

F-PACK

THE LIFT PACKAGE

- Elevate comfort and reliability to the next level
- Benefit from getting exactly the drive you need
- Optimize performance and grid protection
- Built to last





F-PACK - the right drive for any lift application

The F-PACK is a perfectly fine-tuned system that includes Wittur WSG-S lift machines and the WLD, a customized inverter with built-in database of our WSG-S machines.

▲ Advantages

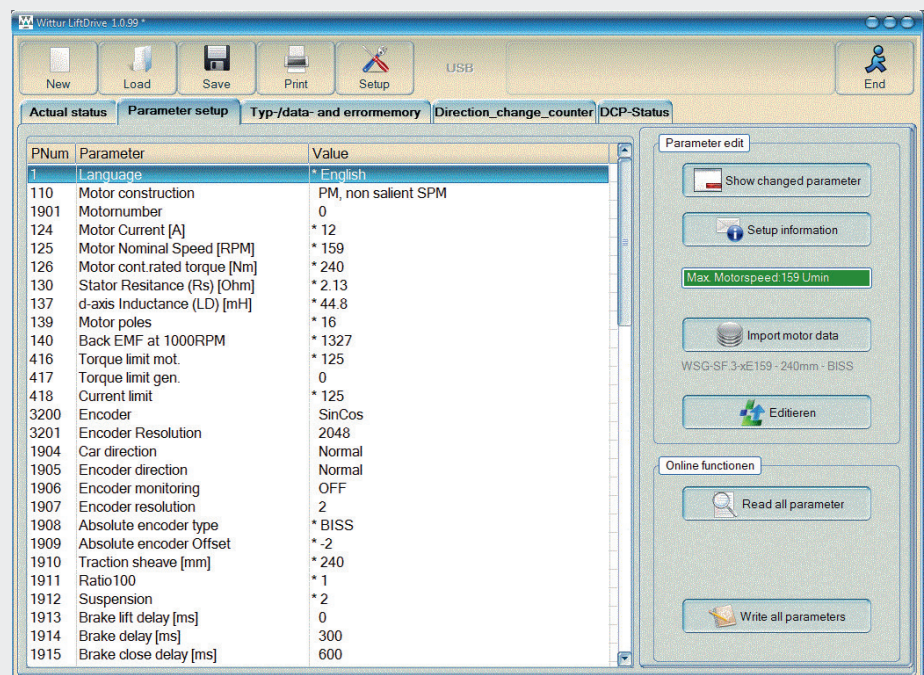
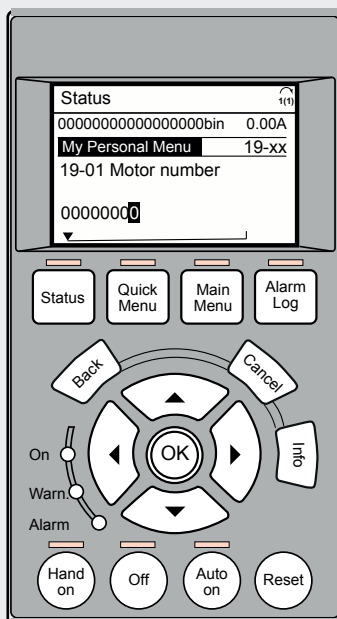
- ▶ Longer motor lifetime (reduced max. voltage during regen mode)
- ▶ All Rope-directions for the lift machines allowed
- ▶ SBU - Safe brake control unit available (no brake contactors needed)
- ▶ Wireless parametrisation with QR Code - On-line-monitoring via smart-phone app - Modify parameters during operation (from lift cabin)
- ▶ No inverter de-rating at low speeds
- ▶ EMC filter and DC choke integrated
- ▶ Earth and short-circuit connection
- ▶ No service required over lifetime (inverter)
- ▶ Open-loop operation possible (encoder failure)
- ▶ Standard interfaces to the lift controller: DCP 3/4, CANopen lift 417, parallel, RS 485, USB
- ▶ Specific quick-guide for easy installation of package
- ▶ Installation in shaft without cabinet (STO certified protection „pollution degree 3“)
- ▶ One unit for all applications (no additional interface options required – everything on-board)
- ▶ Lift-set-up tool in local language available

