Speed feed-forward control

Translation of the "Original Dokumentation"

Name: FKT_Speed_feed-forward_control_en

Version:

Version: 2018/44	
Change	**Letter symbol**
• iX(-R3) / iC(-R3) / iDT5(-R3) added	STL

Previous version: 2017/14

Product version:

Product AMK part no.	Firmware Version (AMK part no.)
KW-R06 (O835) KW-R07 (O807) KW-R16 (O872) KW-R17 (O873)	AE-R05/R06 V1.13 2015/21 (205700)
KW-R24 (O901)	AE-R24 V2.03 2015/06 (205587)
KW-R24-R (O954)	AE-R24-R V2.11 2016/46 (206643)
KW-R25 (O902)	AE-R25 V2.03 2015/06 (205588)
KW-R26 (O903)	AE-R26 V2.03 2015/06 (205589)
iX / iC / iDT5	iX V1.07 2015/17 (205688)
iX(-R3) / iC(-R3) / iDT5(-R3) /	iX V2.08 2015/46 (206017)
ihX	ihX V1.00 2015/06 (205440)

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1 Speed feed-forward control

Supported hardware:	KW-R06 / KW-R16 / KW-R07 / KW-R17 / iX / iC / iDT5 / iX(-R3) / iC(-R3) / iDT5(-R3) / ihXT / KW-R24 / KW-R24-R / KW-R25 / KW-R26 /

Speed feed-forward control values can be externally calculated by a controller and written to ID37 'Additive velocity command value'. Alternatively, the speed feed-forward control values can be internally calculated by differentiating the position setpoints.

Parametrization:

Parameter ID	Parameter description	Setting	Meaning
ID34225	'Mode feed forward control'	Bit 4 = 0	Source speed feed-forward control values: ID37 'Additive velocity command value' The following error compensation (SAK) [1] must be switched off (ID3280x 'AMK operating modes' Bit 9 = 0), otherwise it will be pre-controlled twice!
		Bit 4 = 1	Source speed feed-forward control values: By differentiating the position setpoints The following error compensation (SAK) [1] must be switched off (ID3280x 'AMK operating modes' Bit 9 = 0), otherwise it will be pre-controlled twice!
ID37	'Additive velocity command value'		[0.0001 1/min]

1) The following error compensation (SAK) is another way to generate internally speed pre values. The SAK can reference other parameters to affect the gain of the feed-forward control of speed and acceleration, as well as compensate for dead times.
See document: FKT_Schleppabstandskompensation_en