Monitoring Relays Voltage Control Relays Voltage (under and over) detection with memory function

- > Automatic recognition of AC/DC
- > Overvoltage or undervoltage control with Selectable latching (memory) function
- > Control of AC and DC voltage
- > True RMS measurement
- > LED status indication





MUS80

MUS260

Selection	guide					
Туре	Function	Measuring range	Output	Power Supply	Part-Numbers	
MUS80	Over and Undervoltage / Selectable latching memory function	$20 \rightarrow 80 \ V \overline{\sim}$	1 x 5 A (changeover)	$24 \rightarrow 48 \ V \overline{\sim}$	84872141	
MUS260	Over and Undervoltage / Selectable latching memory function	$65 \rightarrow 260 \ V \overline{\sim}$	1 x 5 A (changeover)	110 → 240 V≂	84872142	
		MUS80		MUS260		
Timing						
Timing		$0.1 \rightarrow 10$	$0.1 \rightarrow 10 \text{ s} (0, \pm 10 \%)$			
	accuracy with constant parameters to IEC/EN 60255-1)	± 0.5 %	± 0.5 %			
Power ON	delay	500 ms i	500 ms in AC / 1 s in DC			
Reset time	max (ms)	1500	1500			
Supply						
Voltage typ	be for actuating	AC/DC	AC/DC			
Rated control supply voltage Un at AC		$24 \rightarrow 48$	$24 \rightarrow 48 \text{ V} \qquad \qquad 110 \rightarrow 240 \text{ V}$			
AC supply voltage frequency 50/60 HZ		± 10 %	± 10 %			
Rated control supply voltage Un at DC		24-48 V	24-48 V		110-240 V	
Operating	range	15 →100	15 →100 V≂ 50 →27		$\overline{}$	
Polarity wit	h DC voltage	Yes	Yes			
Galvanic is	solation of power supply/Input circuit	No	No			
Galvanic is	solation of power supply/Output circuit	Yes	Yes			
Galvanic is	solation of Input circuit/Output circuit	Yes	Yes			
Immunity f	rom micro power cuts: typical	10 ms	10 ms			
Maximum Power consumption at Un		AC: 2 VA		AC: 4 VA		
		DC: 0.5	DC: 0.5 W		DC: 1 W	
Insulation						
	lation voltage (according to IEC/EN 60664-1)	250 V				
Insulation coordination (according to IEC/EN 60664-1)		Overvolt	Overvoltage category III; pollution degree 3			
Insulation resistance between supply and Input circuit (according to IEC/EN 60664-1 and IEC/EN 60255-27)		> 1 MΩ (500 V)				

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Description:

Crouzet's Monitoring Relays are essential for enhancing the safety and efficiency of electrical systems by providing continuous and precise monitoring. These relays help in detecting and alerting users to abnormalities such as overvoltage, undervoltage, phase failure, and phase sequence errors. The relays are designed to be compact and easy to use, making them suitable for an easy integration into various electrical panels without taking up excessive space.

