

PROJECT:	Magna-3	UNIT TAG:		QUANTITY:	1
REPRESENTATIVE:	Hurley Engineering	TYPE OF SERVICE:	Cast Iron Pump Configuration	DATE:	
ENGINEER:	TBD	SUBMITTED BY:	Devin Carle	DATE:	
CONTRACTOR:	TBD	APPROVED BY:		DATE:	
		ORDER NO.:		DATE:	

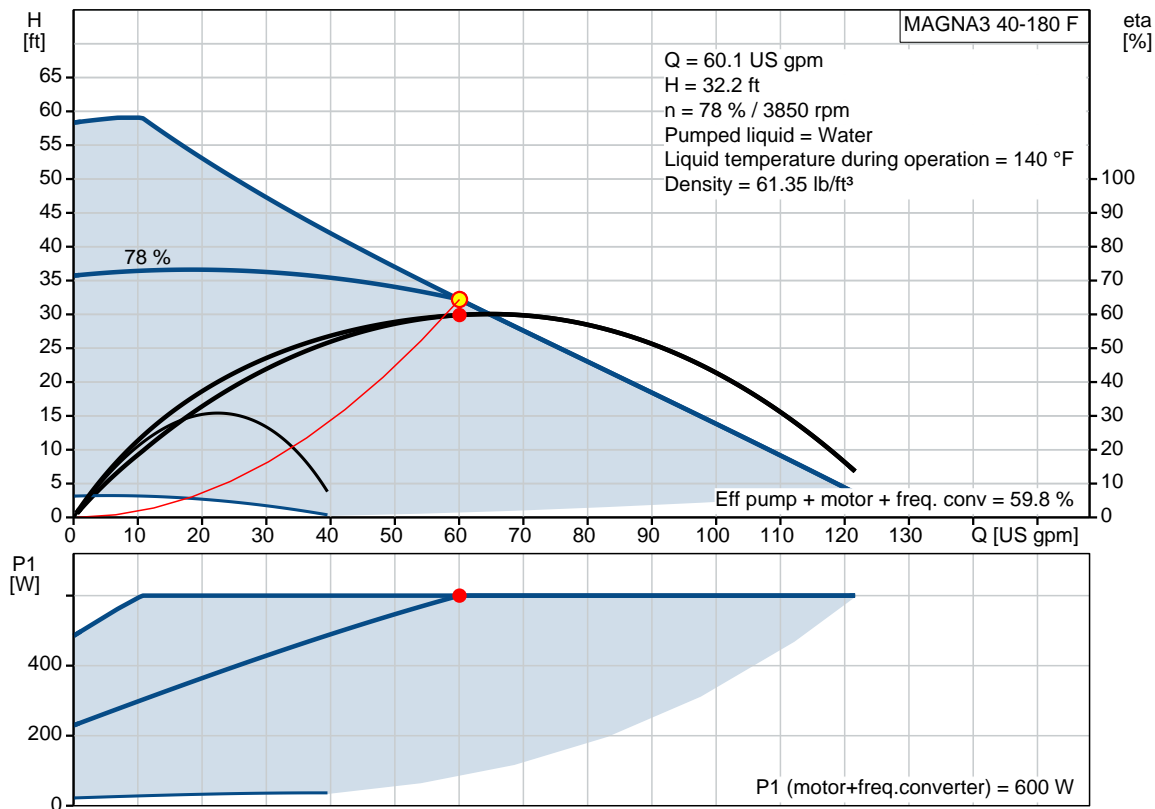


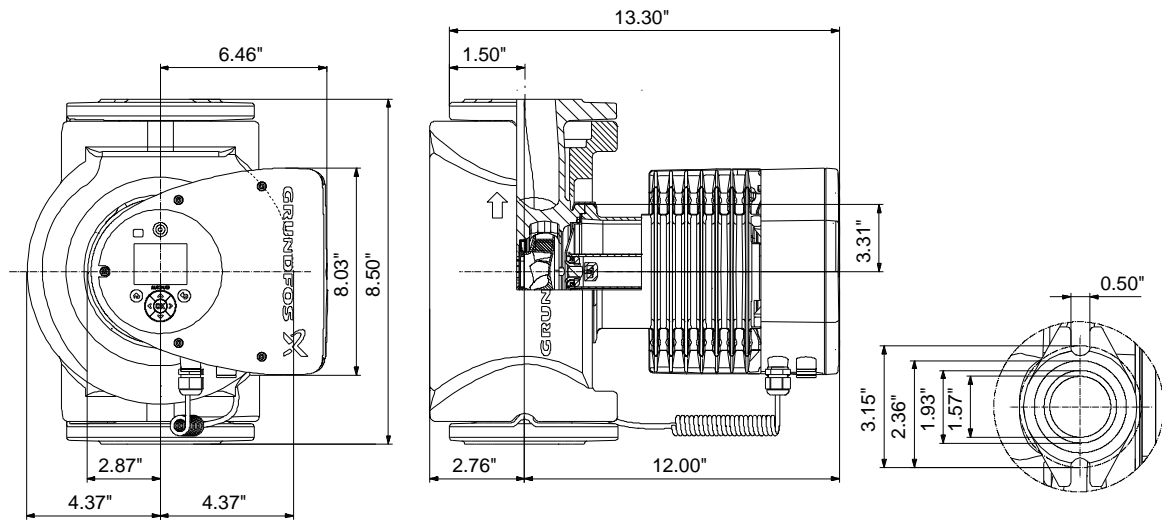
### MAGNA3 40-180 F

Full range of intelligent, high-efficiency circulators for heating, cooling, ground source heat pump systems and domestic hot water applications

Product photo could vary from the actual product

Conditions of Service	Pump Data	Motor Data
Flow: 60.1 US gpm	Maximum operating pressure: 174.05 psi	P1 max: 16 .. 600 W
Head: 32.2 ft	Liquid temperature range: 14 .. 230 °F	Rated voltage: 208-230 V
Efficiency: 59.8 %	Maximum ambient temperature: 104 °F	Main frequency: 60 Hz
Liquid: Water	Approvals: 98544605	Enclosure class: X4D
Temperature: 140 °F	Flange standard: GF	Insulation class: F
NPSH required: ft	Pipe connection: GF15/26/40/43	
Viscosity:	Product number: 98126836	
Specific Gravity: 0.985		






**Materials:**

Pump housing: Cast iron  
EN-GJL-250  
ASTM A48-250B

Impeller: PES 30%GF

Count	Description
1	<p><b>MAGNA3 40-180 F</b></p>  <p>Product No.: <a href="#">98126836</a></p> <p><b>MAGNA3 – More than a pump</b> With its unrivalled efficiency, all-encompassing range and built-in communication capabilities plus functionalities replacing system components, the MAGNA3 is ideal for engineers and specifiers looking to create high-performance systems for buildings.</p> <p>This pump in the Grundfos Master Class will fit both heating and cooling applications perfectly, making it the obvious choice for almost any building project – old or new.