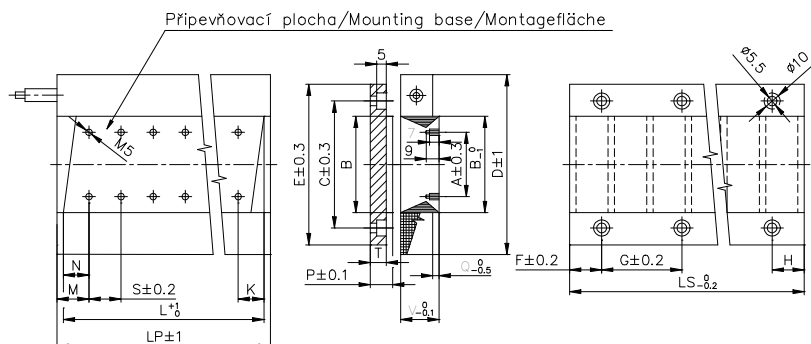


- Typ  
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- L2S
- L2SK
- L3S
- L3SK
- LTSK
- LNS
- LA

## ◆ Řada L1S ◆ Series L1S ◆ Reihe L1S ◆

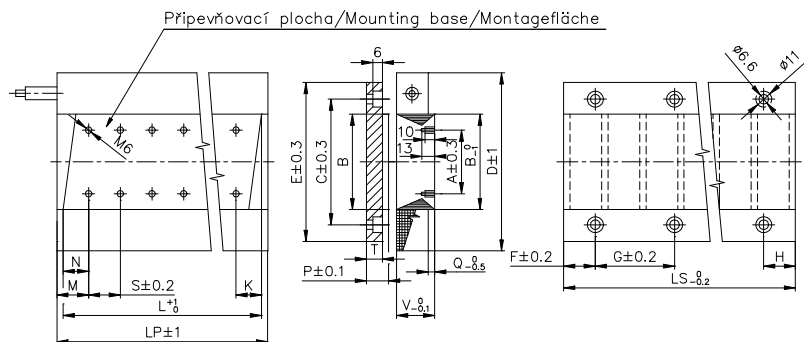
Velikost L1S025P – 075P / Size L1S025 – 075P / Größe L1S025P – 075P



Primární díly / Primary parts / Primärteile

Typ / Type / Typ	F <sub>peak</sub> [N]	A [mm]	B [mm]	D [mm]	K [mm]	L [mm]	L <sub>p</sub> [mm]	M [mm]	N [mm]	Q [mm]	R <sub>p</sub> [mm]	S [mm]	U [mm]	V [mm]	m [kg]
L1S025P-0808	90	15	25	70	14,5	64	70	17,5	14,5	6	M5	35	8	25	0,35
L1S025P-1108	135				14	88	94	17	14			50			0,52
L1S025P-1708	225				18	136	142	21	18						0,75
L1S025P-2308	300				17	184	190	20	17						1
L1S025P-2608	375				29	208	214	32	29						1,25
L1S050P-1708	460	30	50	95	18	136	145	22,5	18	6	M5	50	8	25	1,3
L1S050P-2008	550				30	160	166	33	30						1,5
L1S050P-2608	725				29	208	214	32	29						1,8
L1S050P-3808	1000				27	304	310	30	27						2,1
L1S075P-2608	1100	35	75	120	29	208	214	32	29	6	M5	50	8	25	3
L1S075P-3208	1400				28	256	262	31	28						3,5

