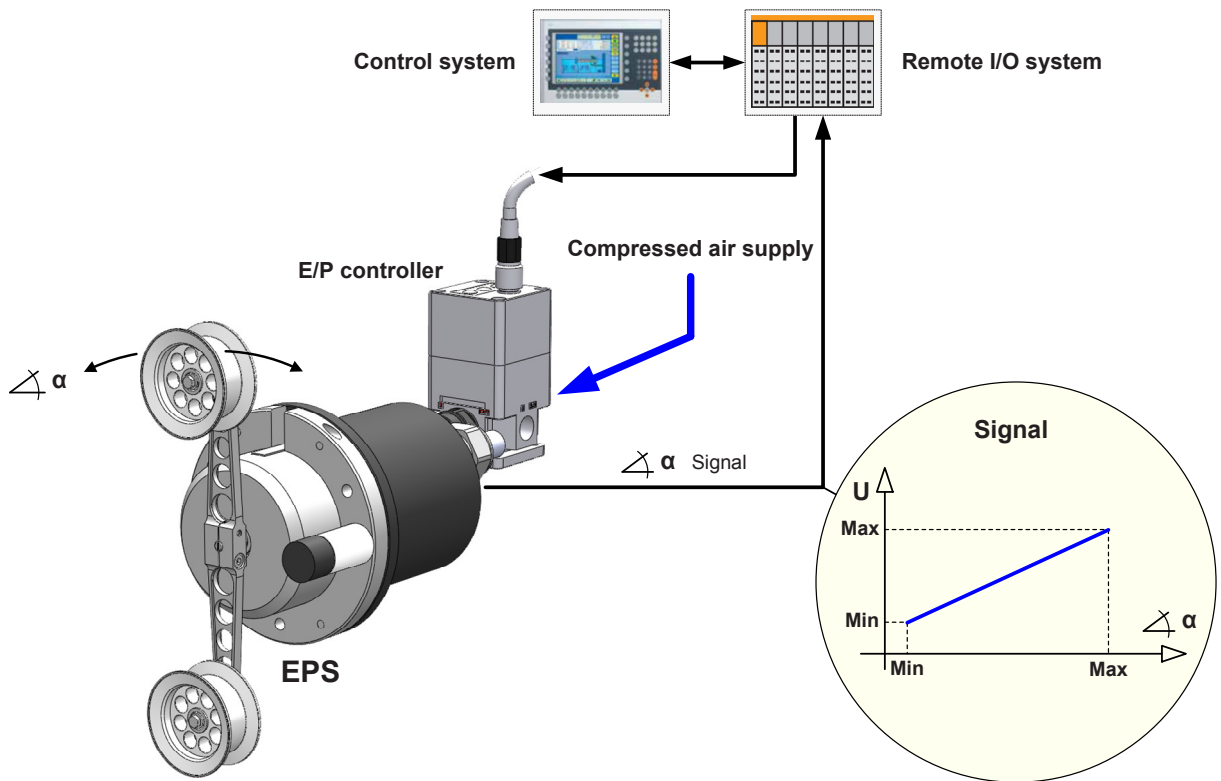


**Description**

EPS is a control dancer and used for tension control on winding of endless material. It is an active dancer system. The required tension is precisely adjustable in a wide range. EPS operates as an electrically controllable P/F actuator.



**Applications**

- tension controlled unwinding
- actuating element for tension control
- material accumulator / dancer system

**Special features**

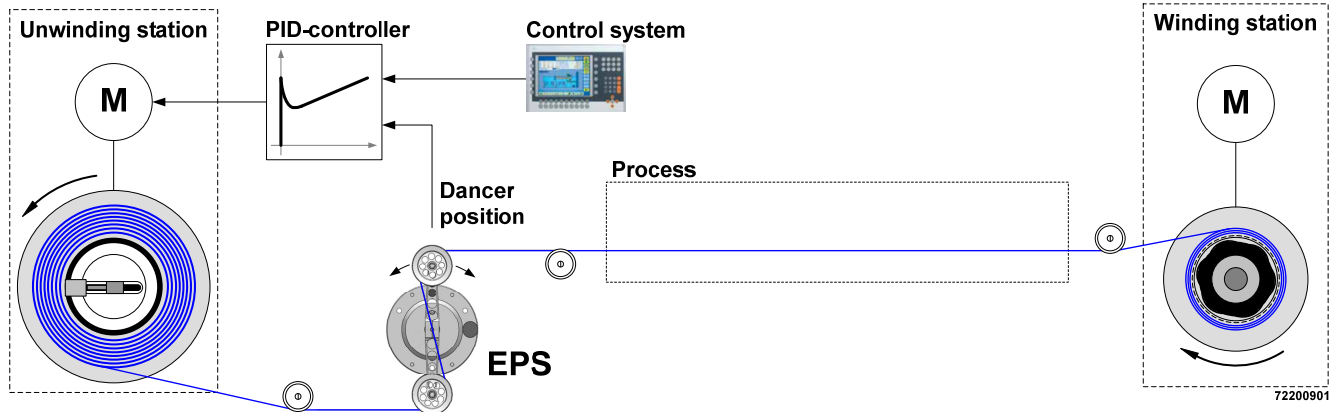
- wide adjustable tension range
- follows high dynamic speed variations very precisely
- excellent start / stop behavior
- compact design for low required space
- long-living, free from wear and maintenance

### TechInfo

Functionality using the example of a typical unwinding process:

A motor-driven chuck supports the material roll at the unwinder.

