

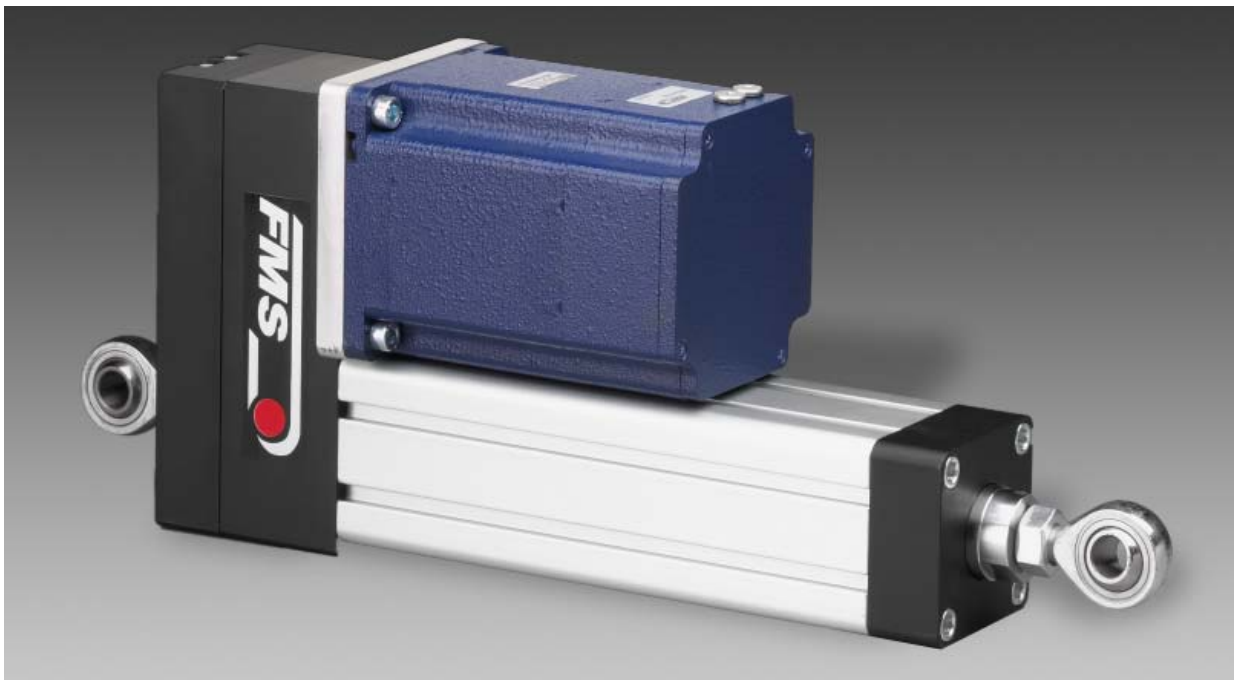


# Installation Manual

## FMS winderGLIDE Type BKS.D.6

Actuator for unwind and rewind stations

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Diese Bedienungsanleitung ist auch in Deutsch erhältlich.  
Bitte kontaktieren Sie Ihren nächstgelegenen FMS Vertreter.

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# 1 Safety Instructions

## 1.1 Description Conditions

a) High danger of health injury or loss of life



### **Danger**

*This symbol refers to high risk for persons to get health injury or loss of life. It has to be followed strictly.*

b) Risk of damage of machines



### **Caution**

*This symbol refers to information, that, if ignored, could cause heavy mechanical damage. This warning has to be followed absolutely.*

c) Note for proper function



### **Note**

*This symbol refers to an important information about proper use. If not followed, malfunction can be the result.*

## 1.2 List of Safety Instructions



*The main supply terminal on the Power Supply Unit can be under a tension of 95-264 VAC. Mortal danger! Only specially instructed and qualified personnel should handle the cabling of this unit. In any case the main supply may only be switch on after having properly connected the cables on the terminal.*



*The winderGLIDE BKS.D.6 may not be stressed over the specification limits neither during assembly nor operation. In particular it may not be operated outside the specified temperature range and protection class.*



*The attachment points for the winderGLIDE on the machine must be properly designed*



*For correct installation and operation, follow the electrical wiring diagram and instructions in this manual.*