Velikost L1S080P – 160P / Size L1S080 – 160P / Größe L1S080P – 160P



Primární díly / Primary parts / Primärteile

Typ / Type / Typ	F <sub>peak</sub> [N]	A [mm]	B [mm]	D [mm]	K [mm]	L [mm]	L <sub>p</sub> [mm]	M [mm]	N [mm]	Q [mm]	R <sub>p</sub> [mm]	S [mm]	U [mm]	V [mm]	m [kg]
L1S080P-1111	580	40	80	140	25,5	121	127	28,5	25,5	8	M6	35	11	38	3,6
L1S080P-2311	1350				26,5	253	259	29,5	26,5			50			6,9
L1S080P-3211	1900				26	352	358	29	26						10
L1S080P-4111	2400				25,5	451	456	28	25,5						13,2
L1S080P-4711	2800				33,5	517	523	36,5	33,5						14
L1S080P-5611	3400				33	616	622	36	33						17,5
L1S120P-3211	2900	60	120	180	26	352	358	29	26	8	M6	50	11	38	14,5
L1S120P-4111	3600				25,5	451	457	28,5	25,5						18,5
L1S120P-4711	4200				33,5	517	523	36,5	33,5						21,5
L1S120P-5611	5000				33	616	622	36	33						24,5
L1S120P-5911	5300				24,5	649	655	27,5	24,5						25,8
L1S160P-4711	5400	80	160	230	33,5	517	523	36,5	33,5	8	M6	50	11	38	26,8
L1S160P-5611	6550				33	616	622	36	33						32,2
L1S160P-6511	7200				32,5	715	720	35	32,5						37
L1S160P-6811	8000				24	748	754	27	24	6					38,5

### Sekundární díly / Secondary parts / Sekundärteile

Typ / Type / Typ	B [mm]	C [mm]	E [mm]	F [mm]	G [mm]	H [mm]	LS [mm]	P [mm]	RS1 [mm]	RS2 [mm]	T [mm]	ZS [mm]	2p	m [kg]
L1S025S-0624	25	42	56	24	48	24	144	12	5,5	10	7,5	5	6	0,6
L1S025S-0824							192						8	0,8
L1S025S-1024							240						10	1
L1S050S-0624	50	66	80	24	48	24	144	12	5,5	10	7,5	5	6	0,85
L1S050S-0824							192						8	1,44
L1S050S-1024							240						10	2
L1S075S-0624	75	92	106	24	48	24	144	12	5,5	10	7,5	5	6	1,12
L1S075S-0824							192						8	1,62
L1S075S-1024							240						10	2
L1S080S-0633	80	98	114	33	66	33	198	14	6,6	11	8,5	6	6	2,2
L1S080S-0833							264						8	3
L1S080S-1033							330						10	3,7
L1S120S-0633	120	138	154	33	66	33	198	14	6,6	11	8,5	6	6	3,1
L1S120S-0833							264						8	4,1
L1S120S-1033							330						10	5,2
L1S160S-0633	160	178	194	33	66	33	198	14	6,6	11	8,5	6	6	4
L1S160S-0833							264						8	6
L1S160S-1033							330						10	7,4

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### Standardně používané kabely / Usually used cables Standard benutzte Kabel

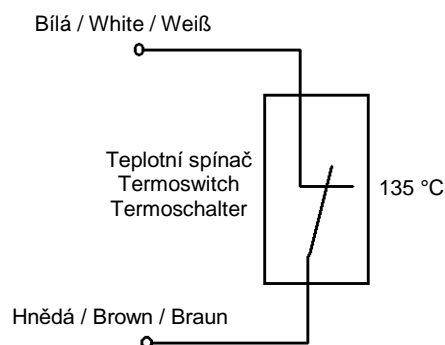
Kabel / Cable / Kabel	30°C*	40°C*	50°C*
4 x 0,75 + 1x (2 x 0,25)	12 A	10,4 A	8,5 A
4 x 1,5 + 1x (2 x 0,5)	18 A	15,5 A	12,5 A
4 x 2,5 + 1x (2 x 0,5)	26 A	24 A	22,5 A
4 x 4 + 1x (2 x 0,5)	42 A	38,5 A	36,5 A

\*) – Teplota okolí / Ambient temperature / Umgebungstemperatur

### Zapojení / Connection / Schaltung

Měníč / Converter Verstärker	Kabel / Cable Kabel
U	1
V	2
W	3
PE	YG*
TS	Bílá / White / Weiß
TS	Hnědá / Brown / Braun

TS – Teplotní spínač / Termoswitch / Termoschalter  
YG\* – Žlutozelená / Yellow-green / Gelb-grün



