ASCII Befehlssatz E100/E1001

	ASCII Befehle				
	Wert / Befehl	**Schreib Befehl**	**Lese Befehl**	**LinMot**	**System**
Schreib Befehle	Inkrementiere Sollposition	!IP	-	●	
	Inkrementiere Sollposition beim nächsten Trigger	!TI	-	●	
	Setze Sollposition beim nächsten Trigger	!TP	-	●	
	Starte Kurve	!RC	-	●	
	Starte Kurve beim nächsten Trigger	!TC	-	●	
	Startet Kurve zyklisch	!CC	-	●	
	Startet Kurve zyklisch beim nächsten Trigger	!CT	-	●	
	Beende zyklische Kurve	!CS	-	●	
	Verschiebe Referenzposition	!MH	-	●	
	Definiere neue Istposition	!RP	-	●	
	Setze internen Positionszähler auf den Wert 0	!ZD	-	●	
Lese/Schreib Befehle	Sollposition	!SP	!GD	●	
	FF Acceleration	!DA	!EA	●	
	FF Deceleration	!DB	!EB	●	
	FF Friction	!DF	!EF	●	
	P-Wert von Regler	!DP	!EP	●	
	D-Wert von Regler	!DD	!ED	●	
	I-Wert von Regler	!DI	!EI	●	
	Maximale Geschwindigkeit	!SV	!GV	●	
	Maximale Beschleunigung	!SA	!GA	●	
	Maximaler Strom	!SC	!GC	●	
	Strom Offset	!DK	!GK	●	
	Kurven-Amplitude	!DC	!EC	●	
	Kurven-Offset	!DO	!EO	●	
	Kurven-Geschwindigkeit	!DS	!ES	●	
	Flag **FREEZE**	!SF	!GX	●	●
	Flag **INIT** / Flag **RUN** / Flag **STOP**	!SI / !SR / !SS	!GX		●
Lese Befehle	Iststrom	-	!AC	●	
	Istposition	-	!GP	●	
	Positionsauflösung	-	!PI	●	
	Geschwindigkeitauflösung	-	!VI	●	
	Beschleunigungsauflösung	-	!AI	●	
	Stromauflösung	-	!CI		●
	Status	-	!GS		●
	System Fehler Status	-	!GE		●
	System Warn Status	-	!GW		●
	Motor Fehler Status	-	!EE	●	
	Motor Warn Status	-	!EW	●	
	Zustand-Flags	-	!EX		●
	Protokollversion		!PV		●

Aufbau Befehle		
Byte	**Wert**	**Bedeutung**
0	'!'	Befehlskopf
1...2	char, char	Befehl
3...x	[char], …	Argumente
x+1	'↵' (0xD)	Befehlsabschluss

Jeder Befehl fängt mit einem Ausrufezeichen an, danach kommen zwei Zeichen, welche den Befehl kodieren, anschliessend folgen die optionalen Befehlsargumente und als Abschluss steht ein Zeilenende-Zeichen.

Aufbau Quittierung		
Byte	**Wert**	**Bedeutung**
0	'#'	Quitierungskopf
1...x	char, ...	Quitierungsmeldung
x+1	'↵' (0xD)	Quitierungsabschluss

Jeder auf der LinMot Servo Controller empfangene Befehl wird quittiert. Ein weiterer Befehl darf nur gesendet werden, falls der letzte Befehl von der Elektronik quittiert wurde.

Beispiel		
Richtung	**ASCII-Sequenz**	**Beschreibung**
PC -> *LinMot* Servo Controller	'!SP2000A' + 0xD	Setze die Sollposition von Motor A auf 2000 Inkremente
LinMot Servo Controller -> PC	'#' + 0xD	Wenn nur das '#'-Zeichen übermittelt wird, bedeutet dies, dass der Befehl vom *LinMot* Servo Controller akzeptiert wurde.

