



PLUS+1™ Generic Dual Path Subsystem Application Software

Mobile Machine Management

The Generic Dual Path (GDP) subsystem application is for use with vehicles incorporating an independent left and right side pump/motor propel system. The application includes: An application block, supporting plug-in features, and a complete sample application.

Product Highlights

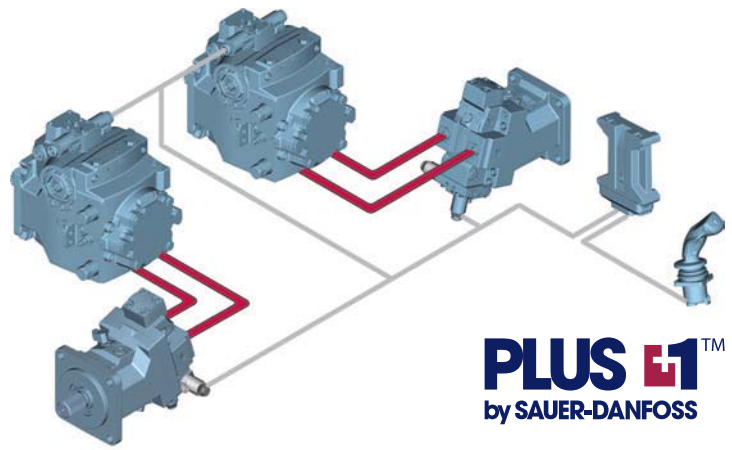
The subsystem application consists of: Application Block, input logic, output logic, fault handling, and calibration, with service screens. The Application Block is the foundation for the GDP application and is supported by the suite of plug-ins.

User-programmable

Subsystem applications allow machine specific tailoring, which is accomplished by using Sauer-Danfoss PC based PLUS+1 GUIDE (Graphic User Integrated Development Environment) tool set. This environment allows the developer to configure Sauer-Danfoss PLUS+1 application hardware, select application options, integrate the applications with other subsystem applications, and enhance the application with additional features.

Data sheet

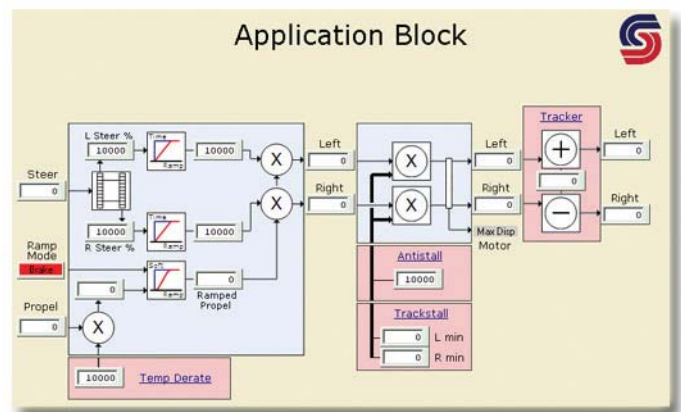
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PLUS+1™
by SAUER-DANFOSS

User-programmable GDP Subsystem Application

Features



Application Block

- The software core functionality converts steering and propel speed input commands into pump and motor output commands. Propel speed is variable from full forward to full reverse. Steering is variable from straight tracking and pivot steer to full counter-rotate.
- The Application Block accepts optional plug-in modules. Plug-ins augment functionality with additional features.

Plug-ins

- Tracker uses closed loop control to correct errors caused by uneven loading, hydraulic volumetric efficiencies, and calibration disparity.
- Antistall monitors engine rpm, and reduces the propel command for engine recovery.
- Trackstall is an option that works in conjunction with antistall and limits the propel output reduction to maintain motor torque.
- Temperature Derate reduces propel command relative to temperature extremes.

Additional Features

- Two displacement and variable displacement motors are supported. When variable motors are supported, a linearization feature converts non-linear motor displacement to linear propel output speed.
- Brake release coordinates propel command with the brake release output.

GUIDE Programmable Subsystem Application Service Tool

The PLUS+1 GUIDE Service Tool screens provide the ability to monitor and tune the operation of devices on the PLUS+1 network. Standard features include: bar graph display, oscilloscope display for trending and tuning, data record, and export feature. All required user modifiable service screens are provided with this product.



PC with Sauer-Danfoss PLUS+1 GUIDE.
Gateway supported by Service Tool program.
PLUS+1 compliant module.

Diagnostic Navigator

Name	Value	Status
New System		
ECU List		
Generic Dual Path		
Log Functions		
Software		
Inputs		
Active Faults		
Fault History		
AppBlock		
Input Calibration		
Threshold Calibra...		
Max Output Calib...		
Outputs		
Software Components		
Tuning		
Parking Brake C...		
Motor Shift Ramp...		
Parameter Functions		
Steering Controls		
Propel Controls		
Park Brake Control		
Motor PPI Is		

Software

The diagram shows a signal flow from left to right. On the left, 'Inputs' include Propel (10000), Decel (10000), and Steer (0). Below these are digital inputs: Run, Stop, Brake, Transport, Neutral, and AutoReverse (CR). RPM values for Throttle (2275), Engine (2334), L Motor (3216), and R Motor (3219) are shown. Temperature is 579 °C x10. In the center, 'Fault Handling' includes System, Forward, Reverse, Full Speed, High Range, Steer, Tracker, Antistall, and TempDerate. Below this is 'App Block' with Antistall (10000), Tracker (54), TempDerate (10000), and Trackstall (L: 750, R: 750). On the right, 'Calibration' shows Left (10000) and Right (9946) values, and an 'Inactive' status. 'Outputs' include Left Pump (10000), Left Motor (6981), Right Pump (9953), and Right Motor (6819). Backup Alarm is OFF and Brake Release is ON.

* Additional screens.

The **Software** log function screen shows a high-level signal flow from the inputs to the outputs as well as the signal status. Additional screens for configuring, tuning, calibration, and setting parameters are provided.

Specifications

Minimum requirements
Sauer-Danfoss PLUS+1 application hardware microcontroller with 256K internal flash memory (Key #10106603)
PC with Sauer-Danfoss GUIDE program, version 4.1 or later
Gateway supported by the PLUS+1 Service Tool

Ordering Information

Description	Part number
Application software*	11079203

* Software can be downloaded from: www.sauer-danfoss.com

Comprehensive technical information: *Generic Dual Path Control System Description*, **11058298**
and *Generic Dual Path Subsystem Application Service Tool User Manual*, **11058326**
Sauer-Danfoss product literature and application software on line at: www.sauer-danfoss.com