### Teplotní spínač / Termoswitch / Termoschalter

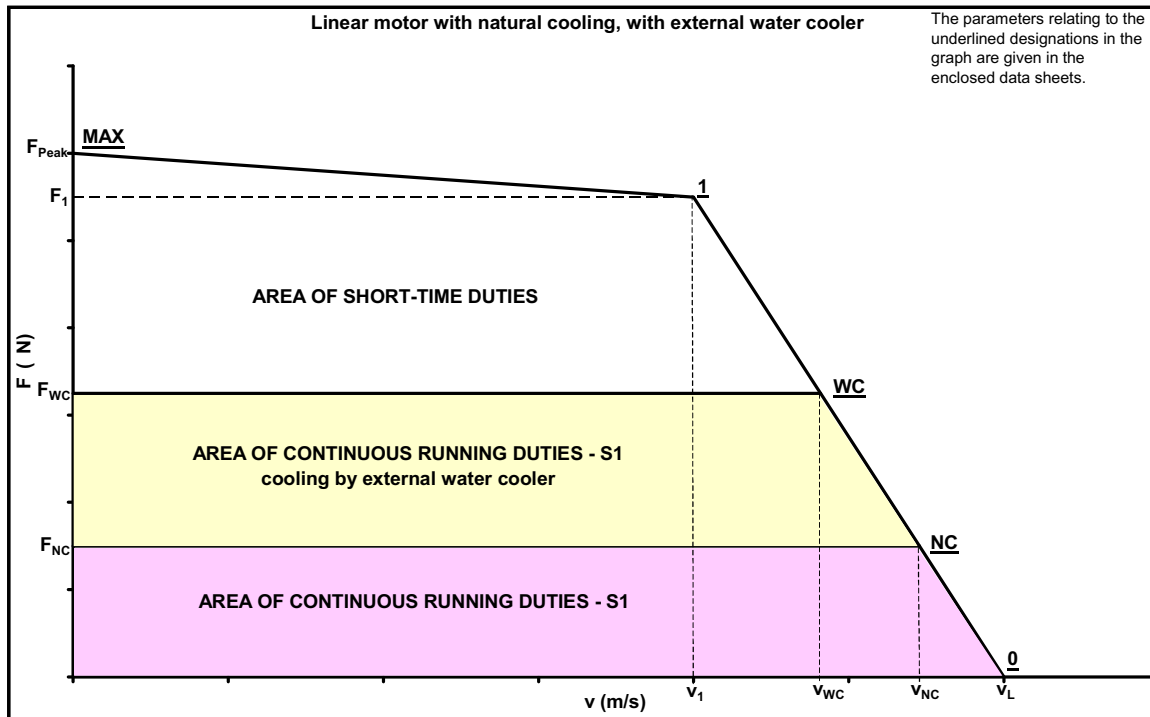
Provedení	Design	Kontaktausführung	Rozpínací / Brake contact / Öffned	
Jmenovité napětí	Nominal voltage	Nennspannung	250 V <sub>AC</sub>	500 V <sub>AC</sub>
Jmenovitý proud	Nominal current	Nennstrom		
		cosφ = 1,0	2,5 A	0,75 A
		cosφ = 0,6	1,6 A	0,5 A
Max. rozpínací proud	Max. switching current	Schaltstrom max.	7,5 A	2,5 A

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Technická data / Technical data / Technische Daten  
L1S025 – 160 , U<sub>bc</sub> = 560 V