## 2 Product Data

### 2.1 Mechanical Dimensions

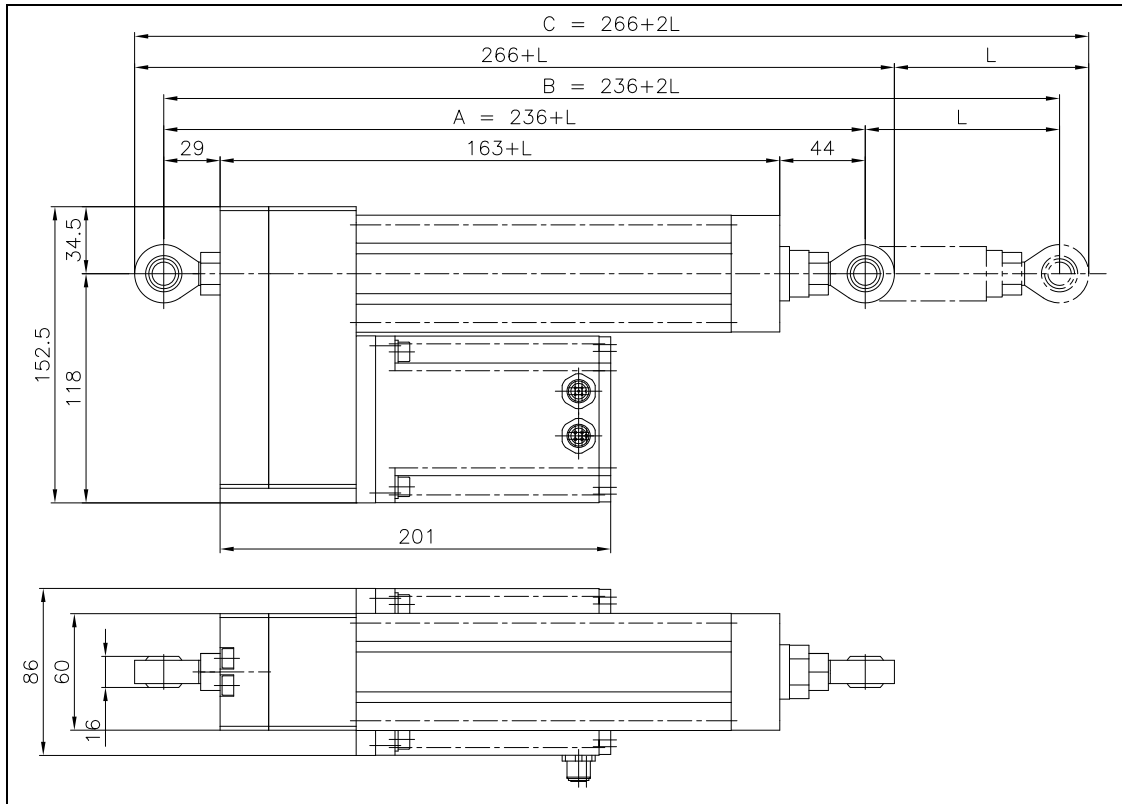


Fig. 1: Outline Drawing Actuator

BKS.D.6.0001

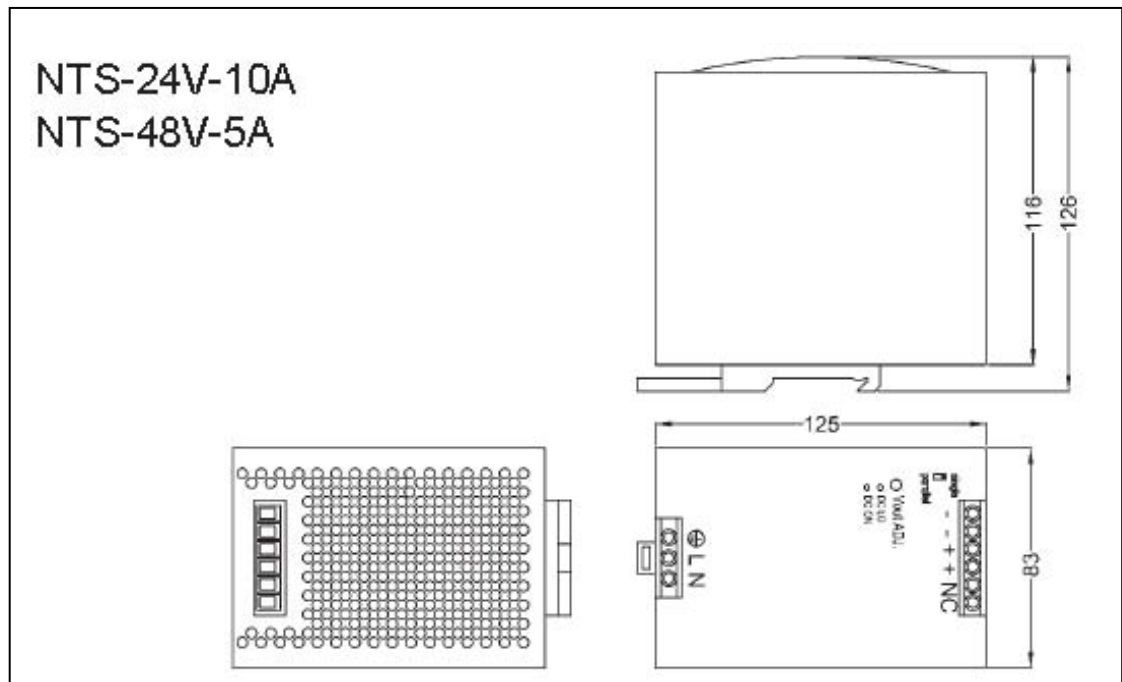
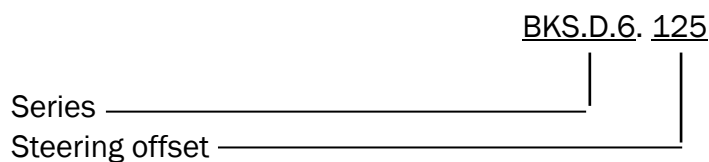


Fig. 2: Outline Drawing Power Supply Unit

BKS.D.6.0003

Dimensions (see Fig. 1 and Fig. 2)	in mm [in]
Steering offset L	125 [4.9] or 200 [7.9]
Bracket distance A in center position of toggle link sockets	236 [9.3] + L
Total length B at full travel positions	236 [9.3] + 2L
Total length C	266[10.5] + L
Power Supply Unit (l * w * h)	227 * 125.2 * 100 [8.9 * 4.9 * 3.9]
Screw pitch	5

## 2.2 Order Code (Example) winderGLIDE Type D.6



## 2.3 Scope of Delivery

- Actuator with spherical rod ends on both sides
- Supply Unit NTS-24A-10A
- Cable to Supply Unit

Not included in the scope of delivery are the preassembled cable to the Electronics and alternative mounting devices. Additional mounting devices like clevis, hinge or flange for front mounting can be ordered separately.

## 3 Installation

### 3.1 Assembly Conditions

The winderGLIDE BKS.D.6 is defined as “partly completed machinery” according to the **Directives 2006/42/EC, article 2**. In order to assure a proper functionality of the parts and guarantee the essential health and safety requirements of operators working with it, the following conditions for the assembly of the winderGLIDE must be met:



#### Caution

*The winderGLIDE BKS.D.6 may not be stressed over the specification limits neither during assembly nor operation. In particular it may not be operated outside the specified temperature range and protection class.*



#### Caution

*The attachment points for the winderGLIDE on the machine must be properly designed (refer to Fig. 3).*



#### Caution

*For correct installation and operation, follow the electrical wiring diagram and instructions in this manual (refer to Fig. 5).*

### 3.2 Mounting the winderGLIDE Type D.6

There are four mounting devices to assemble the winderGLIDE on the machine frame

These mounting devices can be combined according to the table below to meet the requirements of the application (see also Fig.3).