For more information about Monitoring Relays please visit www.crouzet.com



	MUS80	MUS260	
Dielectric strength	2 kV / 1 min / 1 mA / 50 Hz		
(according to IEC/EN 60664-1 and IEC/EN 60255-27)			
Impulse voltage	4 kV		
(according to IEC/EN 60664-1 and IEC/EN 60255-27)	wave 1.2 / 50 µs		
Input and measuring specifications			
Measurement range	$20 \rightarrow 80 \ V \overline{\sim}$	$65 \rightarrow 260 \ V \overline{\sim}$	
Display accuracy (according to IEC/EN 60255-1)	± 10 % of full scale		
Measuring error with drift temperature	0.05 %/°C		
Measuring error with drift voltage	< 1 % across the whole range		
Repetition accuracy with constant parameters	± 0.5 %		
(according to IEC/EN 60255-1)			
Voltage threshold adjustment	$20 \rightarrow 80 \ V \overline{\sim}$	$65 \rightarrow 260 \ V \overline{\sim}$	
Frequency of measured signal	0 Hz, 5060 Hz		
Max. measuring cycle time	250 ms / True RMS measurement		
Voltage threshold hysteresis	$5 \rightarrow 20$ % of threshold		
Output specifications			
Maximum switching power (resistive)	2500 VA / 300 W		
Maximum rate (at max switching power)	360 operations/hour at full load		
Maximum breaking current	10 AAC 250 V~ resistive 10 ADC 30 V resistive		
Minimum breaking current	10 mA / 5 V		
Operating categories	AC 12, AC 13, AC 14, AC 15, DC 12, DC 13, DC 14		
(according to IEC/EN 60947-5-1 and IEC/EN 60947-5-2)			
Nominal rating	5 A		
Voltage breaking capacity (according to IEC/EN 60255-1)	250 V \sim / 8 AAC resistive		
	125 V / 0.3 A resistive		
Electrical life (operations)	1 x 10 ⁵		
Mechanical life (operations)	1 x 10 ⁷		
1 or 2 changeover relays, AgNi (cadmium-free)	1 C/O		
Functions			
Automatic recognition of AC/DC	True		
Overvoltage and undervoltage control	False		
Overvoltage or undervoltage control	True		
Selectable latching (memory) function			
Control of AC and DC voltages	True		
General characteristics			
Temperature limits use (°C) (according to IEC/EN 60068-2)	-20 → +50		
Temperature limits stored (°C) (according to IEC/EN 60068-2)	-40 → +70		
MTBF in hours (according to IEC/TR 62380)	1437392.70		
MTTF (according to IEC/TR 62380)	160 years		
Led status indicator	 Un: Green LED (power on) R: Yellow LED (relay status ON) OFF LED (under/overvoltage) Flashing LED during time delay Un, R: Flashing LED (Position e No Tt LED 		
Creepage distance and clearance (according to IEC/EN 60664-1)	 4 kV / 9.4 mm Pollution degree 3 		
IP degree of protection Terminal block (according to IEC/EN 60529)	IP20		
IP degree of protection Housing (according to IEC/EN 60529)	IP30		
IP degree of protection Front face (according to IEC/EN 60529)	IP50		

