

紧凑型开关

Compact Switches



PCE  MERZ

switch to Quality!

优势

BENEFITS



瞬时消弧不残热
Trennfunktion
very fast shut off
time



免维护•零牵挂
maintenance free



结构紧凑坚固
very compact design



单体成型
模块化结构
Robust and
modular construction



开放式成品
封闭式组件
open and
enclosed version



ML0-ML 3系列符合
IEC 60947和UL508认证
ML0 - ML 3 according to
IEC 60947 and UL508



ML4-ML7系列遵
循欧盟最新指令
ML4 - ML7 with
CE marking



用户定制
解决方案
Customized solutions
on request



高质量触点
耐用寿命长
High quality contacts
for a long lifetime



MERZ ML 系列

MERZ ML SERIES



紧凑型开关

行业中普遍术语『紧凑型开关』描述了隔离开关的结构设计,专指为配电盘布局安排的通断开关。大多数情况下,开关嵌入安装在箱体底部的导轨上 (DIN-rail),如您更打算将开关架设于箱体的门盖上,我们也提供适配的形态及组件。配接端子螺丝全都同侧排布,令繁复的检修变得更加便利可靠。

紧凑型开关共有3大电流等级,应用范围从16A到32A我们推荐基本系列ML0系列;从25A至125A则选用系列ML1、ML2或ML3;电流范围从125A至630A的应用,我们也具备充分的选项、协助您达成安全无虞之产品开发,下页列出了各系列技术细节。

Compact Switches

The term „Compact Switch“ is common practice in the industry and describes a design of disconnect switches. It is about On-Off switches arranged for switchboard installation.

In the majority of cases the switches are drafted for snap-on DIN rail mounting, base mounting or front mounting in the door. The terminal screws are all accessible from one side and are situated in line of the conduct. The Compact Switches are classified in 3 groups starting with the basic series ML0 with applications from 16A to 32A. The well proven series ML1 to ML3 from 25A up to 125A and the high-performance series ML4- ML7 from 125A to 630A.

The technical details of these series are listed in the following pages.

规格总览

OVERVIEW SPECIFICATIONS

参数

Specifications

		從/	from	到/	to
额定工作电流 I_e AC-21A Rated operating current I_e AC-21A	A	25		630	
额定电压 U_e Rated voltage U_e	V	690		690	
额定不间断电流 $I_u=I_{th}$ (open) Rated uninterrupted current (open) $I_u=I_{th}$	A	25		630	
常规封闭式热电流 I_{the} Conventional enclosed thermal current I_{the}	A	25			
额定绝缘电压 U_i VED0110 绝缘C组测试认证 Rated insulation voltage U_i Insulation group C under VDE 0110	V	690		1000	
断开和关合能力 MAKING BREAKING CAPACITY					
AC-3 类别 段位自定义马达开关 Service category AC-3 Motor switch for optional switching	230 V 3~	kW	5		
	400 V 3~	kW	7,5		
	690 V 3~	kW	9,5		
AC-23A(B) 类别 Service category AC-23A(B) 马达开关 / Motor switch 主开关 / Main switch 维护开关 / Maintenance switch	230 V 3~	kW	5/-		-/-
	400 V 3~	kW	7,5/-		280/280
	690 V 3~	kW	9/-		150/185
AC-22A(B) 类别 马达开关 Service category AC-22A(B) Motor Switch	230 V 3~	kW	25/-		-/-
	400 V 3~	kW	25/-		630/630
	690 V 3~	kW	25/-		315/315

设计总览

DESIGN OVERVIEW



前板安装
Front mounting



底部安装
Base mounting



外壳封闭式
Enclosure

前板安装设计

DESIGN FRONT MOUNTING

适用于不同外壳面板

All housing designs are also available in the housing variant



依设计需求提供 多色搭配

Available colours for all housing designs



单孔安装- 1

简易旋钮 (P25/P25.9无挂锁)

