

识别 / Identification

标准	Standard	LR3 40-4/x	电抗器类型	Type of choke	3~ Line Reactor
			系列	Model Family	LR3





技术数据 / Technical Data

相数	No. of phase			3
防护等级	Protection class			III0
额定电压	Rated voltage	[V]		690 AC (UL = max. 600V)
额定频率	Rated frequency	[Hz]		50 – 60
短路电压	Short circuit voltage	[%]		4 @ 400V
电压降	Voltage drop	[V]		9.4 @ 50 Hz 11.1 @ 60 Hz
电感偏差	L tolerance	[%]		± 10
测试电压	Test voltage	[kV]		4.0 2 sec

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			25/100/21 (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			B (130°C) LR3 40-4/2 – LR3 40-4/4 F (155°C) LR3 40-4/6 – LR3 40-4/115 LR3 40-4/200 – LR3 40-4/400 H (180°C) LR3 40-4/125 – LR3 40-4/180 LR3 40-4/500 – LR3 40-4/1600
温度等级 UL	Class ISO °C UL			Class 130 LR3 40-4/2 – LR3 40-4/4 Class 155 LR3 40-4/6 – LR3 40-4/115 LR3 40-4/200 – LR3 40-4/400 Class 180 LR3 40-4/125 – LR3 40-4/180 LR3 40-4/500 – LR3 40-4/1600
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]		> 500.000 @ 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 103521
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

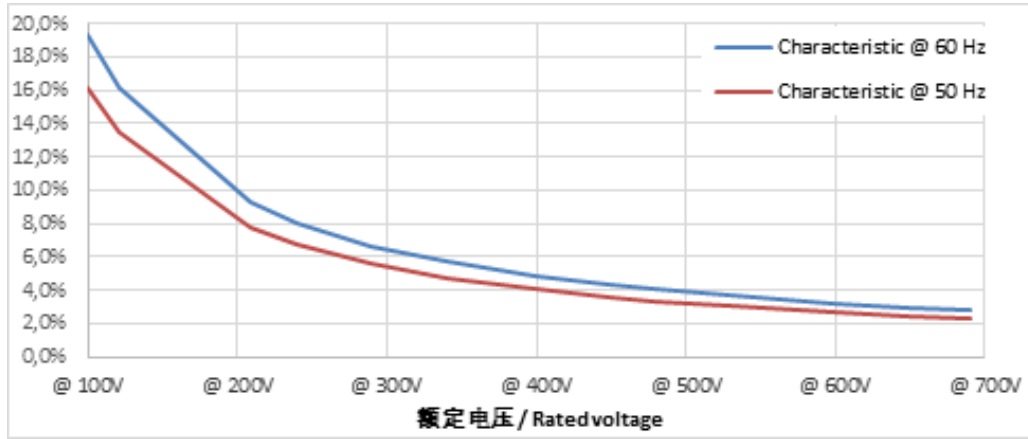
	额定电流	额定功率		线性度达到	电感 L	绕组电阻	损耗*
	Rated current	Rated Power		Linear up to	Inductance L	Typ. Winding resistance	Power Loss*
	[A]	[kW]	[HP]	[A]	[mH]	[mOhm]	[W]
LR3 40-4/2	2	1.1	1.5	3	14.70	767.1	13.3
LR3 40-4/4	4	2.2	3	6	7.35	266.6	17.9
LR3 40-4/6	6	3	4	9	4.90	170.1	27.0
LR3 40-4/8	8	4	5	12	3.68	82.6	22.9
LR3 40-4/10	10	5.5	7.5	15	2.98	62.9	27.7
LR3 40-4/16	16	7.5	10	24	1.84	42.9	52.4
LR3 40-4/20	20	11	15	30	1.47	17.9	35.6
LR3 40-4/25	25	15	20	37.5	1.18	12.2	37.3
LR3 40-4/30	30	16.6	22	45.0	0.98	7.86	37.5
LR3 40-4/35	35	18.5	25	52.5	0.84	8.19	51.3
LR3 40-4/40	40	22	30	60.0	0.74	8.23	65.1
LR3 40-4/45	45	25	35	67.5	0.65	5.91	59.6
LR3 40-4/50	50	30	40	75.0	0.59	5.91	74.9
LR3 40-4/63	63	35	45	94.5	0.47	5.35	111.6
LR3 40-4/70	70	37	50	105	0.42	5.39	127.9
LR3 40-4/80	80	45	60	120	0.37	2.90	93.7
LR3 40-4/90	90	50	70	135	0.33	1.79	145.4
LR3 40-4/100	100	55	75	150	0.30	1.43	147.0
LR3 40-4/115	115	64	85	172.5	0.26	1.32	158.8
LR3 40-4/125	125	75	100	180	0.24	1.23	173.8
LR3 40-4/160	160	90	125	240	0.19	0.75	203.2
LR3 40-4/180	180	110	150	270	0.17	0.56	215.1
LR3 40-4/200	200	132	175	300	0.15	0.57	285.6
LR3 40-4/250	250	160	200	375	0.12	0.47	223.9
LR3 40-4/300	300	200	250	450	0.098	0.36	258.6
LR3 40-4/400	400	250	300	600	0.074	0.24	330.5
LR3 40-4/500	500	315	400	750	0.059	0.16	342.7
LR3 40-4/630	630	400	500	945	0.047	0.11	633.0
LR3 40-4/710	710	450	600	1065	0.042	0.089	805.9
LR3 40-4/800	800	500	700	1200	0.037	0.069	941.2
LR3 40-4/1000	1000	630	800	1500	0.030	0.070	547.2
LR3 40-4/1200	1200	740	1000	1800	0.025	0.058	634.6
LR3 40-4/1400	1400	870	1100	2100	0.021	0.049	821.3
LR3 40-4/1600	1600	1100	1400	2400	0.019	0.039	1015.8