▲ Easy installation



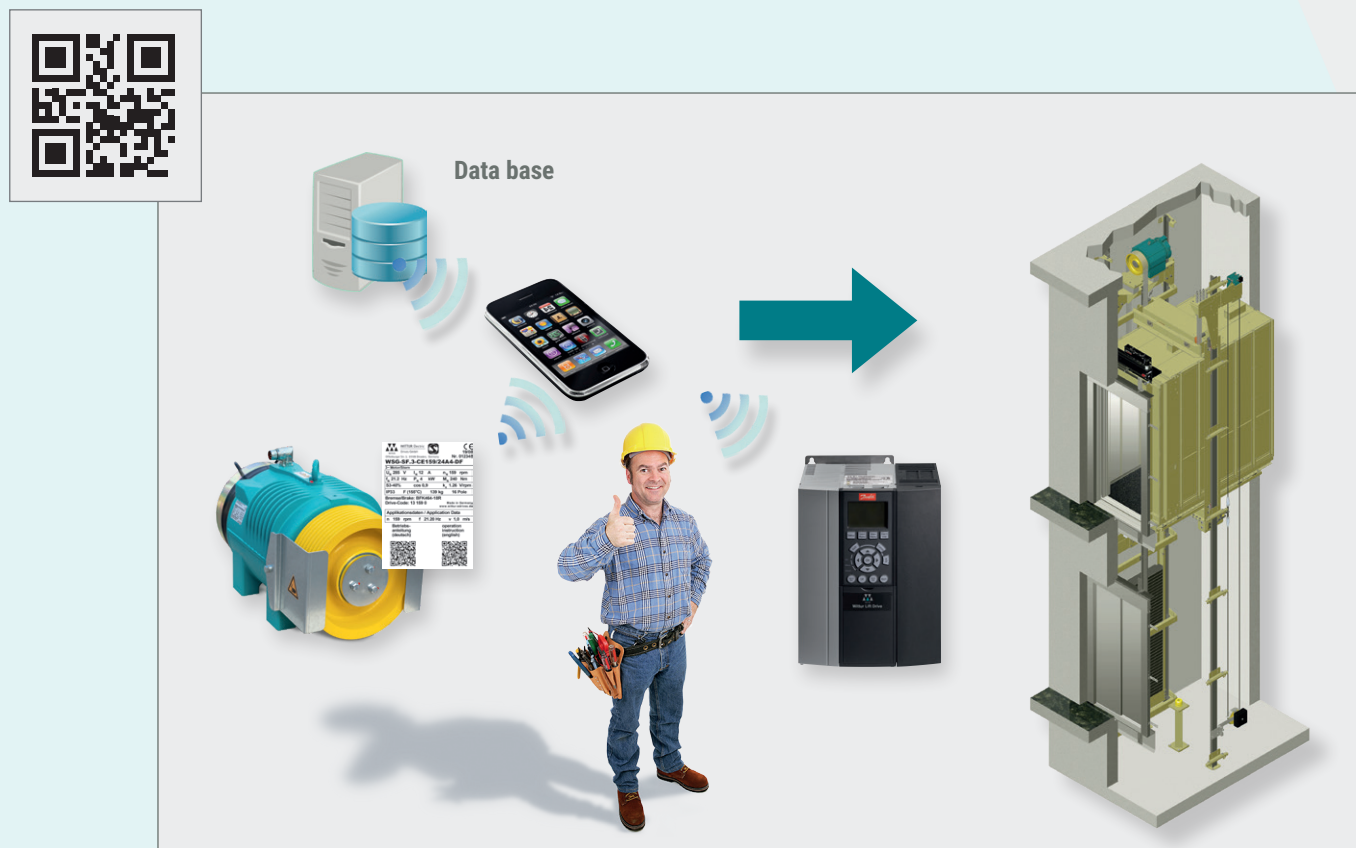


▲ Easy setup via LCP or with PC-tool



F-PACK

▲ Parametrisation with QR Code



▲ Standard applications

Rated load	Speed	Suspension	Traction sheave diameter	Motor	Ropes	Lift current	Inverter		
							Type	Power	Current ^{*)}
320 kg	1.0 m/s	1 : 1	160 mm	WSG-SF.2	7 x 6.5 mm	6.0 A	WLD 302 P4K0	4.0 kW	10 / 16 A
630 kg	1.0 m/s	1 : 1	270 mm	WSG-MF.1	8 x 6.5 mm	12.1 A	WLD 302 P5K5	5.5 kW	13 / 20.8 A
800 kg	0.63 m/s	1 : 1	270 mm	WSG-MF.2	7 x 8 mm	12.9 A	WLD 302 P7K5	7.5 kW	16 / 25.6 A
1,050 kg	1.0 m/s	2 : 1	240 mm	WSG-SF.4	8 x 6 mm	16.7 A	WLD 302 P11K0	11.0 kW	26 / 46.8 A
1,275 kg	1.0 m/s	2 : 1	320 mm	WSG-MF.3	7 x 8 mm	22.1 A	WLD 302 P15K0	15.0 kW	35 / 59.9 A
1,600 kg	1.6 m/s	2 : 1	400 mm	WSG-LF.2	5 x 10 mm	51.9 A	WLD 302 P18K0	18.0 kW	44 / 70.4 A
2,000 kg	1.6 m/s	2 : 1	400 mm	WSG-LF.3	6 x 10 mm	54.2 A	WLD 302 P30K0	30.0 kW	60 / 108 A
2,500 kg	2.0 m/s	2 : 1	400 mm	WSG-LF.S	7 x 10 mm	90.0 A	WLD 302 P55K0	55.0 kW	98 / 198 A

^{*)} Continuous output current at 12 kHz (100 %) / Overload current 6 s

▲ Wittur Lift Drive - Specifications

Main supply (L1, L2, L3)	
Supply voltage	3 x 380-400 V AC $\pm 10\%$
Supply frequency	