Befehlssatz Controller Serie E1100/B1100

Run Modes		Applications	
Motion Command Interface		Auto Start	*
Triggered VA-Interpolator		Easy Steps	
Triggered Time Curves	*	Master Slave	*
Command Table Mode	*	Force Control	*
Triggered Command Table	*	Winding	*
Position Indexing		Customized Application Software	
Analog Position			
Triggered Analog Position			
CAM Mode	*		
Triggered CAM Mode	*		
VAI two Positions Continuous			
Continuous Curve	*		

	Control Word	Status Word	Warn Word
0	Switch On	Operation Enabled	Motor Hot Sensor
1	Voltage Enable	Switch On Active	Motor Short Time Overload
2	/Quick Stop	Enable Operation	Motor Supply Voltage Low
3	Enable Operation	Error	Motor Supply Voltage High
4	/Abort	Voltage Enable	Position Lag Always
5	/Freeze	/Quick Stop	Position Lag Standing
6	Go To Position	Switch on Locked	Controller Hot
7	Error Acknowledge	Warning	Motor Not Homed
8	Jog Move +	Event Handler Active	PTC 1 *
9	Jog Move -	Special Motion Active	PTC 2 *
10	Reserved	In Target Position	Regeneration calc. Hot
11	Home	Homed	Reserved
12	Clearance Check	Fatal Error	Reserved
13	Goto Inital Position	Motion Active	Reserved
14	Reserved	Position Band 1	Interface Warning
15	Phase Search	Position Band 2	Application Warning

Command

Parameter Access & Contol		Parameter 1		Parameter 2	
Write Interface Control Word	*	Interface Control Word			
Write Live Parameter		UPID (Unique Parameter ID)		Parameter Value	
Write X4 Intf Outputs with Mask	*	X4 Write Bit Mask	*	X4 Write Bit Values	*
Clear Event Evaluation	*				
No Operation					

Velocity Acceleration Interpolated Positioning Commands			Parameter 1	Parameter 2	Parameter 3	Parameter 4	Parameter 5
Absolute	VAI Go To Pos		Target Position	Maximal Velocity	Acceleration	Deceleration	
	VAI Go To Pos After Actual Command	*	Target Position	Maximal Velocity	Acceleration	Deceleration	
	VAI Go To Pos From Act Pos Starting With Dem Vel = 0		Target Position	Maximal Velocity	Acceleration	Deceleration	
	VAI Go To Pos From Act Pos And Act Vel		Target Position	Maximal Velocity	Acceleration	Deceleration	
	VAI Dec=Acc Go To Pos	*	Target Position	Maximal Velocity	Acceleration		
	VAI Dec=Acc Go To Pos After Actual Command	*	Target Position	Maximal Velocity	Acceleration		
	VAI Dec=Acc Go To Pos From Act Pos Starting With Dem Vel = 0	*	Target Position	Maximal Velocity	Acceleration		
	VAI Dec=Acc Go To Pos From Act Pos And Act Vel	*	Target Position	Maximal Velocity	Acceleration		
	VAI Predef Acc Go To Pos	*	Target Position	Maximal Velocity			
	VAI Predef Acc Go To Pos After Actual Command	*	Target Position	Maximal Velocity			
	VAI Predef Acc Go To Pos From Act Pos Starting With Dem Vel = 0	*	Target Position	Maximal Velocity			
	VAI Predef Acc Go To Pos From Act Pos And Act Vel	*	Target Position	Maximal Velocity			
	Predef VAI Go To Pos		Target Position				
	Predef VAI Go To Pos After Actual Command	*	Target Position				
	Predef VAI Go To Pos From Act Pos Starting with Dem Vel = 0		Target Position				
	Predef VAI Go To Pos From Act Pos And Act Vel		Target Position				
Increment	VAI Increment Act Pos		Position Increment	Maximal Velocity	Acceleration	Deceleration	
	VAI Increment Act Pos Starting with Dem Vel = 0		Position Increment	Maximal Velocity	Acceleration	Deceleration	
	VAI Increment Dem Pos		Position Increment	Maximal Velocity	Acceleration	Deceleration	
	VAI Increment Target Pos		Position Increment	Maximal Velocity	Acceleration	Deceleration	
	VAI Dec=Acc Increment Dem Pos	*	Position Increment	Maximal Velocity	Acceleration		
	VAI Dec=Acc Increment Target Pos	*	Position Increment	Maximal Velocity	Acceleration		
	VAI Predef Acc Increment Dem Pos	*	Position Increment	Maximal Velocity			
	VAI Predef Acc Increment Target Pos	*	Position Increment	Maximal Velocity			
	Predef VAI Increment Dem Pos		Position Increment				
	Predef VAI Increment Target Pos		Position Increment				

