SIMOTICS DP crane motors –
Highest degree of reliability and ruggedness

Your advantages – an overview
• High product safety, reliability and a long service life through high voltage strength and high quality components
• Secure converter operation with SINAMICS converter family
• High energy efficiency by using IE2 active parts, in converter operation complies with efficiency class up to IES2
• Generously dimensioned motor terminal box for easy connection
• Can be flexibly used (in hoisting, trolley, swiveling, slewing and travel units) worldwide with non-ventilated, ventilated and force-ventilated types
• Globally available spare parts concept as a result of the standard 1LE1 platform used

SIMOTICS DP crane motors
have been specifically developed to achieve the highest degree of reliability in humid, salt-laden atmospheres. A modular concept with application-specific, rugged components for flexible use as hoisting, trolley, slewing, swiveling and gantry drives around the globe. Perfectly harmonized motor-drive combinations are available with the well-proven SINAMICS converters up to 690 V.

Applications
Those motors were specifically developed for following crane applications:
• Gantry drive
• Trolley drive
• Boom
• Hoist drive

Special features
• Suitable in ambient temperatures up to 50°C, optionally also higher
• Protected against 100% humidity and salt-laden atmospheres (corrosion protection according to DIN IEC 60721-2-1 class C4)
• Rugged, crane-specific mounted components with a special mounting design (pulse encoder, brakes)
• Wide range of options for a high degree of flexibility or especially robust motor elements manufactured out of torsionally-stiff spheroidal iron
• Motors have a low-vibration cast-iron design
• Reliably sealed inside the motor (winding, enclosure, bearing shields) against aggressive humidity that is typical for these types of applications
• Torque reserves permit high surge loads
Technical details

Mechanical design
SIMOTICS DP crane motors used as gantry drive are naturally cooled units without fans. Depending on the shaft height, brakes with different torques can be built onto the motors. Housing and terminal box are made of cast iron. The brake itself does not have a separate terminal box; all the brake connections, whether coil, microswitch or heater, are fed to the motor terminal box.

Electrical design
Those SIMOTICS DP crane motors are available for the following rated voltages:
• 3 AC 400 V 50 Hz
• 3 AC 460 V 50 Hz
• 3 AC 500 V 50 Hz
• 3 AC 690 V 50 Hz

The specifications change as follows for motors operating with a rated frequency of 60 Hz:
• Rated speed +20%
• Rated power +15%

Special versions
SIMOTICS DP crane motors with brake offer different special versions:
• Emergency release with hand lever
• Microswitch for “brake released” monitoring
• Microswitch for air-gap monitoring / wear

Technical data – an overview

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References
Siemens crane motors have been used for more than 10 years in container ports around the globe. SIMOTICS reliably power cranes in Shanghai, Rotterdam, Hamburg, Wilhelmshaven and Helsinki.

For more information
See Catalog D81.1 and / or siemens.com/simotics-dp