The following process needs material feeding with process-specific dynamic and well-defined tension..



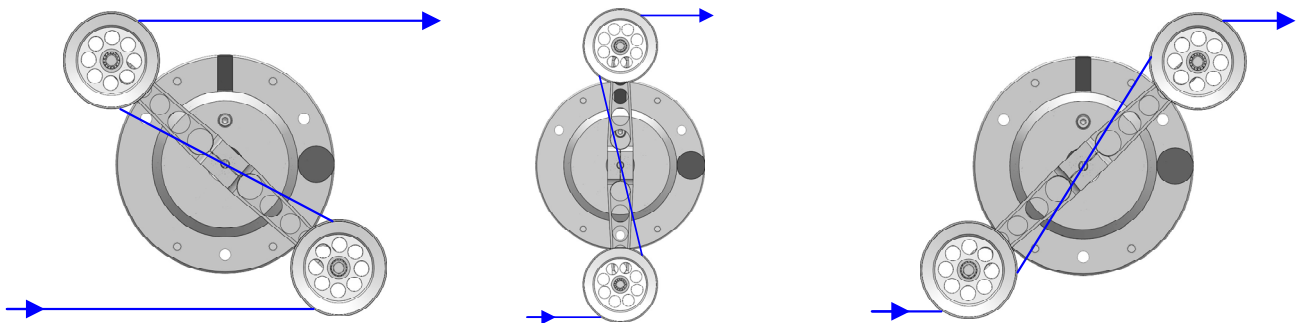
EPS serves as link between unwinder and process.

- The material is guided S-shaped over the dancer pulleys.
- A torque, which acts on the dancer, is generated electro-pneumatically.
- Tension  $F_z$  is proportional to the upcoming torque.
- The actual rotation angle of the dancer is output as electric signal.
- The dancer is in position control.

### Material accumulator

EPS functions as an accumulator additionally.

It can dispense or receive the material depending on the dancer position.



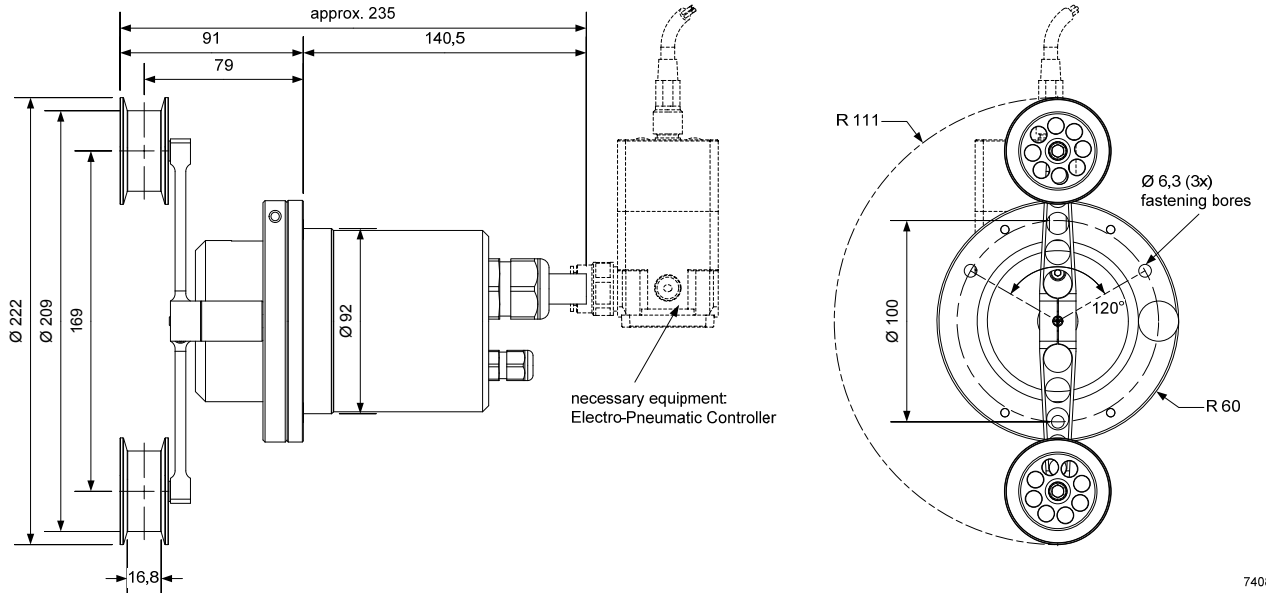
**Deflection left:**  
ready to dispense