ON-OFF指示面板

with front plate without padlock



单孔安装- 2

单锁孔旋钮 (EVS) ON-OFF指示面板

with lockout handle for 1 or 2 padlocks



单孔安装- 3

美規帶鎖旋钮 (灰/黑)

with lockout handle for 3 padlocks



单孔安装- 4

嵌夹式固定, 无指示板

with front ring, without front plate



单孔安装- 5

嵌夹式固定, 无指示板

with front ring, without front plate

安装选项

Mounting Options

- 2孔安装
2-hole mounting
- 4孔安装
4-hole mounting
- 中央圆孔
($\Phi=16,0/22,5/30,5$ mm)
Central mounting
16 und 22,5 and 30,5 mm

底部安装设计

DESIGN BASE MOUNTING

适用于不同外壳面板

All housing designs are also available in the housing variant



依设计需求提供 多色搭配

Available colours for all housing designs



底部安装- 1

简易旋钮(P25/P25.9无挂锁)

ON-OFF指示面板

with front plate without padlock



底部安装- 2

单锁孔旋钮(EVS)

ON-OFF指示面板

with lockout handle for 1 or 2 padlocks



底部安装- 3

美规带锁旋钮(黄/红)

锁孔三方位可选

with lockout handle for 3 padlocks

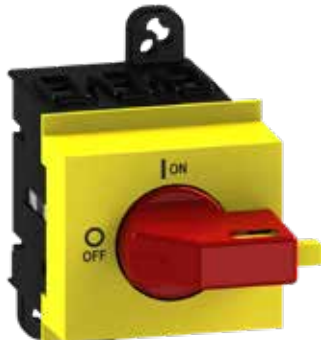


配电盘/箱体- 1

旋钮内置箱体(不外露)P25/P25.9

无挂锁、ON-OFF指示

with front plate without padlock



配电盘/箱体- 2

旋钮内置箱体(不外露)简易带锁旋钮

(EVS) ON-OFF指示面板

with lockout handle for 1 or 2 padlocks

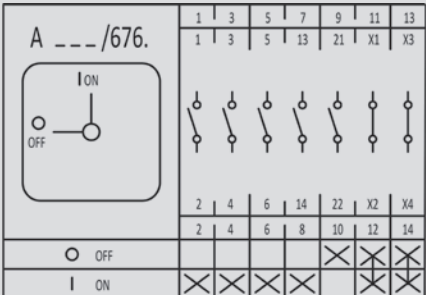
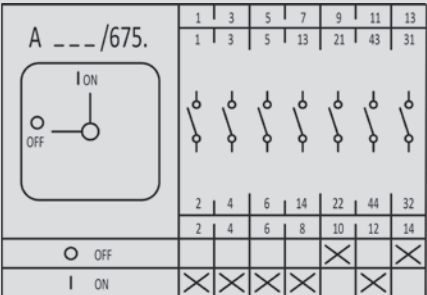
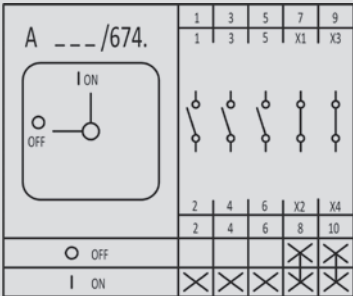
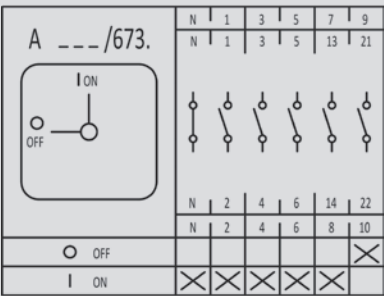
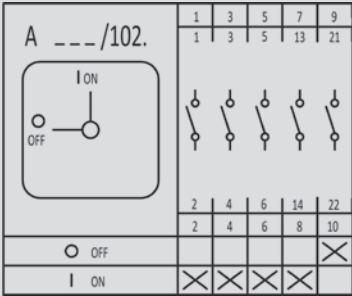
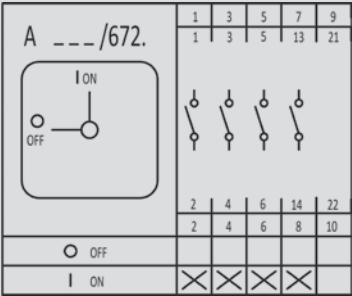
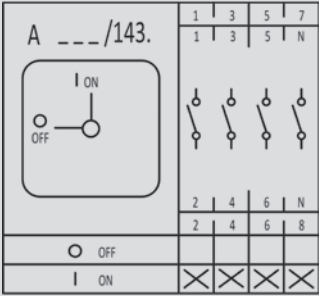
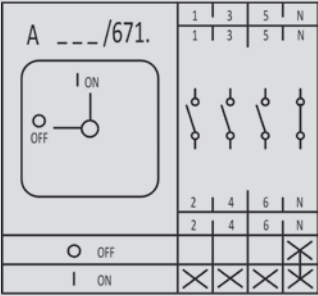
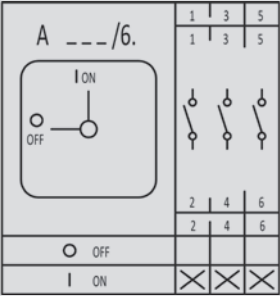
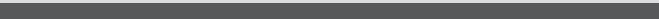
安装选项

