

# POSITIONING AND SAFETY DOOR DRIVES

Reliable, robust  
and **energy  
efficient**

Industrial Motors

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Appliance Motors

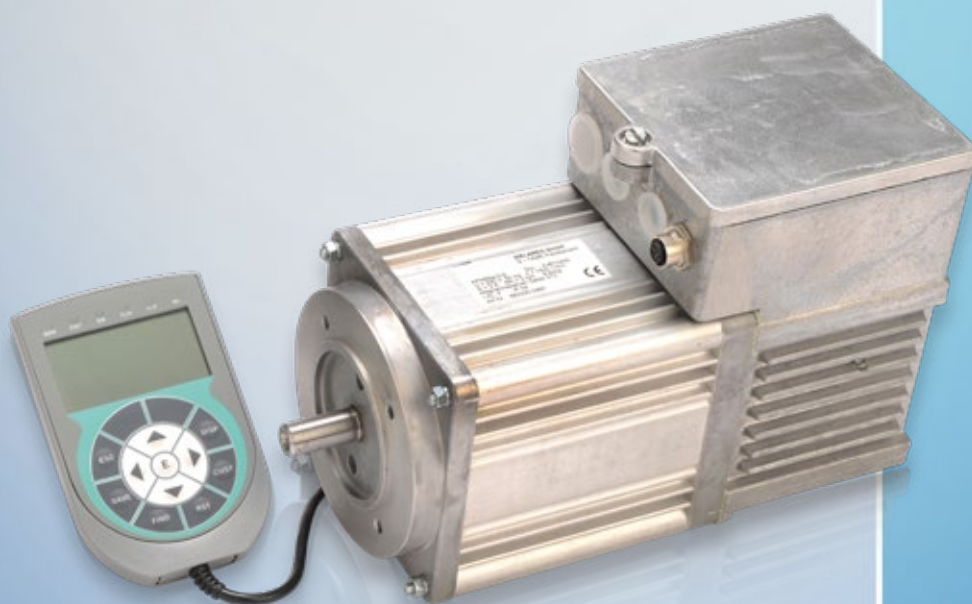
**Automation**

Digital &  
Systems

Energy

Transmission &  
Distribution

Coatings



Driving efficiency and sustainability





# S U M M A R Y

## **KFM SAFETY** - COMPLETE SOLUTION FOR MACHINE SAFETY DRIVES

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Advantages at a glance

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Product features

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Certified safety features

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## **KFM 05a** - POSITIONING DRIVE

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Advantages at a glance

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Product features

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Application

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05

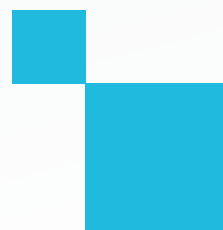
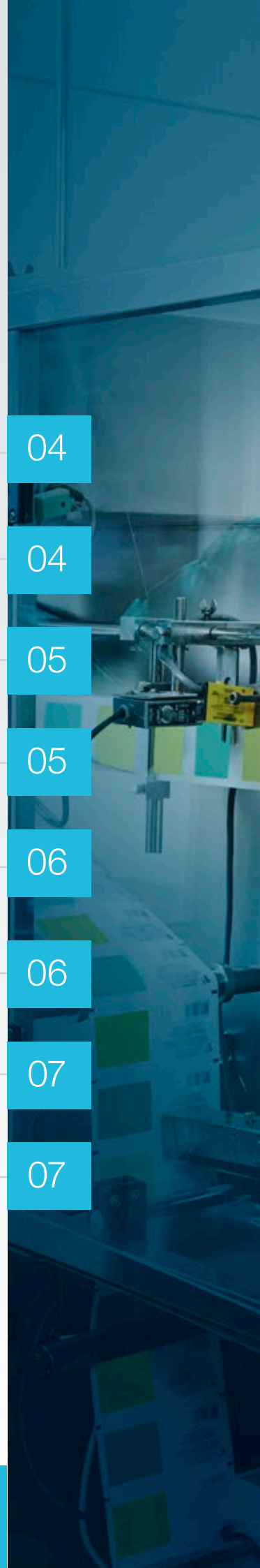
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# KFM SAFETY

## COMPLETE SOLUTION FOR MACHINE SAFETY DOOR DRIVES

### Advantages at a glance

#### Simple

- Teach-In: commissioning of the machine door at the push of a button (Automatic learning of movement direction, dimensions, mass and frictional forces)

#### Cost-effective

- No end switches or other hardware for door operation required (except where necessary for safety function)
- Minimal wiring