Velocity Acceleration Interpolated Positioning Commands			Parameter 1	Parameter 2	Parameter 3	Parameter 4	Parameter 5
Stop	VAI Stop		Deceleration				
	Predef VAI Stop (QuickStop Deceleration)						
Trigger	VAI Go To Pos On Falling Trigger Event	*	Target Position	Maximal Velocity	Acceleration	Deceleration	
	VAI Go To Pos On Rising Trigger Event	*	Target Position	Maximal Velocity	Acceleration	Deceleration	
	VAI Dec=Acc Go To Pos On Falling Trigger Event	*	Target Position	Maximal Velocity	Acceleration		
	VAI Dec=Acc Go To Pos On Rising Trigger Event	*	Target Position	Maximal Velocity	Acceleration		
	VAI Predef Acc Go To Pos On Falling Trigger Event	*	Target Position	Maximal Velocity			
	VAI Predef Acc Go To Pos On Rising Trigger Event	*	Target Position	Maximal Velocity			

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	Predef VAI Go To Abs Target Pos On Falling Trigger Event	*	Target Position				
	Predef VAI Go To Abs Target Pos On Rising Trigger Event	*	Target Position				
	VAI Increment Target Pos On Falling Trigger Event	*	Position Increment	Maximal Velocity	Acceleration	Deceleration	
	VAI Increment Target Pos On Rising Trigger Event	*	Position Increment	Maximal Velocity	Acceleration	Deceleration	
	VAI Dec=Acc Increment Target Pos On Falling Trigger Event	*	Position Increment	Maximal Velocity	Acceleration		
	VAI Dec=Acc Increment Target Pos On Rising Trigger Event	*	Position Increment	Maximal Velocity	Acceleration		
	VAI Predef Acc Increment Target Pos On Falling Trigger Event	*	Position Increment	Maximal Velocity			
	VAI Predef Acc Increment Target Pos On Rising Trigger Event	*	Position Increment	Maximal Velocity			
	Predef VAI Increment Target Pos On Falling Trigger Event	*	Position Increment				
	Predef VAI Increment Target Pos On Rising Trigger Event	*	Position Increment				
Event	VAI Change Motion Parameters On Negative Position Transition	*	Trans. Event Pos.	Max Vel After Event	Accel. After Event	Decel. After Event	
	VAI Change Motion Parameters On Positive Position Transition	*	Trans. Event Pos.	Max Vel After Event	Accel. After Event	Decel. After Event	
Capture	VAI Increment Captured Pos	*	Position Increment	Maximal Velocity	Acceleration	Deceleration	
Analog	VAI Go To Analog Pos	*	Maximal Velocity	Acceleration	Deceleration		
Velocity Acceleration Interpolated Positioning Commands (16 Bit)							
Absolute	VAI 16Bit Go To Pos		Target Position	Maximal Velocity	Acceleration	Deceleration	
	VAI 16Bit Go To Pos After Actual Command	*	Target Position	Maximal Velocity	Acceleration	Deceleration	
	VAI 16Bit Go To Pos From Act Pos Starting With Dem Vel = 0		Target Position	Maximal Velocity	Acceleration	Deceleration	
	VAI 16Bit Go To Pos From Act Pos And Act Vel		Target Position	Maximal Velocity	Acceleration	Deceleration	
	Predef VAI 16Bit Go To Pos		Target Position				
	Predef VAI 16Bit Go To Pos After Actual Command	*	Target Position				
	Predef VAI 16Bit Go To Pos From Act Pos Starting With Dem Vel = 0		Target Position				
	Predef VAI 16Bit Go To Pos From Act Pos And Act Vel		Target Position				
Increment	VAI 16Bit Increment Act Pos		Position Increment	Maximal Velocity	Acceleration	Deceleration	
	VAI 16Bit Increment Act Pos Starting with Dem Vel = 0		Position Increment	Maximal Velocity	Acceleration	Deceleration	
	VAI 16Bit Increment Dem Pos		Position Increment	Maximal Velocity	Acceleration	Deceleration	
	VAI 16Bit Increment Target Pos		Position Increment	Maximal Velocity	Acceleration	Deceleration	
	Predef VAI 16Bit Increment Dem Pos		Position Increment				
	Predef VAI 16Bit Increment Target Pos		Position Increment				
Stop	VAI 16Bit Stop		Deceleration				
	Predef VAI 16Bit Stop (QuickStop Deceleration)						
Trigger	VAI 16Bit Go To Pos On Falling Trigger Event	*	Target Position	Maximal Velocity	Acceleration	Deceleration	
