| Standards           |              |     | IEC/EN 60947-5-1 |
| Test pressure       |              | bar | 32               |
| Rupturing pressure  |              | bar | 90               |
| Operating frequency | Operations/h |     | ≦ 1500           |

General

| Climatic proofing                             |                                    |                   | Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30 |
|---|------------------------------------|-------------------|--|
| Ambient temperature                           |                                    |                   | -25 - 70   |
| Degree of Protection                          |                                    |                   | IP65   |
| Mounting position                             |                                    |                   | As required  |
| Mechanical shock resistance to IEC 60068-2-27 | Half-<br>sinusoidal<br>shock 20 ms | g                 | > 10   |
| Vibration resistance acc. to IEC/EN 60068-2-6 | Amplitude 1<br>mm                  | Hz                | 36   |
| lifespan                                      | Operations                         | x 10 <sup>6</sup> | 1  |
| Terminal capacities                           |                                    | mm <sup>2</sup>   |  |
| Solid   |                                    | mm <sup>2</sup>   | 1 x (0.75 - 2.5)<br>2 x (0.75 - 1.5)   |
| Flexible with ferrules to DIN 46228           |                                    | mm <sup>2</sup>   | 1 x (0.5 - 1.5)  |
| Terminations                                  |                                    |                   | Tunnel terminal  |
| Terminal screw                                |                                    |                   | M3   |
| Tightening torque of terminal screw           |                                    | Nm                | 0.5  |
| Contacts/switching capacity                   |                                    |                   |  |
| Rated impulse withstand voltage               | U <sub>imp</sub>                   | V AC              | 4000   |
| Rated insulation voltage                      | Ui                                 | V                 | 400  |
| Overvoltage category/pollution degree         |                                    |                   | III/3  |
| Max. short-circuit protective device          |                                    |                   |  |
| Fuseless                                      |                                    | Туре              | PKZM0-6,3  |
| Fuse  | gG/gL                              | А                 | 10   |
| AC-15   |                                    |                   |  |
| Rated operational current                     |                                    |                   |  |
| 230 V, 50/60Hz                                |                                    | Α                 | 2  |
| DC-13   |                                    |                   |  |
| Rated operational current                     |                                    |                   |  |
| 24 V  |                                    | А                 | 2  |
| 110 V   |                                    | A                 | 0.25   |
| Rated frequency                               | f                                  | Hz                | 50   |
|   |                                    |                   |  |

# Design verification as per IEC/EN 61439

| Technical data for design verification |    |     |
|--|----|-----|
| Operating ambient temperature min.     | °C | -25 |
| Operating ambient temperature max.     | °C | 70  |

# **Technical data ETIM 7.0**

Low-voltage industrial components (EG000017) / Pressure switch (EC000243)

| Electric engineering, automation, process control engineering / Low-voltage switch technology / Monitoring equipment (low-voltage switch technology) / Pressure monitoring equipment (ecl@ss10.0.1-27-37-18-14 [AKF108014]) |     |                                     |
|---|-----|-------------------------------------|
| Suitable as guard   |     | Yes                                 |
| Suitable as 2-point controller  |     | Yes                                 |
| Suitable as limiter   |     | No                                  |
| Max. operation pressure   | hPa | 25000                               |
| Engaging pressure   | bar | 0 - 21                              |
| Initial setting   | hPa | 0 - 0                               |
| Switch off pressure   | bar | 0 - 22                              |
| End setting   | hPa | 0 - 0                               |
| Pressure-switching differential   | bar | 0                                   |
| Max. test pressure  | bar | 32                                  |
| Bursting pressure   | bar | 90                                  |
| Medium temperature  | °C  | 25 - 80                             |
| Connection  |     | Inner thread gas cylindrical (BSPP) |
| Thread size   |     | 1/4 inch                            |

