

# K-POWER

## DYNAMIC INERTIA CONTROL (DIC)



KONGSBERG



**The Dynamic Inertia Control (DIC) function is an intelligent add-on feature to the K-Power Power Management System (PMS) that can manage both conventional marine power plants for merchant vessels, and complex power generation systems for offshore vessels with K-Pos systems.**

### FEATURES

The DIC function reads available inertia (kW/s) from connected generator-sets and batteries and calculates the total available inertia and forward this to K-Pos for optimizing the thrust allocation algorithm.

### FUNCTIONS

The inertia control automatically adapts to the power plant configuration and type of generators sets and battery units connected. For combustion engines the inertia can differ depending on the fuel used, e.g and MDO fueled engine can have a quicker ramp (kW/s) than a gas fueled engine.

For energy storage units like batteries, the available inertia depends on the battery SOC and available current from the Battery Management System (BMS).

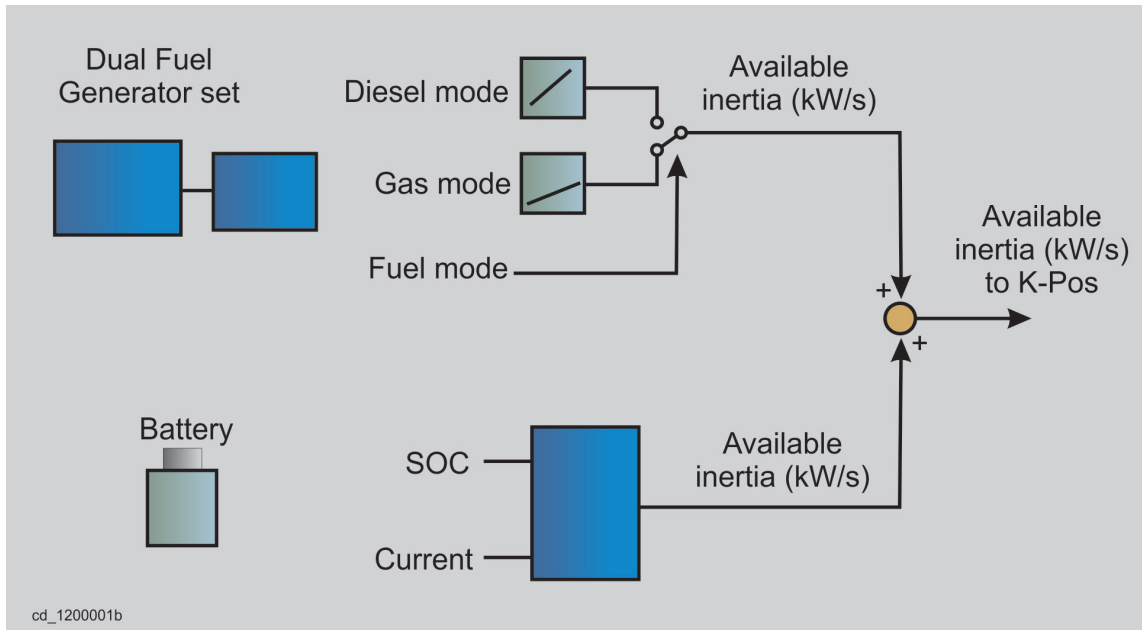
The DIC calculates the total available inertia for single or connected switchboard and forward the values to the K-Pos system for optimizing the thrust allocation algorithms.

# TECHNICAL SPECIFICATIONS

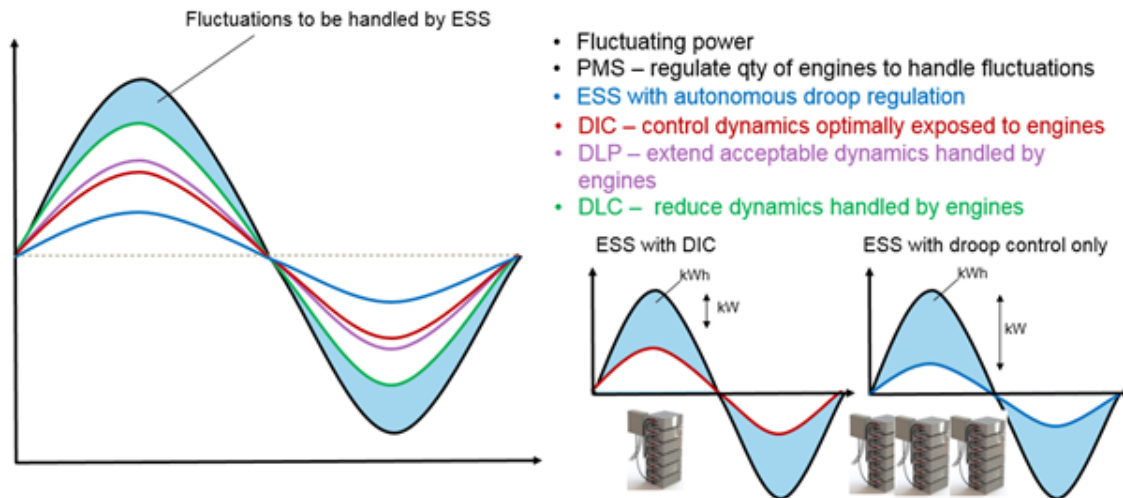
## Requirements

K-Chief 700 PMS and K-Pos.

This figure shows the ramp values from the generator and battery forwarded to the K-Pos.



Load fluctuations handled by DIC combined with Energy Storage System (ESS) control:



Specifications subject to change without any further notice.