	VAI 16Bit Go To Pos On Rising Trigger Event	*	Target Position	Maximal Velocity	Acceleration	Deceleration	
	Predef VAI 16Bit Go To Pos On Falling Trigger Event	*	Target Position				
	Predef VAI 16Bit Go To Pos On Rising Trigger Event	*	Target Position				
	VAI 16Bit Increment Target Pos On Falling Trigger Event	*	Position Increment	Maximal Velocity	Acceleration	Deceleration	
	VAI 16Bit Increment Target Pos On Rising Trigger Event	*	Position Increment	Maximal Velocity	Acceleration	Deceleration	
	Predef VAI 16Bit Increment Target Pos On Falling Trigger Event	*	Position Increment				
	Predef VAI 16Bit Increment Target Pos On Rising Trigger Event	*	Position Increment				
Event	VAI 16Bit Change Motion Parameters On Negative Position Transition	*	Transition Event Position	Max Velocity After Event	Acceleration After Event	Deceleration After Event	
	VAI 16Bit Change Motion Parameters On Positive Position Transition	*	Trans. Event Pos.	Max Vel After Event	Accel. After Event	Decel. After Event	
Time Curve Commands			**Parameter 1**	**Parameter 2**	**Parameter 3**	**Parameter 4**	**Parameter 5**
Curve	Time Curve With Default Parameters	*	Curve ID				
	Time Curve With Default Parameters From Act Pos	*	Curve ID				
	Time Curve With Adjustable Offset\c Time & Amplitude Scale	*	Curve ID	Curve Offset	Curve Time	Amplitude Scale	
	Time Curve With Adjustable Offset\c Time Scale & Amplitude Scale	*	Curve ID	Curve Offset	Time Scale	Amplitude Scale	
Time Curve Commands			**Parameter 1**	**Parameter 2**	**Parameter 3**	**Parameter 4**	**Parameter 5**
Curve to Position	Time Curve To Pos With Default Speed	*	Curve ID	Target Position			
	Time Curve To Pos With Adjustable Time	*	Curve ID	Target Position	Curve Time		
Trigger	Time Curve With Adjus. Offset\c Time & Ampl. Scale On Falling Trigger Event	*	Curve ID	Curve Offset	Curve Time	Amplitude Scale	
	Time Curve With Adjus. Offset\c Time & Ampl. Scale On Rising Trigger Event	*	Curve ID	Curve Offset	Curve Time	Amplitude Scale	
	Time Curve To Pos With Adjustable Time On Falling Trigger Event	*	Curve ID	Target Position	Curve Time		
	Time Curve To Pos With Adjustable Time On Rising Trigger Event	*	Curve ID	Target Position	Curve Time		
	Time Curve To Pos With Default Speed On Falling Trigger Event	*	Curve ID	Target Position			
	Time Curve To Pos With Default Speed On Rising Trigger Event	*	Curve ID	Target Position			
Encoder CAM Commands			**Parameter 1**	**Parameter 2**	**Parameter 3**	**Parameter 4**	**Parameter 5**
Control	Encoder Cam Disable (101xh)	*					
	Encoder Cam Enable (100xh)	*					
	Encoder Cam 1 Disable	*					
	Encoder Cam 1 Enable	*					
	Encoder Cam 2 Disable	*					
	Encoder Cam 2 Enable	*					
	Encoder CAM Go To Sync Pos	*					
	Encoder CAM Set Value	*	Counter Value				
CAM1	Encoder Cam 1 Define Curve To Pos	*	Curve ID	Curve Start Count	Target Position		
	Encoder Cam 1 Define Curve To Pos In Counts	*	Curve ID	Curve Start Count	Target Position	Curve Length	
	Encoder Cam 1 Define Curve From Act Pos	*	Curve ID	Curve Start Count			
	Encoder Cam 1 Define Curve With Default Parameters	*	Curve ID	Curve Start Count			
	Encoder Cam 1 Define Curve With Amp Scale In Counts	*	Curve ID	Curve Start Count	Amplitude Scale	Curve Length	
	Encoder Cam 1 Change Amp Scale and Length	*	Amplitude Scale	Curve Length			
CAM2	Encoder Cam 2 Define Curve To Pos	*	Curve ID	Curve Start Count	Target Position		
	Encoder Cam 2 Define Curve To Pos In Counts	*	Curve ID	Curve Start Count	Target Position	Curve Length	
	Encoder Cam 2 Define Curve From Act Pos	*	Curve ID	Curve Start Count			
	Encoder Cam 2 Define Curve With Default Parameters	*	Curve ID	Curve Start Count			
	Encoder Cam 2 Define Curve With Amp Scale In Counts	*	Curve ID	Curve Start Count	Amplitude Scale	Curve Length	
	Encoder Cam 2 Change Amp Scale and Length	*	Amplitude Scale	Curve Length			

