

识别 / Identification

标准	Standard	SFB 400/x	滤波器类型	Type of filter	3~ Sine Filter
			系列	Model Family	SFB






技术数据 / Technical Data

相数	No. of phase				3
防护等级	Protection class				III0
额定电压绝缘	Rated voltage isolation	[V]			0 – 440 AC 0 – 520 AC
纹波频率	Ripple Frequency	[kHz]			3 – 8 4 – 8
额定频率	Rated frequency	[Hz]			0 – 150 SFB 400/4 – SFB 400/150
					0 – 60 SFB 400/180 – SFB 400/480
电感偏差	L tolerance	[%]			± 10
测试电压	Test voltage	[kV]			4.0 2 sec
最大允许电机电缆长度 (依靠变频器的型号)	Max. allowable length of the motor cables (depending on converter type)	[m]			Ca. 300 (非屏蔽 / unshielded) Ca. 200 (屏蔽 / shielded)

运行条件 / Operating conditions

防护等级	Protection index				IP 00
环境温度	Ambient temperature	[°C]			-10.... +40
储存温度	Storage temperature	[°C]			-25 +70 (EN 60721-3-1 ; 1K3)
储存温度	Transport temperature	[°C]			-40 +85 (EN 60721-3-2 ; 2K3)
过载能力	Overload capability				1.5 倍额定电流每小时 1 分钟 / 1.5 times rated current for 1 minute per hour
气候类别	Climatic category				25/085/21 (EN 60068-1)
湿度	humidity				3K3 (没有冷凝, 中间相应湿度 85%) (Without condensation, medium relative humidity 85%)
可燃等级	Class of flammability				UL 94V-2 或更好 / UL 94V-2 or better
温度等级 VDE	Class ISO °C VDE				H (180°C)
温度等级 UL	Class ISO °C UL				Class 180
冷却类型	Type of cooling				AN
运行条件	Operating conditions				DB
并联	Parallel connection				是 / yes (90% 单个负载) / (90% Single load)
过电压种类	Overvoltage category				3 >2000m = 2 (EN 61800-5-1)
抗震性	Vibration resistance				Transport 2M2 (IEC/EN 60721-3-2)
污染度	Degree of pollution				2 (EN 61800-5-1)
MTBF	MTBF	[h]			> 400.000 @ 40°C / 400V

标准 / Standards

类型 / Type:	日期 / Date	符号 / Signs
EN 61558-1 +AC+A1 EN 61558-2-20	2005 + 2006 + 2009 2011	 
UL 5085-1-2 CSA 22.2 No. 6.6	2006, Edition 1	 E 219022 仪 / Only: SFB 400/4 – SFB 400/180
EAC	2015	
SJ/T 11363-2006 (China-RoHS)	2006	
RoHS 2011/65/EU RoHS 2015/863/EU	2011 2015	

