#### **Embedded Weighing Electronics and signal conditioner**

Thank you for choosing HBK's weighing electronic and the related software. This Firmware is used in following products: (AD104C and AD105C-series already End-of-Life) and actual: **AD105D**-series, **AD112D**-series, **PAD**-series, **FIT5- FIT7**-series.

Important: Due to Legal-For-Frade regulations, Firmware- Updated or Downgrades are only allowed by HBK internally.

**Please be aware**, that depending of the FW-version **you need the related ESD-file for the CAN-interface.** (e.g. FW P80\_**118** in CAN-device needs EDS-file: AD105D\_\_P80\_**118**\_01\_COS.EDS. EDS-files can be downloaded from the related HBM product-website.

For the RS485-interface, there is no device-description-file necessary.

Your feedback is important for HBK. If you encounter any problems or suggestions to improve the weighing electronics, please let us know.

You can contact our team of support engineers directly at http://www.hbm.com/support

#### **Version Overview**

Version	Release Date	Color Code on pcb	Product(s) Interfaces(s)	Issue Type (Feature/BugFixFix)	Description	
v1.03 - Internal release						
vP79_103	13.11.2014		All		Initial release	
v1.04 - Internal release						
D70 404	104 16.01.2015	Red	All	Feature	Enhanced filling optimisation	
			All	BugFix	CANopen LSS (CiA 305) fixed	
P79_104			All	BugFix	Start-Filling via Input fixed.	
			AD105D	Feature	AD105D integrated	
v1.05						
	01.04.2015	Blue	All	BugFix	Checkweigher settling time fixed	
DOO 105			CANopen	BugFix	Fixed baud rate change via LSS	
P80_105			FIT7AE/FIT5AE	BugFix	Dignostic interface fixed	
			RS485	Feature	Parity none added	
v1.06						
			CANopen	Feature	LSS "Activate bit timing" added	
			All	BugFix	Fixed calculation of filter settling times in command FST	
			DeviceNet	BugFix	Fixed measured value status bit 12 "Short circuit digital outputs"	
			All	BugFix	Fixed limit switches 3+4 did not activate output	
v1.07						



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P80_107	15.12.2015	Green	RS485	BugFix	Fixed: Continuous output after reset in RS485 didn't stop		
180_107	13.12.2013	dreen	All	BugFix	Auto-Zeroing CD1/CD2 in filling-mode fixed		
v1.08							
P80_108	31.03.2016	Pink	CANopen	BugFix	Setting 1Mbit/s in CANopen LSS falsely activated 20KBit/s fixed PDO 2 and 3 now additionally contain		
			CANopen	Feature	trigger and filling counter (see comamnd APD)		
v1.09							
P80_109	27.04.2016		All	Feature	Internal release		
				v1.10			
			All	BugFix	Fixed filling-parameters sets		
P80_110	29.04.2016	White	All	BugFix	Fixed: Alarm did not activate when weight was below minimal filling weight		
			CANopen	BugFix	Fixed diagnostis memory mode DGS11/12		
v1.11							
			All	BugFix	Optimize diagnosis funuction		
			v1.12 -	internal release			
			All	BugFix	Settings storage TDD now works in background		
			All	BugFix	Tare command TAR no longer stored in flash		
			All	Feature	New resolution 500d in RSN command		
			All	BugFix	Integrate zero tracking value in zero command CDL		
			CANopen	Feature	New product code 50F (hex.) for PW15IA		
			All	BugFix	Digital outputs DL1/DL" in filler mode only availabe when OMD=3		
				v1.13			
			All	BugFix	Overflow counter updates flash memory each 10 min.		
			CANopen / Devicenet	Feature	Fiexed resolution RSN with 500d		
v1.14							
			All	BugFix	Prevent command CDL1 from starting filing cycle		
			All	Feature	New command LVS gets current status of all limit switches Cyclic scan to detect flash corruption.		
			All	Feature	Signalized as memory error in ESR command.		
			AD105D	BugFix	Fix digital filter setting ASF9		
			All	Feature	Stabilize temperature values TMP/TME		
			AD105D	BugFix	Fixed: Measured value rate was doubled		



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		1			when HSM0		
			All	Feature	Store TDD in background task		
			All	Feature	New command software trigger TSW		
			All	BugFix	Fixed getting current zero value via command CDL		
			All	Feature	Command LIC uses busy flag BSY		
			CANopen	BugFix	Fix activating Legal-For-Trade mode via LFT command 2300/02		
			PW15IA	Feature	New EDS file for PW15IA		
v1.15 - Krones release							
P80_115	30.07.2019	Blue	All	Feature	TDD command answers CANopen request immediately, in order to maintain compatibility with older Krones machines.		
			v1.16 - AD10	05D BugFixfix release			
B00 446		51	AD105D	BugFix	Fixed inverted digital ouput		
P80_116	20.02.2020	Blue	AD105D	BugFix	Fixed digital Filter FMD3		
			v1.17 -	Internal Release			
			All	BugFix	Fexed: Tare value wasn'.t stored in flash with TDD1 command		
P80_117	07.07.2020	Yellow	All	BugFix	Fixed restore commad TDD0, to no longer change baudrate, address		
			CANopen	BugFix	Fixed object 1018/02 (Product code)		
v1.18 - FMC release							
P80_118	07.07.2020	Green	All	FW Optimizing	Reduced reset duration from about 3000ms to 1070ms		
			v1.19 -	AD116D release			
P80_119	18.01.2021	White	AD116D	BugFix	Fixed internal temperature sensor		
				v1.20			
					Changed version in legal-for-trade software identification from 80 to 81		
	01.06.2022	Lasered: AD112D V1.20	PAD(AD112D), Fit7 (not AD105D)	Feature	Changed checksum in legal-for-trade software identification from 240413 to 244554		
P81_120					Setting a preset tare value in legal-for-trade mode is now allowed		
					Added preset tare status bit		
					New automatic zero setting mode New commands (DZB, DZH, DZM, DZT)		
					Added new modes for multi-range changeover		
					New commands MRM (Multi Range Mode), SCR (Set Current Range)		



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				v1.21	
P81_121	21.10.2022	Türkis (turquoise)	PAD/AD112D, AD105D	Feature BugFix	Added settings for TF-synchronization, see Objekts (SYN/SYT/SST)  Added settings for 4-point linearisation  New option: ZMD1 (Zeroing Mode up to +/- 100% (NLFT)  AD105D Bug Inverted digital output 1, now compartible with AD105C  AD105D Feature New command OI1 for inverting digital output 1  All: Bug Fixed in peak values  All: Bug error when zeroing > 2% fixed  All: Bug crash caused by fast LFT/TDD command sequences fixed

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