

Line Reactor, three phase, 4 % (uK) **LR3**



General Data

Rated voltage 3 x 400 Vac
Short circuit voltage (uK) 4 %
Rated current 3 x 2 - 3 x 1600A
Inductance 0.019 - 14.700 mH
Insulation class B or F
Ambient temperature -10° C to +40° C
Degree of protection IP 00

Advantages

Use as line reactor, commutating reactor or PFC reactor
Ensuring the short-circuit voltage of 4 % to the mains
Power harmonic damping
Starting current limitation
Increases the service life of consumers
Low ripple
Bridging voltage dips
Peak current limitation
Very good corrosion protection and low noise thanks to BLOCKIMPEX vacuum impregnation
Integrated lifting rings
Multifunctional fixing rail

Applications

Line reactor to minimize mains pollution, to reduce the reactive-power components and charging currents in the DC link capacitor and to improve the $\cos(\phi)$.

Standards



Line- and commutation reactor to
DIN EN 61558-2-20, IEC 61558-2-20, UL 506, CSA 22.2

Certifications



UL 506, CSA 22.2



Line Reactor, three phase, 4 % (uK)
LR3

Type	LR3 40-4/2	LR3 40-4/4	LR3 40-4/6	LR3 40-4/8	LR3 40-4/10	LR3 40-4/16
Electrical data						
<u>Operating data</u>						
Rated voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated voltage (IEC)	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac
Rated voltage (UL)	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac
Short circuit voltage uK	4 %	4 %	4 %	4 %	4 %	4 %
Voltage drop	9.2 Vac	9.2 Vac	9.2 Vac	9.2 Vac	9.2 Vac	9.2 Vac
Rated current	2 A	4 A	6 A	8 A	10 A	16 A
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Inductivity	14.700 mH	7.350 mH	4.900 mH	3.680 mH	2.940 mH	1.840 mH
Inductivity deviation	±10%	±10%	±10%	±10%	±10%	±10%
<u>Approvals</u>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<u>Environment</u>						
Ambient temperature	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C
Cooling method	AN	AN	AN	AN	AN	AN
<u>Safety and protection</u>						
Type	open type	open type	open type	open type	open type	open type
Class of Insulation System	IEC=B, UL=class 130	IEC=B, UL=class 130	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Test voltage	4000 Vac	4000 Vac	4000 Vac	4000 Vac	4000 Vac	4000 Vac
<u>Order numbers</u>						
Order Number	LR3 40-4/2	LR3 40-4/4	LR3 40-4/6	LR3 40-4/8	LR3 40-4/10	LR3 40-4/16

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LINE-SIDE SUPPRESSION/ LINE REACTORS



Line Reactor, three phase, 4 % (uK) **LR3**

Type	LR3 40-4/20	LR3 40-4/25	LR3 40-4/30	LR3 40-4/35	LR3 40-4/40	LR3 40-4/45
Electrical data						
<u>Operating data</u>						
Rated voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated voltage (IEC)	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac
Rated voltage (UL)	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac
Short circuit voltage uK	4 %	4 %	4 %	4 %	4 %	4 %
Voltage drop	9.2 Vac	9.2 Vac	9.2 Vac	9.2 Vac	9.2 Vac	9.2 Vac
Rated current	20 A	25 A	30 A	35 A	40 A	45 A
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Inductivity	1.470 mH	1.180 mH	0.980 mH	0.840 mH	0.740 mH	0.650 mH
Inductivity deviation	±10%	±10%	±10%	±10%	±10%	±10%
<u>Approvals</u>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<u>Environment</u>						
Ambient temperature	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C
Cooling method	AN	AN	AN	AN	AN	AN
<u>Safety and protection</u>						
Type	open type	open type	open type	open type	open type	open type
Class of Insulation System	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Test voltage	4000 Vac	4000 Vac	4000 Vac	4000 Vac	4000 Vac	4000 Vac
<u>Order numbers</u>						
Order Number	LR3 40-4/20	LR3 40-4/25	LR3 40-4/30	LR3 40-4/35	LR3 40-4/40	LR3 40-4/45