Vbraton resistance (according to IEC/EN 60255-21-1) -20 mbs ² Relative humidity no condensation (according to IEC/EN 60086-23-20) 2x AP roycle 59 % RN max, without condensation 55 °C Electonagnetic compatibility - Immunity to dectostatic discharge (according to IEC/EN 61000-4.2) Level II (Vim: 2.0 GHz2.7 GHz) Immunity to radiated, radia-frequency, electronagnetic field (according to IEC/EN 61000-4.4) Level II (Vim: 2.0 GHz2.7 GHz) Immunity to radia transient bursts (according to IEC/EN 61000-4.4) Level II (Vim: 2.0 GHz2.7 GHz) Immunity to radia transient bursts (according to IEC/EN 61000-4.4) Level II (Vim: 2.0 GHz2.0 GHz) (according to IEC/EN 61000-4.5) Level II (Vim: 2.0 GHz2.0 GHz) (according to IEC/EN 61000-4.5) Level II (Vim: 0.15 MHz1 GHz) (according to IEC/EN 61000-4.5) Vis realidual voltage, 2.500 cycles (according to IEC/EN 61000-4.5) Vis realidual voltage, 2.500 cycles (according to IEC/EN 61000-4.5) Vis realidual voltage, 2.500 cycles (according to IEC/EN 61000-4.5) Vis realidual voltage, 2.500 cycles (according to IEC/EN 61000-4.5) Vis realidual voltage, 2.500 cycles (according to IEC/EN 61000-4.5) Vis realidual voltage, 2.500 cycles (according to IEC/EN 61000-4.5) Vis realidual voltage, 2.500 cycles <th></th> <th>MUS80 MUS260</th>		MUS80 MUS260
- 10 Hz - 150 Hz Relative humidity no condensation (according to IEC/EN 80089-2-30) 2x 24 hr yole 65 % H max. without condensation 55 °C Electromagnetic compatibility - immunity to electrostatia discharges (according to IEC/EN 81000-4-2) Immunity for radiust, radio-fequency, electromagnetic field - Level II (1 Vim 2.0 GHz2.7 GHz) (according to IEC/EN 81000-4-3) - Level II (1 Vim 2.0 GHz2.7 GHz) (according to EC/EN 81000-4-3) - Level II (1 Vim 2.0 GHz2.7 GHz) (according to IEC/EN 81000-4-3) - Level II (1 Vim 2.0 GHz2.7 GHz) (according to IEC/EN 81000-4-3) - Level II (1 Vim 2.0 GHz2.7 GHz) (according to IEC/EN 81000-4-3) - Level II (1 Vim 2.0 GHz2.7 GHz) (according to IEC/EN 8100-4-10) - Level II (1 Vim 2.0 GHz2.7 GHz) (according to IEC/EN 8100-4-5) - Level II (1 Vim 2.0 GHz2.7 GHz) Immunity to valtage dips and breaks - 0 % residual voltage, 1 cycle (according to IEC/EN 8100-4-10) - 2 N Matalau voltage, 25,00 cycles Main-borne and radiated emissions - 0 % residual voltage, 25,00 cycles Main-borne and radiated emissions - 0 % residual voltage, 25,00 cycles Main-borne and radiated emissions - 1 X AVG 14 - 2 X AVG 14 Relactore and radiated emissions	Vibration resistance (according to IEC/EN 60255-21-1)	■ 20 m/s ²
Electomagnetic compatibility - Immunity to electrostatic discharges (according to IEC/EN 61000-4-2) Immunity to radiate, radio-frequency, electromagnetic field (according to IEC/EN 61000-4-3) · Level II (1 Vim: 20 GHz2.7 GHz) · To % residual voltage dps and trans · Gater drans demands · Level II (1 Vim: 20 GHz2.7 GHz) · Level II (1 Vim: 20 GHz2.7 GHz) · Level II (1 Vim: 20 GHz2.7 GHz) · Level drans demands · Gater drans		
(according to IEC/EN 61000-4:2) - Level II (V Vm: 2.0 GHz2.7 GHz) (according to IEC/EN 61000-4:3) - Level II (V Vm: 3.0 GHz2.7 GHz) (according to IEC/EN 61000-4:3) - Level II (V Vm: 3.0 MHz2.0 GHz) Immunity to abdx waves on power supply Level II (V Vm: 3.0 MHz2.0 GHz) Immunity to abdx waves on power supply Level II (V Vm: 0.15 MHZ80 MHz) (according to IEC/EN 61000-4:5) Immunity to abdx waves on power supply (according to IEC/EN 61000-4:1) -0 % residual uvitage, 1 cycle (according to IEC/EN 61000-4:1) -0 % residual uvitage, 2 s/d0 cycles (according to IEC/EN 61000-4:1) -0 % residual uvitage, 2 s/d0 cycles (according to IEC/EN 61000-4:1) -0 % residual uvitage, 2 s/d0 cycles (according to IEC/EN 6100-4:1) -1 X 4* -2 X 2.5" mm² (according to IEC/EN 6006-2:31) High: fm Ruigd connecting capacity without ferrule -1 X 4* -2 X 2.5" mm² -1 X AWG14 - 2 X AWG16 -1 X AWG14 - 2 X AWG16 Tightening torque (according to IEC/EN 6025-21-2) IS g-11 ms Shock and bump tests (according to IEC/EN 6025-21-2) IS g-11 ms Short interruption on ower line (according to IEC/EN 6025-21-2) IS g-11 ms Short interruption on	Relative humidity no condensation (according to IEC/EN 60068-2-30)	2 x 24 hr cycle 95 % RH max. without condensation 55 °C
