



Overview

Safety

Compact safety magnetic sensors



		MC36CH_M5	MC36CH_A2	MC88CH_M5	MC88CH_A2	MC88CH_T1
Switching distance	Sao: 5mm; Sar: 15mm	With MC36CM			With MC88CM1	
	Sao: 8mm; Sar: 18mm				With MC88CM2	
	Sao: 18mm; Sar: 30mm				With MC88CM3	
	Sao: 15mm; Sar: 20mm					
Connection type	Sao: 16 mm; Sar: 20mm					
	M8 plug left exit	▼		▼		
	M8 plug right exit	▼		▼		
	Cable left exit		▼		▼	
	Cable right exit		▼		▼	
	Pigtail M12 left exit					▼
	Pigtail M12 right exit					▼
Reed switch outputs	Cable					
	1 NO					
	1 NC + 1 NO	▼	▼	▼	▼	▼
	2 NO	▼	▼	▼	▼	▼
LED indication	2 NO + 1 NC					
	With LED		▼		▼	
Safety parameters	No LED		▼		▼	
	Electrical life cycle	700.000 operations @ 250 mA resistive load				
Environmental	B10d (for each channel)	80.000.000 of operations				
	Operating temperature	-25° to +80°C (-13° to +176°F)				
Electrical data	Protection degree	IP67	IP67	IP67	IP67	IP67
	Switching voltage	12-24 VAC/DC				
	Switching current	250 mA	250 mA	250 mA	250 mA	250 mA
Housing	Switching power	6 W	6 W	6 W	6 W	6 W
	Style	Cubic - miniature		Cubic - standard		
	Length	36 mm / 1,41"		88 mm / 3,46"		
	Width	26 mm / 1,02"		25 mm / 0,98"		
	Height	13 mm / 0,51"		13 mm / 0,51"		
Actuator	Diameter					
	Material	PBT		PBT		
	MC36CM	▼				
	MC88CM1, MC88CM2, MC88CM3			▼		
Approvals	CLSA2 (for M18)					
	CLSA3 (for M30)					
Approvals	CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus	

Safety magnetic sensors



		SMSA2P10	SMSA2(3)P02	SMSA2P03	SMSA3P03
Switching distance	Sao: 5mm; Sar: 15mm				
	Sao: 8mm; Sar: 18mm				
	Sao: 18mm; Sar: 30mm				
	Sao: 15mm; Sar: 20mm		With CLSA2/CLSA3		
Connection type	Sao: 16 mm; Sar: 20mm	With CLSA2		With CLSA2	With CLSA3
	M8 plug left exit				
	M8 plug right exit				
	Cable left exit				
	Cable right exit				
	Pigtail M12 left exit				
	Pigtail M12 right exit				
Reed switch outputs	Cable	▼	▼	▼	▼
	1 NO	▼			
	1 NC + 1 NO		▼		
	2 NO			▼	▼
LED indication	2 NO + 1 NC				
	With LED		(on request on M18)		
Safety parameters	No LED	▼	▼	▼	▼
	Electrical life cycle				
Environmental	B10d (for each channel)				
	Operating temperature	-25° to +70°C (-13° to +158°F)			
Electrical data	Protection degree	IP67	IP67	IP67	IP67
	Switching voltage	100 VAC			
	Switching current	250 mA	250 mA	250 mA	250 mA
Housing	Switching power	5 VA	5 VA	5 VA	5 VA
	Style	Cylindrical		Cylindrical	
	Length	38 mm / 1,49"	38 mm / 1,49" 42 mm / 1,65"	38 mm / 1,49"	42 mm / 1,65"
	Width				
	Height				
Actuator	Diameter	M18 x 1	M18 x 1 or M30 x 1.5	M18 x 1	M30 x 1.5
	Material	PBT		PBT	
	MC36CM				
	MC88CM1, MC88CM2, MC88CM3				
Approvals	CLSA2 (for M18)	▼	▼	▼	
	CLSA3 (for M30)		▼		▼
Approvals	CE	CE (UL on request for M18)	CE	CE	

Safety modules
















	SMS20	SMS31	SMSA31	SM2H21	SME41	
Safety functions	Emergency stop	▼	▼			
	Safety magnetic switch	▼	▼	▼		
	Safety limit switch	▼	▼	▼		
	Safety hinge	▼	▼	▼		
	Electromechanical interlock	▼	▼			
	Lift levelling	▼	▼			
	Two-hand controls				▼	
	ESPE type 2					
	ESPE type 4					
	Safety mats					
Expansion relay unit	in combination with SME41				▼	
Safety outputs	NO relay outputs	2	3	3	2	
	OSSD delayed outputs					
	OSSD instantaneous outputs					
Auxiliary outputs	NC relay outputs		1	1	1	
	OSSD outputs					
	PNP output			1		
Start mode	Manual	▼	▼	▼		
	Automatic	▼	▼	▼		
	Monitored manual	▼	▼	▼		
Connection type	Pluggable screw terminals	▼	▼	▼	▼	
	Fix screw terminals					
Safety parameters	Safety	Cat. 4 - PL e as EN ISO 13849				
	MTTFD	420,8	420,8	420,8	422,1	363,4
	PFHD	1,85 E-10	1,85 E-10	1,85 E-10	1,35 E-10	1,59 E-10
	DCavg	99%	99%	99%	99%	99%
Power supply	24 VDC/AC	▼	▼	▼	▼	
Dimensions	Width	17,5 mm / 0,69"				
	Height	110,8 mm / 4,36"				
	Depth	121,1 mm / 4,77"				
Approvals	CE, UL, TÜV, RoHS EN 81-20, EN 81-50	CE, UL, TÜV, RoHS EN 81-20, EN 81-50	CE, TÜV, cULus, RoHS	CE, TÜV, cULus, RoHS	CE, TÜV, cULus, RoHS	