Line Reactor, three phase, 4 % (uK)
LR3

Type	LR3 40-4/50	LR3 40-4/63	LR3 40-4/70	LR3 40-4/80	LR3 40-4/90	LR3 40-4/100
Electrical data						
<u>Operating data</u>						
Rated voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated voltage (IEC)	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac
Rated voltage (UL)	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac
Short circuit voltage uK	4 %	4 %	4 %	4 %	4 %	4 %
Voltage drop	9.2 Vac	9.2 Vac	9.2 Vac	9.2 Vac	9.2 Vac	9.2 Vac
Rated current	50 A	63 A	70 A	80 A	90 A	100 A
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Inductivity	0.590 mH	0.470 mH	0.420 mH	0.370 mH	0.330 mH	0.290 mH
Inductivity deviation	±10%	±10%	±10%	±10%	±10%	±10%
<u>Approvals</u>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<u>Environment</u>						
Ambient temperature	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C
Cooling method	AN	AN	AN	AN	AN	AN
<u>Safety and protection</u>						
Type	open type	open type	open type	open type	open type	open type
Class of Insulation System	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=F, UL=class 155
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Test voltage	4000 Vac	4000 Vac	4000 Vac	4000 Vac	4000 Vac	4000 Vac
<u>Order numbers</u>						
Order Number	LR3 40-4/50	LR3 40-4/63	LR3 40-4/70	LR3 40-4/80	LR3 40-4/90	LR3 40-4/100

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LINE-SIDE SUPPRESSION/ LINE REACTORS



Line Reactor, three phase, 4 % (uK) **LR3**

Type	LR3 40-4/115	LR3 40-4/125	LR3 40-4/160	LR3 40-4/180	LR3 40-4/200	LR3 40-4/250
Electrical data						
<u>Operating data</u>						
Rated voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated voltage (IEC)	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac
Rated voltage (UL)	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac
Short circuit voltage uK	4 %	4 %	4 %	4 %	4 %	4 %
Voltage drop	9.2 Vac	9.2 Vac	9.2 Vac	9.2 Vac	9.2 Vac	9.2 Vac
Rated current	115 A	125 A	160 A	180 A	200 A	250 A
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Inductivity	0.250 mH	0.230 mH	0.180 mH	0.160 mH	0.150 mH	0.120 mH
Inductivity deviation	±10%	±10%	±10%	±10%	±10%	±10%
<u>Approvals</u>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<u>Environment</u>						
Ambient temperature	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C
Cooling method	AN	AN	AN	AN	AN	AN
<u>Safety and protection</u>						
Type	open type	open type	open type	open type	open type	open type
Class of Insulation System	IEC=F, UL=class 155	IEC=H, UL=class 180	IEC=H, UL=class 180	IEC=H, UL=class 180	IEC=B, UL=class 130	IEC=F, UL=class 155
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Test voltage	4000 Vac	4000 Vac	4000 Vac	4000 Vac	4000 Vac	4000 Vac
<u>Order numbers</u>						
Order Number	LR3 40-4/115	LR3 40-4/125	LR3 40-4/160	LR3 40-4/180	LR3 40-4/200	LR3 40-4/250



Line Reactor, three phase, 4 % (uK)
LR3

Type	LR3 40-4/300	LR3 40-4/400	LR3 40-4/500	LR3 40-4/630	LR3 40-4/710	LR3 40-4/800
Electrical data						
<u>Operating data</u>						
Rated voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac
Rated voltage (IEC)	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac	3 x 690 Vac
Rated voltage (UL)	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac
Short circuit voltage uK	4 %	4 %	4 %	4 %	4 %	4 %
Voltage drop	9.2 Vac	9.2 Vac	9.2 Vac	9.2 Vac	9.2 Vac	9.2 Vac
Rated current	300 A	400 A	500 A	630 A	710 A	800 A
Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Inductivity	0.098 mH	0.074 mH	0.059 mH	0.047 mH	0.042 mH	0.037 mH
Inductivity deviation	±10%	±10%	±10%	±10%	±10%	±10%
<u>Approvals</u>						
Approvals	cURus	cURus	cURus	cURus	cURus	cURus
<u>Environment</u>						
Ambient temperature	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C
Cooling method	AN	AN	AN	AN	AN	AN
<u>Safety and protection</u>						
Type	open type	open type	open type	open type	open type	open type
Class of Insulation System	IEC=F, UL=class 155	IEC=F, UL=class 155	IEC=H, UL=class 180	IEC=H, UL=class 180	IEC=H, UL=class 180	IEC=H, UL=class 180
Protection index	IP 00	IP 00	IP 00	IP 00	IP 00	IP 00
Safety class (prepared)	I	I	I	I	I	I
Test voltage	4000 Vac	4000 Vac	4000 Vac	4000 Vac	4000 Vac	4000 Vac
<u>Order numbers</u>						
Order Number	LR3 40-4/300	LR3 40-4/400	LR3 40-4/500	LR3 40-4/630	LR3 40-4/710	LR3 40-4/800

