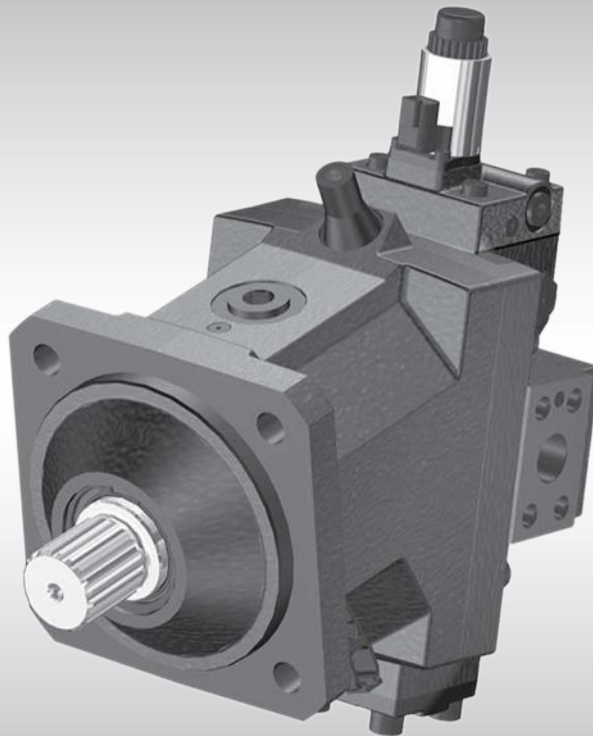




Electrical Installation

# H1B Motor Electric Proportional Control L1, L2



**Revision history***Table of revisions*

<b>Date</b>	<b>Changed</b>	<b>Rev</b>
July 2015	Converted to Danfoss layout	BA
April 2009	Title changed to H1B Motor....	AC
March 2009	Reference	AB
February 2009	First edition	AA

**Contents****Literature references**

H1B motor electric proportional control L1, L2 literature references.....	4
Latest version of technical literature.....	4

**Product overview**

Product image.....	5
Nomenclature.....	5
Theory of operation.....	6
L1XX, L2XX.....	6
L1BA, L2BA without BPD.....	6
Displacement versus input command.....	6
Hydraulic schematics.....	6
Electrical specifications.....	7

**Electrical installation**

Pinout.....	8
Pin compatibility.....	8
Mating connector.....	8

**Literature references****H1B motor electric proportional control L1, L2 literature references**

Literature title	Description	Literature number
<i>H1B Bent Axis Variable Displacement Motors Technical Information</i>	Complete product electrical and mechanical specifications	<a href="#">11037153</a>
<i>PLUS+1® Compliant H1B Motor Electric Proportional Control L Function Block User Manual</i>	Compliant function block set-up information	<a href="#">11061428</a>
<i>PLUS+1® Compliant H1B Motor Electric Proportional Control L Function Block</i>	Compliant function block set-up information	11063627

**Latest version of technical literature**

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

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**Product overview**

**Theory of operation**

**L1XX, L2XX**

The electric proportional control consists of a proportional solenoid driving a two-position, three-way porting spool. When activated, the spool ports high pressure to the larger diameter of the servo piston. The servo piston and rotating group move to change the displacement to the point where the pressures on the servo are in balance with the force from the feedback spring.

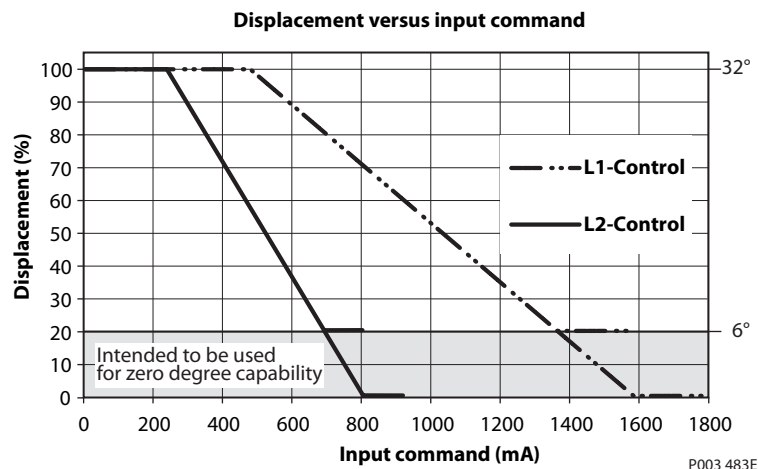
- Solenoid de-energized = maximum displacement
- Solenoid full-energized = minimum displacement

