

# DYNAMIC ENERGY UNIT

Improves overall system efficiency and reduces cabinet power losses



The Dynamic Energy Unit (DEU) is an accessory for Servo Drives that provides active storage and supply for DC link energy management. The DEU is comprised of three modules, an energy storage module, energy supply module and expansion modules. The combination of these three modules gives the machine builder maximum flexibility in management of DC bus energy. The Energy Storage module (DEU-ST) allows the energy from decelerating axes to be stored for use on the next machine cycle instead of being dissipated in a braking resistor. The result is improvement in overall system efficiency and reduction in cabinet power losses. In situations where backup or UPS function is needed due to the loss of main power, the Supply Unit Module (DEU-SU) allows the axis to continue to operate from stored energy, ensuring a safe shutdown or emergency operation of the axis under control.

Both the Storage and Supply Modules are available with a simple plug-and-play installation with minimal setup and installation. These units can be connected directly to the DC link (up to 800 V) and do not increase line harmonics as would be the case with a simple capacitor based approach. Expansion modules (DEU-EM) in sizes 2 and 4 are available for both the storage and supply units to provide increased energy handling capability.



## ADVANTAGES

### Storage Unit (DEU-ST)

- Increased system efficiency
- Reduce/eliminate braking resistor
- Simple installation
- Reduced power dissipation
- No impact on power quality (line harmonics)
- Expansion modules for higher energy axes (DEU-EM)

### Supply Unit (DEU-SU)

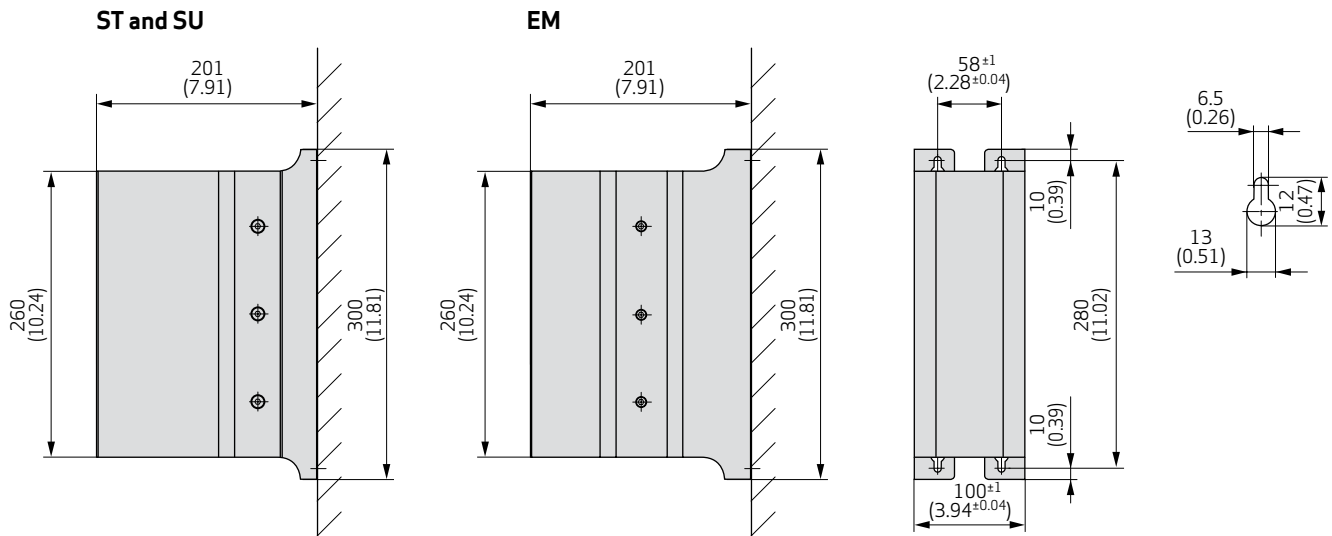
- Simple installation
- Short term UPS function
- Digital output for monitoring
- Expansion modules for higher energy axes/extended backup time (DEU-EM)

## APPLICATIONS

- Power generation
- Blow moulding
- Plastics
- Material packaging

## TECHNICAL DATA

Dynamic Energy Unit - Storage (DEU-ST), Supply (DEU-SU) and Expansion (DEU-EM)



Note: Dimensions in mm (in)

Model	Storage Unit (DEU-ST)	Supply Unit (DEU-SU)	Expansion Module Size 2 (DEU-EM 2.0)	Expansion Module Size 4 (DEU-EM 4.0)
Storage capacity	1,600 Ws	2,000 Ws	-	-
Storage capacity (with -ST)	-	-	1,600 Ws	3,200 Ws
Storage capacity (with -SU)	-	-	2,000 Ws	4,000 Ws
Maximum continuous DC link voltage	800 V <sub>DC</sub>	800 V <sub>DC</sub>	-	-
Short-term peak voltage	950 V <sub>DC</sub> (30 s in 6 minutes)	950 V <sub>DC</sub> (30 s in 6 minutes)	-	-
Working voltage	-	470 V <sub>DC</sub>	-	-
Output power maximum	18 kW	18 kW	-	-
PTC braking resistor	60 Ohm, 30 W	-	-	-
Dimensions H x W x D	300 x 100 x 201 mm (11.81 x 3.94 x 7.91 in)	300 x 100 x 201 mm (11.81 x 3.94 x 7.91 in)	300 x 100 x 201 mm (11.81 x 3.94 x 7.91 in)	300 x 100 x 201 mm (11.81 x 3.94 x 7.91 in)
Weight	6.9 kg (15.21 lb)	6.9 kg (15.21 lb)	4.1 kg (9.04 lb)	6.2 kg (13.67 lb)
Protection class	IP20	IP20	IP20	IP20
Ordering number	CB33257-001	CB33256-001	CB33255-001	CB33255-002

Moog has offices around the world. For more information or the office nearest you, contact us online.

[info@moog.com](mailto:info@moog.com)

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