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LINE-SIDE SUPPRESSION/ LINE REACTORS



Line Reactor, three phase, 4 % (uK) **LR3**

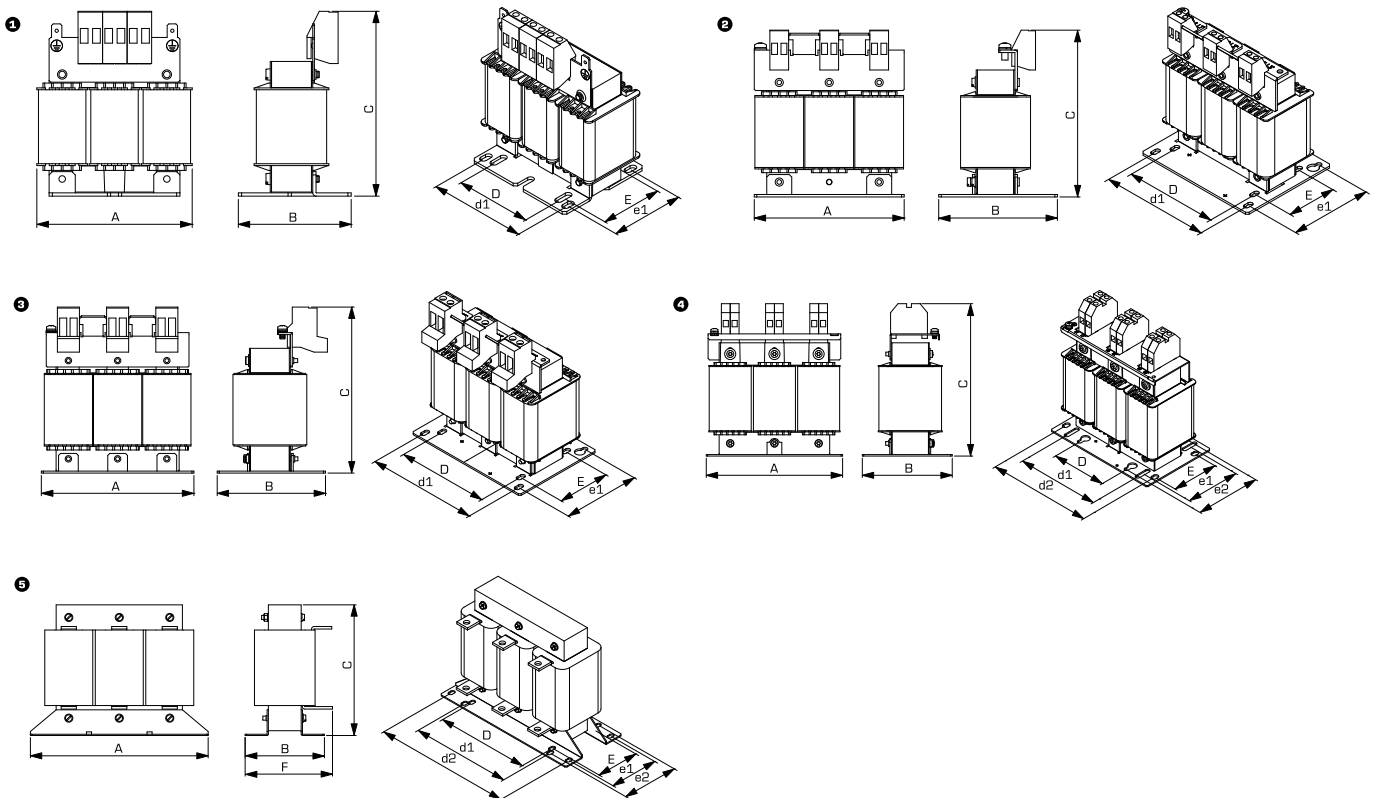
		LR3 40-4/1000	LR3 40-4/1200	LR3 40-4/1400	LR3 40-4/1600	
Electrical data	Type					
	Operating data					
	Rated voltage	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	3 x 400 Vac	
	Rated voltage (IEC)	3 x 1100 Vac	3 x 1100 Vac	3 x 1100 Vac	3 x 1100 Vac	
	Rated voltage (UL)	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	3 x 600 Vac	
	Short circuit voltage uK	4 %	4 %	4 %	4 %	
	Voltage drop	9.2 Vac	9.2 Vac	9.2 Vac	9.2 Vac	
	Rated current	1000 A	1200 A	1400 A	1600 A	
	Rated frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	
	Inductivity	0.030 mH	0.025 mH	0.021 mH	0.019 mH	
	Inductivity deviation	±10%	±10%	±10%	±10%	
	Approvals					
	Approvals	cURus	cURus	cURus	cURus	
	Environment					
Ambient temperature	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C	-10° C to +40° C		
Cooling method	AN	AN	AN	AN		
Safety and protection						
Type	open type	open type	open type	open type		
Class of Insulation System	IEC=H, UL=class 180	IEC=H, UL=class 180	IEC=H, UL=class 180	IEC=H, UL=class 180		
Protection index	IP 00	IP 00	IP 00	IP 00		
Safety class (prepared)	I	I	I	I		
Test voltage	4000 Vac	4000 Vac	4000 Vac	4000 Vac		
Order numbers						
Order Number	LR3 40-4/1000	LR3 40-4/1200	LR3 40-4/1400	LR3 40-4/1600		



