

## Energy optimally used

### Energy Saving Module saves energy costs, protects against machine downtime whilst increasing manufacturing quality

The Energy Saving Module (ESM) is a capacitor module which, when connected to the KOLLMORGEN servo amplifiers, can store energy and feed it back into the servo system when required. In this way, brief mains interruptions can be bridged and sufficient energy can be provided in order to move individual axes into a safe position in the event of power failure. Furthermore, the module helps to save energy: Any energy which, using conventional technology, is converted into heat with brake resistance, now remains in the system. Machine designers and users will profit considerably, as quality and productivity losses during manufacture due to unstable mains supplies are eliminated.

In applications for the packaging industry, for example, with continual accelerations and decelerations, considerable savings in power consumption can be achieved. The consequent clearly lower CO<sub>2</sub> pollution is a further benefit from an environmental point of view.

### Overview of benefits

#### Saving energy

- Less warming up of servo amplifiers
- Lower CO<sub>2</sub> output
- Less external cooling required
- Up to 70 % savings in energy costs

#### Increased manufacturing quality and productivity

- Less machine downtime
- Reduced machine repair call-outs
- Even network supplies



### Technical data

Electrical data	DIM	ESM4000	ESM8400
Nominal connection voltage (grounded net) phase-phase	V~	3 x 208 V-10% ... 3 x 480 V+10%, 50/60 Hz	
Nominal connection current AC	kVA	1	
Capacity	μF	4000	8400
Permissible switch-on frequency	1/h	30	
Auxiliary voltage supply	V=	24 V (-10% +15%)	
	A	1	
Start input	-	as per EN 61131-2 Type 1, max. 30 V DC, 15 mA	
Status report	-	as per EN 61131-2 Type 1, max. 30 V DC, 100mA	
Voltage monitor	-	±10V	
Mechanical data			
Height	mm	348	
Width	mm	120	
Depth without connectors	mm	243	
Depth with connectors	mm	285	

### Dimensions