备注 / Notes

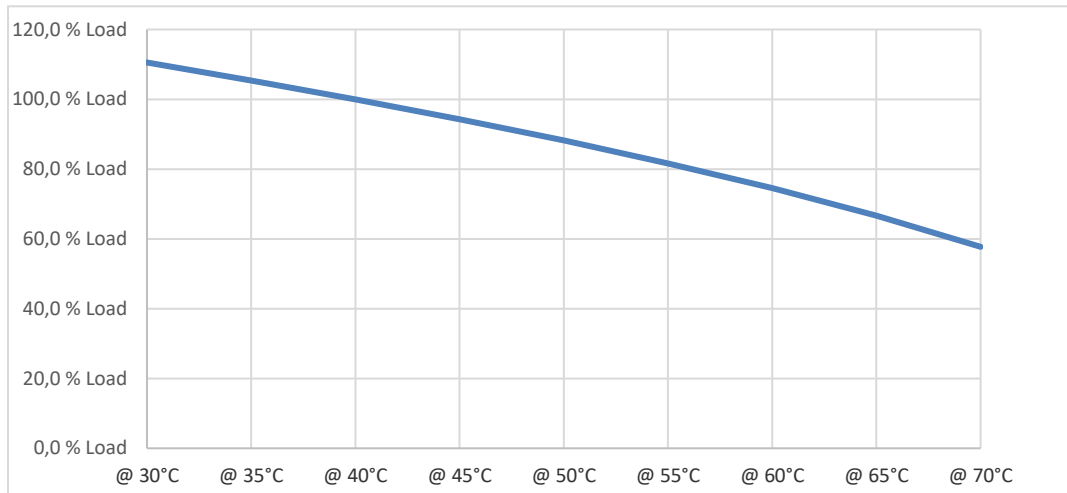
* 50 Hz 正弦激励条件下的典型损耗功率。

* Typical power loss under sinusoidal excitation (50 Hz).