Safety modules



	CM22D0A	CM30D1A	CM40D0A	CL20D2A	
Safety functions	Emergency stop	▼	▼	▼	
	Safety magnetic switch	▼	▼	▼	
	Safety limit switch	▼	▼	▼	
	Safety hinge	▼	▼	▼	
	Electromechanical interlock	▼	▼	▼	
	Lift levelling				
	Two-hand controls				
	ESPE type 2	▼	▼	▼	
	ESPE type 4	▼	▼	▼	
	Safety mats	▼	▼	▼	
Expansion relay unit	in combination with SME41				
Safety outputs	NO relay outputs				
	OSSD delayed outputs	2 / -			
	OSSD instantaneous outputs	2 / 3 / 4	3	4	
Auxiliary outputs	NC relay outputs	-	-	-	
	OSSD outputs	- / 1 / -	1	2	
	PNP output				
Start mode	Manual	▼	▼	▼	
	Automatic	▼	▼	▼	
	Monitored manual	▼	▼	▼	
Connection type	Pluggable screw terminals				
	Fix screw terminals	▼	▼	▼	
Safety parameters	Safety	Cat. 4 - PL e as EN 13849 / SIL3 as IEC 61508 / SILCL3 as IEC 62061			
	MTTFD	2403	2403	2403	1268
	PFHD	1,89 E-09	1,89 E-09	1,89 E-09	3,58 E-09
	DCavg	99%	99%	99%	99%
Power supply	24 VDC	▼	▼	▼	
Dimensions	Width	17,5 mm / 0,69"			
	Height	90 mm / 3,54"			
	Depth	63 mm / 2,48"			
Approvals	CE, TÜV, cULus, RoHS	CE, TÜV, cULus, RoHS	CE, TÜV, cULus, RoHS	CE, TÜV, cULus, RoHS EN 81-20, EN 81-50	

Limit switches - Safety hinge - Electromagnetic safety interlock

																			
		PS21S	PS21H	PS21R	PS31S	PS31R	PS42S	PS42R	PS43S	PS43R	PS38H_T1	PS38H_T2	ESI_E	ESI_M					
Actuation	External actuator key	▼			▼		▼		▼				▼	▼					
	External hinge		▼																
	Hinge mount										▼	▼							
	Pull wire			▼		▼		▼		▼									
	Electromagnetic interlock																		
Reset	No reset			▼		▼		▼		▼									
	Manual reset			▼		▼		▼		▼									
Interlock	Electrical												▼						
	Mechanical													▼					
Contact outputs	1 NC + 1 NO	▼	▼	▼	▼	▼	▼	▼	▼	▼									
	2 NC	▼	▼	▼	▼	▼	▼	▼	▼	▼									
	2 NC + 1 NO				▼	▼		▼	▼	▼									
	2 NC + 2 NO											▼							
	1 NC + 2 NO				▼	▼		▼	▼	▼									
	3 NC				▼	▼		▼	▼	▼									
	3 NC + 1 NO										▼								
	2 NC operated by solenoid												ES11	ES12	ES13	ES11	ES12	ES13	
	1 NO operated by solenoid													ES11	ES12	ES13	ES11	ES12	ES13
	1 NO operated by key													ES11	ES12	ES13	ES11	ES12	ES13
1 NC operated by key													ES11	ES12	ES13	ES11	ES12	ES13	
Rated operational current	Ie/AC-15 230 VAC											3,1 A		4 A		4 A		4 A	
	Ie/DC-13 24 VDC											2,8 A		2 A		4 A		4 A	
Safety parameters	Mechanical durability											1.000.000 of operations		1.000.000 of operations		1.000.000 of operations			
	B10d											2.000.000 of operations		2.000.000 of operations		4.000.000 of operations			
Housing	Width	30 mm / 1,18"		40 mm / 1,57"			50 mm / 1,97"			60 mm / 2,36"		60 mm / 2,36"		40 mm / 1,57"					
	Plastic	▼	▼								▼	▼	▼	▼					
	Metal			▼	▼	▼	▼	▼	▼	▼									
	Protection degree	IP65	IP65	IP66	IP66	IP66	IP66	IP66	IP66	IP66	IP66	IP67		IP65					
Approvals	CE, UL, CSA, RoHS	CE, UL, CSA, RoHS	CE, UL, CSA, RoHS	CE, UL, CSA, RoHS	CE, UL, CSA, RoHS	CE, UL, CSA, RoHS	CE, UL, CSA, RoHS	CE, UL, CSA, RoHS	CE, UL, CSA, RoHS	CE, UL, CSA, RoHS	CE, UL, CSA, RoHS	CE, UL, CSA, RoHS	CE, cULus, IMQ, RoHS						

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