Mounting Options

- 门板轴心对接器件组 / 互锁
Door coupling and door interlock
- 对接器件组
Cover coupling
- 配电盘安装
Distribution board mounting

接点图

CONTACT DIAGRAMS

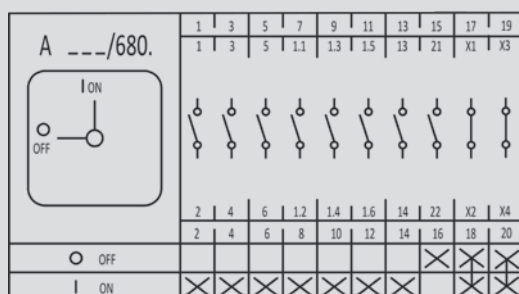
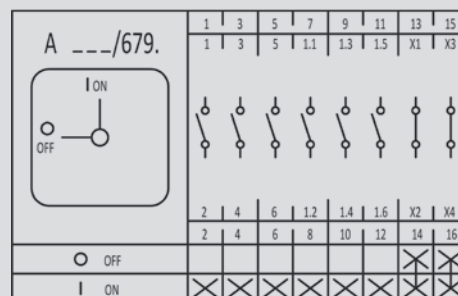
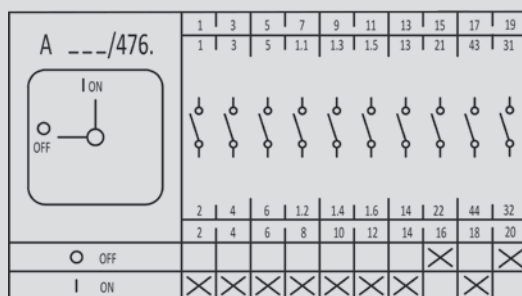
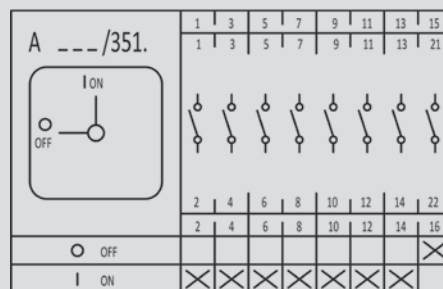
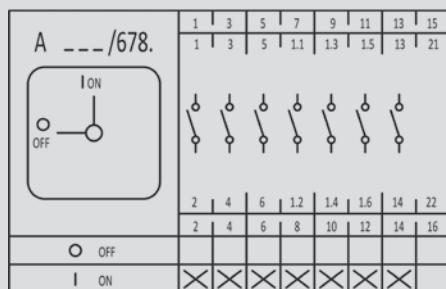
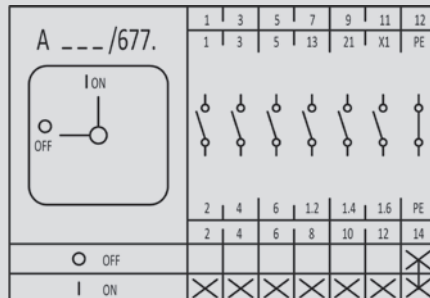
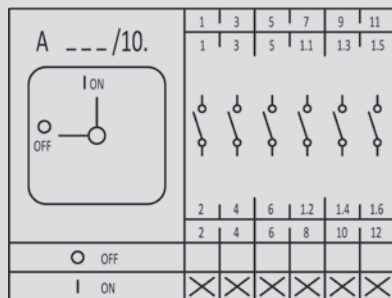




