Project Planning Sheet
Linear motors

HIWIN®

(1) CONTACT

Name: _____ Company: _____ Phone.: _____ Mail: _____

(2) MOTOR COMPONENT

2.1 TYPECODE *(see Product: www.hiwin.de)*

linear motor type and winding type: e.g. LMFA43L

2.2 BASE DATA (*for designing a customer-specific motor*)

continuous current; I_C *[A]*		peak current; I_P *[A]*		stall current; I_S *[A]*	
continuous force; F_c *N]*		peak force; F_p *[N]*		stall force; F_S *[N]*	
rated speed. at F_c; v_c *[m/s]*		speed at F_p; v_{max} *[m/s]*		working point; *F @ v [N @ m/s]*	
forcer length; *[mm]*		forcer width; *[mm]*		total installation height; *[mm]* *(forcer and stator)*	

2.3 MOTOR TEMPERATURE PROTECTION

☐ standard: *(see catalogue / technical data)* ☐ additional sensors: type: _____ | amount: _____ pcs

2.4 OPTIONS

connection ☐ cable | ☐ plug cable length *[m]*

(3) APPLICATION

3.1 DESCRIPTION: *(application, machine type)*

3.2 ADDITIONAL INFROMATION

needed protection class? ambient temperature ____*[°C]* installation position ☐ horizontal ☐ vertical

(IP60: LMSA, LMFA, LMSC, LMC

cooling system ☐ air | ☐ liquid cooling flow rate *[l/min]* *(motor axle)* cooling medium / additive

3.3 CYCLE DESCRIPTION *(position, velocity, acceleration, jerk, time, moved mass, mass moment of inertia, force)*

1	
2	
3	
4	
5	

3.4 OPERATON MODE

force [F]; operation time [t]; operation with constant load [dt_P]; standstill with unpowered motor [dt_R]; standstill with powered motor [dt_V]

☐ S1	*F [N]*		☐ S3	*F [N]*		☐ S6	*F [N]*	
	t [s]			dt_P *[s]*			dt_P *[s]*	
				dt_R *[s]*			*F* dt_V *[N]*	
							dt_V *[s]*	

(4) INFORATION ON INSTALLATION SITUATION

4.1 POWERSUPPLY AND FILTERS

supply voltage U_N *[V]* net type ☐ TN | ☐ TT ☐ IT net filter, choke used?: ☐ no | ☐ yes *(which?)* motor- filter, -choke used?: ☐ no | ☐ yes *(which?)*

4.2 MACHINE CONTROL

manufacturer type

4.3 POWER UNIT

drive manufacturer		drive type		switching frequency *[kHz]*	
coupled DC-Link	☐ yes | ☐ no	max. DC Link $U_{ZK,max.}$ *[V]*		cable type	
Motor protection I^2t	☐ yes | ☐ no	DC Link voltage U_{ZK} *[V]*		cable length *[m]*	
motors per drive?	☐ 1 pcs | ☐ 2 pcs	coupled axis?	☐ mech. ☐ electrical	brake/clamp?	☐ yes | ☐ no

4.4 MOTOR TERMINAL VOLTAGE *(empirical values)*

phase-phase *[V]* phase-ground *[V]* gradient *[kV/µs]*

(5) COMMENTS: *(amount / needs etc.)*