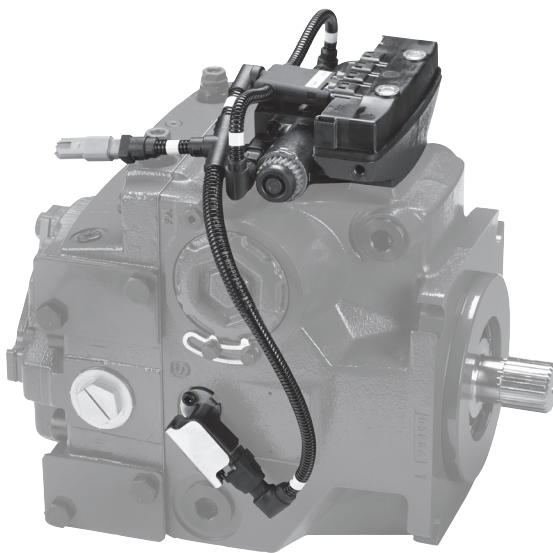


Data Sheet

H1 integrated Automotive Control (AC)

Single Pumps size 45 to 130 cm³



The H1 Automotive Control (AC) is an electric NFPE Control with an integrated Microcontroller, installed on the pump. The integrated Microcontroller enhanced control performance with a flexible, configurable control scheme for an entire single path propel transmission. It can be used in combination with fixed and variable displacement hydraulic-motors. With the pre-installed application software and easily changeable control parameters, it is possible to tailor the vehicle's driving behavior to the individual requirements of the customer.

Target applications

- Wheelloader, telehandler and dumper with a load dependent (torque controlled) driving behavior.
- Sweeper, snow blower and forestry machines with a load independent (speed controlled) driving behavior.

Features

Basic functions:

- Four selectable system modes, selectable via switches
- Independent pump/motor profiling & ramping for each mode
- Electric drive pedal
- Electronic inching
- Electric creep mode potentiometer
- Proportional pump displacement control (automotive)
- Load independent pump displacement control with integrated swash plate angle sensor (option)
- Hydraulic motor displacement control including brake pressure defeat function

Protection and safety functions:

- Safety controlled vehicle start protection
- Operator presence detection
- Hydraulic system overheat and low-temperature protection
- Hydraulic motor overspeed protection
- SIL2 certification*

Performance functions:

- ECO fuel saving mode*
- Cruise Control in Work Mode*
- Vehicle constant speed drive control
- Vehicle speed limitation
- Dynamic brake light, automatic park brake, reverse buzzer and vehicle speed controlled output functions.
- Temperature compensation for predictable performance
- Advanced CAN J1939 interface*

Engine control and protection:

- CAN J1939 engine interface
- Engine speed control via drive pedal with safety controlled monitoring function
- Engine antistall protection
- Engine over speed protection
- Engine speed dependent Retarder control*
- Engine cold start protection

* Functions depending on the installed Application Software package

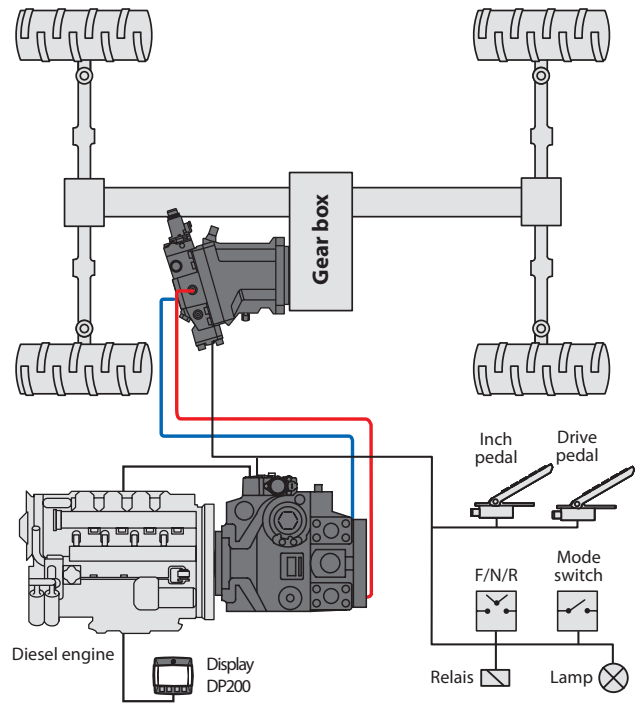
Technical specifications

Rated supply voltage 12V System	9-16V
Rated supply voltage 24V System	18-36V
Digital and PWM Outputs	3000 mA
Sensor-Supply-Voltage-Range (internal)	5V /1A
Operating Temperature (oil)	-40 to 104°C
IP rating with attached connectors	IP69k
EMC-Immunity	100V/m
Vibration and Shock tested	IEC60068

I/O Configuration

Inputs	Function
6 x digital	FNR (direction selection), Seat switch, System Mode selection
7 x analog	Inch pedal, drive pedal, creep potentiometer, hydraulic-motor direction, engine speed setpoint, pressure sensors
2 x frequency	Pump/engine, hydro-motor rpm
Outputs	Function
3 x PWM	Pump and hydro-motor displacement/direction
5 x digital	Hydraulic-Motor brake pressure defeat, dynamic brake light, park brake, reverse buzzer, retarder control, vehicle speed dependent output, status LED

Dimensions



For further information please refer to the “Technical Information – H1 Automotive Control for Single Axial Piston Pumps” L1223856 or contact Danfoss Power Solutions

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