</p> <p>The MAGNA3 is of the canned-rotor type, i.e. pump and motor form an integral unit without shaft seal and with only two gaskets for sealing. The bearings are lubricated by the pumped liquid. The innovative clamp with only one screw enables easy repositioning of the pump head. The MAGNA3 is a pump with no maintenance requirements and with extremely low Life Cycle Cost.</p> <p>The pump is characterised by the following:</p> <ul style="list-style-type: none"> <li>• controller integrated in the control box</li> <li>• control panel with TFT display on the control box</li> <li>• control box prepared for optional CIM modules</li> <li>• built-in differential-pressure and temperature sensor</li> <li>• cast-iron pump housing (depending on model)</li> <li>• carbon-fiber-reinforced composite rotor can</li> <li>• stainless-steel bearing plate and rotor cladding</li> <li>• aluminium alloy stator housing</li> <li>• air-cooled power electronics</li> </ul> <p>The MAGNA3 is a single-phase pump.</p> <p><b>Characteristic features</b></p> <ul style="list-style-type: none"> <li>• AUTOADAPT.</li> <li>• FLOWADAPT and FLOWLIMIT (more than a pump function as it reduces the need for pump throttling valves).</li> <li>• Proportional-pressure control.</li> <li>• Constant-pressure control.</li> <li>• Constant-temperature control.</li> <li>• Constant-curve duty.</li> <li>• Max. or min. curve duty.</li> <li>• Automatic Night Setback.</li> <li>• No external motor protection required.</li> <li>• Insulating shells supplied with single-head pumps for heating systems.</li> <li>• Large temperature range where the liquid temperature and the ambient temperature are independent of each other.</li> </ul> <p><b>Communication</b> The MAGNA3 enables communication via the following:</p>



