

H1-The new Generation of Hydrostatics 089/100 cm³ Single Pumps with integrated Automotive Control (AC)

Introduction

For more than 40 years, Sauer-Danfoss has been developing state-of-the-art components and systems for mobile machinery used in off-highway operations around the world. We have become a preferred supplier by offering the best of what really matters: The hardware inside your vehicle application. H1 - our new generation of servo-controlled hydrostatic pumps - is no exception.

The H1 range is built around an advanced electrical control and available in a wide range of displacements. It is designed for quality and reliability and offers expanded functionality, greater total efficiency, and easy installation.

All H1 control and sensor options are PLUS+1 Compliant. The new Automotive Control (AC) option for H1 pumps puts 40 years of mobile machinery propel system experience at your fingertips: through software configuration it enables faster time-to-market and improved performance and functionality for both new machine designs and model variants.

Local Address:



 **1** COMPLIANT

*H1 Axial Piston Pump
Size 089/100 single pump
with integrated Automotive Control (AC)*

Features

- **Complete propel drive system functionality**
 - PLUS+1 Service Tool configurable for custom drive behavior
 - PLUS+1 Compliant pump and motor control, pedal, joystick, and sensor options
 - Independent pump/motor profiling & ramping
 - Multiple individually configurable propel drive modes:
 - Automotive (command signal to pump engine RPM dependent)
 - Non-Automotive (command signal to pump by pedal or joystick)
 - Creep automotive (combination of both above)
 - Advanced functions, including:
 - Temperature compensation for predictable performance
 - Overheat and low-temperature protection
 - Engine antistall
 - Constant speed drive control
 - Vehicle speed limiter
 - Engine and motor overspeed protection
 - Option: pump swashplate feedback and control
 - Option: J1939 CAN communication enabling component to component and service tool/laptop communication via gateway
 - See also related documents:
 - 11066201 H1 Automotive Control System Description
 - 70012797 H1 Automotive Control PLUS+1™ Compliant User Manual
- **Designed for greater functional safety**
 - Optional SIL-2 certification simplifies vehicle certification
- **Installation and packaging benefits**
 - Length optimized pump
 - Minimum one clean side
 - Higher corner power and power density
 - Deutsch connector standard
 - Expanded functionality through PLUS+1
- **Greater total efficiency**
 - Minimized control losses
 - Improved charge circuit
 - Lower control pressure for less power consumption

Technical Specifications

Physical properties

Features	Unit	Sizes	
		089	100
Displacement	cm ³ [in ³]	89.2 [5.44]	101.7 [6.21]
Weight (without PTO and filter)	kg [lb]	62 [137]	

Operating parameters

Input speed	Minimum	min-1 (rpm)	500
	Rated		3300
	Maximum		3800
System pressure	Maximum working pressure*	bar [psi]	450 [6525] 420 [6090]
	Maximum pressure		480 [6960] 450 [6525]
	Minimum low loop		10 [150]
Case pressure	Rated	bar [psi]	3.0 [40]
	Maximum		5.0 [75]

* Applied pressures above maximum working pressure requires Sauer-Danfoss application approval.

T000 167E

H1-The new Generation of Hydraulics

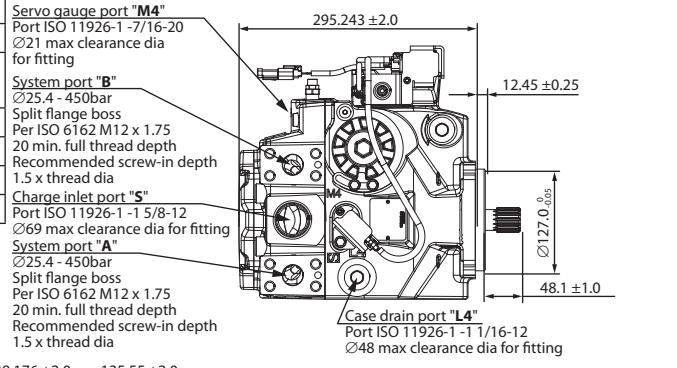
089/100 cm³ Displacement Single Pumps with integrated Automotive Control (AC)