触点闭合状态
contact closed



无遮断切换
contact closed without interruption



客制化开关

Your individual switch

为您的项目量身定制。请联系我们！

Tailored for your project. Contact us!

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规格				Specifications										ML0-016		ML0-032		ML1-016		ML1-025		ML1-032		ML1-040	
断开开关欧规参数 IEC 60947-3, EN 60947-3, GB/T14048				Disconnect Switches acc. IEC 60947-3, EN 60947-3, GB/T14048																					
额定工作电流 I _e		AC-21A/B		Rated operating current I _e		AC-21A/B		A	25/-		32/-		16/-		25/-		32/-		40/-						
额定电压 U _e				Rated voltage U _e				V	690		690		690		690		690		690						
额定不间断电流 I _u =I _{th}				Rated uninterrupted current (open) I _u =I _{th}				A	25		32		16		25		32		40						
常规封闭热电流 I _{the}				Conventional enclosed thermal current I _{the}				A	25		32		16		25		32		40						
类别		AC-22A/B		Service category		AC-22A/B																			
690 V 3~				690 V 3~				A	25/-		32/-		16/-		25/-		32/-		40/-						
额定绝缘电压 U _i (III/3)				Rated insulation voltage U _i (III/3)				V	400		400														
额定绝缘电压 U _i (III/2)				Rated insulation voltage U _i (III/2)				V	690		690		690		690		690		690						
额定冲击耐受电压 U _{imp}				Rated impulse withstand voltage U _{imp}				kV	6		6		6		6		6		6						
断开和关合能力				Making/breaking capacity																					
类别		AC-3		Service category		AC-3																			
马达开关		230 V 3~		Motor switch		230 V 3~		kW / A	5,0	18,5	5,5	20,0	3,0	12,0	5,5	20,0	5,5	20	7,5	27					
用于可选开关		400 V 3~		for optional		400 V 3~		kW / A	7,5	15,5	9,0	18,5	5,5	12,0	7,5	16,0	9	18	11	22					
690 V 3~				switching		690 V 3~		kW / A	9,5	11,2	11,5	13,5	5,5	7,0	7,5	9,0	9	10	11	13					
类别		AC-23A/B		Service category		AC-23A/B																			
马达开关		230 V 3~		Motor switch		230 V 3~		kW / A	5/-	18,5	5,5/-	20,0	5,0/-	16,0	7,5/-	25,0	9/-	32	11/-	38					
主开关		400 V 3~		Main switch		400 V 3~		kW / A	7,5/-	15,5	9/-	18,5	9/-	16,0	11/-	22,0	11/-	22	15/-	29					
维护开关		690 V 3~		Maintenance switch		690 V 3~		kW / A	9/-	10,5	11/-	12,8	9/-	10,0	11/-	13,0	11/-	13	15/-	17					
额定条件				Rated conditional				kA	10 (4-pl.)		10 (4-pl.)		10 (3-pl.)		10 (3-pl.)		10 (3-pl.)		10 (3-pl.)						
短路电流				short-circuit current																					