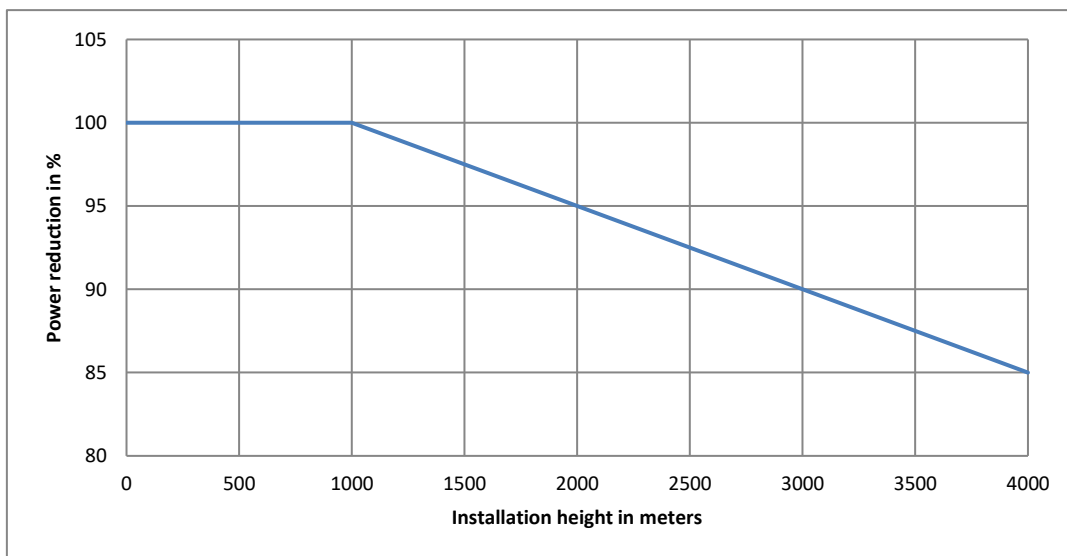
电源质量英国评级 / Power Quality uk rating



降级 / Derating

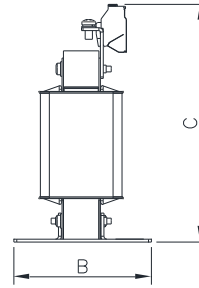
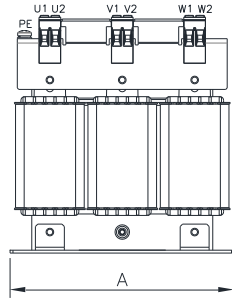


功率降低 / Power reduction



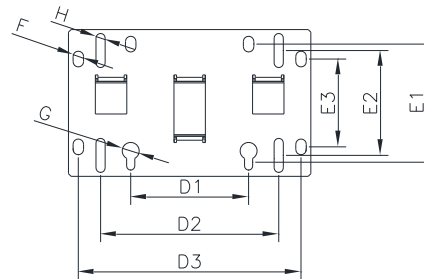
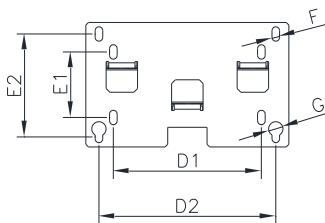
设计图 / Construction drawing