Displacement power factor	> 0.98 near unity
Harmonic disturbance	Meets EN 63000-3-12

Output data (U, V, W)	
Output voltage	0 - 100 % of supply voltage
Output frequency	0 - 590 Hz

Motor feedback	
Supported motor feedback	Incremental: 5V TTL (RS 422) Incremental: 1 Vpp SinCos Absolute: BiSS, EnDat, Hiperface
Supported motor types	Asynchronous motors in open and closed loop; permanent magnet synchronous motors in open and closed loop;

Digital inputs	
Programmable digital inputs	4 (6), Terminals 27 and 29 can also be programmed as output
Changeable to digital output	2 (terminal 27 and 29)
Logic	PNP or NPN
Voltage level	0 – 24 V DC
Scan interval	1 ms

Analogue inputs	
Analogue inputs	2
Modes	Voltage or current
Voltage level	-10 to +10 V (scaleable)
Current level	0/4 to 20 mA (scaleable)

Digital output	
Programmable digital/pulse outputs	2
Voltage level at digital/frequency output	0 – 24 V DC
Max. output current (sink or source)	40 mA
Maximum output frequency at frequency output	0 to 32 kHz

Analogue output	
Programmable analogue outputs	1
Current range at analogue output	0/4 – 20 mA
Max. load to common at analogue output (clamp 30)	500 Ω
Accuracy on analogue output	Max. error: 0.5% of full scale