Typ / Type / Typ	F <sub>peak</sub> [N]	I <sub>peak</sub> [A]	F <sub>1</sub> [N]	I <sub>1</sub> [A]	V <sub>1</sub> [ms <sup>-1</sup> ]	f <sub>1</sub> [Hz]	ΔP <sub>1</sub> [W]	F <sub>wc</sub> [N]	I <sub>wc</sub> [A]	V <sub>wc</sub> [ms <sup>-1</sup> ]	ΔP <sub>wc</sub> [W]	F <sub>inc</sub> [N]	I <sub>inc</sub> [A]	V <sub>inc</sub> [ms <sup>-1</sup> ]	ΔP <sub>inc</sub> [W]	F <sub>A</sub> [N]	I <sub>ult</sub> [A]	k <sub>F</sub> [NA <sup>-1</sup> ]	R <sub>U,V</sub> [Ω]	L <sub>U,V</sub> [mH]	τ <sub>el</sub> [ms]
L1S025P-1708-FH	225	8	115	3,0	9,5	198	375	-	-	-	-	48	1,1	13,2	65	700	11	45	20,6	34,5	2
L1S025P-2308-HH	300	8	155	3,0	8,3	174	420	-	-	-	-	66	1,3	10,8	73	950	11	60	22,7	38,5	2
L1S025P-2608-HH	375	10	175	13,0	8,3	174	510	-	-	-	-	78	1,4	10,7	102	1100	13	60	20,3	34,5	2
L1S050P-1708-HH	480	12	225	4,1	6,7	139	446	240	4,3	7,7	405	96	1,7	10,0	80	1700	14	60	12,9	3	2,8
L1S050P-2008-KH	560	13	265	4,5	6,7	139	495	260	6,8	7,8	445	120	1,9	9,3	87	1700	16	70	11,9	30	2,8
L1S050P-2608-KH	550	13	350	5,7	6,7	139	635	260	4,3	7,7	440	120	1,9	9,3	84	1700	16	70	9,4	23	2,8
L1S075P-2608-JH	1100	15	550	6,2	4,2	87	905	500	5,4	5,1	690	240	2,4	6,2	131	3500	18	100	11,7	32	3,2
L1S075P-3208-JH	1400	22	650	7,2	4,2	87	950	620	6,4	5,1	800	288	2,9	6,2	-	4000	26	100	9,1	25,5	3,2
L1S080P-1111-PH	540	44	350	2,0	1,7	25	570	230	1,3	2,2	230	150	0,8	2,7	83	1400	5	200	69,3	45	7,5
L1S080P-2311-NH	1350	11	750	4,6	1,7	25	1260	420	2,9	2,4	504	240	1,7	2,9	183	3600	12	150	29,8	185	7,5
L1S080P-3211-NH	1900	15	1100	7,0	1,7	25	1820	800	4,4	2,1	728	420	2,6	2,9	264	4400	17	150	18,6	123	7,5
L1S080P-4111-PH	2400	16	1500	6,5	1,7	25	2110	1000	5,6	2,3	845	540	2,9	2,9	305	5600	24	200	13,9	98	7,5
L1S080P-4711-PH	2800	21	2000	12,0	1,7	25	3480	1500	7,8	2,0	1400	720	3,5	2,7	319	8000	25	200	12,1	87	7,5
L1S080P-5611-PH	3400	27	2800	17,5	1,7	25	5830	1900	11,0	2,2	2320	900	4,8	2,8	435	9500	31	200	9,6	67	7,5
L1S120P-3211-PH	2700	29	2000	16,5	3,0	45,5	3265	1500	10,5	3,3	1340	720	4,2	4,0	218	7200	35	200	6	49	9,5
L1S120P-3211-NH	2900	21	2000	13,0	1,7	25	3338	1500	8,2	2,1	1350	720	4,9	2,9	522	7200	26	150	9,9	78	9,5
L1S120P-4111-PH	3600	25	2650	16,0	1,7	25	4050	1680	10,2	2,3	1620	1020	6,1	2,8	587	10000	27	200	7,8	64	9,5
L1S120P-4711-NH	4200	41	3000	24,0	3,0	45,5	4300	2050	16,6	3,5	2050	1200	10,1	4,1	742	11000	52	150	3,7	29,2	9,5
L1S120P-4711-PH	4200	27	3000	16,0	1,7	25	4300	2050	10,3	2,1	1720	1200	6,2	2,6	624	11000	35	200	8,2	66	9,5
L1S120P-5611-NH	5000	33	4000	25,5	1,7	25	7885	2800	16,2	2,1	3185	1440	9,7	2,7	1154	13000	44	150	6,1	47,7	9,5
L1S120P-5911-PH	5300	35	4500	27,0	1,7	25	8362	3000	15,9	2,2	2900	1680	9,6	2,8	1051	15000	48	200	5,8	43	9,5
L1S120P-5911-SH	5300	21	4500	16,5	0,7	10,1	8575	3000	9,6	1,0	2900	1680	5,8	1,5	1051	15000	29	300	15,9	118	9,5
L1S160P-3511-NH	4000	38	3000	26,0	3,5	53	4230	2050	16,6	3,9	1690	1200	9,6	4,3	609	9000	50	150	3,1	26	9,7
L1S160P-4711-RH	5400	38	4200	22,5	1,7	25	6270	2800	13,9	2,1	2380	1500	6,6	2,6	551	14000	45	250	6,2	53	9,7
L1S160P-5611-PH	6550	43	5000	26,5	1,7	25	7100	3400	16,8	2,2	2840	2100	10,1	2,5	1030	17500	51	200	5,1	42	9,7
L1S160P-6511-PH	7200	53	6200	33,0	1,7	25	9900	4500	20,9	2,0	3960	2640	13,1	2,5	1436	24000	62	200	4,6	37,5	9,7
L1S160P-6511-QH	7200	30	6200	20,0	0,7	10,1	9802	4500	12,6	0,9	3925	2640	7,6	1,4	1422	24000	38	400	12,3	102	9,7