#### Compact

- Space-saving: minimal effort for wiring. Often a cabinet is dispensable

#### Smart

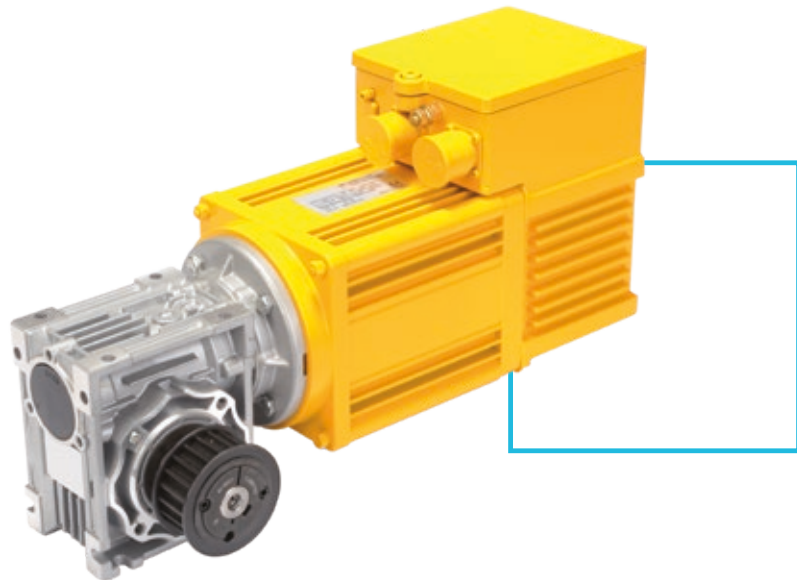
- Partial opening (useful in injection molding for example)
- "Door open" detection
- Torque in the "door-closed" direction before opening
- Short cycle times due to fast door movement

#### Safe

- Performance Level PL e according to DIN EN ISO 13849-1/-2 and Safety Integrity Level SIL 2 according to DIN EN 61508-1/-2/-3
- TÜV Nord certified safety functions STO, SLS and SLT
- Safety functions provided for by the EN 61800-5-2 standard

#### Distributed and integrated

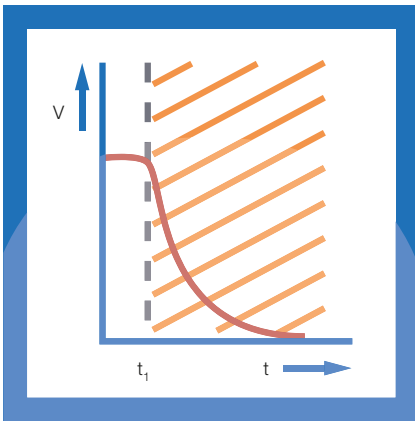
- Integrated EMC filter and versatile input/outputs
- Complete unit including gearbox and pulley



## Product features

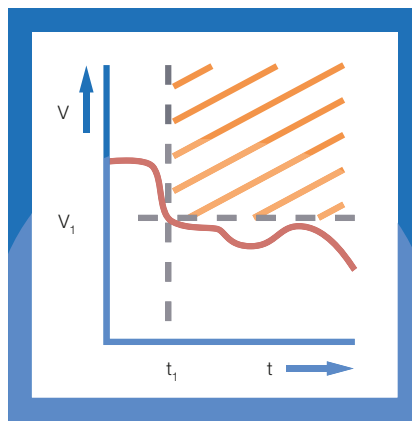
Technical specifications	KFM SAFETY 180	KFM SAFETY 510
Power supply	230 V ac $\pm 10\%$ 50/60 Hz $\pm 10\%$	
Nominal power	188 W	512 W
Nominal torque	1.8 Nm	2.8 Nm
Rated speed	1,000 rpm	1,750 rpm
Encoder resolution	2,048 pulses per revolution	
Control signals	2x2 channels for safe digital IN (enable and safety), 4 digital IN 24 V dc $\pm 20\%$ , 5 digital OUT 24 V dc/50 mA short-circuit proof	
Interfaces	RS232, USB, PROFINET (optional)	
Optionals	Control box; brake	
Programming	Software for parameter optimization and functions control	
Certifications	CE, UL, CSA, CCC, TÜV Safety (PL e (Kat 3), SIL2)	

## Certified safety features



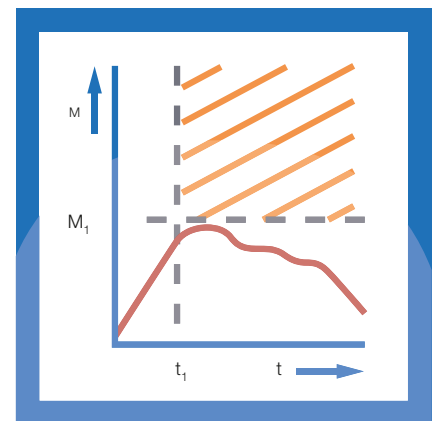
### Safe Torque Off

- STO: Safe Torque Off  
The KFM SAFETY is safely switched to torque-free by blocking the IGBT output.