Mounting devices	Joint at the static end	Joint at the moving end
Spherical rod end	●	●
Clevis	●	●
Hinge	●	-
Flange	●	-

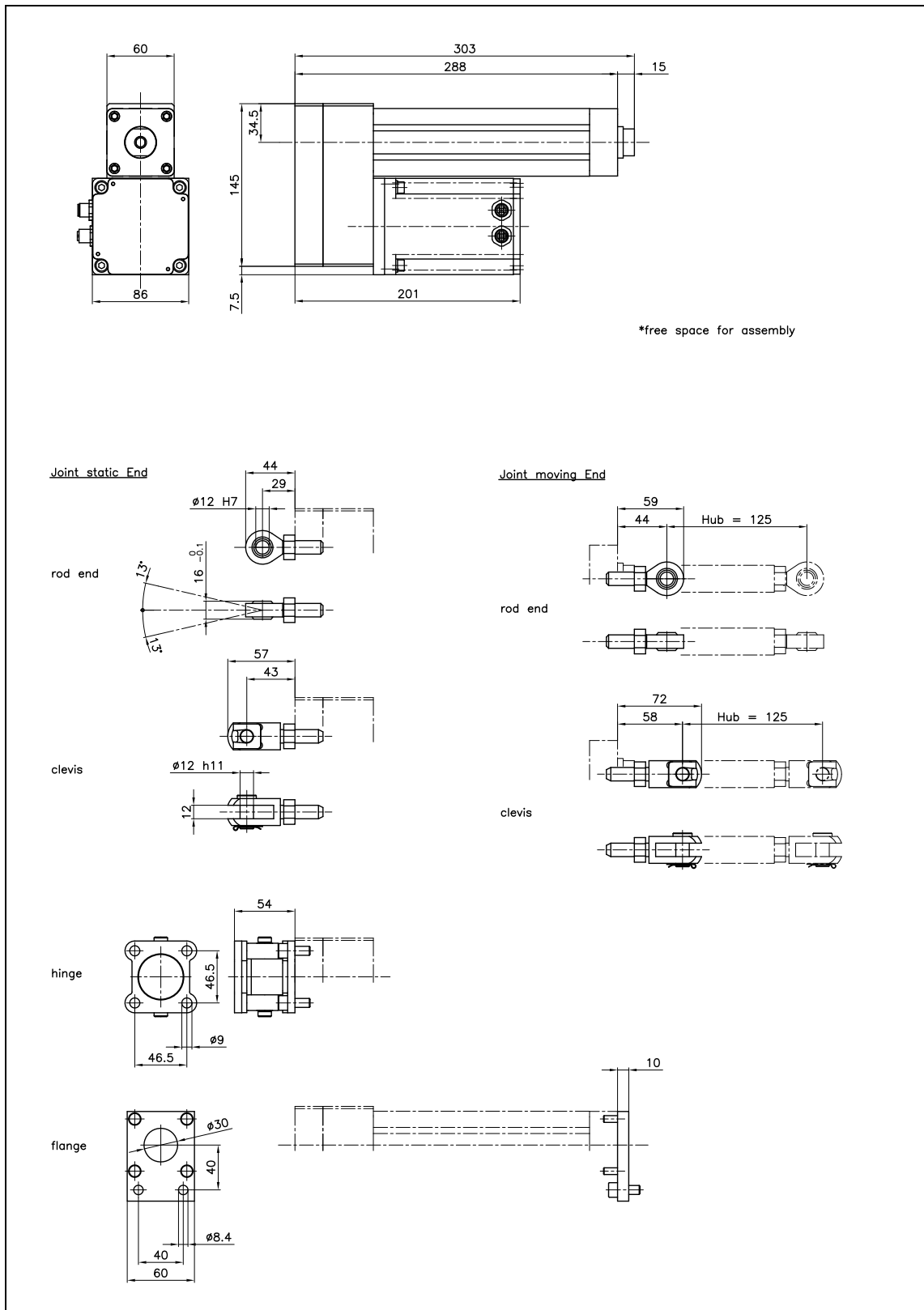


Fig. 3: Mounting Devices of BKS.D.6

BKS.D.6.0002e

The static part of the winderGLIDE must be mounted to the machine frame e.g by means of the spherical rod end on the gearbox or the flange at the end of the spindle housing. The moving rod end is mounted to the winding stand. The BKS.D.6 was designed for horizontal mounting positions.