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Trigger	Start Encoder Cam On Fall Trigger Event With Delay Counts	*	Curve ID	Curve Start Delay			
	Start Encoder Cam On Rise Trigger Event With Delay Counts	*	Curve ID	Curve Start Delay			
Position Indexing			**Parameter 1**	**Parameter 2**	**Parameter 3**	**Parameter 4**	**Parameter 5**
	Start Predef VAI Encoder Position Indexing	*	Target Position				
	Start VAI Encoder Position Indexing	*	Target Position	Maximal Velocity	Acceleration	Deceleration	
	Stop Position Indexing And Predefined VAI Go To Pos	*	Target Position				
	Stop Position Indexing And VAI Go To Pos	*	Target Position	Maximal Velocity	Acceleration	Deceleration	
Position Streaming Commands			**Parameter 1**	**Parameter 2**	**Parameter 3**	**Parameter 4**	**Parameter 5**
	P Stream With Slave Generated Time Stamp	*	Position				
	P Stream With Slave Generated Time Stamp and Configured Period Time	*	Position				
	PV Stream With Slave Generated Time Stamp	*	Position	Velocity			
	Stop Stream	*					
Force Control Commands			**Parameter 1**	**Parameter 2**	**Parameter 3**	**Parameter 4**	**Parameter 5**
	Force Ctrl Change Target Force	*	Target Force				
	VAI Go To Pos With Force Ctrl Limit	*	Target Position	Maximal Velocity	Acceleration	Force Limit	
	VAI Go To Pos With Force Ctrl Limit and Target Force	*	Target Position	Maximal Velocity	Acceleration	Force Limit	Target Force
	VAI Go To Pos From Act Pos And Reset Force Control	*	Target Position	Maximal Velocity	Acceleration	Deceleration	
Winding Application			**Parameter 1**	**Parameter 2**	**Parameter 3**	**Parameter 4**	**Parameter 5**
	Encoder Winding Start With Default Parameters	*					
	Encoder Winding Start With Default Parameters At Revolutions	*	Start Rev. Count				
	Encoder Winding Restart Adaptation Of Left/Right Position and Disturbance	*					
	Encoder Winding Stop Adaptation Of Left/Right Position and Disturbance	*					
	Encoder Curve Winding Start With Default Parameters	*	Curve ID				
	Encoder Curve Winding Start With Default Parameters At Revolutions	*	Curve ID	Start Rev. Count			
Command Table Commands			**Parameter 1**	**Parameter 2**	**Parameter 3**	**Parameter 4**	**Parameter 5**
	Start Command Table Command	*	Cmd Table Entry ID				
	Start Command Table Command On Falling Trigger Event	*	Cmd Table Entry ID				
	Start Command Table Command On Rising Trigger Event	*	Cmd Table Entry ID				
	IF Actual Position Greater Than	*	Condition Value	Cmd. ID if True	Cmd. ID if False		
	IF Actual Position Less Than	*	Condition Value	Cmd. ID if True	Cmd. ID if False		
	IF Analog Val On X4.4 Less Than	*	Condition Value	Cmd. ID if True	Cmd. ID if False		
	IF Cmd Table Var 1 Greater Than	*	Condition Value	Cmd. ID if True	Cmd. ID if False		