### Safe-Limited Speed

- SLS: Safe-Limited Speed  
With a speed limit, the kinetic energy (energy of motion) is limited (typically to 10J).



### Safe Limited Torque

- SLT: Safe Limited Torque  
By a torque limitation the force of the door when closing is limited (typically to 150N).

# KFM 05a

## POSITIONING DRIVE

### Advantages at a glance

#### Compact

- No end switches or other hardware required for door operation
- Safety strips, light barriers and light curtains can directly stop the movement of the KFM 05a via the digital inputs

#### Flexible

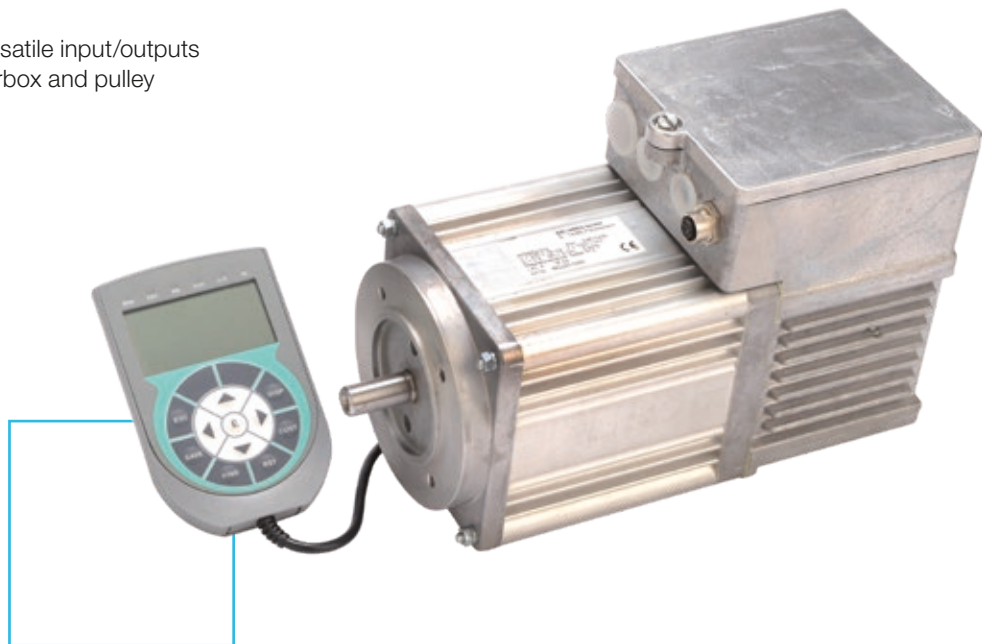
- A variety of options such as safety relays, various fieldbus systems and optional integrated holding brake allow easy integration into customer applications
- Customized versions for optimal adaptation to customer needs

#### Comfortable and easy to operate

- Easy and quick installation/configuration
- Included user-friendly PC software
- Control box for on-site configuration available
- Automatic commissioning of the machine door at the push of a button: automatic learning of movement direction, dimensions, mass and frictional forces

#### Distributed and integrated

- Integrated EMC filter and versatile input/outputs
- Complete unit including gearbox and pulley



## Product features

Technical specifications	KFM 05a 180	KFM 05a 310	KFM 05a 510	KFM 05a 500L
Power supply	230 V ac $\pm 10\%$ 50/60 Hz $\pm 10\%$			
Nominal power	188 W	314 W	512 W	507 W
Nominal torque	1.8 Nm	2.0 Nm	2.8 Nm	1.9 Nm
Rated speed	1,000 rpm	1,500 rpm	1,750 rpm	2,550 rpm
Encoder resolution	2,048 pulses per revolution			
Analog setpoint	AIN1 and AIN2 0-10 V, 0-20 mA, 2-10 V, 4-20 mA, digital 24 V dc			
Positions	16 preset positions (any number via fieldbus)			
Control signals	5 digital IN 24 V dc $\pm 20\%$ , 3 digital OUT 24 V dc/50 mA short-circuit proof, 2 relays 30 V 1 A			
Interfaces	RS232, RS422, CANopen (optional), PROFINET (optional)			
Options	Control box; brake			
Programming	Software for parameter optimization and functions control			
Certifications	CE, UL, CSA, CCC			

## Application

- Transportation technology
- Lift drives
- Horizontal and vertical conveyors
- Dough kneading and dividing machines
- Positioning drives for linear axis
- Angle positioning
- Handling technique
- Packaging machines
- Belt drives
- Special-purpose machines
- Door and gate drives











# Global presence

is essential, as much  
as understanding  
your needs.



## Global Presence

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**Partnership** is to create solutions that suits your needs



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The values shown are subject to change without prior notice.  
The information contained is reference values.