注意 / Notes

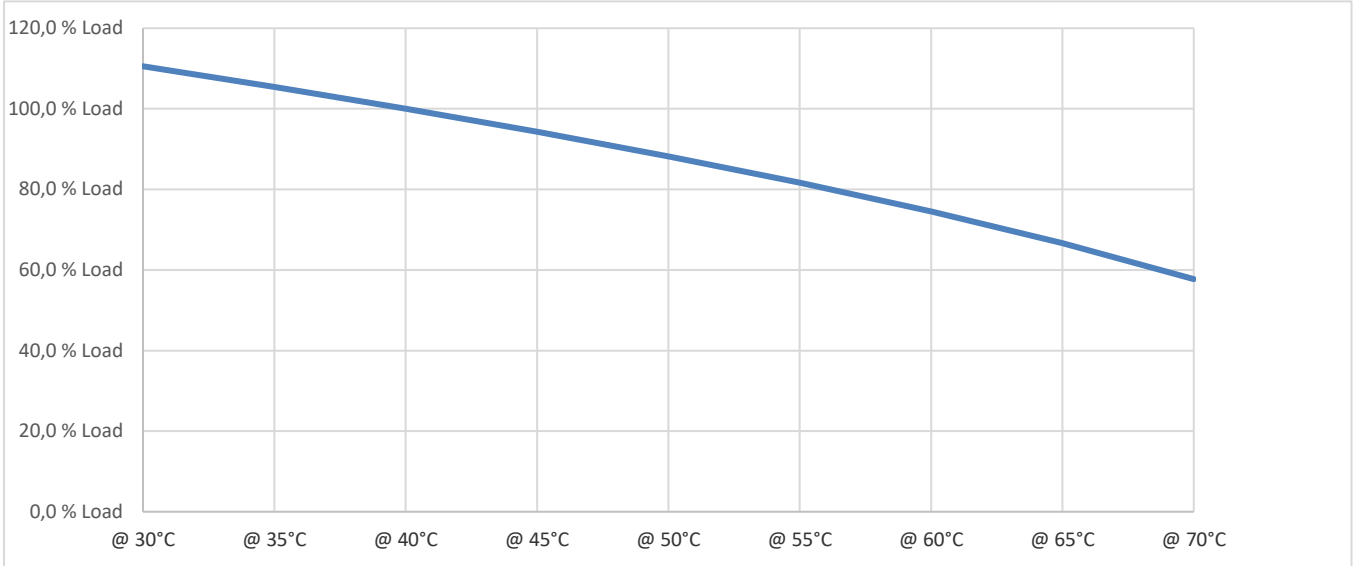
技术规范是典型的
由于材料和生产误差它们可能改变

Technical specifications are typical.
They can vary due to material and production tolerances.