1

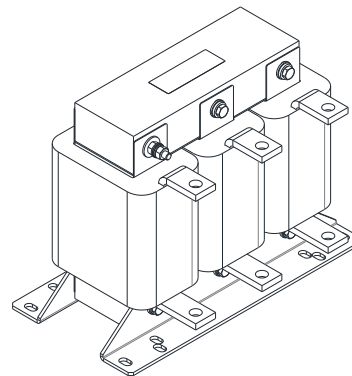
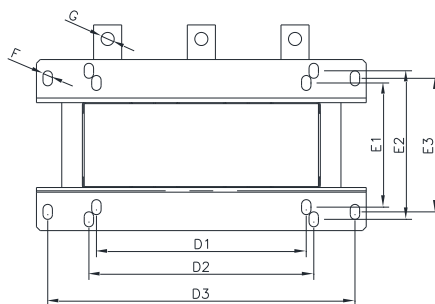
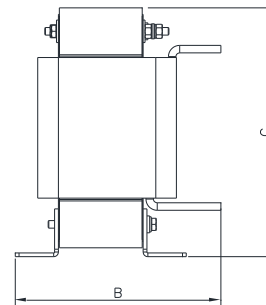
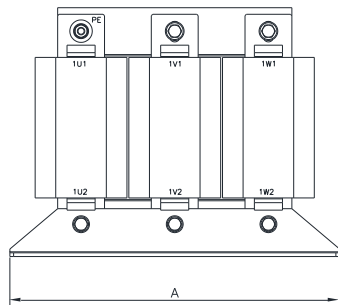


LR3 40-4/2
-
LR3 40-4/35

LR3 40-4/40
-
LR3 40-4/80



2



尺寸 / Dimensions

	设计图 Construction drawing	A	B	C	D1 x E1	D2 x E2	D3 x E3	F	G	H
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[Ø]	[Ø]	[Ø]
LR3 40-4/2	1	74	56	100	50 x 35	65 x 40	-	4.8	-	-
LR3 40-4/4	1	95	70	116	56 x 47	71 x 54	-	4.8	-	-
LR3 40-4/6	1	95	70	116	56 x 47	71 x 54	-	4.8	-	-
LR3 40-4/8	1	120	85	137	90 x 39	105 x 68	-	4.8	10	-
LR3 40-4/10	1	120	85	137	90 x 39	105 x 68	-	4.8	10	-
LR3 40-4/16	1	120	95	137	90 x 49	105 x 80	-	4.8	10	-
LR3 40-4/20	1	150	95	162	113 x 50	135 x 77.5	-	5.8	11	-
LR3 40-4/25	1	155	110	167	113 x 65	135 x 92.5	-	5.8	11	-
LR3 40-4/30	1	155	110	167	113 x 65	135 x 92.5	-	5.8	11	-
LR3 40-4/35	1	155	110	167	113 x 65	135 x 92.5	-	5.8	11	-
LR3 40-4/40	1	185	102	196	90 x 81	136 x 70	170 x 57	8	13	7
LR3 40-4/45	1	185	112	196	90 x 91	136 x 80	170 x 67	8	13	7
LR3 40-4/50	1	185	112	206	90 x 91	136 x 80	170 x 67	8	13	7
LR3 40-4/63	1	185	122	206	90 x 101	136 x 90	170 x 77	8	13	7
LR3 40-4/70	1	210	117	240	105 x 96	156 x 85	175 x 77	8	13	7
LR3 40-4/80	1	210	125	240	105 x 104	156 x 93	175 x 85	8	13	7
LR3 40-4/90	2	267	128	201	176 x 67	180 x 97.5	249 x 78.5	7	8.5	-
LR3 40-4/100	2	267	152	206	176 x 94.5	180 x 121.1	249 x 102.5	7	8.5	-
LR3 40-4/115	2	291	158	212	-	185 x 106.5	273 x 106.5	10	10.5	-
LR3 40-4/125	2	291	158	212	-	185 x 106.5	273 x 106.5	10	10.5	-
LR3 40-4/160	2	291	167	212	-	185 x 116.5	273 x 116.5	10	10.5	-
LR3 40-4/180	2	291	172	212	-	185 x 120.5	273 x 120.5	10	10.5	-
LR3 40-4/200	2	352	161	264	224 x 93.5	240 x 119.5	328 x 103.5	10	13	-
LR3 40-4/250	2	352	175	266	224 x 108	240 x 134	328 x 118	10	13	-
LR3 40-4/300	2	352	205	266	224 x 117.5	240 x 143.5	328 x 127.5	10	14	-
LR3 40-4/400	2	352	220	266	224 x 132.5	240 x 158.5	328 x 142.5	10	14	-
LR3 40-4/500	2	352	232	266	224 x 145	240 x 171	328 x 155	10	14	-
LR3 40-4/630	2	412	220	318	264 x 157.5	310 x 157.5	388 x 147.5	10	14	-
LR3 40-4/710	2	480	225	372.5	316 x 144.5	370 x 152.5	450 x 134.5	10	16.5	-
LR3 40-4/800	2	480	240	372.5	316 x 159.5	370 x 167.5	450 x 149.5	10	16.5	-
LR3 40-4/1000	2	480	285	375	315 x 204.5	370 x 212.5	450 x 194.5	10	16.5	-
LR3 40-4/1200	2	552	328	421	356 x 185.5	430 x 221.5	516 x 183.5	14	4 x 13	-
LR3 40-4/1400	2	552	362	420	356 x 210	430 x 241.5	516 x 213.5	14	4 x 13	-
LR3 40-4/1600	2	552	378	416	356 x 230	430 x 261.5	516 x 233.5	14	4 x 13	-