额定短时耐受电流 I _{cw 1 sec}				Rated short-time				kA																	
				with stand current I _{cw 1 sec}																					
最高 备用保险丝最大级别 gG				Max. Back up fuse Service class gG				A	35		35		50		50		50		50						
终端横截面				Terminal cross section																					
单芯或多芯带护套的细绞线	最小/最大	single or multi-core		min./max.				mm ²	1,5 - 10		1,5 - 10		2,5 - 16		2,5 - 16		2,5 - 16		2,5 - 16						
	最小/最大	finely stranded with sleeve		min./max.				mm ²	1,5 - 6		1,5 - 6		1,5 - 10		1,5 - 10		1,5 - 10		1,5 - 10						
端子螺丝				Terminal screws				M	M4		M4		M4		M4		M4		M4						
端子螺丝扭矩				Torque terminal screws				NM	1,2		1,2		1,2		1,2		1,2		1,2						
机械寿命切换周期				Mechanical life																					
				switching cycles					50.000		50.000		30.000		30.000		30.000		30.000						
环境温度		打開		Ambient temperature		open		°C	+50/-25		+50/-25		+75/-25*		+75/-25*		+75/-25*		+75/-25*						
高温/低温		封装的		max./min.		encapsulated		°C	+40/-25		+40/-25		+40/-25		+40/-25		+40/-25		+40/-25						
符合 UL/CSA 手动电机控制器				Manual Motor Controller							UL508		UL 60947		UL 60947		UL 60947		UL 60947						
				according UL and CSA									C22.2 No. 0-M91 C22.2 No. 14-05 UL 508 Ed17		C22.2 No. 60947-4-1-14		C22.2 No. 60947-4-1-14		C22.2 No. 60947-4-1-14						
				General purpose 3-phase									-4-1		-4-1		-4-1		-4-1						
通用三相额定工作电流				rated operational current				A			32		16		25		32		40						
								V			600		600		600		600		600						
手动电机控制器 (额定马力)				Manual Motor Controller (Horse power ratings)																					
220/240 V 3~				Motor 3-phase		220/240 V 3~		hp			7,5		7,5		7,5		7,5		10						
440/480 V 3~						440/480 V 3~		hp			15		10		10		10		20						
550/600 V 3~						550/600 V 3~		hp			20		10		10		10		20						
手动电机控制器 (额定马力)				Manual Motor Controller (Horse power ratings)																					
(单极)		110/120 V		(1 pole)		110/120 V		hp			1,5		1		1		1		1,5						
(双极)		220/240 V		(2 pole)		220/240 V		hp			3		2		2		2		3						
环境温度		打開		Ambient temperature		open		°C					+60		+60		+60		+60						
最高/最低		封装的		max./min.		encapsulated		°C					+45		+45		+45		+45						
导体横截面				Cable cross section				AWG-No			16 - 10		14 - 8		14 - 8		14 - 8		14 - 8						