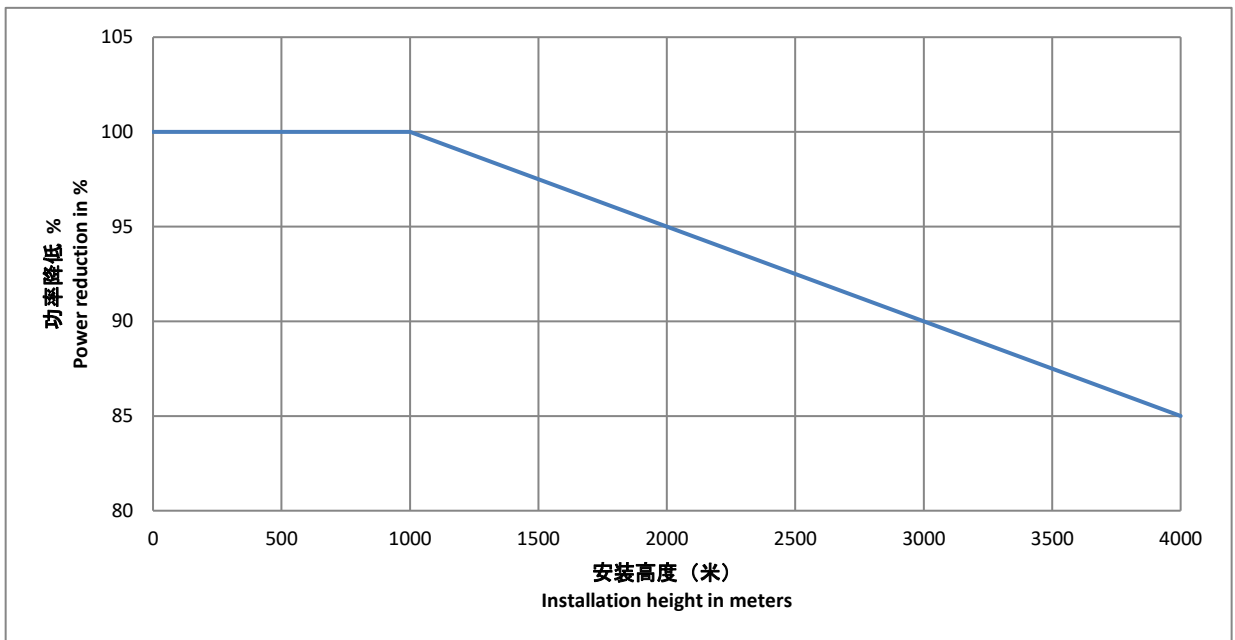
其它数据表 / Other Technical Data

	额定电流 @ 480V	线性度达到	电感 L	电容值 C 三角接	绕组电阻	短路电压 @ 400V & 50Hz	损耗
	Rated current @ 480V	Linear up to	Inductance L	Capacitance C Delta connection	Typ. Winding resistance	Short circuit voltage @ 400V & 50Hz	Power Loss
	[A]	[A]	[mH]	[μ F]	[mOhm]	[%]	[W]
SFB 400/4	4.0	6.0	11.0	1.5	253	6.0	50
SFB 400/10	10.0	15	5.10	3.3	75.2	7.0	100
SFB 400/16,5	16.5	24.8	3.07	3.3	32.7	6.9	110
SFB 400/23,5	23.5	35.3	2.50	3.3	32.1	8.0	125
SFB 400/32	32.0	48.0	2.00	3.3	16.1	8.7	140
SFB 400/37	37.0	55.5	1.70	3.3	14.3	8.6	210
SFB 400/48	48.0	72.0	1.20	3.3	7.28	7.8	240
SFB-N 400/61	61.0	91.5	1.00	7.05	5.42	8.3	280
SFB-N 400/72	72.0	108	0.95	7.05	5.32	9.3	300
SFB-N 400/90	90.0	135	0.80	7.05	3.03	9.8	290
SFB 400/115	115	172.5	0.70	7.05	3.25	11.0	460
SFB 400/150	150	225	0.50	14.1	2.20	10.2	530
SFB 400/180	180	270	0.40	14.1	1.50	9.8	580
SFB 400/250	250	375	0.35	22.5	1.33	11.9	810
SFB 400/440	440	660	0.14	47.0	0.69	8.4	1400
SFB 400/480	480	720	0.14	66.0	0.69	9.1	1550