(according to IEC/EN 61000-4-3) • Level III (13 V/m: 14 GHz20 GHz) Immunity to rapid transient bursts (according to IEC/EN 61000-44) Level III (10 V/m: 0.15 MHz1 GHz) Immunity to shock waves on power supply Level III (10 V/m: 0.15 MHz1 GHz) Immunity to shock waves on power supply Level III (10 V/m: 0.15 MHz1 GHz) (according to IEC/EN 61000-4-5) Immunity to shock waves on power supply (according to IEC/EN 61000-4-5) Immunity to shock waves on power supply (according to IEC/EN 61000-4-5) Immunity to rapid transient bursts (according to IEC/EN 61000-4-11) (according to IEC/EN 61000-4-11) - 0 % residual voltage, 1 cycle (according to IEC/EN 61000-4-11) - 70 % residual voltage, 25/30 cycles Mains-borne and radide demissions Gas B (according to IEC/EN IEC 60068-2-11) 1 f ghz: tm Rigd connecting capacity with ferrule - 1 x 4/ - 2 x 2.5 mm² To pot occording to IEC/EN 1600-4-11) 9 Self-extinguishing Housing material (according to IEC/EN 6065-2-11) - Self-extinguishing Not interruption on power line (according to IEC/EN 6065-2-11) - Self-extinguishing Not interruption on power line (according to IEC/EN 6005-2-11) - Self-extinguishing Not interruption on p		Level III (Air 8 kV / Contact 6 kV)
• Level III (10 V/m: 80 MHz1 GHz) Immunity to rapid transient bursts (according to IEC/EN 61000-4-4) Level III (2 kV / common mode 2 kV / residual current mode 1 kV) (according to IEC/EN 61000-4-5) Level III (2 kV / common mode 2 kV / residual current mode 1 kV) (according to IEC/EN 61000-4-5) Level III (2 kV / common mode 2 kV / residual current mode 1 kV) (according to IEC/EN 61000-4-5) Level III (10V rms: 0.15 MHz 80 MHz) (according to IEC/EN 61000-4-1) 70 % residual voltage, 1 cycle (according to IEC/EN 61000-4-1) 70 % residual voltage, 2503 cycles Minar-borne and radiated emissions Class B (according to IEC/EN 61001 (CISPR22), ENSO11 (CISPR21) Sift residual voltage, 2503 cycles Minurito position All positions Class B Drop to concrete floor (according to IEC/EN 16C 6008-2-31) High: 'm Rigid connacting capacity with forrule 1 x 2 x 2.5 ² mm² Tightening torque (according to IEC/EN 16C 60085-2-11) 1 x 4VG14 - 2 x A/WG14 1 x 4WG14 Bout interuption on power line (according to IEC/EN 6025-2-12) 1 S g - 11 m. 1 s d - 2 x 2.5 ² mm² Tightening torque (according to IEC/EN 6025-2-11) Self extring using a string a	Immunity to radiated, radio-frequency, electromagnetic field	 Level I (1 V/m: 2.0 GHz →2.7 GHz)
Immunity to rapid transient bursts (according to IEC/EN 61000-44) Level III (direct 2 kV / Capacitive coupling damp 1 kV) Immunity to shock waves on power supply Level III (direct 2 kV / Common mode 2 kV / residual current mode 1 kV) (according to IEC/EN 61000-45) Immunity to radio frequency in common mode Level III (10V ms: 0.15 MHz 80 MHz) (according to IEC/EN 61000-41) -0 % residual voltage, 1 cycle (according to IEC/EN 61000-41) Mains-borne and radiated emissions Class B (according to IEC/EN 61000-41) Mains-borne and radiated emissions Class B (according to IEC/EN 61000-41) Mains-borne and radiated emissions Class B (according to IEC/EN IEC/EN IEC 60068-2.31) Mounting position All positions Direc/EN 61000-410 Prop to concrete floor (according to IEC/EN IEC 60068-2.31) High: 1m Rigid connecting capacity with ferrule -1 x 47 - 2 x 2.57 mm² -1 x AVOI14 - 2 x AVOI16 -1 x XVOI14 - 2 x AVOI16 Tiphening torque (according to IEC/EN 6025-21-1) -5 Gelf-extinguishing -1 radiated emissions Class B Delivery: open terminals Tue Pays of electric connection Oscilla voltage, 250/300 cycles Delivery: open terminals	(according to IEC/EN 61000-4-3)	■ Level II (3 V/m: 1.4 GHz →2.0 GHz)