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.

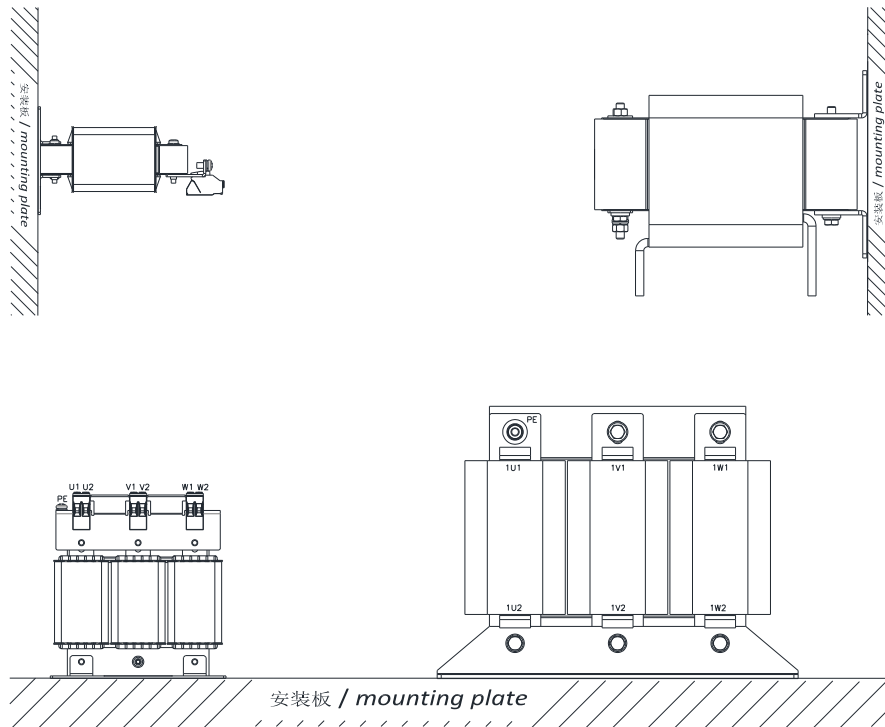
额外信息 / Additional Information

	端子 / Terminals			扭矩 / Torque			-	
	螺钉端子	铜接头	PE-端子	螺栓端子	铜接头	PE-端子	重量	线圈材料
	Screw terminal	Copper connection	PE Terminal	Screw terminal	Copper connection	PE Terminal	Weight (Net)	Winding material
	[mm ²]	[mm]	-	[Nm]	[Nm]	[Nm]	[kg]	-
LR3 40-4/2	4.0	-	6.3 x 0.8	0.5 - 1.0	-	-	0.53	CU
LR3 40-4/4	4.0	-	6.3 x 0.8	0.5 - 1.0	-	-	1.31	CU
LR3 40-4/6	4.0	-	6.3 x 0.8	0.5 - 1.0	-	-	1.45	CU
LR3 40-4/8	4.0	-	M5	0.5 - 1.0	-	3.0	1.90	CU
LR3 40-4/10	4.0	-	M5	0.5 - 1.0	-	3.0	2.00	CU
LR3 40-4/16	4.0	-	M5	0.5 - 1.0	-	3.0	2.70	CU
LR3 40-4/20	4.0	-	M5	0.5 - 1.0	-	3.0	3.80	CU
LR3 40-4/25	10.0	-	M5	1.2 - 2.0	-	3.0	5.80	CU
LR3 40-4/30	10.0	-	M5	1.2 - 2.0	-	3.0	5.85	CU
LR3 40-4/35	10.0	-	M5	1.2 - 2.0	-	3.0	5.95	CU
LR3 40-4/40	10.0	-	M5	1.2 - 2.0	-	3.0	5.95	CU
LR3 40-4/45	10.0	-	M5	1.2 - 2.0	-	3.0	8.25	CU
LR3 40-4/50	16.0	-	M5	2.0 - 4.0	-	3.0	8.35	CU