降级 / Derating

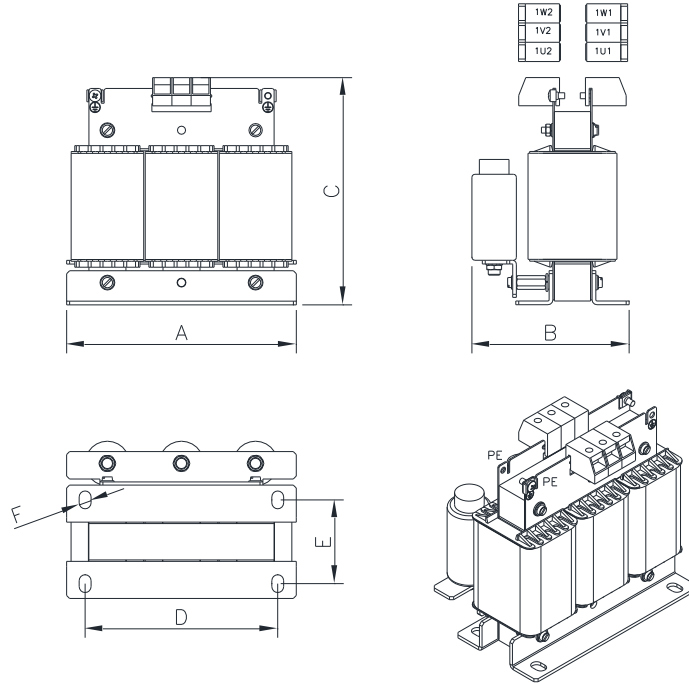


功率降低 / Power reduction

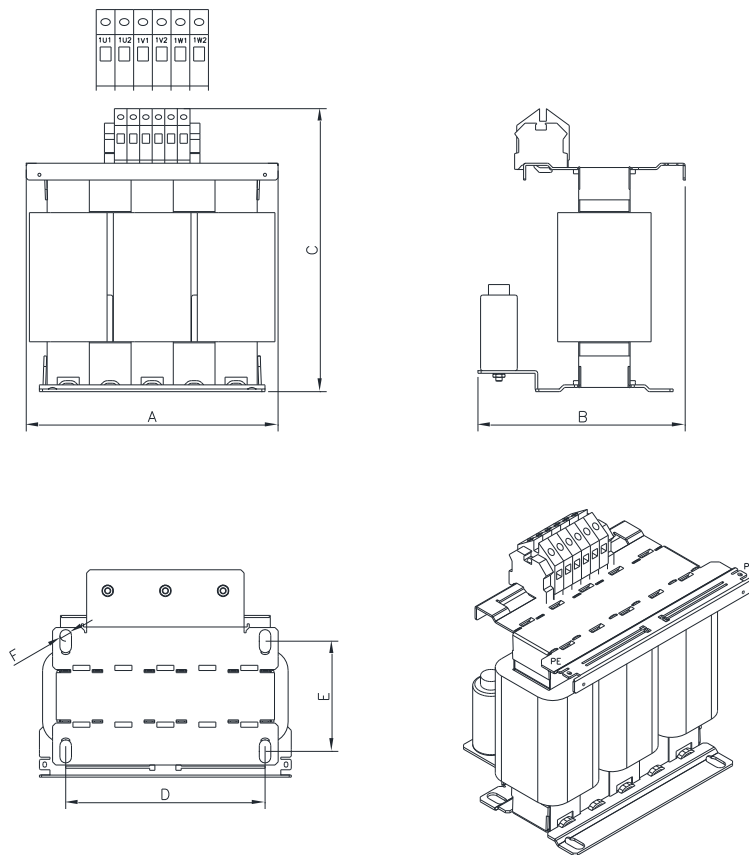


设计图 / Construction drawing

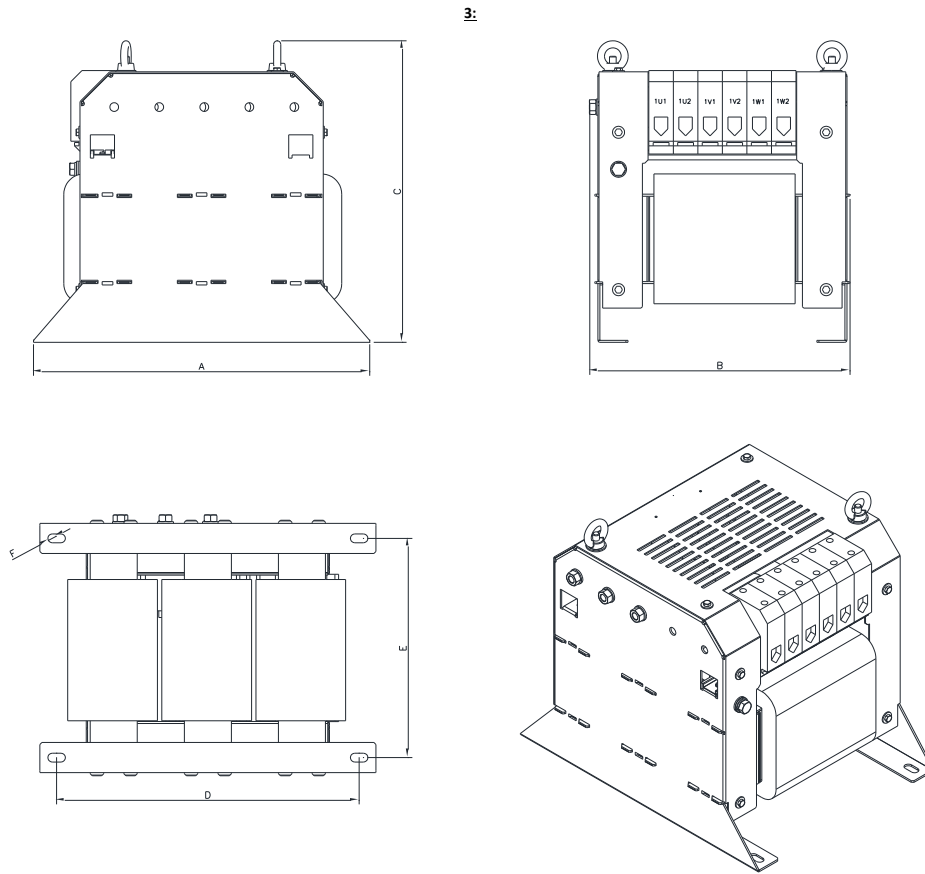
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2:



设计图 / Construction drawing

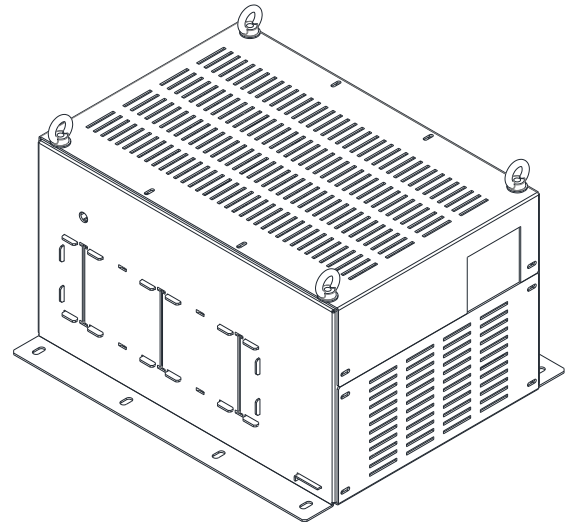
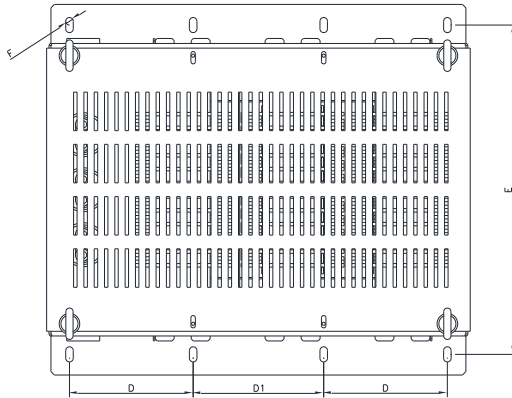
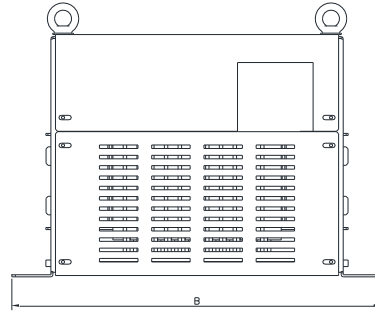
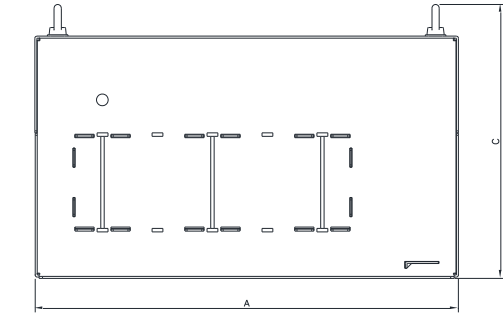


尺寸 / Dimensions

	设计图 Construction drawing	A	B	C	D	E	F
		[mm]	[mm]	[mm]	[mm]	[mm]	[\varnothing]
SFB 400/4	1	155	105	160	130	56.5	8.0
SFB 400/10	1	155	120	160	130	71.5	8.0
SFB 400/16,5	1	190	160	195	170	67	8.0
SFB 400/23,5	2	240	190	280	190	95	11
SFB 400/32	2	240	200	280	190	105	11
SFB 400/37	2	240	210	280	190	115	11
SFB 400/48	2	240	220	280	190	125	11
SFB-N 400/61	2	300	228	315	240	133	11
SFB-N 400/72	2	300	250	320	240	145	11
SFB-N 400/90	2	300	270	320	240	171	11
SFB 400/115	2	360	210	420	264	124.5	10
SFB 400/150	2	360	225	422	264	140	10
SFB 400/180	2	360	235	444	264	155	10
SFB 400/250	3	500	400	450	450	325	13

设计图 / Construction drawing

SFB 400/440

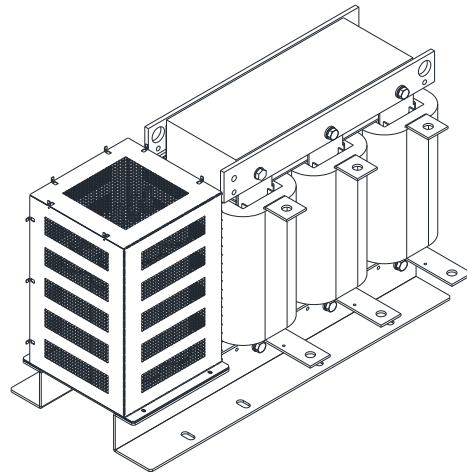
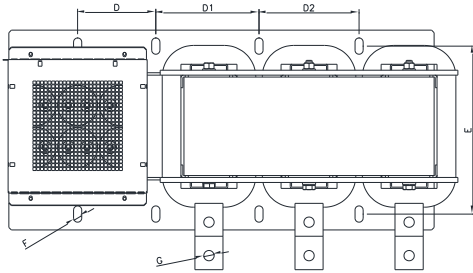
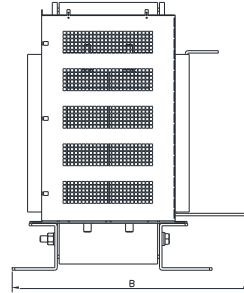
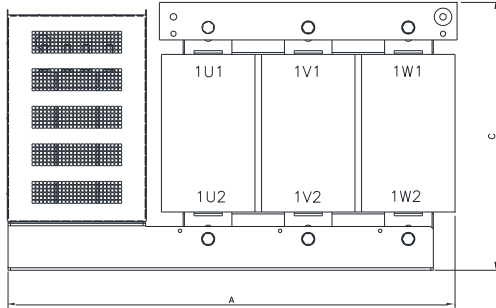