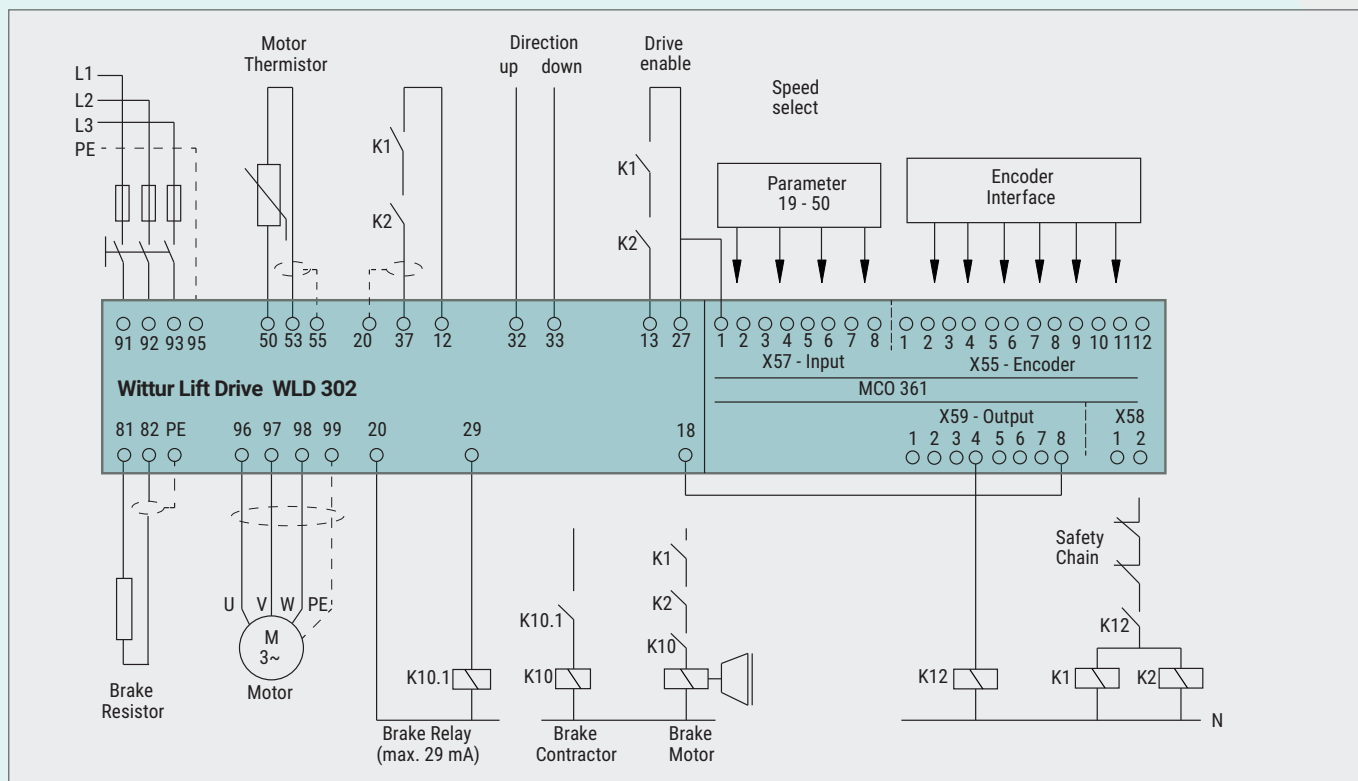
Control card	
USB interface	1.1 (Full Speed)
USB plug	Type "B"
RS485 interface	Up to 115 kBaud
Max. load (10 / 24 V)	15 / 200 mA

Relay output	
Programmable relay outputs	2
Max. terminal load (AC) on 1-3 (break), 1-2 (make), 4-6 (break) power card	240 V AC, 2 A
Max. terminal load (AC) on 4-5 (make) power card	400 V AC, 20 mA
Min. terminal load on 1-3 (break), 1-2 (make), 4-6 (break), 4-5 (make) power card	24V DC, 20 mA