**L1BA, L2BA without BPD**

This control does not employ a Pressure Compensator Override (PCOR) function or the electric brake pressure defeat (BPD) function.

**Displacement versus input command**

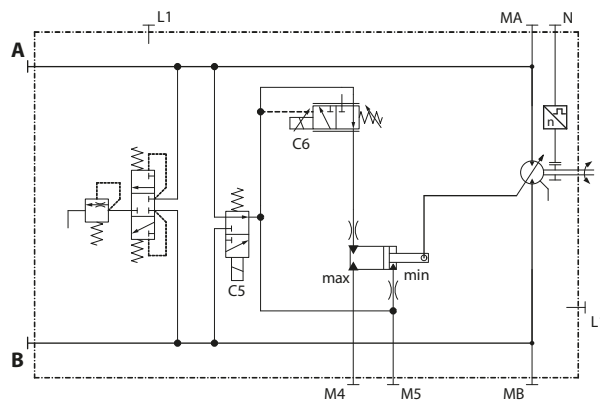
L1XX, L2XX



P003 483E

**Hydraulic schematics**

*Motor with Electric Proportional Control L1BA, L2BA circuit diagram*



P003436

**Ports:**

**A, B**                    Main pressure lines

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**Electrical Installation      H1B Motor Electric Proportional Control L1, L2**


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**Product overview**

<b>L1, L2</b>	Drain lines
<b>M4, M5</b>	Gage port servo pressure
<b>N</b>	Speed sensor (optional)
<b>MA, MB</b>	Gage port system pressure

**Electrical specifications**
*Electric proportional solenoid C1*

<b>Specification</b>	<b>L1</b>	<b>L2</b>
Voltage	12 V	24 V
Maximum current	1800 mA	920 mA
Nominal resistance at 20°C [70°F]	3.66 Ω	14.20 Ω
Nominal resistance at 80°C [176°F]	4.52 Ω	17.52 Ω
PWM frequency range*	70 to 200 Hz	70 to 200 Hz
Recommended PWM frequency*	100 Hz	100 Hz
Inductance	33 mH	140 mH

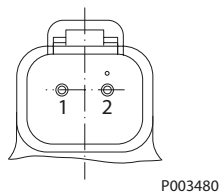
\* PWM signal required for optimum control performance.

## Electrical Installation    H1B Motor Electric Proportional Control L1, L2

### Electrical installation

#### Pinout

*Electric proportional control and electric brake pressure defeat solenoid pin location*



*Pinout*

Pin	Function
1	PWM signal/ voltage input
2	Ground

*Alternative pinout*

Pin	Function
1	Ground
2	PWM signal/ voltage input

#### Pin compatibility

*PLUS+1® module pin type/ H1B L pin compatibility*

Acceptable use: device pin number	Function
1, 2	PWMOUT/DOUT/PVG Power supply*
1, 2	PWMOUT/DOUT/PVGOUT*
1, 2	Power ground

\* Use output pins with configurable PWM frequency for LX.

#### Mating connector

*Parts list*

Description	Quantity	Ordering number
Mating connector	1	DEUTSCH: DT06-2S
Wedge lock	1	DEUTSCH: W2S
Socket contact (16 and 18 AWG)	2	DEUTSCH: 0462-201-16141
Mating connector kit	1	Danfoss: K29657











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