尺寸 / Dimensions

	A	B	C	D	D1	E	F
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[∅]
SFB 400/440	627	532	398	180	190	472	11

设计图 / Construction drawing

SFB 400/480



尺寸 / Dimensions

	A	B	C	D	D1	D2	E	F	F
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[Ø]	[Ø]
SFB 400/480	730	370	410	125	165	160	266.5	13.0	16.5

额外信息 / Additional Information

	端子 / Terminals			扭矩 / Torque			-	
	螺钉端子 Screw terminal	铜接头 Copper connection	PE-端子 PE Terminal	螺栓端子 Screw terminal	铜接头 Copper connection	PE-端子 PE Terminal	重量 Weight (Net)	线圈材料 Winding material
	[mm ²]	-	-	[Nm]	[Nm]	[Nm]	[kg]	-
SFB 400/4	4.0	-	M4	1.5 - 1.8	-	1.8	4.0	CU
SFB 400/10	4.0	-	M4	1.5 - 1.8	-	1.8	6.1	CU
SFB 400/16.5	10.0	-	M4	1.2 - 2.0	-	1.8	9.5	CU
SFB 400/23.5	16.0	-	M6	2.0 - 4.0	-	6.0	14.4	CU
SFB 400/32	16.0	-	M6	2.0 - 4.0	-	6.0	19.7	CU
SFB 400/37	16.0	-	M6	2.0 - 4.0	-	6.0	21.3	CU
SFB 400/48	16.0	-	M6	2.0 - 4.0	-	6.0	26.2	CU
SFB-N 400/61	35.0	-	M6	2.5 - 5.0	-	6.0	35.0	CU
SFB-N 400/72	50.0	-	M6	6.0 - 8.0	-	6.0	39.0	CU
SFB-N 400/90	50.0	-	M6	6.0 - 8.0	-	6.0	53.5	CU
SFB 400/115	95.0	-	M8	8.0 - 12.0	-	12.0	67.5	CU
SFB 400/150	95.0	-	M8	8.0 - 12.0	-	12.0	79.0	CU
SFB 400/180	150.0	-	M8	14.0 - 20.0	-	12.0	88.7	CU
SFB 400/250	240.0	-	M12	10.0 - 20.0	-	30.0	157.5	CU
SFB 400/440	-	30 x 5	M16	-	60.0	60.0	192.5	CU
SFB 400/480	-	45 x 4	M10	-	60.0	20.0	220.0	CU

端子额外信息 / Additional Information Terminals

端子 Terminal	[mm ²]	4	10	16	35	50	95	150	240	螺钉端子 / Screw Terminal
输入 Input	[mm ²]	0.2 - 6.0	0.2 - 16	2.5 - 25	2.5 - 50	16 - 50 / 25 - 50	25 - 95	35 - 150	70 - 240	单根线 (固体) / 标准的 Single wire (solid) / stranded
	[mm ²]	0.2 - 6.0 / 0.2 - 4.0	0.2 - 10	2.5 - 25 / 2.5 - 16	2.5 - 35	25 - 50	25 - 95	35 - 150	70 - 240 / 70 - 185	灵活的 / 带电缆和套管灵活的 Flexible / flexible with cable and sleeves
输出 Output	AWG	22 - 10	22 - 10	10 - 6	12 - 2	6 - 1/0	2 - 4/0	300 - 2	2/0 - 500	
	[mm]	9	14	15	20	27	30	38	38	剥离长度 / Stripping length
-	有槽得 / Slotted	有槽得 / Slotted	有槽得 / Slotted	内六角头 / Hexagon socket	内六角头 / Hexagon socket	内六角头 / Hexagon socket	内六角头 / Hexagon socket	内六角头 / Hexagon socket	内六角头 / Hexagon socket	螺钉头 / Screw head
-	M3	M4	M5	M6	M6	M8	M8	M10		螺纹 / Screw threading