Line Reactor, three phase, 4 % (uK)
LR3

Typ	Connections phase/N	Connections PE	Fixing method	Fixing screws	Weight	Dimension picture (in mm)	Dimensions (mm)									
							A	B	C	D	d1	d2	E	e1	e2	
LR3 40-4/2	Screw clamp, 4 mm ²	Tab connector, 6.3 x 0.8 mm	Mounting brackets	M4	0.53 kg	1	78	56	100	50	65	-	35	27	36	
LR3 40-4/4	Screw clamp, 4 mm ²	Tab connector, 6.3 x 0.8 mm	Mounting brackets	M4	1.31 kg	1	96	60	117	56	71	-	44	30	41	
LR3 40-4/6	Screw clamp, 4 mm ²	Tab connector, 6.3 x 0.8 mm	Mounting brackets	M4	1.45 kg	1	96	69	117	56	71	-	53	39	50	
LR3 40-4/8	Screw clamp, 4 mm ²	for M5	Mounting brackets	M4	1.90 kg	2	120	85	140	90	105	-	35	68	-	
LR3 40-4/10	Screw clamp, 4 mm ²	for M5	Mounting brackets	M4	2.00 kg	2	120	85	140	90	105	-	35	68	-	
LR3 40-4/16	Screw clamp, 4 mm ²	for M5	Mounting brackets	M4	2.70 kg	2	120	95	140	90	105	-	45	78	-	
LR3 40-4/20	Screw clamp, 4 mm ²	for M5	Mounting brackets	M5	3.80 kg	3	155	95	162	113	135	-	45	78	-	
LR3 40-4/25	Screw clamp, 10 mm ²	for M5	Mounting brackets	M5	5.80 kg	3	155	110	177	113	135	-	60	93	-	
LR3 40-4/30	Screw clamp, 10 mm ²	for M5	Mounting brackets	M5	5.85 kg	3	155	110	177	113	135	-	60	93	-	
LR3 40-4/35	Screw clamp, 10 mm ²	for M5	Mounting brackets	M5	5.95 kg	3	155	110	177	113	135	-	60	93	-	
LR3 40-4/40	Screw clamp, 10 mm ²	for M5	Mounting brackets	M5	6.80 kg	3	185	102	210	90	136	170	74	50	51	
LR3 40-4/45	Screw clamp, 10 mm ²	for M5	Mounting brackets	M5	8.25 kg	3	185	112	210	90	136	170	74	50	51	
LR3 40-4/50	Screw clamp, 16 mm ²	for M5	Mounting brackets	M5	8.35 kg	4	185	112	210	90	136	170	62	91	62	
LR3 40-4/63	Screw clamp, 16 mm ²	for M5	Mounting brackets	M5	9.65 kg	4	185	122	210	90	135	170	94	70	71	
LR3 40-4/70	Screw clamp, 35 mm ²	for M6	Mounting brackets	M6	10.80 kg	4	210	117	240	98	156	175	77	88	105	
LR3 40-4/80	Screw clamp, 35 mm ²	for M6	Mounting brackets	M6	12.50 kg	4	210	125	240	106	156	175	85	93	105	
LR3 40-4/90	Flat copper	for M8	Mounting brackets	M8	16.00 kg	5	267	149	200	176	249	-	79	79	-	
