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Danfoss

Electrical Installation

Series 51-1 Motor

Electrohydraulic Two-Position Controls F1, F2

Revision history

Table of revisions

Date	Changed	Rev
August 2015	Converted to Danfoss layout	BA
April 2007	First edition	AA

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Literature references

S51-1 Electrohydraulic Two-Position Controls F1, F2 literature references

Literature title	Description	Literature number
S51 and 51-1 Bent Axis Variable Displacement Motors Technical Information	Complete product electrical and mechanical specifications	520L0440
On/Off Functions Function Block User Manual	Compliant function block set-up information	11022918

Latest version of technical literature

Danfoss product literature is online at: *http://powersolutions.danfoss.com/literature/*

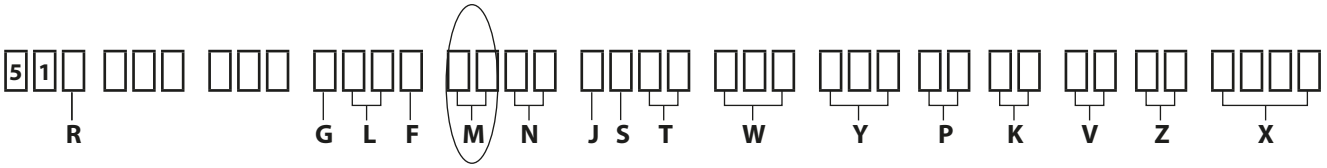
Product overview

Product image

S51-1 Electrohydraulic Two-Position Controls F1, F2

Nomenclature

S51-1 model code



Code M options

M	Description
F1	Electrohydraulic two-position control, 12 Vdc
F2	Electrohydraulic two-position control, 24 Vdc

Only certain control options for the S51-1 motor utilize the Electrohydraulic Two-Position Control. Please refer to the motor's nomenclature to determine if the motor is equipped with the proper option. The nomenclature can be found on the motor's nametag.

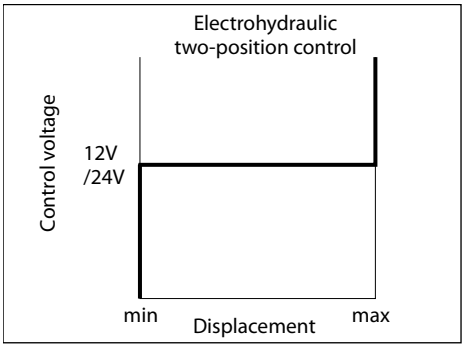
Product overview

Theory of operation

Displacement can be changed electrohydraulically under load from maximum displacement to minimum displacement and vice versa, by using a built-in solenoid valve.

- Solenoid off = minimum displacement
- Solenoid on = maximum displacement

Control operation



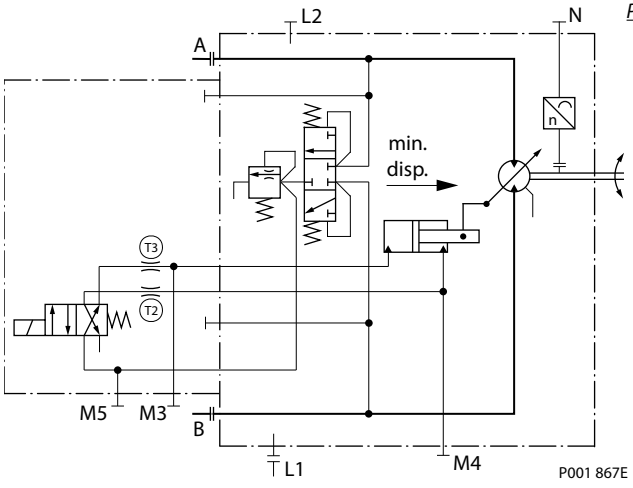
P001 871E

Warning

Unintended vehicle or machine movement hazard. The loss of hydrostatic drive line power, in any mode of operation (forward, neutral, or reverse) may cause the system to lose hydrostatic braking capacity. You must provide a braking system, redundant to the hydrostatic transmission, sufficient to stop and hold the vehicle or machine in the event of hydrostatic drive power loss.

Hydraulic schematics

Circuit diagram – motor with control options: F1B1, F2B1



P001 867E

Ports:

A, B = Main pressure lines
L1, L2 = Drain lines
M3, M4 = Servo pressure
M5 = Gauge port servo supply pressure internal
T2, T3 = Optional orifices
N = Speed sensor

Product overview

Electrical specifications

Two-position solenoid

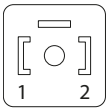
M-option	F1	F2
Voltage	12 Vdc	24 Vdc
Rated power	14.7 W	14.7 W

Electrical installation

Pinout

DIN 43650 connector

Pin location



Pinout

Pin	Function
1	PWM signal
2	Ground

Pinout (alternative)

Pin	Function
1	Ground
2	PWM signal

Pin compatibility

PLUS+1® module pin type

Pin	Function
1,2	DOUT
1,2	DOUT/PVG Power
1,2	PWMOUT/DOUT/PVG Power supply
1,2	PWMOUT/DOUT/PVGOUT
1,2	Power ground -

Mating connector

DIN 43650 connector parts list

Description	Quantity	Ordering Number
DIN 43650 connector	1	Hirschmann 932 106-100
Mating connector kit	1	Danfoss K09129

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