Immunity to shock waves on power supply Level III (2 kV / common mode 2 kV / residual current mode 1 kV) (according to EC/EN 61000-4-6) Immunity to add frequency in common mode Immunity to voltage dips and breaks • 0 % residual voltage, 1 cycle (according to EC/EN 61000-4-6) - 70 % residual voltage, 1 cycle (according to EC/EN 51000-4-11) • 70 % residual voltage, 1 cycle (according to EC/EN 51000-4-11) • 70 % residual voltage, 1 cycle (according to EC/EN 51000-4-11) • 70 % residual voltage, 1 cycle (according to EC/EN 51000-4-11) • 70 % residual voltage, 25/30 cycles Mains-borne and radiated emissions Class B (according to EC/EN EC/EN EC/EN 600715) 35 mm Mounting position All positions Drop to concrete floor (according to EC/EN EC/EN 60068-2-31) High: 1m Rigid connecting capacity with errule • 1 x 4 × 2 x 2 x 1.5° mm² • 1 x AWG31 • 2 x AWG14 • 1 x AWG31 • 2 x AWG16 Tightening torque (according to EC/EN 60055-21-1) • 50.6N m Housing material (according to EC/EN 60055-21-2) 15 g - 11 ms Short interruption on power line (according to EC/EN 6100-4-11) 0% residual voltage, 250/300 cycles Delivey: open termi		
(according to IEC/EN 61000-4-5)Level II (10V ms: 0.15 MHz -> 60 MHz)Immunity to voltage dips and breaks-0 % residual voltage, 1 cycle(according to IEC/EN 61000-4-11)-70 % residual voltage, 25/30 cyclesMains-borne and radiated emissionsClass B(according to EC/EN 61000-4-11)-70 % residual voltage, 25/30 cyclesMains-borne and radiated emissionsClass B(according to EC/EN 61000-4-11)-70 % residual voltage, 25/30 cyclesMains-borne and radiated emissionsClass B(according to EC/EN 61000-4-11)-70 % residual voltage, 25/30 cyclesMains-borne and radiated emissionsClass B(according to EC/EN 60715)35 mnMounting positionAll positionsDrop to concretel floor (according to IEC/EN 6008-2-31)High: 1mRigid connecting capacity without ferrule-1 x 4 * - 2 x 2 .5 * nm²+1 x 4 * - 2 x 2 .5 * nm²+1 x 4 * - 2 x AWG16Tightening torque (according to IEC/EN 6008-2-11)-5 elf-extinguishing+1 x 4 * - 2 x AWG16-1 x 2 + x 4 × 2 x 2 * 1 × 1 × 1 × 1 × 2 × 1 × 1 × 1 × 1 × 2 × 1 × 1		
(according to IEC/EN 61000-4-6)··· 0% residual voltage, 1 cycle (according to IEC/EN 6100-4-11)·· 0% residual voltage, 25/30 cyclesMains-borne and radiated emissionsClass B(according to IES/EN 6100-4-11)S mmMounting positionAll positionsMounting positionAll positionsDrop to concrete floor (according to IEC/EN IEC 60068-2-31)High: 1mRigid connecting capacity with our ferule:1 x 4 ² - 2 x 5 ⁵ mm² ·1 x 4WG11 - 2 x AWG14Fiexble connecting capacity with ferule:1 x 2.5 ⁵ - 2 x 1.5 ⁵ mm² ·1 x AWG14 - 2 x AWG16Tightening torque (according to IEC/EN 60058-2-11):5 eafl-extinguishing ·1 x AWG14 - 2 x AWG16Tightening torque (according to IEC/EN 60058-2-12)15 eafl-extinguishing ·1 x AWG14 - 2 x AWG16Shock and bump tests (according to IEC/EN 60255-21-22)15 eafl-extinguishing ·1 reardescent wire testShock and bump tests (according to IEC/EN 60255-21-22)15 eafl-extinguishing ·1 reardescent wire testShock and bump tests (according to IEC/EN 60064-01)% residual voltage, 250/300 cyclesDeliver; open terminalsGrueDeliver; open terminalsScree connectionUting DuracionScree connectionUting Duracion9Veght (m)9Quita State (SCR)YesUting Concept (SCR)YesInternation N*1907/2005/CEYesUting Concept (SCR)YesUting Concept (SCR)YesUting Concept (SCR)YesUting Concept (SCR)YesUting Concept (SCR)YesStat		· · · · · · · · · · · · · · · · · · ·
(according to IEC/EN 8100-4-11)-70 % residual voltage, 25/30 cyclesMains-borne and radiated emissionsClass B(according to IEC/EN 60715)35 mmMounting positionAll positionsDrop to concrete floor (according to IEC/EN 160715)35 mmRigid connecting capacity without ferrule1 x 4" - 2 x 2.5" mm"Rigid connecting capacity without ferrule1 x 2.5" rmm"1 x XMG11 - 2 x AWG141 x 2.5" rmm"Filexible connecting capacity with ferrule1 x 2.5" rmm"1 x 2.5" runding to recording to IEC/EN 60695-211)050.6N.mHousing material (according to IEC/EN 60595-212)156-11 msShock and bump tests (according to IEC/EN 60255-21-2)159-11 msShock and bump tests (according to IEC/EN 600694-71)0% residual voltage, 250/300 cyclesDelivery: open terminalsTrueType of electric connectionScrew connectionOutine DimensionsCrew connectionUtine Dimensions90Weight (g)7.5With (mm) according to IEV/EN 60054)% sVeight (g)7.5With (mm) according to IEV/EN 60054)% sLivery (Livery (Live		Level III (10V rms: 0.15 MHz \rightarrow 80 MHz)