LR3 40-4/63	16.0	-	M5	2.0 - 4.0	-	3.0	9.65	CU
LR3 40-4/70	35.0	-	M5	2.0 - 5.0	-	3.0	10.8	CU
LR3 40-4/80	35.0	-	M5	2.0 - 5.0	-	3.0	12.5	CU
LR3 40-4/90	-	20 x 4	M8	-	30.0	12.0	16.0	CU
LR3 40-4/100	-	20 x 4	M8	-	30.0	12.0	20.0	CU
LR3 40-4/115	-	20 x 4	M8	-	30.0	12.0	21.0	CU
LR3 40-4/125	-	20 x 4	M8	-	30.0	12.0	22.0	CU
LR3 40-4/160	-	20 x 4	M8	-	30.0	12.0	25.5	CU
LR3 40-4/180	-	20 x 4	M8	-	30.0	12.0	28.0	CU
LR3 40-4/200	-	30 x 5	M8	-	30.0	12.0	32.0	CU
LR3 40-4/250	-	30 x 5	M8	-	60.0	12.0	41.0	CU
LR3 40-4/300	-	30 x 8	M8	-	60.0	12.0	48.0	CU
LR3 40-4/400	-	30 x 8	M8	-	60.0	12.0	56.0	CU
LR3 40-4/500	-	30 x 8	M8	-	60.0	12.0	62.0	CU
LR3 40-4/630	-	30 x 8	M8	-	60.0	12.0	75.5	CU
LR3 40-4/710	-	50 x 6	M8	-	120.0	12.0	102.0	CU
LR3 40-4/800	-	50 x 8	M8	-	120.0	12.0	115.0	CU
LR3 40-4/1000	-	50 x 8	M16	-	120.0	60.0	145.0	CU
LR3 40-4/1200	-	70 x 12	M16	-	60.0	60.0	180.5	CU
LR3 40-4/1400	-	70 x 12	M16	-	60.0	60.0	207.9	CU
LR3 40-4/1600	-	70 x 12	M16	-	60.0	60.0	306.6	CU