### 3.3 BKS.D.6 System Overview

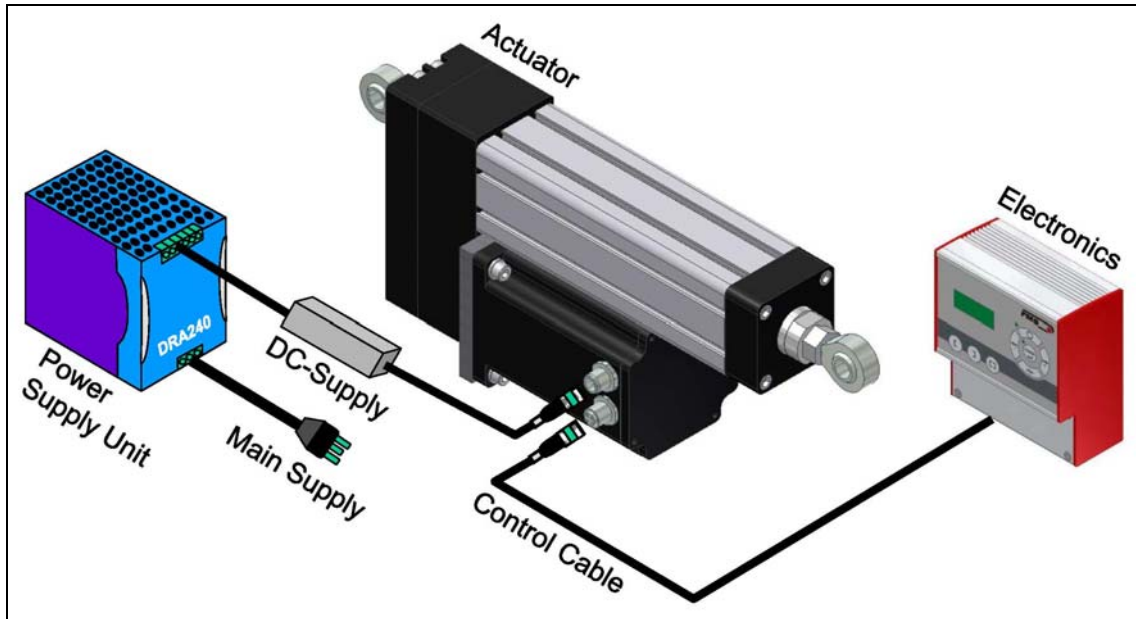
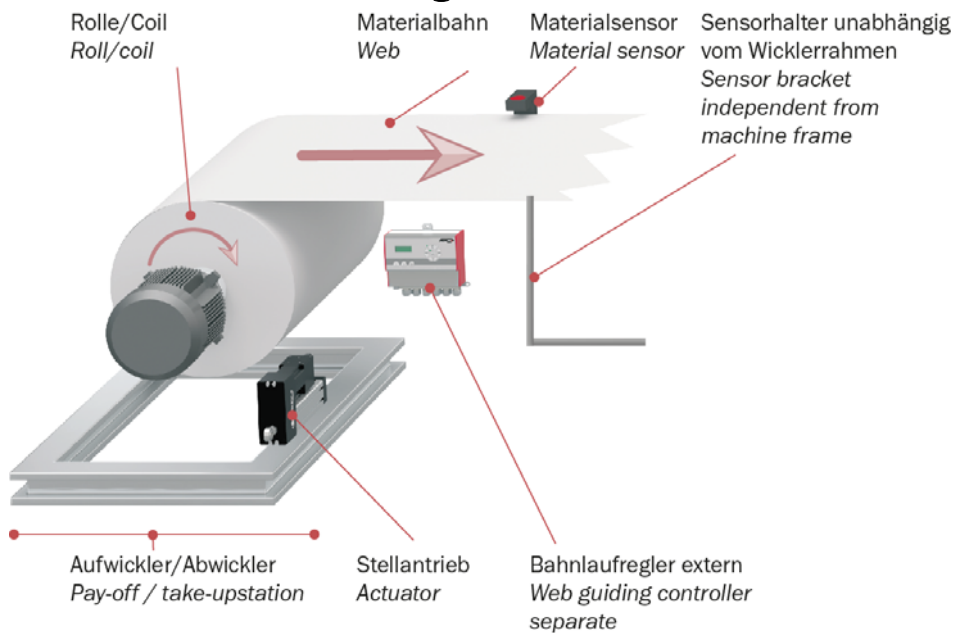