## Power characteristic for the type L1S



Typ  
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Typ

L1S

L1SK

L2S

L2SK

L3S

L3SK

LTSK

LNS

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### Used symbols

$F_{peak}$ [ N ]	- highest force developed by the motor (it is used as starting force)	$R_{u-v}$ [ $\Omega$ ]	- resistance of the motor winding at 20°C
$F_1$ [ N ]	- max. force by current $I_1$ and speed $v_1$	$L_{u-v}$ [ mH ]	- inductance of the winding
$v_1$ [ m/s ]	- speed of the motor by current $I_1$ and force $F_1$	$\tau_{el}$ [ ms ]	- electromagnetic time constant of the motor
$F_1, I_1$ and $v_1$ values determine the transition point of the motor.		$U_{BUS}$ [ V ]	- DC voltage of intermediate circuit of the frequency converter for which the motor is produced
$F_{NC}$ [ N ]	- force being developed by the motor continuously at the air cooling by the motor surface and additional cooling area represented by an aluminium plate with the thickness of 10 mm and the cooling surface area three times as large as mechanical interface of the primary part. This additional cooling plate serves for simulating heat removal into the structure of the driven equipment during the tests	$k_F$ [ N/A ]	- force constant of the motor
		$k_E$ [ Vs/m ]	- voltage constant of the motor
$F_A$ [ N ]	- attractive force between the primary and secondary parts of the motor	$k_M$ [ N/ $\sqrt{W}$ ]	- constant of the motor
$F_{wc}$ [ N ]	- force being developed by the motor continuously at the water cooling	$v_L$ [ m/s ]	- theoretic no-load velocity
$F_{wc1}$ [ N ]	- force being developed by the motor continuously at the cooling by a built-in water cooler	$\Delta P_1$ [ W ]	- motor losses corresponding to the force $F_1$ at the winding temperature of 130°C
$F_{wc2}$ [ N ]	- force being developed by the motor continuously at the cooling by a built-in and additional water coolers	$\Delta P_{wc}$ [ W ]	- motor losses corresponding to the force $F_{wc}$ at the winding temperature of 130°C
$I_{peak}$ [ A ]	- current corresponding to the force $F_{peak}$	$\Delta P_{wc1}$ [ W ]	- motor losses corresponding to the force $F_{wc1}$ at the winding temperature of 130°C
$I_1$ [ A ]	- maximum short-time permissible current (r.m.s. value) which is given by the intersection of current limitation of the servomotor and of limitation by the rated voltage of the converter	$\Delta P_{wc2}$ [ W ]	- motor losses corresponding to the force $F_{wc2}$ at the winding temperature of 130°C
		$\Delta P_{NC}$ [ W ]	- motor losses corresponding to the force $F_{NC}$ at the winding temperature of 130°C
$I_{wc}$ [ A ]	- current corresponding to the force $F_{wc}$	$m$ [ kg ]	- mass of the primary part of the motor
$I_{wc1}$ [ A ]	- current corresponding to the force $F_{wc1}$	$m_{sec}$ [ kg ]	- mass of the secondary part of the motor
$I_{wc2}$ [ A ]	- current corresponding to the force $F_{wc2}$	$f_1$ [ Hz ]	- supply current frequency corresponding to the velocity $v_1$
$I_{NC}$ [ A ]	- current corresponding to the force $F_{NC}$	$I_{ult}$ [ A ]	- supply current the exceeding of which brings about demagnetization of magnets