Electrical parameters

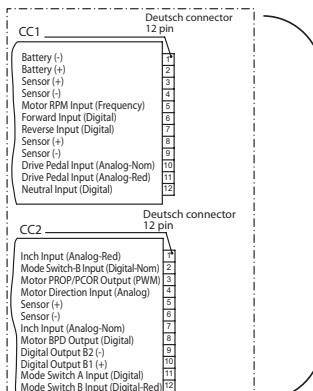
Rated voltage 12 V	Minimum	V	9
Maximum			16
Rated voltage 24 V	Minimum	mA	18
Maximum			36
Digital PWM outputs		T301 059	3000

T301 059

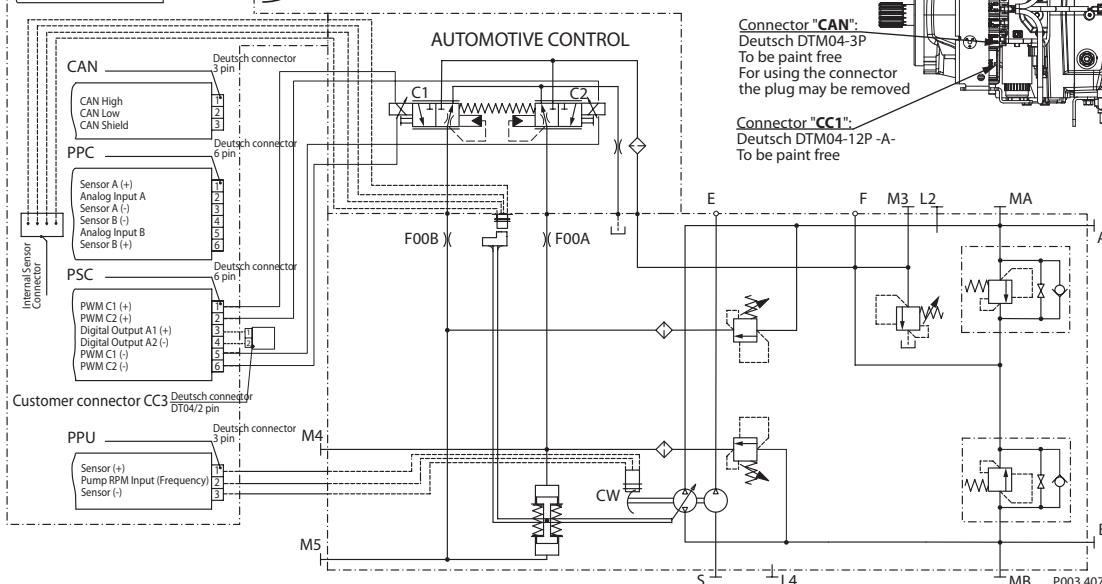
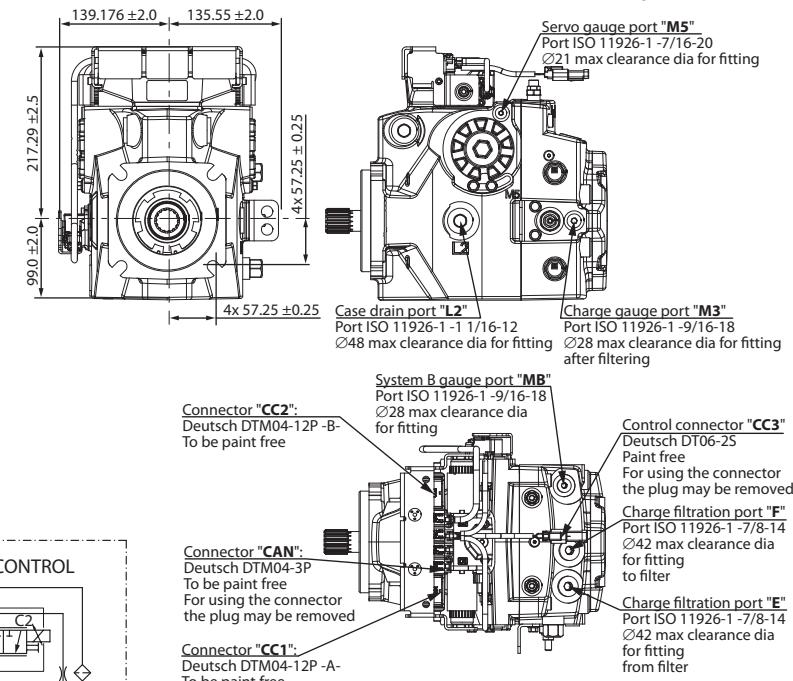
Dimensions



Schematic



Customer connectors CC1 + CC2



P003 563E