Mains-borne and radiated emissions Class B (according to ENS5032 (CISPR22), ENS5011 (CISPR11))) Fixing: Symmetrical DIN rail (according to IEC/EN 60715) 35 mm Mounting position All positions Mounting positions Minomition position All positions Drop to concrete floor (according to IEC/EN IEC 60068-2-31) High: 1m Rigid connecting capacity with out ferrule 1 x 4 ² - 2 x 2.5 ⁵ mm ² Fixible connecting capacity with ferrule 1 x 2.5 ⁶ - 2 x 1.5 ⁵ mm ² 1 x AWG14 Fixible connecting capacity with ferrule 1 x 2.5 ⁶ - 2 x 1.5 ⁵ mm ² 1 x AWG14 Fixible connecting to IEC/EN 60695-2-11) 0.506.N.m Housing material (according to IEC/EN 60695-2-12) 15 g - 11 ms Shock and bump tests (according to IEC/EN 60695-2-12) 15 g - 11 ms Soff-extinguishing Incandescent wire test Shock and bump tests (according to IEC/EN 6025-21-2) 15 g - 11 ms Soff-extinguishing Incandescent wire test Type of electric connection Screw connection Screw connection Commontoget Scord/Sc		
(according to ENS5032 (CISPR22), ENS5011 (CISPR11))Fixing: Symmetrical DIN rall (according to IEC/EN 60715)35 mmMouting positionAll positionsDrop to concrete floor (according to IEC/EN IEC 60068-2-31)High: 1mRigid connecting capacity without ferrule1 x 4² - 2 x 25² mm² -1 x XWG14 - 2 x AWG14Fixible connecting capacity with ferrule1 x 2² - 2 x 1.5² mm² -1 x XWG14 - 2 x AWG16Tightening torque (according to IEC 60947-1)0.50.6N.mHousing material (according to IEC/EN 60695-2-11)Self-extinguishing -Incandescent wire testShock and bump tests (according to IEC/EN 6025-21-2)15 - 11 msShort Interruption on power line (according to IEC/EN 61000-4-11)0% residual voltage, 250/300 cyclesDelivery: open terminalsTrueType of electric connection69Vultine Dimensions70.5Utiling Informations70.5Widh (mm) according to IEN/ENCORDYesReACh regulation N°1907/2006/CEYesUK PEACh regulation N°1907/2006/CEYesUK PEACh regulation N°1907/2006/CEYesUN 2014/36/UEYesEuropean Directive 2005/20/CEYesEuropean Directive 2005/20/CEYesCertification CEYesCertification CEYesCertification CEYesCertification CEYesCertification CEYesCertification ULYesCertification VL CAYes	(according to IEC/EN 61000-4-11)	 70 % residual voltage, 25/30 cycles
Fixing: Symmetrical DIN rail (according to IEC/EN 60715)36 mmMounting positionAll positionsDrop to concrete floor (according to IEC/EN IEC 60068-2-31)High: 1mRigid connecting capacity without ferrule1 x 4² - 2 x 25* mm² - 1 x AWG11 - 2 x AWG14Fiexble connecting capacity with ferrule1 x 25* - 2 x 1.5* mm² - 1 x AWG14 - 2 x AWG16Tightening torque (according to IEC 60947-1)0.56.0.mHousing material (according to IEC/EN 60695-2-11)- Self-extinguishing - Incandescent Wire testShock and bump tests (according to IEC/EN 60255-21-2)15 g - 11 msShoct interruption on power line (according to IEC/EN 60025-21-3)5 resu - runePilvery: open terminalsTrueType of electric connectionScrew connectionOutline Dimensions-Utine Dimensions-Weight (g)70.5Widt (mm) according to DIN 4388017.5International Directives & Conformity CertificationYeesREACh regulation N*1907/2006/CEYesUV 2014/36/UEYeesEuropean Directive 2005/20/CEYesUV 2014/36/UEYesCertification CEYesCertification CEYesCertification ULYesCertification ULYesCertification ULYesCertification ULYesCertification ULYesCertification ULYesCertification ULYes		Class B
