## **DATASHEET - MCSN11**



Pressure switch, 3p, 15bar MCSN11 Part no. 029203 Catalog No. **Alternate Catalog** MCSN11 No.

4356112

**EL-Nummer** 

(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 is separately for the specific application at hand.
Product range		Pressure switches with main contacts
Degree of Protection		IP65
Number of poles		3 pole
Cut-in pressure and cut-out pressure: separate stepless adjustment. All the intersection points within the diagram area can be set.		
		$\begin{array}{c} & & & \\ & & & & \\ & & & \\ &$
		Min. switching differential: 1.4 bar
		Example:
		Cut-out pressure 8.5 bar
		Cut-in pressure 4.5 bar
		Variable switching differential
Max. operating pressure	bar	15

### Notes

### Features

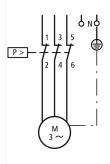
- With terminal cover as standard
- 1 insulated protective conductor terminal •
- 1 insulated N terminal
- 2 cable entry knockouts for M20, without cable gland
- IP65 in conjunction with V-M20 cable gland
- Pressure pipe flange R 1/2"
- please enquire: Pressure pipe flange R ¼" ٠ •
- Neoprene membrane

R ¼" corresponds to G ¼

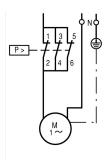
R ½" corresponds to G ½ as per ISO 228-1

For use as a motor load switch as per IEC/EN 60947-4-1 for:

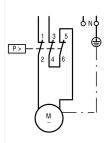
### Three-phase current



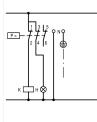
#### Single-phase current



Direct current DC-3



For use as control switch:



Cut-in and cut-out pressures are factory-preset as specified with type suffix ightarrow 203948