安装指导 / Mounting directions

所有正弦滤波器的安装方向都是立式
其它方向请咨询

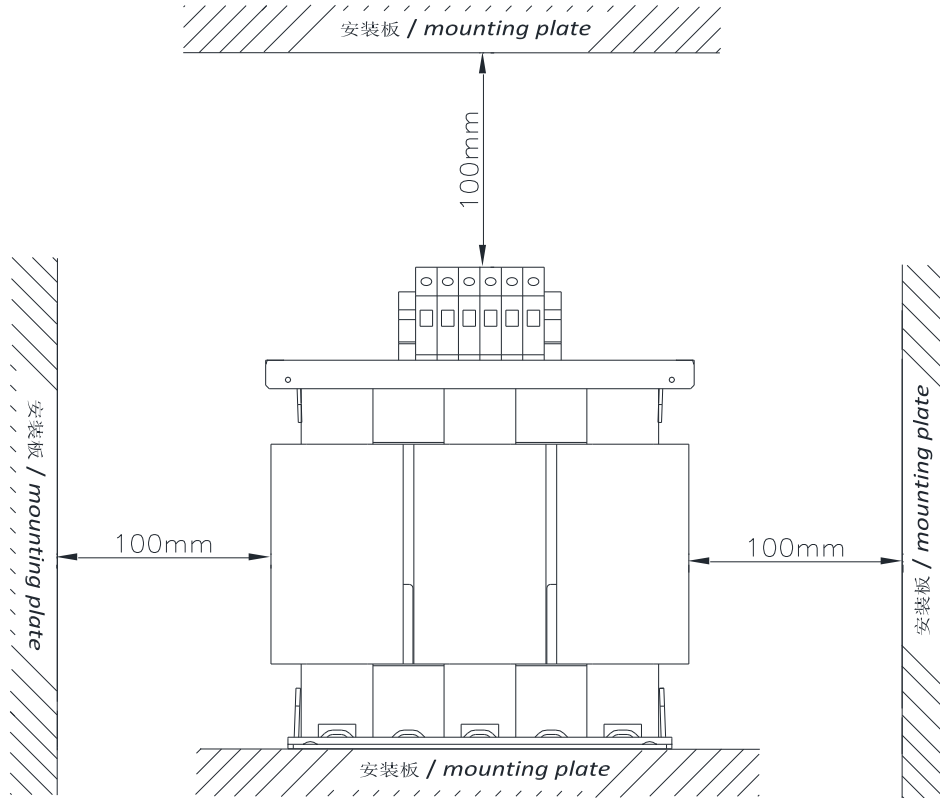
The Mounting directions all Sine filter must be standing position.
For any other position please consult.

备注 / Notes

图纸中的技术规范不具有约束力。
通用公差符合 DIN 2768-m。
保留更改权力

Technical specifications in the drawing are not binding.
General tolerance to DIN 2768-m.
Subject to change.

可用空间 / Free spaces



安全通知 / Safety notices

在操作设备之前，请仔细阅读这些警告和安全注意事项。本设备的安装仅供合格人员使用。当设备出现故障或损坏时，应立即切断电源电压，送生产车间检查。设备不包含任何服务部件。指定的数据仅服务于产品描述，不被理解为法律意义上的授权特征。

正确使用

该设备设计用于安装在接线柜中，并于工业控制系统，机床，风机和电梯等变频器配套使用。请勿在飞机，火车或是核设施控制系统中使用此设备，因为故障可能导致严重的伤害或是死亡。

安装

安装应按当地条件、有关规定、国家事故预防规定和工程技术规程进行。这电气设备是为安装在电气系统或机器上而设计的部件，它满足低电压指令要求（2014/35/EU）。必须保持与相邻部件之间所需的最小距离防止冷却系统受到阻碍！

Please read these warnings and safety notices carefully before operating the device. Installation of the device is reserved for competent and qualified personnel. In the event of malfunctions or damage to the device, switch off the supply voltage immediately and send to the production plant for inspection. The device does not contain any service parts. The specified data serve the product description alone and are not understood as warranted characteristics in the legal sense.

Proper use

This device is designed for installation in a wiring cabinet and for general use with a frequency inverter such as industrial control systems, machine tools, wind turbines and elevators for example. Do not use this device in the control systems of aircraft, trains, or nuclear facilities where malfunction may result in severe injury or death.

Installation

Installation should be performed in accordance with local conditions, relevant provisions, national accident prevention regulations and the accepted rules of engineering. This electrical equipment is a component designed for installation in electrical systems or machines and it satisfies the requirements of the Low Voltage Directive (2014/35/EU). The required minimum distance from the adjacent parts must be maintained in order to prevent the cooling system from being impeded!