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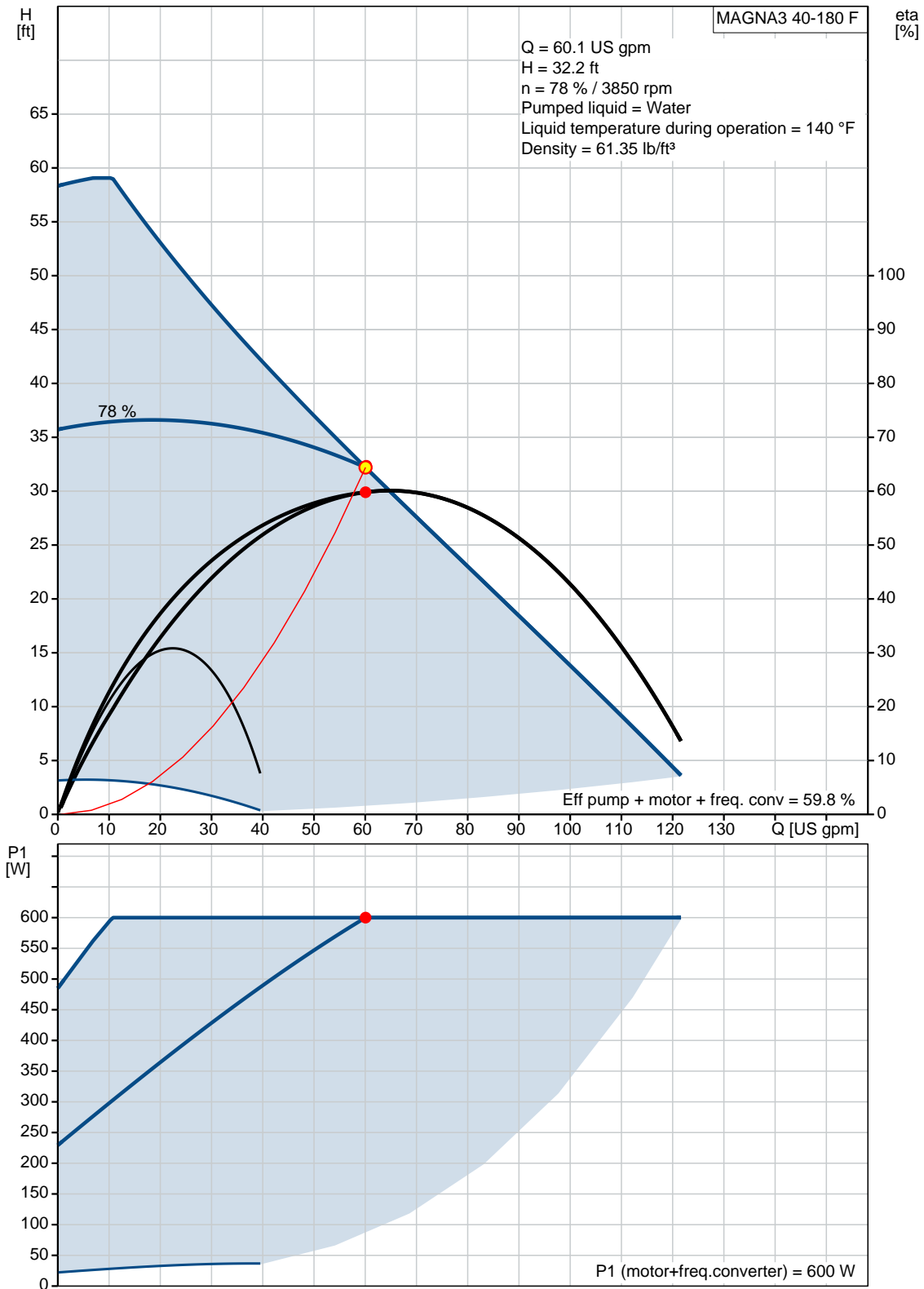
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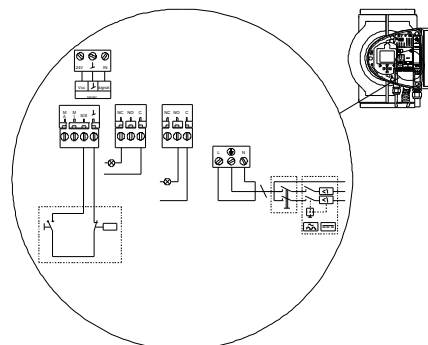
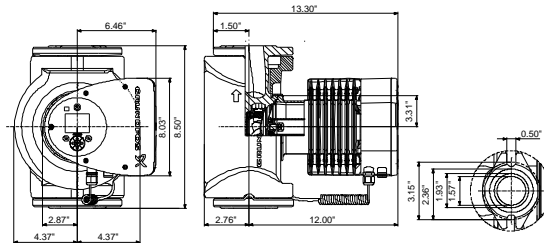
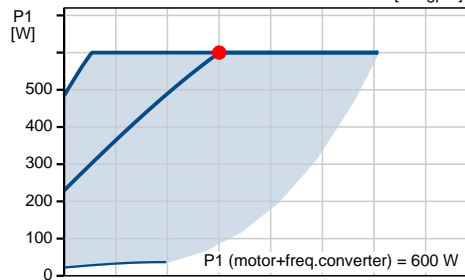
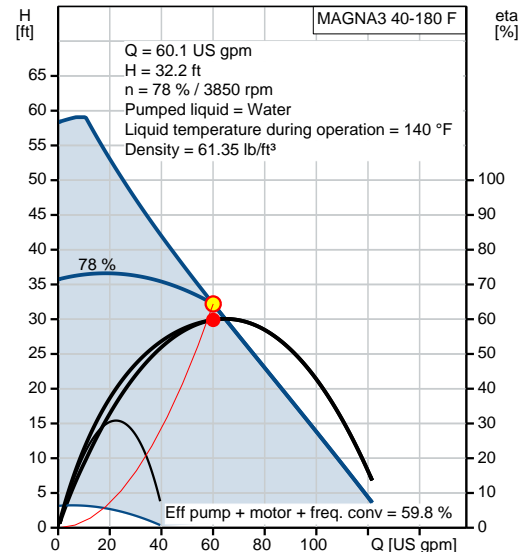
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Count	Description																																																								
	<ul style="list-style-type: none"><li>• wireless Grundfos GO Remote</li><li>• fieldbus communication via CIM modules</li><li>• digital inputs</li><li>• relay outputs</li><li>• analog input (more than a pump function as heat energy meter)</li></ul> <p>Motor and electronic controller</p> <p>The MAGNA3 incorporates a 4-pole synchronous, permanent-magnet motor (PM motor). This motor type is characterised by higher efficiency than a conventional asynchronous squirrel-cage motor.</p> <p>The pump speed is controlled by an integrated frequency converter.</p> <p>A differential-pressure and temperature sensor is incorporated in the pump.