**Center position:**  
ready to dispense / receive

**Deflection right:**  
ready to receive

max. content: approx. 320mm

**Scale drawing**



74087014

All dimensions in mm

**Order code**

		EPS	20-250
<b>Type</b>			
<b>Tension range</b>	20-250	cN	
	20-400	cN	

**Electrical connections**

M12 male flange plug, 4-poles, A-coded		Connection cable, 3m, open ends, shielded
Pin assignment		Cable colors
<p>View on flange plug</p>	<p>1: +5V DC 2: Output signal 3: Gnd 4: n.c.</p>	<p>1: brown 2: white 3: blue 4: black and additionally shield</p>

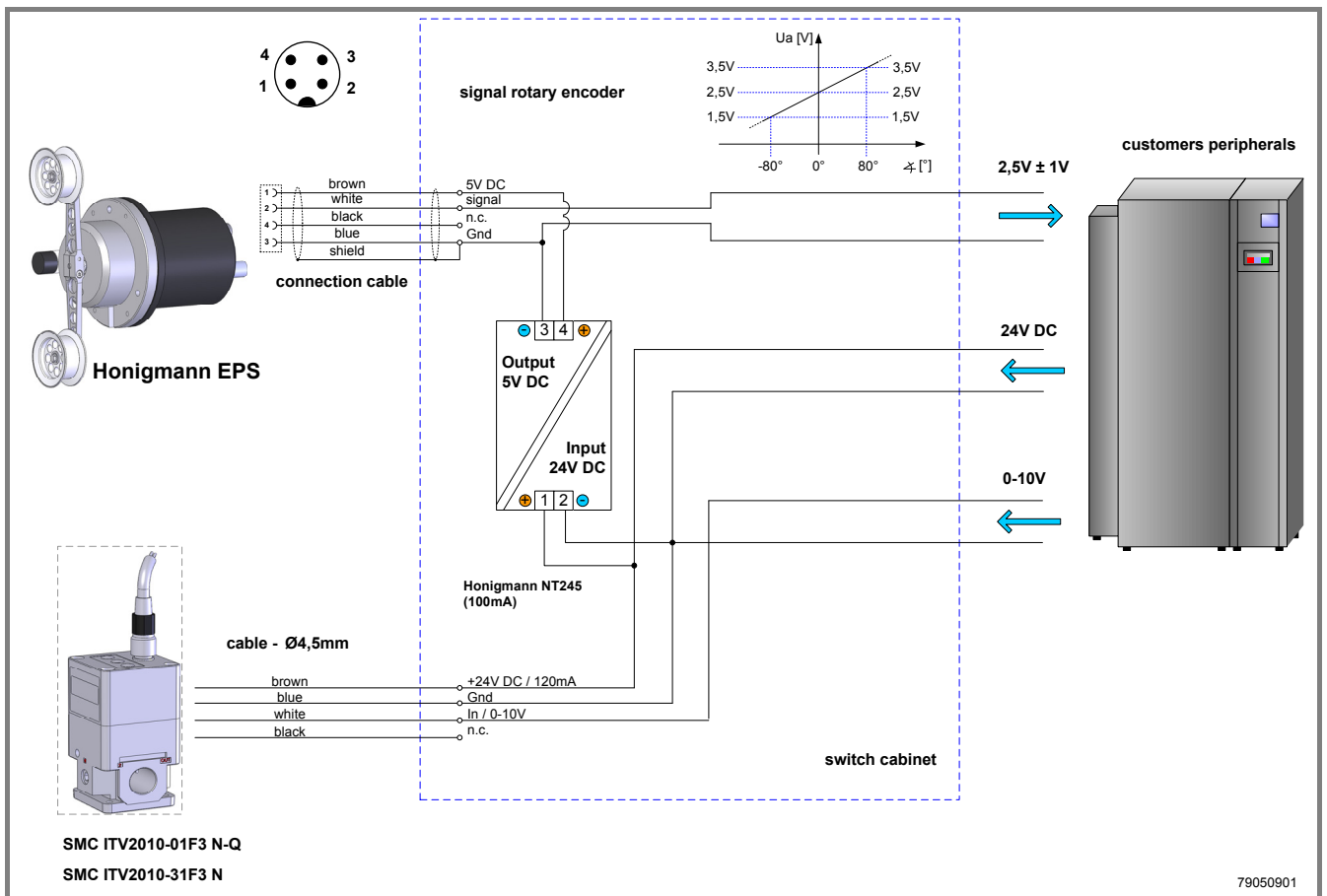
**Scope of supply**

- Dancer EPS
- Connection cable, 3m long, open ends

## Technical data

available tension ranges	<b>cN</b>	20 to 250; 20 to 400
Output	<b>V</b>	$2,5 \pm 1$ , max. 20mA
Supply voltage	<b>V DC</b>	$5 \pm 0,25$
Current consumption	<b>mA</b>	max. 25
Compressed air supply		via E/P controller Compressed air must be dried, free of grease + oil.
- Input pressure	<b>mbar</b>	50 to 1000
- Volume flow	<b>l/min</b>	4 to 50
- Connection		3/8-18 NPSM
Nominal temperature range	<b>°C</b>	0 to 50
Operational temperature range	<b>°C</b>	-10 to 70
Storage temperature range	<b>°C</b>	-30 to 75
Dimension		see scale drawing
Weight	<b>g</b>	approx. 4150

## Wiring example



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