Control card	
USB interface	1.1 (Full Speed)
USB plug	Type "B"

Surroundings/external	
Enclosure	IP 20
Vibration test	1.0 g
Max. THVD	10 %
Max. relative humidity	5% - 93% (IEC 721-3-3; Class 3K3 (non-condensing) during operation
Aggressive environment (IEC 60068-2-43) H2S test	class Kd
Aggressive environment (IEC 60721-3-3)	Standard coated PVB Class 3C2, optional coated class 3C3
Ambient temperature	45 °C without derating (higher temperatures possible with derating)
Minimum ambient temperature during full-scale operation	0 °C
Minimum ambient temperature at reduced performance	-10 °C
Temperature during storage/transport	-25 to +65/70 °C
Galvanic isolation of all	I/O supplies according to PELV
Maximum altitude above sea level without derating	1,000 m
EMC standards, Emission	EN 61800-3
EMC standards, Immunity	EN 61800-3
RFI Filter	Included as standard
DC- Coils	Included as standard

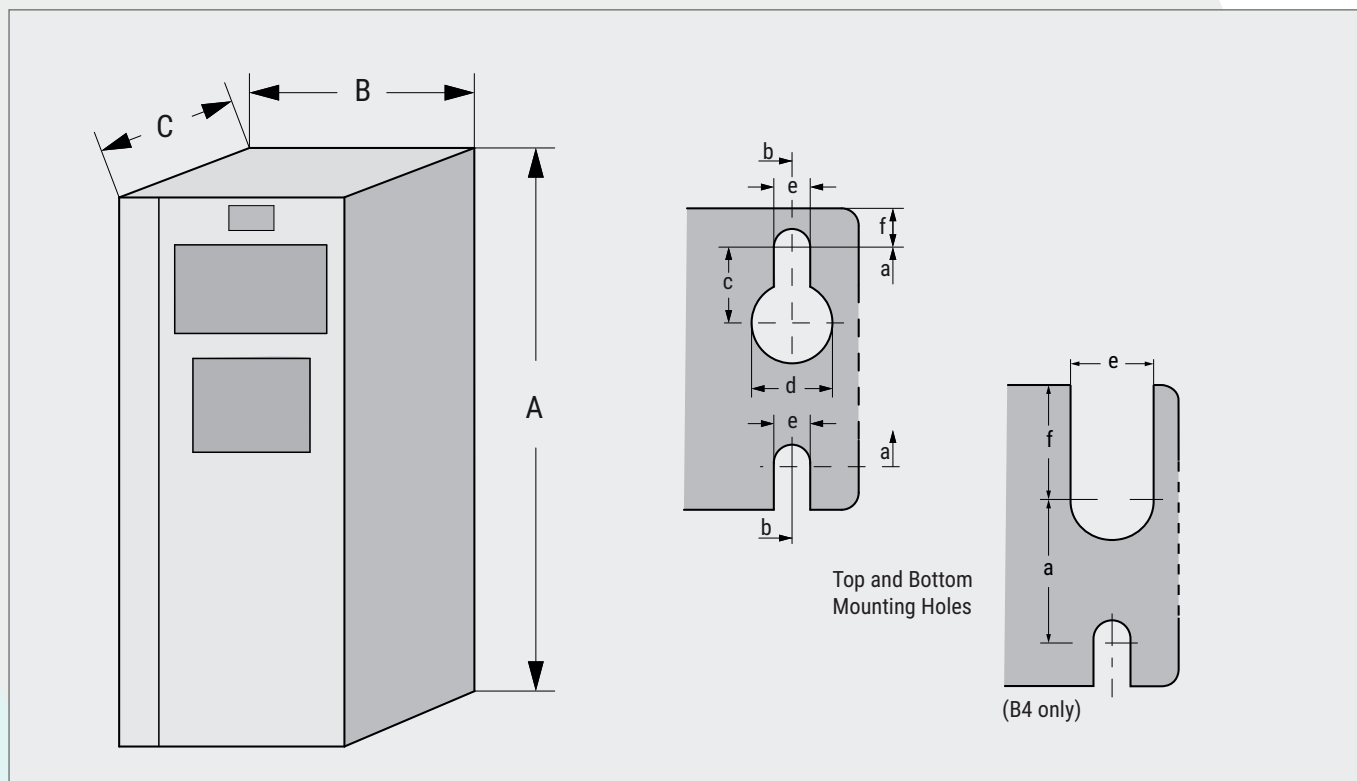
▲ Wiring Schematic - Operation without motor contactors