# **Technical data**

Baty resure     Perform	General			
Autoring pressureOperationsSeed9Operating frequencyOperations5000000000000000000000000000000000000	Standards			IEC/EN 60947-4-1
Operating frequency     Operating frequency     Operating frequency     Second statule of the second statule of th	Test pressure		bar	32
Climatic product   Ampleat, constant, to IEC 60068-2-38     Ambient temperature   -25 -70     Degree of Protection   -25 -70     Mounting position   -26 -70     Methanical shock resistance to IEC 60068-2-27   Resequired     Minisoidal shock 200ms   -26     Vitration resistance acc. to IEC/EN 60068-2-80   Ampletat, constant, to IEC 60068-2-30     Iffespan   -26     Terminal capacities   Operations     Solid	Rupturing pressure		bar	90
Ambient temperature Damp heat, cyclic, to EC 60068-2-30   Ambient temperature 25 - 70   Degree of Protection Pies   Munting position Fee great   Muchanical shock resistance to EC 60068-2-27 Namino 3   Sinusoidal shock 20 shock 20 sh	Operating frequency	Operations/h		≦ 1500
Degree of Protection     P65       Mounting position     As required       Mechanical shock resistance to IEC 60068-2-27     half- sinck 20 ms     \$       Vibration resistance acc. to IEC/EN 60068-2-67     mplitudgi     Ka       Vibration resistance acc. to IEC/EN 60068-2-67     mplitudgi     Ka       Vibration resistance acc. to IEC/EN 60068-2-67     mplitudgi     Ka       Vibration resistance acc. to IEC/EN 60068-2-66     mplitudgi     Ka       Solid     Solid     solid     Solid       Terminal capacities     Marce     marce       Solid     marce     solid     solid       Terminations     marce     solid     solid       Terminal screw     Marce     Marce     solid       Tightening torque of terminal screw     Marce     Marce     Marce       Totatets/switching capacity     Marce     Marce     Marce       Contracts/switching capacity     Marce     Marce     Marce       Read insultation voltage     Marce     Marce     Marce       Marce     Marce     Marce     Marce	Climatic proofing			
Arrow of the sensition     Arrow of the sensition     Arrow of the sensition       Multing position     Malf-sinus of all shock resistance to IEC 60068-2-27     Malf-sinus of all shock resistance to IEC 60068-2-25     Malf-sinus of all shock resistance to IEC 60068-2-25     Malf-sinus of all shock resist	Ambient temperature			-25 - 70
Haff-sinusoidal shock resistance to IEC 60068-2-27   Haff-sinusoidal shock 20ms   g   plotential shock resistance acc. to IEC/EN 60068-2-6     Vibration resistance acc. to IEC/EN 60068-2-6   Mplitude 1   J   g     Iffespan   Operations   y 10 <sup>6</sup> J     Iffespan   Operations   y 10 <sup>6</sup> J     Solid   mm <sup>2</sup> J×1075-2.5)   x 0.075-1.5)     Terminal capacities   mm <sup>2</sup> J×10.55-1.5)   x 0.075-1.5)     Terminations   Mm <sup>2</sup> J×10.55-1.5)   Reterminal with clamping washer     Terminal screw   Mm <sup>2</sup> Mafferming washer   Mafferming washer     Tightening torque of terminal screw   Mm   Mafferming washer   Mafferming washer     Contract/swritching capacity   Mm   Mafferming washer   Mafferming washer     Rated insulation voltage   Mm   Mafferming With clamping washer   Mafferming washer     Rated insulation voltage   Mine   Mafferming With clamping washer   Mafferming With clamping washer     Rated insulation voltage   Mine   Mine   Mafferming With clamping washer     Mathematics   Mine   Mine   Mafferming With clamping washer     Rated ins	Degree of Protection			IP65
sinusoidal shock 20 ms   sinusoidal shock 20 ms     Viration resistance acc. to IEC/EN 60068-2-6   Amplitude 1   Hz   sinusoidal shock 20 ms     Ifespan   Operations   x 10 <sup>6</sup> 5     Terminal capacities   Mm2   sinusoidal shock 20 ms   sinusoidal shock 20 ms     Solid   mm2   sinusoidal shock 20 ms   sinusoidal shock 20 ms   sinusoidal shock 20 ms     Fexible with ferrules to DIN 46228   mm2   sinusoidal shock 20 ms   sinusoidal shock 20 ms   sinusoidal shock 20 ms     Terminations   Fexible with ferrules to DIN 46228   mm2   sinusoital shock 20 ms   sinusoital shock 20 ms     Terminations   Fexible with ferrules to DIN 46228   mm2   sinusoital shock 20 ms   sinusoital shock 20 ms     Terminations   Fexible with ferrules to DIN 46228   mm2   sinusoital shock 20 ms   sinusoital shock 20 ms     Termination screw   Fexible with should shock 20 ms   Termination shock 20 ms   sinusoital shock 20 ms   sinusoital shock 20 ms     Contact:   Sinusoital shock 20 ms   Sinusoital shock 20 ms   sinusoital shock 20 ms   sinusoital shock 20 ms     Read insulation voltage   Vinpo   VAC   Monoonnonon shock 20 ms   sinusoital shock 20 ms<	Mounting position			As required
im   im     lifespan   Operations   info     Terminal capacities   im   im     Solid   mm <sup>2</sup> im     Isolid solution for use to DIN 46228   mm <sup>2</sup> im     Terminal screw   mm <sup>2</sup> im     Terminal screw   mm <sup>2</sup> im     Tightening torque of terminal screw   Mm   im     Tortacts/swritching capacity   Vimp   VAC     Read insulation voltage   Vimp   VAC     Read insulation voltage   Vimp   VAC     Name   im   im     Name   im   im     Name   im   im     Solid   Im   im     Terminal screw   Tom   im     Tortacts/swritching capacity   Tom   im     Read insulation voltage   Vimp   VAC   Mon     Name   im   im   im     Name   im   im   im     Name   Vimp   VAC   im     Name   im   im   im     Name   Name	Mechanical shock resistance to IEC 60068-2-27	sinusoidal	g	> 10
Terminal capacities   mm <sup>2</sup> Solid   mm <sup>2</sup> Solid   mm <sup>2</sup> Flexible with ferrules to DIN 46228   mm <sup>2</sup> Terminations   mm <sup>2</sup> Terminal screw   mm <sup>2</sup> Tightening torque of terminal screw   M4     Contacts/switching capacity   Vac     Rated impulse withstand voltage   Vac     Rated insulation voltage   Vac     Name   Main Screw     Vinp   VAC     MacAlexander   Main Screw     Rated insulation voltage   Vac     Name   Main Screw     Name   Main Screw     Name   Main Screw     Solid   Name     Main Screw   Vac     Main Screw   Main Screw     Solid   Name     Main Screw   Vac     Main Screw   Main Screw     Rated insulation voltage   Vac     Main Screw   Main Screw     Name   Main Screw     Main Screw   Main Screw     Main Screw   Main Screw     Main Screw   Main Screw	Vibration resistance acc. to IEC/EN 60068-2-6		Hz	36
Solid mm <sup>n</sup> Solid mm <sup>2</sup> Flexible with ferrules to DIN 46228 mm <sup>2</sup> Terminations mm <sup>2</sup> Terminal screw mm <sup>2</sup> Tightening torque of terminal screw Mm   Tightening torque of terminal screw Mm   Rated impulse withstand voltage Mmp   Nim VAC   Rated insulation voltage Vac   Porvoltage category/pollution degree Vac   Max. sort-circuit protective device Max. sort-circuit protective device	lifespan	Operations	x 10 <sup>6</sup>	0.5
Flexible with ferrules to DIN 46228   mm <sup>2</sup> 2 x (0.75 - 1.5)     Terminations   mm <sup>2</sup> 1 x (0.5 - 1.5)     Terminal screw   Flat terminal with clamping washer     Tightening torque of terminal screw   M4     Contacts/switching capacity   Nm   1.2     Rated insulation voltage   U <sub>inp</sub> V AC   400     Overvoltage category/pollution degree   U <sub>i</sub> V   400     Ill/3   Ill/3   Ill/3   Ill/3	Terminal capacities		mm <sup>2</sup>	
Terminations 2x (0.5 - 1.5)   Terminal screw Flat terminal with clamping washer   Tightening torque of terminal screw Ma   Tightening torque of terminal screw Nm   Rated inpulse withstand voltage U <sub>imp</sub> VAC   Rated insulation voltage U <sub>i</sub> V   Overvoltage category/pollution degree Ma 1///	Solid		mm <sup>2</sup>	
Terminal screw Me   Tightening torque of terminal screw Nm   Tightening torque of terminal screw Nm   Contacts/switching capacity Vac   Rated insulation voltage Vimp   Vac 400   Overvoltage category/pollution degree III/3   Max. short-circuit protective device Image: Mathematical screw	Flexible with ferrules to DIN 46228		mm <sup>2</sup>	
Tightening torque of terminal screw Nm 1.2   Contacts/switching capacity Uimp V AC 4000   Rated insulation voltage Uimp V AC 400   Overvoltage category/pollution degree Vinop V AC 400   Max. short-circuit protective device Vinop V AC 400	Terminations			Flat terminal with clamping washer
Contacts/switching capacity   Rated inpulse withstand voltage Vimp VAC 400   Rated insulation voltage Vinp V 400   Overvoltage category/pollution degree Vinp Vinp Vinp   Max. short-circuit protective device Vinp Vinp Vinp	Terminal screw			M4
Rated impulse withstand voltage Uimp V AC 400   Rated insulation voltage Uimp Vimp 400   Overvoltage category/pollution degree Impulse Impulse Impulse   Max. short-circuit protective device Impulse Impulse Impulse	Tightening torque of terminal screw		Nm	1.2
Rated insulation voltage Ui V 400   Overvoltage category/pollution degree III/3 III/3   Max. short-circuit protective device III/3 III/3	Contacts/switching capacity			
Overvoltage category/pollution degree III/3   Max. short-circuit protective device III/3	Rated impulse withstand voltage	U <sub>imp</sub>	V AC	4000
Max. short-circuit protective device	Rated insulation voltage	Ui	V	400
	Overvoltage category/pollution degree			111/3
Fuseless Type PKZM0-20	Max. short-circuit protective device			
	Fuseless		Туре	PKZM0-20