端子额外信息 / Additional Information Terminals

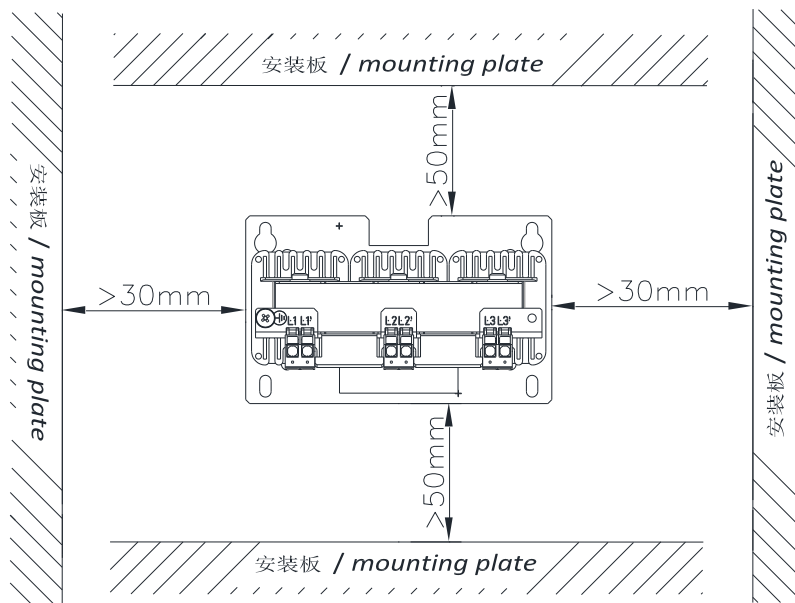
端子	Terminal	[mm ²]	4	10	16	35	螺钉端子 / Screw Terminal
输入 输出	Input	[mm ²]	0.2 - 6.0 / -	0.2 - 16	2.5 - 25	2.5 - 50	单根线 (固体) / 标准的 Single wire (solid) / stranded
		[mm ²]	0.2 - 6.0 / 0.2 - 4.0	0.2 - 10	2.5 - 16	2.5 - 35	细纹 / 带电缆和套管的细纹 Finely-stranded / Finely-stranded with cable and sleeves
	Output	AWG	22 - 10	8	10 - 6	12 - 2	
		[mm]	9	14	15	20	剥离长度 / Stripping length
		-	有槽得 / Slotted	有槽得 / Slotted	有槽得 / Slotted	有槽得 / Slotted	螺钉头 / Screw head
		-	M3	M4	M5	M6	螺纹 / Screw threading

安装指导 / Mounting directions



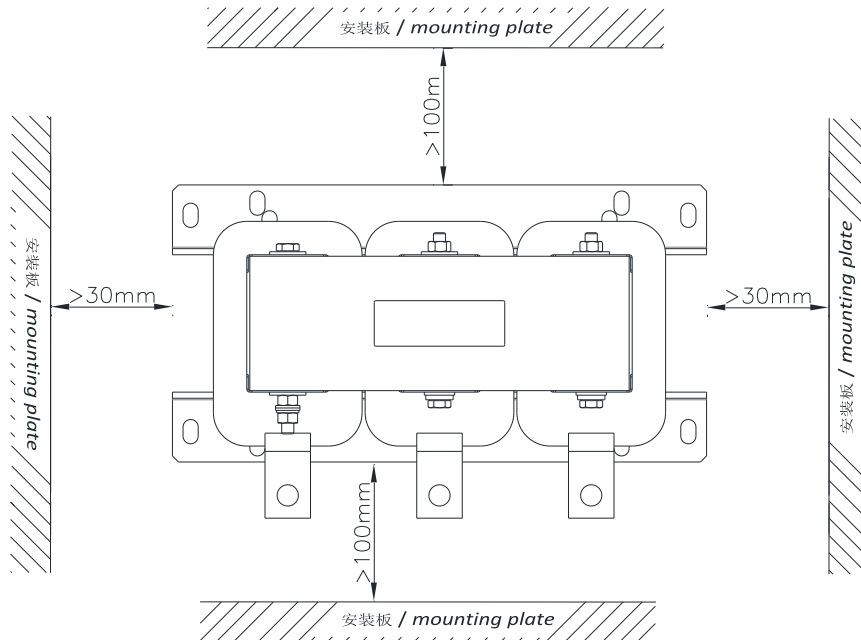
可用空间 / Free spaces

LR3 40-4/2 - LR3 40-4/80



可用空间 / Free spaces

LR3 40-4/90 - LR3 40-4/1600



备注 / Notes

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!