▲ Wittur Lift Drive - Electrical data

Type		WLD 302										
		P4K0	P5K5	P7K5	P11K	P15K	P18K	P22K	P30K	P37K	P45K	P55K
Power rating	[kW]	4	5.5	7.5	11	15	18	22	30	37	45	55
Enclosure size		A2	A3	A3	B3	B4	B4	B4	C3	C4	C4	C4
Voltage	[V]	400										
Ingress protection		IP 20										
Cont. output current 100 %	[A]	10	13	16	26	35	44	51	60	75	90	110
Overload current 6/60s	[A]	16	20.8	25.6	46.8/41.6	59.9/56	70.4	91.3/81.6	108/90	135/112	162/135	198/165
Current @ 16 kHz	[A]	10	13	16	N/A	32	35	44	N/A	N/A	N/A	N/A
Current @ 14 kHz	[A]	10	13	16	N/A	32	35	44	N/A	N/A	N/A	N/A
Current @ 12 kHz	[A]	10	13	16	21	35	44	51	60	75	83	98
Current @ 10 kHz	[A]	10	13	16	26	35	44	51	60	75	90	98
Current @ 8 kHz	[A]	10	13	16	26	35	44	51	60	75	90	110
Ambient temperature	[°C]	45										
Duty cycle	[%]	50										
Accessories												
Brake resistor	Type	BR-80/010	BR-56/012	BR-38/016	BR-28/025	BR-22/030	BR-19/040	BR-14/050	BR-12/060	BR-09/075	BR-07/090	BR-05/120
Encoder cable	Type	K 514 273 022 xx (xx... cable length)										

▲ Dimensional drawing



▲ Dimensions - Weights

Type		WLD 302										
		P4K0	P5K5	P7K5	P11K	P15K	P18K	P22K	P30K	P37K	P45K	P55K
Power rating	[kW]	4	5.5	7.5	11	15	18	22	30	37	45	55
Enclosure size		A2	A3	A3	B3	B4	B4	B4	C3	C4	C4	C4
Height A	[mm]	268/374 ^{*)}	268/374 ^{*)}	268/374 ^{*)}	399/420 ^{*)}	520/595 ^{*)}	520/595 ^{*)}	520/595 ^{*)}	550/630 ^{*)}	660/800 ^{*)}	660/800 ^{*)}	660/800 ^{*)}
Width B	[mm]	130	170	170	205	230	230	230	308	370	370	370
Depth C	[mm]	205	205	205	249	242	242	242	333	333	333	333
Weight	[kg]	4.9	6.6	6.6	11.4	21	21	21	36	50	50	50
Mounting holes												
a	[mm]	257	257	257	380	495	495	495	521	631	631	631
b	[mm]	70	110	110	140	200	200	200	270	330	330	330
c	[mm]	8	8	8	8	-	-	-	-	-	-	-
d	[mm]	Ø 11	Ø 11	Ø 11	Ø 12	-	-	-	8.5	8.5	8.5	8.5
e	[mm]	Ø 5.5	Ø 5.5	Ø 5.5	Ø 6.8	8.5	8.5	8.5	17	17	17	17
f	[mm]	9	6.5	6.5	7.9	15	15	15	35	50	50	50



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MODULES AND SYSTEMS IN THE ELEVATOR INDUSTRY



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