	IF Cmd Table Var 1 Less Than	*	Condition Value	Cmd. ID if True	Cmd. ID if False		
	IF Cmd Table Var 2 Greater Than	*	Condition Value	Cmd. ID if True	Cmd. ID if False		
	IF Cmd Table Var 2 Less Than	*	Condition Value	Cmd. ID if True	Cmd. ID if False		
	IF Current Greater Than	*	Condition Value	Cmd. ID if True	Cmd. ID if False		
	IF Current Less Than	*	Condition Value	Cmd. ID if True	Cmd. ID if False		
	IF Demand Position Greater Than	*	Condition Value	Cmd. ID if True	Cmd. ID if False		
	IF Demand Position Less Than	*	Condition Value	Cmd. ID if True	Cmd. ID if False		
	IF Difference Position Greater Than	*	Condition Value	Cmd. ID if True	Cmd. ID if False		
	IF Difference Position Less Than	*	Condition Value	Cmd. ID if True	Cmd. ID if False		
	Wait Time	*	Time				
	Wait Time Defined With Cmd Table Var 1	*					
	Wait Time Defined With Cmd Table Var 2	*					
	Wait until Actual Position Greater Than	*	Act Pos Trig Level				
	Wait until Actual Position Less Than	*	Act Pos Trig Level				
	Wait until Actual Velocity Greater Than	*	Act Vel Trig Level				
	Wait until Actual Velocity Less Than	*	Act Vel Trig Level				
	Wait until Current Greater Than	*	Dem Curr Trig Lvl				
	Wait until Current Less Than	*	Dem Curr Trig Lvl				
	Wait until Demand Position Greater Than	*	Dem Pos Trig Level				
	Wait until Demand Position Less Than	*	Dem Pos Trig Level				
	Wait until Demand Velocity Greater Than	*	Dem Vel Trig Level				
	Wait until Demand Velocity Less Than	*	Dem Vel Trig Level				
	Wait until Difference Position Greater Than	*	Act Pos Trig Level				
	Wait until Difference Position Less Than	*	Act Pos Trig Level				
	Wait until Difference Position unsigned Greater Than	*	Act Pos Trig Level				
	Wait until Difference Position unsigned Less Than	*	Act Pos Trig Level				
	Wait until Falling Trigger Edge	*					
	Wait until In Target Position	*					
	Wait until Motion Finished	*					
	Wait until Rising Trigger Edge	*					
	Set Cmd Table Var 1 To	*	Set Value Of Var 1				
	Set Cmd Table Var 2 To	*	Set Value Of Var 2				
	Add To Cmd Table Var 1	*	Add Value Of Var 1				
	Add To Cmd Table Var 2	*	Add Value Of Var 2				
	VAI Go To Cmd Tab Var1 Pos	*	Maximal Velocity	Acceleration	Deceleration		
	VAI Go To Cmd Tab Var2 Pos	*	Maximal Velocity	Acceleration	Deceleration		
	Write Cmd Table Var 1 To UPID RAM value	*	UPID				
	Write Cmd Table Var 2 To UPID RAM value	*	UPID				
	Modify Command Table 16 bit Parameter in RAM	*	Cmd Table Entry ID	Parameter Offset	Parameter Value		
	Modify Command Table 32 bit Parameter in RAM	*	Cmd Table Entry ID	Parameter Offset	Parameter Value		

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Die aktuellesten Befehle finden Sie
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