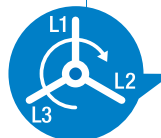


Selection guide



Designation	Part number	Description	Operating conditions
Phase control			
MWS	84873020	Phase failure and phase sequence	–
MWS2	84873021	Phase failure and phase sequence	–
MWG	84873022	Phase failure and phase sequence	Regeneration 70% of Un
MWU	84873023	Phase failure and phase sequence	Regeneration 70% of Un
		Undervoltage	Phase/phase Un: 208/220/380/400/415/440/480 V AC
MWA	84873024	Phase failure and phase sequence	Regeneration 70% of Un
		Asymmetry	–
MWUA	84873025	Overtoltage/undervoltage (window)	Phase/phase Un: 208/220/380/400/415/440/480 V AC
		Asymmetry	–
		Phase failure and phase sequence	–
HWUA	84873026	Overtoltage	Phase/phase Un: 220/380/400/415/440/480 V AC
		Asymmetry	–
		Undervoltage	Phase/phase Un: 220/380/400/415/440/480 V AC
		Phase failure and phase sequence	–
H3US	84873220	Phase failure	–
		Undervoltage	Phase/phase Un: 220/380/400/415/440/480 V AC
		Overtoltage	Phase/phase Un: 220/380/400/415/440/480 V AC
H3USN	84873221	Loss of phase and neutral	–
		Undervoltage	Phase/neutral Un: 120/127/220/230/240/260/277 V AC
		Overtoltage	Phase/neutral Un: 120/127/220/230/240/260/277 V AC
M3US	84873222	Phase failure	–
		Undervoltage	Phase/phase Un: 208/220/380/400/415/440/480 V AC
		Overtoltage	Phase/phase Un: 208/220/380/400/415/440/480 V AC



Voltage control			
MUS12DC	84872140	Undervoltage or overvoltage	–
MUS80ACDC	84872141	Undervoltage or overvoltage	–
MUS260ACDC	84872142	Undervoltage or overvoltage	–
MUSF80ACDC	84872151	Overtoltage/undervoltage (window)	–
MUSF260ACDC	84872152	Overtoltage/undervoltage (window)	–
HUL	84872120	Undervoltage or overvoltage	–
HUH	84872130	Undervoltage or overvoltage	–



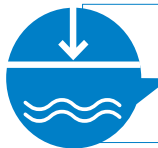
Current control			
MIC	84871122	Overcurrent (or undercurrent)	Via built-in current transformer
HIL	84871120	Undercurrent or overcurrent	–
HIH	84871130	Undercurrent or overcurrent	–

Control values	Supply voltage	Time delay	Output relay
208-480 V AC 50/60 Hz	Self-powered 208-480 V AC	–	1 single changeover relay (1 SPDT) 5 A
208-440 V AC 50/60 Hz	Self-powered 208-440 V AC	–	2 single changeover relay (2 SPDT) 5 A
208-480 V AC 50/60 Hz	Self-powered 208-480 V AC	–	1 single changeover relay (1 SPDT) 5 A
208-480 V AC 50/60 Hz -20% to -2%	Self-powered 208-480 V AC	0.1 s to 10 s	1 single changeover relay (1 SPDT) 5 A
208-480 V AC 50/60 Hz 5% to 15%	Self-powered 208-480 V AC	0.1 s to 10 s	1 single changeover relay (1 SPDT) 5 A
-20% to -2% +2% to +20% 5% to 15%	Self-powered 208-480 V AC	0.1 s to 10 s	1 single changeover relay (1 SPDT) 5 A
208-480 V AC 50/60 Hz +2% to +20% 5% to 15% -20% to -2%	Self-powered 220-480 V AC	0.1 s to 10 s	1 double changeover relay (1 DPDT) 2 x 5 A
220-480 V AC 50/60 Hz 220-480 V AC 50/60 Hz -20% to -2% +2% to +20%	Self-powered 220-480 V AC	0.3 s to 30 s	2 single changeover relay (2 SPDT) 5 A
120-277 V AC 50/60 Hz -20% to -2% +2% to +20%	Self-powered 120-277 V AC	0.3 s to 30 s	2 single changeover relay (2 SPDT) 5 A
208-480 V AC 50/60 Hz -20% to -2% +2% to +20%	Self-powered 208-480 V AC	0.3 s to 30 s	1 single changeover relay (1 SPDT) 5 A
9-15 V DC	Self-powered 12 V DC	0.1 s to 10 s	1 single changeover relay (1 SPDT) 5 A
20-80 V AC/DC	Self-powered 24-48 V AC/DC	0.1 s to 10 s	1 single changeover relay (1 SPDT) 5 A
65-260 V AC/DC	Self-powered 110-240 V AC/DC	0.1 s to 10 s	1 single changeover relay (1 SPDT) 5 A
20-80 V AC/DC	Self-powered 24-48 V AC/DC	0.1 s to 10 s	1 single changeover relay (1 SPDT) 5 A
65-260 V AC/DC	Self-powered 110-240 V AC/DC	0.1 s to 10 s	1 single changeover relay (1 SPDT) 5 A
0.2 V to 2 V 1 V to 10 V 6 V to 60 V	24-240 V AC/DC 50/60 Hz	0.1 s to 3 s	1 double changeover relay (1 DPDT) 2 x 5 A
15 V to 150 V 30 V to 300 V 60 V to 600 V	24-240 V AC/DC 50/60 Hz	0.1 s to 3 s	1 double changeover relay (1 DPDT) 2 x 5 A
2 A to 20 A	24-240 V AC/DC 50/60 Hz	–	1 single changeover relay (1 SPDT) 5 A
2 mA to 20 mA 10 mA to 100 mA 50 mA to 500 mA	24-240 V AC/DC 50/60 Hz	0.1 s to 3 s	1 double changeover relay (1 DPDT) 2 x 5 A
0.1 A to 1 A 0.5 A to 5 A 1 A to 10 A	24-240 V AC/DC 50/60 Hz	0.1 s to 3 s	1 double changeover relay (1 DPDT) 2 x 5 A