| Rade voltage Ue at AC 60 Hz       Comparison  |   |    |                  |
|---|---|----|------------------|
| Attack volume variable va | Rated voltage Ue at AC 50 Hz                            | V  | 0 - 230          |
| Antiol value measuring range pressureImage and the sense of the sense o   | Rated voltage Ue at AC 60 Hz                            | V  | 0 - 230          |
| And value measuring range pressure   Pa     Anded operation power at AC-3,400 V   KW     Switching capacity at AC-3,240 V   KA     Switching capacity at AC-3,240 V   KA     Sated operation current le at AC-1,400 V   KA     Rated operation current le at AC-1,400 V   C     Number of auxiliary contacts as normally open contact   M     Number of auxiliary contacts as normally closed contact   M     Number of auxiliary contacts as normally closed contact   M     Number of auxiliary contacts as normally closed contact   M     Number of main contacts as normally open contact   N     Number of main contacts as normally copen contact   M     Number of main contacts as normally copen contact   N     Number of main contacts as normally copen contact   N     Number of main contacts as normally copen contact   N     Number of main contacts as normally copen contact   N <  | Rated voltage Ue at DC                                  | V  | 0 - 110          |
| Rede operation power at AC-3, 400 V       KW       O         Switching capacity at AC-3, 240 V       KM       0         Rade operation current le at AC-1, 400 V       A       0         Rade operation current le at AC-3, 400 V       A       0         Number of auxiliary contacts as normally open contact       M       0         Number of auxiliary contacts as normally closed contact       M       0         Number of auxiliary contacts as change-over contact       M       0         Number of auxiliary contacts as main contact       M       0         Number of main contacts as main contact       M       0         Number of main contacts as normally open contact       M       0         Number of main contacts as main contact       M       0         Number of main contacts as main contact       M       0         Number of main contacts as mormally open contact       M       0         Number of main contacts as mormally compace       M       0         Number of main contacts as mormally compace       M       0         Number of main contacts as mormally compace       M       0         Nuther of main contact       M       0         Nuther of main contact  | Initial value measuring range pressure                  | Ра | 0                |
| Kitching capacity at AC-3, 240 V       KA       0         Rated operation current le at AC-1, 400 V       A       0         Rated operation current le at AC-3, 400 V       A       0         Number of auxiliary contacts as normally open contact       P       P         Number of auxiliary contacts as normally closed contact       0       0         Number of auxiliary contacts as normally closed contact       F       P         Number of auxiliary contacts as normally closed contact       F       F       0         Number of auxiliary contacts as normally closed contact       F       F       0         Number of normally closed contacts       F       F       F       0         Number of normally closed contacts as main contact       F       F       0       F       0         Adjustable current range       F       F       F       No       F       No         With manual on/off switch       F       F       No       F       F       F  | End value measuring range pressure                      | Ра | 0                |
| Act operation current le at AC-1, 400 V       A       0         Rated operation current le at AC-3, 400 V       A       0         Number of auxiliary contacts as normally open contact       F       0         Number of auxiliary contacts as normally closed contact       0       0         Number of auxiliary contacts as change-over contact       0       0         Number of auxiliary contacts as normally closed contact       F       0         Number of auxiliary contacts as normally closed contact       F       0         Number of normally closed contacts as nain contact       F       0         Number of normally closed contacts as nain contact       F       0         Adjustable current range       F       0       0         Adjustable current range       F       No       0         With manual on/off switch       F       No       No         Electronic version       F       No       No         Explosion-proof       F       No       No         Explosion-proof       F       No       No         Explosion-proof       F       No       No         Explosion-proof       F       No       No   | Rated operation power at AC-3, 400 V                    | kW | 0                |
| Rated operation current le at AC-3, 400 V     A     0       Number of auxiliary contacts as normally open contact     A     0       Number of auxiliary contacts as normally closed contact     A     0       Number of auxiliary contacts as normally closed contact     A     0       Number of auxiliary contacts as normally closed contact     A     0       Number of auxiliary contacts as normally closed contact     A     0       Number of normally closed contacts as main contact     A     0       Number of main contacts as normally open contact     A     0       Adjustable current range     A     0     0       With manual on/off switch     A     0     0       Electronic version     A     0     0       With display     A     0     0       Explosion-proof     A     0     0       Degree of protection (IP)     A     0     0       Beight     Mm     Degree of protection (NEMA)     No   | Switching capacity at AC-3, 240 V                       | kA | 0                |