Fuse	gG/gL	A	20
Type of coordination			1
Rated short-circuit current	I <sub>q</sub> (= Current r)	kA	1
AC-3			
Rated operational current			
230 V		Α	15
400 V		Α	11.5
Rated power P			
230 V		kW	4
400 V		kW	5.5
DC - 3			
Rated operational current			
24 V		Α	16
110 V		Α	12.5
250 V		Α	2
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	15000
Engaging pressure	bar	0 - 9.4
Initial setting	hPa	0 - 0
Switch off pressure	bar	0 - 11
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		1/2 inch
Rated voltage Ue at AC 50 Hz	V	0 - 400
Rated voltage Ue at AC 60 Hz	V	0 - 400
Rated voltage Ue at DC	V	0 - 250
Initial value measuring range pressure	Ра	0
End value measuring range pressure	Ра	0
Rated operation power at AC-3, 400 V	kW	5.5
Switching capacity at AC-3, 240 V	kA	15
Rated operation current le at AC-1, 400 V	А	0
Rated operation current le at AC-3, 400 V	А	11.5
Number of auxiliary contacts as normally open contact		0
Number of auxiliary contacts as normally closed contact		0
Number of auxiliary contacts as change-over contact		0
Type of electric connection		Screw connection
Number of normally closed contacts as main contact		3
Number of main contacts as normally open contact		0

Adjustable current range	А	0 - 0
With hand operation		No
With manual on/off switch		No
Electronic version		No
With display		No
Explosion-proof		No
Degree of protection (IP)		IP65
Degree of protection (NEMA)		Other
Height	mm	110
Width	mm	60
Diameter	mm	0
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