Fig. 4: winderGLIDE BKS.D.6 components and cabling

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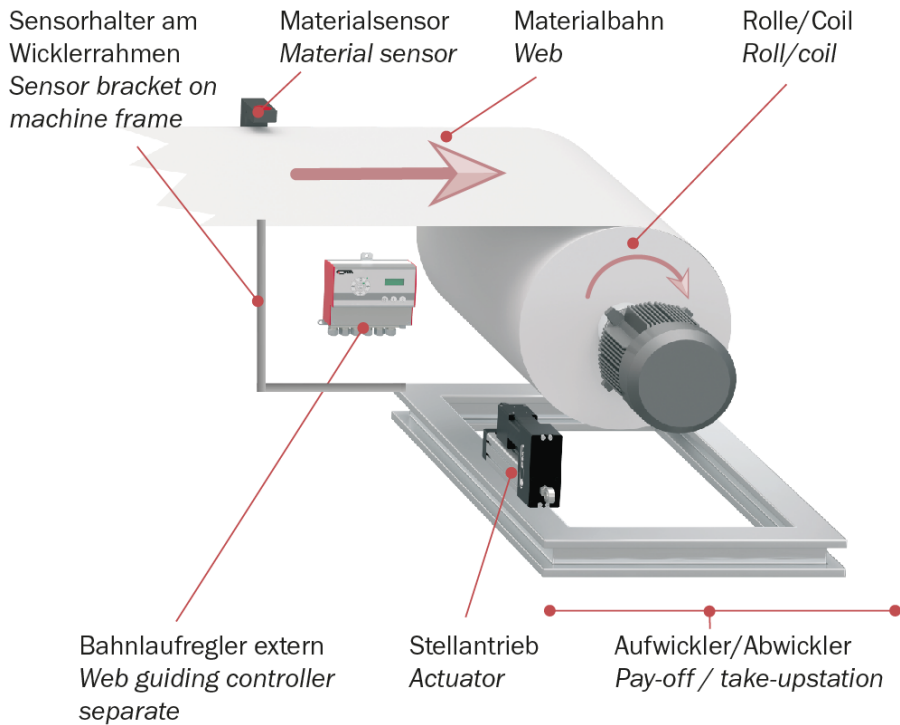
### 3.4 Installation on unwinding station