| Number of auxiliary contacts as normally open contact       Image: second            | Rated operation current le at AC-1, 400 V               | А  | 0                |
| Number of auxiliary contacts as normally closed contact     Image: Contacts as normally closed contact       Number of auxiliary contacts as change-over contact     Image: Contacts as change-over contact       Type of electric connection     Image: Contacts as main contact       Number of normally closed contacts as main contact     Image: Contacts as main contact       Number of normally closed contacts as main contact     Image: Contacts as main contact       Number of normally closed contacts as main contact     Image: Contacts as normally open contact       Number of main contacts as normally open contact     Image: Contacts as normally open contact       Adjustable current range     Image: Contacts as normally open contact       Nith hand operation     Image: Contacts as normally open contact       Nith hand operation     Image: Contacts as normally open contact       Nith display     Image: Contact Contacts       Vith display     Image: Contact Contact Contact Contact       Explosion-proof     Image: Contact Co  | Rated operation current le at AC-3, 400 V               | А  | 0                |
| Number of auxiliary contacts as change-over contact       Image: second s            | Number of auxiliary contacts as normally open contact   |    | 0                |
| Type of electric connection       Screw connection         Number of normally closed contacts as main contact       0         Number of main contacts as normally open contact       Image: Connection         Adjustable current range       Image: Connection         With hand operation       Image: Connection         With manual on/off switch       Image: Connection         Electronic version       Image: Connection         With display       Image: Connection         Explosion-proof       Image: Connection (IPC)         Degree of protection (NEMA)       Image: Connection         Height       Image: Connection  | Number of auxiliary contacts as normally closed contact |    | 0                |
| Number of normally closed contacts as main contact     Image: Contacts as normally open contact     Image: Contacts as normally open contact       Number of main contacts as normally open contact     Image: Contacts as normally open contact     Image: Contacts as normally open contact       Adjustable current range     Image: Contacts as normally contacts     Image: Contacts as normally contacts     Image: Contacts as normally contacts       With hand operation     Image: Contacts as normally contacts     Image: Contacts as normally contacts     Image: Contacts as normally contacts       With manual on/off switch     Image: Contacts as normally contacts     Image: Contacts as norm     Image: Contacts as normaly  | Number of auxiliary contacts as change-over contact     |    | 1                |
| Number of main contacts as normally open contactImage: Sector of Mathematic Sector of Mat   | Type of electric connection                             |    | Screw connection |
| Adjustable current range   A   0     With hand operation   M   M     With manual on/off switch   M   M     Electronic version   M   M     With display   M   M     Explosion-proof   M   M     Degree of protection (NEMA)   M   M     Height   M   M   | Number of normally closed contacts as main contact      |    | 0                |
| Yield baseAnd operationNoWith hand operationNoNoWith manual on/off switchMoNoElectronic versionMoNoWith displayMoNoExplosion-proofMoNoDegree of protection (NEMA)MoMoHeightMoMoMain and the second   | Number of main contacts as normally open contact        |    | 0                |
| With manual on/off switchImage: Second s   | Adjustable current range                                | А  | 0 - 0            |
| Electronic versionImage: Big State of Sta   | With hand operation                                     |    | No               |
| With displayPage <td>With manual on/off switch</td> <td></td> <td>No</td>   | With manual on/off switch                               |    | No               |
| Explosion-proof   Mo     Degree of protection (IP)   IMO     Degree of protection (NEMA)   IMO     Height   IMO   | Electronic version                                      |    | No               |
| Degree of protection (IP)   IP65     Degree of protection (NEMA)   Image: Compare the sector of the sector  | With display  |    | No               |
| Degree of protection (NEMA)   M   Other     Height   mm   10  | Explosion-proof   |    | No               |
| Height mm 110   | Degree of protection (IP)                               |    | IP65             |
|   | Degree of protection (NEMA)                             |    | Other            |
| Nidth mm 60   | Height  | mm | 110              |
|   | Width   | mm | 60               |
| Diameter mm 0   | Diameter  | mm | 0                |
| Depth mm 96   | Depth   | mm | 96               |

# **Approvals**

| ••                          |                   |
|-----------------------------|-------------------|
| Product Standards           | CSA-CC22.2 No. 14 |
| CSA File No.                | 12528             |
| CSA Class No.               | 3211-06           |
| North America Certification | CSA certified     |