LR3 40-4/100	Flat copper	for M8	Mounting brackets	M8	19.00 kg	5	267	173	200	176	249	-	103	103	-	
LR3 40-4/115	Flat copper	for M8	Mounting brackets	M8	21.00 kg	5	291	179	210	185	273	-	107	107	-	
LR3 40-4/125	Flat copper	for M8	Mounting brackets	M8	22.00 kg	5	291	179	210	185	273	-	107	107	-	
LR3 40-4/160	Flat copper	for M8	Mounting brackets	M8	25.50 kg	5	291	189	210	185	273	-	117	117	-	
LR3 40-4/180	Flat copper	for M8	Mounting brackets	M8	28.00 kg	5	291	194	210	185	273	-	121	121	-	

Dimension pictures





Line Reactor, three phase, 4 % (uK) **LR3**

Mechanical data	Typ	Connections phase/N	Connections PE	Fixing method	Fixing screws	Weight	Dimension picture (in mm)									
								A	B	C	D	d1	d2	E	e1	e2
	LR3 40-4/200	Flat copper	for M8	Mounting brackets	M4	32.00 kg	5	352	194	260	224	240	328	102	92	119
	LR3 40-4/250	Flat copper	for M8	Mounting brackets	M8	41.00 kg	5	352	207	260	224	240	328	115	105	132
	LR3 40-4/300	Flat copper	for M8	Mounting brackets	M8	48.00 kg	5	352	219	260	224	240	328	127	117	144
	LR3 40-4/400	Flat copper	for M8	Mounting brackets	M8	56.00 kg	5	352	234	260	224	240	328	142	132	159
	LR3 40-4/500	Flat copper	for M8	Mounting brackets	M8	62.00 kg	5	352	245	260	224	240	328	153	143	170
	LR3 40-4/630	Flat copper	for M8	Mounting brackets	M8	75.50 kg	5	480	225	380	316	370	450	125	143	135
	LR3 40-4/710	Flat copper	for M8	Mounting brackets	M8	102.00 kg	5	480	235	380	316	370	450	135	153	145
	LR3 40-4/800	Flat copper	for M10	Mounting brackets	M10	115.00 kg	5	480	250	380	316	370	450	150	153	145
	LR3 40-4/1000	Flat copper	for M10	Mounting brackets	M10	145.00 kg	5	480	295	380	316	370	450	195	198	190
	LR3 40-4/1200	Flat copper	for M10	Mounting brackets	M10	0.00 kg	5	555	330	445	356	430	515	180	210	180
	LR3 40-4/1400	Flat copper	for M10	Mounting brackets	M10	0.00 kg	5	555	360	445	356	430	515	210	240	210
	LR3 40-4/1600	Flat copper	for M10	Mounting brackets	M10	0.00 kg	5	555	380	445	356	430	515	230	260	230

Dimension pictures