ML1-050		ML1-063		ML2-063	ML2-080	ML3-125	ML4-125	ML4-160	ML5-200	ML5-250	ML6-315	ML6-400	ML6-500	ML7-630
50/-		63/-		63/-	80/-	125/-	125	160	200	250	315	400	500	630
690		690		690	690	690	415 (***690)	415 (***690)	415 (***690)	415 (***690)	415 (***690)	415 (***690)	415 (***690)	415 (***690)
50		63		63	80	125	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
50		50		63	63	100								
							(bei 415VAC)	(bei 415VAC)	(bei 415VAC)	(bei 415VAC)	(bei 415VAC)	(bei 415VAC)	(bei 415VAC)	(bei 415VAC)
50/-		63/-		63/-	-/80	-/125	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
				690	690	690	800	800	800	800	1000	1000	1000	1000
690		690												
6		6		6	6	6	8	8	8	8	12	12	12	12
7,5	27	7,5	27	15	18,5	22								
11	22	11	22	22	30	37								
11	13	11	13	22	30	45								
11/-	38	11/-	38	-/18,5	-/22	-/25	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
15/-	29	15/-	29	-/30	-/37	-/45	63/63-	80/80	100/100	132/132	160/160	220/220	280/280	280/280
15/-	17	15/-	17	-/30	-/37	-/45	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
10 (3-pl.)		10 (3-pl.)		2,1	2,1	3,4								
		5		0,765	1,76	1,5	7,0	7,0	9,0	9,0	13,0	13,0	13,0	13,0
50		50		63	80	125	125	160	200	250	315	400	500	630
2,5 - 16		2,5 - 16		2,5 - 35	2,5 - 35	6 - 70	35 - 50**	50 - 95**	70 - 95**	95 - 150**	150-240**	185-240**	240**	2 x 150
1,5 - 10		1,5 - 10		1,5 - 25	1,5 - 25	6 - 50								2 x 300
M4		M4		M5	M5	M6	M8	M8	M10	M10	M10	M10	M12	M12
1,2		1,2		2,5	2,5	3	9	9	20	20	20	20	20	40-45
30.000		30.000		30.000	30.000	30.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000
+75/-25*		+75/-25*		+50/-25	+50/-25	+40/-25	+40/-25	+50/-25	+40/-25	+40/-25	+40/-25	+40/-25	+40/-25	+40/-25
+40/-25		+40/-25		+40/-25	+40/-25	+40/-25	+35	+35	+35	+35	+35	+35	+35	+35
UL 60947				UL 60947	UL 60947	UL 60947								
-4-1				-4-1	-4-1	-4-1								
C22.2				C22.2	C22.2	C22.2								
No.				No.	No.	No.								
60947-4-1-14				60947-4-1-14	60947-4-1-14	60947-4-1-14								
50				63	80	125								
600				600	600	600								
10				15	20	25								
20				30	40	50								
20				30	40	50								
1,5				3	5	7,5								
3				7,5	10	15								
+60				+70	+70	+75								
+45				+50	+50	+55								
14 - 8				14 - 2	14 - 2	10 - 1/0								



运作方式

How we work

技术上合理的解决方案
满足定制要求

Technically sound solutions
customized requirements.

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* Verwendung von Leitern mit einer zulässigen Temperatur von mind. 90°C

** Anschluß mit Rohrkabelschuh, zulässige Höchstbreite 25 mm

*** Auf Anfrage für 690 V erhältlich

应用实例

APPLICATION EXAMPLES

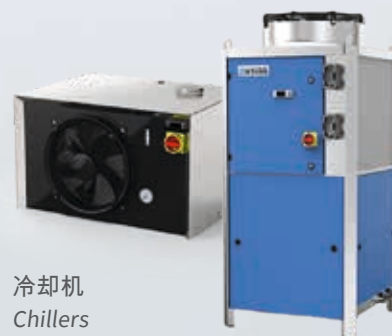


通风设备
Ventilation Equipment

液压升降机
Hydraulic Ramp



输送机和分拣机
Conveyors & Sorters



冷却机
Chillers

专属配件

ACCESSORIES



中性触点 – N端子 – PE端子
Neutral switched – N-terminal – PE-terminal – Switching contact



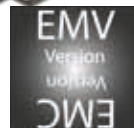
辅助接点 1NO + 1NC
2KL Anreihklemme 2-polig / 2KL Terminal 2-pole



可调式驱动轴, 门板对接器件组
Extension shafts in combination with door coupling



EMC 屏蔽解决方案
EMC shielding solution



外壳系列 89xx
Enclosures series 89xx



附加前面板
Additional front plates



带锁操作
Key operation

公司简介

OUR COMPANY

MERZ Schaltgeräte GMBH + CO KG
延续积累了 70 年的开关专业基础,专注于行动
配电、电气测试设备、钣金技术和电气开关柜四
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