Selection guide



Designation	Part number	Description	Operating conditions
Frequency control			
HHZ	84872501	Underfrequency and overfrequency (window)	50 Hz or 60 Hz



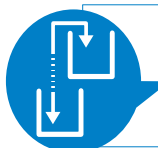
Level control			
HNM	84870700	Filling or emptying with conductive liquids	1 or 2 levels
MNS	84870720	Filling	–
HNE	84870710	Filling or emptying	1 or 2 levels



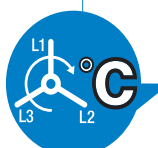
Speed control			
HSV	84874320	Underspeed or overspeed	–



Temperature control in lifts according to EN 81			
HT81	84874110	Undertemperature and overtemperature (window)	–
HT81-2	84874120	Undertemperature and overtemperature (window)	–
HWT81	84874130	Undertemperature and overtemperature (window)	–
		Phase failure and phase sequence	Regeneration 70% of Un



Pump and level control			
HPC	84874200	Network monitoring	1 phase
			3-phase: Phase failure and phase sequence
		Undercurrent and overcurrent (window)	–



Temperature and phase control			
HWTM	84873027	Phase failure and phase sequence	–
		Thermal protection	–
HWTM2	84873028	Phase failure and phase sequence	–
		Thermal protection	–
		Test	Reset on front panel via pushbutton and remotely
		Memory	Reset on front panel via pushbutton and remotely



Control values	Supply voltage	Time delay	Output relay
40 HZ to 60 HZ 50 HZ to 70 HZ	120-277 V AC 50/60 Hz	0.1 s to 10 s	2 single changeover relay (2 SPDT) 5 A
250 Ω to 5 KΩ 5 KΩ to 100 KΩ 50 KΩ to 1 MΩ	24-240 V AC/DC 50/60 Hz	0.1 s to 5 s	1 double changeover relay (1 DPDT) 2 x 5 A
Contact input for discrete sensor	24-240 V AC/DC 50/60 Hz	0.1 s to 5 s	1 single changeover relay (1 SPDT) 5 A
Input for discrete sensor: Contact/PNP/NPN	24-240 V AC/DC 50/60 Hz	0.1 s to 5 s	1 single changeover relay (1 SPDT) 5 A
Time between controlled pulses: 0.05 s to 0.5 s 0.1 s to 1 s 0.5 s to 5 s 1 s to 10 s 0.1 mn to 1 mn 0.5 mn to 5 mn 1 mn to 10 mn	24-240 V AC/DC 50/60 Hz	0.6 s to 60 s	1 single changeover relay (1 SPDT) 5 A
3-wire PT100 input Low threshold: -1°C to +11°C High threshold: +34°C to +46°C	24-240 V AC/DC 50/60 Hz	1 s to 10 s	1 single changeover relay (1 SPDT) 5 A
3-wire PT100 input Low threshold: -1°C to +11°C High threshold: +34°C to +46°C	24-240 V AC/DC 50/60 Hz	1 s to 10 s	2 single contact relays (NO) (2 SPST) 5 A
3-wire PT100 input Low threshold: -1°C to +11°C High threshold: +34°C to +46°C	24-240 V AC/DC 50/60 Hz	1 s to 10 s	2 single contact relays (NO) (2 SPST) 5 A
208-480 V AC 50/60 Hz			
230 V AC 50/60 Hz	Self-powered (1 or 3 phases)	1 s to 60 s on power-up 0.1 s to 10 s on threshold crossing	1 single changeover relay (1 SPDT) 5 A
208-480 V AC 50/60 Hz			
1 A to 10 A AC			
208-480 V AC 50/60 Hz Thermistor with automatic reset	24-240 V AC/DC	–	2 single contact relays (NO) (2 SPST) 5 A
208-480 V AC 50/60 Hz Thermistor with automatic reset	24-240 V AC/DC	–	2 single contact relays (NO) (2 SPST) 5 A
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–			