Mounting positionAll positionsDrop to concrete floor (according to IEC/EN IEC 60068-2-31)High: 1mRigid connecting capacity without ferrule $1 \times 4^2 - 2 \times 2.5^{\circ}$ mm² $1 \times XMG11 - 2 \times AWG14$ Flexible connecting capacity with ferrule $1 \times 2.5^{\circ} - 2 \times 1.5^{\circ}$ mm² $1 \times 2.5^{\circ} - 2 \times 1.5^{\circ}$ Short interruption on power line (according to IEC/EN 61000-4-11)0% residual voltage, 250/300 cyclesDelivery: open terminalsTrueTrueTrueDirective connection69Delivery: open terminals70.5Utine Dimensions10 \times 10^{\circ}Delivery: open terminals70.5Midth (mm) according to DIN 438070.5Utine at 0.5 2.05 (200 CE)Yes <tr< td=""><td></td><td>25 mm</td></tr<>		25 mm
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Rigid connecting capacity without ferrule1 x 4x² - 2 x 2.5² mm² 1 x AWG11 - 2 x AWG14Flexible connecting capacity with ferrule1 x 2.5² - 2 x 1.5² mm² 1 x AWG14 - 2 x AWG16Tightening torque (according to IEC 60947-1)0.50.6N.mHousing material (according to IEC/EN 60695-2-11)Self-extinguishing • Incandescent wire testShock and bump tests (according to IEC/EN 60255-21-2)15 g - 11 msShort interruption on power line (according to IEC/EN 61000-4-11)0% residual voltage, 250/300 cyclesDelivery: open terminalsTrueType of electric connectionScrew connectionOutline Dimensions90Weight (g)70.5Width (mm) according to ID 4388017.5International Directives & Conformity CertificationYesREACh regulation N*1907/2006/CEYesLVD 2014/35/UEYesDirective 2012/19/EUYesEuropean Directive 2005/20/CEYesEuropean Directive 2005/20/CEYesCertification ULYesRecycling noticeYesCertification ULYesRecycling noticeYesCertification ULYesRecycling noticeYesCertification UL KCAYes		
- 1 x AWG11 - 2 x AWG14 Flexible connecting capacity with ferrule - 1 x 2.5² - 2 x 1.5² mm² - 1 x AWG14 - 2 x AWG16 Tightening torque (according to IEC 60047-1) 0.50.6N.m Housing material (according to IEC/EN 60055-2-11) - Self-extinguishing - I ncandescent wire test Shock and bump tests (according to IEC/EN 60255-21-2) 15 g - 11 ms Short interruption on power line (according to IEC/EN 60100-4-11) 0% residual voltage, 250/300 cycles Delivery: open terminals True Type of electric connection connection Outline Dimensions - Depth (mm) 69 Height (mm) 90 Weight (g) 70.5 Width multi colonaction - RoHS 2015/863/UE Yes REACh regulation N*1907/2006/CE Yes UV D 2014/35/UE Yes Directive 2012/19/EU Yes Europen Directive 2005/20/CE Yes Certification UL Yes Certification UL Yes Certification UL Yes Certification UL KCA Yes		·
- 1 x AWG14 - 2 x AWG16 Tightening torque (according to IEC 60947-1) 0.50.6N.m Housing material (according to IEC/EN 60695-2-11) Self-extinguishing - Incandescent wire test Shock and bump tests (according to IEC/EN 60255-21-2) 15 g - 11 ms Short interruption on power line (according to IEC/EN 61000-4-11) 0% residual voltage, 250/300 cycles Delivery: open terminals True Type of electric connection Screw connection Outline Dimensions Screw connection Pepth (mm) 69 Height (mm) according to DIN 43880 70.5 Width (mg) according to DIN 43880 70.5 RoHS 2015/863/UE Yes RACh regulation N°1907/2006/CE Yes LVD 2014/35/UE Yes Directive 2005/20/CE Yes European Directive 2005/20/CE Yes European Directive 2005/20/CE Yes European Directive 2005/20/CE Yes Certification CE Yes Certification CE Yes Certification CE Yes Certification UL CA Yes	Rigid connecting capacity without terrule	
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Type of electric connectionScrew connectionOutline Dimensions69Depth (mm)69Height (mm)90Weight (g)70.5Width (mm) according to DIN 4388017.5International Directives & Conformity CertificationYesReACh regulation N°1907/2006/CEYesUK REACh regulation N°1907/2006/CEYesUV 2014/35/UEYesDirective 2012/19/EUYesEuropean Directive 2005/20/CEYesEuropean Directive 2005/20/CEYesCertification CEYesCertification ULYesRecycling noticeYesCertification ULYesRecycling noticeYesCertification UK CAYes		
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Certification ULYesRecycling noticeYesCertification UK CAYes	ISO 14001: 2015	Yes
Recycling notice Yes Certification UK CA Yes	Certification CE	Yes
Certification UK CA Yes	Certification UL	Yes
	Recycling notice	Yes
Certification CCC Yes	Certification UK CA	Yes
	Certification CCC	Yes