Tension\_Control\_Web\_Guiding\_Scheme\_Schema.ai



### 3.5 Installation on winding station



Tension\_Control\_Web\_Guiding\_Scheme\_Schema.ai

### 3.6 Connecting the Actuator widerGLIDE BKS.D.6

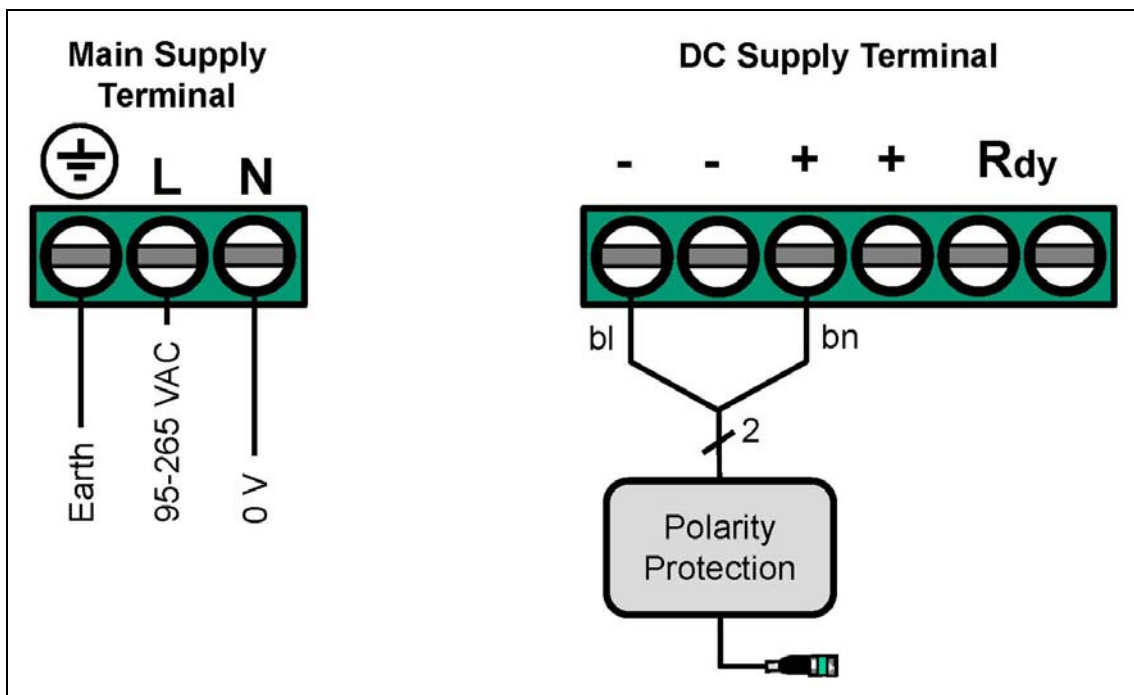


Fig. 5: Cable Terminals of the Power Supply Unit DRA240

BKS.D.6.0007e



### **Danger**

*The main supply terminal on the Power Supply Unit can be under a tension of 95-264 VAC. Mortal danger! Only specially instructed and qualified personnel should handle the cabling of this unit. In any case the main supply may only be switch on after having properly connected the cables on the terminal.*



### **Caution**

*In operation the rated current in the BKS.D.6 actuator can reach up to 10A. In order to ensure an adequate conductor cross section it is essential to duplicate the DC-voltage supply lines (24 VDC and GND) with wires of 0.75mm<sup>2</sup> or higher.*



### **Caution**

*Bad earth connection may cause electric shock to persons, malfunction of the total system or damage of the control unit! It is vital to ensure that there is a proper and secure earth connection.*

### 3.7 Pin Assignment on Actuator Connectors

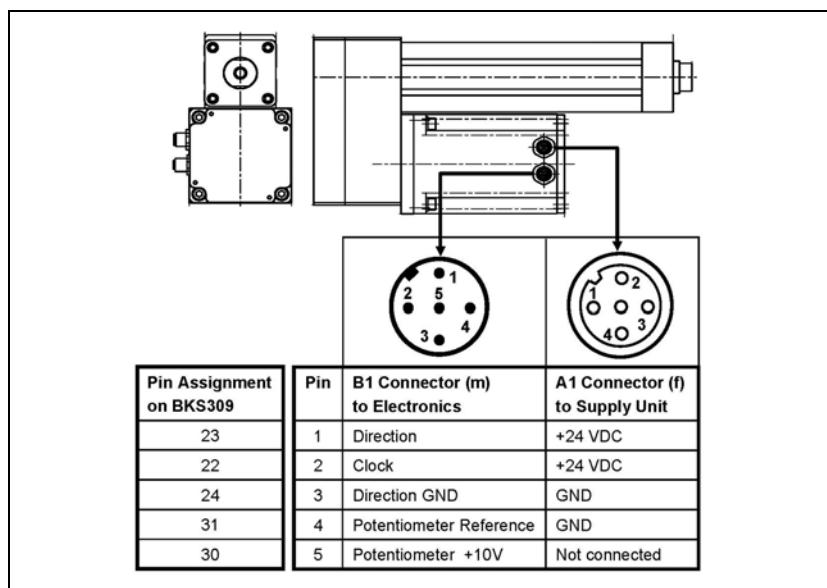


Fig. 6: Wiring diagram winderGLIDE BKS.D.6 BKS.D.6.0008e

## 4 Functional Description

The FMS-winderGLIDE D.6 is an actuator designed for guiding unwind and rewind stands. It utilizes a powerful and high accuracy stepper motor with 2500N of thrust force to ensure the most accurate positioning of even the heaviest stands. When compared to hydraulic systems, this actuator operates clean and is suitable for the food and pharmaceutical packaging industry. The backlash free 5mm pitch spindle/ball screw systems are available in a choice of 125mm or 200mm lengths for greater positioning flexibility. Actuator and power supply are delivered as a complete drive unit. The two easily accessible connectors, multiple mounting options, and space-saving design make the FMS-actuator perfect for new machine designs or upgrading existing installations

## 5 Technical Specification

Parameter	Specification
Spindle Pitch	5 mm [0.2in]
Thrust Force [N]	2500 N [562 lbf]
Adjusting Speed [mm/s]	25 mm/s [1 in/s]
Drive	16mm [0.63in] spindle, ball screw combination
Temperature Range	-10 ... 60 °C (14...140 °F)
Protection Class	IP40



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