Principles

MUS voltage control relays monitor single-phase AC or DC network voltages.

These products monitor their own supply voltage.

MUS relays allow the user to choose between two operating modes:

- Under/overvoltage
- With or without fault latching

An adjustable time delay, on threshold crossing, provides immunity from transient phenomena, thus preventing spurious triggering of the output relay.

Operating principles

MUS80-MUS260 - Under/Overvoltage controller

The under or overvoltage threshold value is set by a graduated potentiometer by reading the Un scale to be monitored directly.

The hysteresis is set by a graduated potentiometer from 5 to 20 % of the preset threshold.

The hysteresis value cannot be higher than the extremes of the measurement range.

In overvoltage mode, if the controlled voltage exceeds the preset threshold for longer than the time set on the front face (0.1 to 10 s), the output relay opens and LED R is extinguished.

During the time delay, this LED flashes.

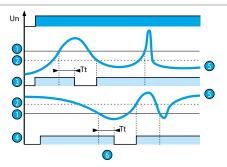
Once the voltage falls below the threshold value minus the hysteresis, the relay closes instantaneously.

In undervoltage mode, if the controlled voltage falls below the preset threshold for longer than the time set on the front face (0.1 to 10 s), the output relay opens and LED R is extinguished.

During the time delay, this LED flashes.

Once the voltage rises above the threshold value plus the hysteresis, the relay closes instantaneously.

MUS - With Memory OFF





Hysteresis

Threshold

- Overvoltage function relay
- Undervoltage underload function relay

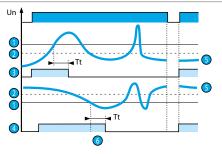
Controlled signal

Delay on threshold crossing (Tt)

MUS - Under/Overvoltage controller

MUS - With Memory ON

If "with memory" mode has been selected, the relay opens and stays in this position when threshold crossing is detected. The power supply must be disconnected to reset the product.

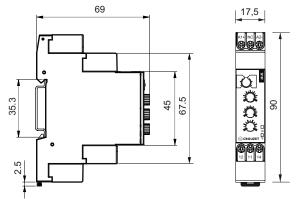


- 1 2 3 4 5 Threshold
- Hysteresis
- Overvoltage function relay
- Undervoltage underload function relay
- Controlled signal Ğ
 - Delay on threshold crossing (Tt)

Product Dimensions

Front and Side

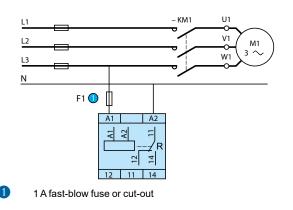
MUS80-MUS260



Electronic & Wiring Diagrams

Connections

MUS80-MUS260



Warning:

The product information contained in this catalogue is given purely as information and does not constitute a representation, warranty or any form of contractual commitment. Crouzet and its subsidiaries reserve the right to modify their products without notice. It is imperative that we should be consulted over any particular use or application of our products and it is the responsibility of the buyer to establish, particularly through all the appropriate tests, that the product is usitable for the use or application. Under no circumstances will our warranty apply, nor shall we be held responsible for any application (such as any modification, deletion, use in conjunction with other electrical or electronic components, circuits or assemblies, or any other unsuitable material or substance) which has not been expressly agreed by us prior to the sale of our products.