</p> <p><b>Liquid:</b></p> <table><tr><td>Pumped liquid:</td><td>Water</td></tr><tr><td>Liquid temperature range:</td><td>14 .. 230 °F</td></tr><tr><td>Selected liquid temperature:</td><td>140 °F</td></tr><tr><td>Density:</td><td>61.35 lb/ft³</td></tr></table> <p><b>Technical:</b></p> <table><tr><td>Actual calculated flow:</td><td>60.1 US gpm</td></tr><tr><td>Resulting head of the pump:</td><td>32.2 ft</td></tr><tr><td>TF class:</td><td>110</td></tr><tr><td>Approvals on nameplate:</td><td>98544605</td></tr></table> <p><b>Materials:</b></p> <table><tr><td>Pump housing:</td><td>Cast iron EN-GJL-250 ASTM A48-250B</td></tr><tr><td>Impeller:</td><td>PES 30%GF</td></tr></table> <p><b>Installation:</b></p> <table><tr><td>Range of ambient temperature:</td><td>32 .. 104 °F</td></tr><tr><td>Maximum operating pressure:</td><td>174.05 psi</td></tr><tr><td>Flange standard:</td><td>GF</td></tr><tr><td>Pipe connection:</td><td>GF15/26/40/43</td></tr><tr><td>Pressure stage:</td><td>PN12</td></tr><tr><td>Port-to-port length:</td><td>8 9/16 in</td></tr></table> <p><b>Electrical data:</b></p> <table><tr><td>Power input - P1:</td><td>16 .. 600 W</td></tr><tr><td>Main frequency:</td><td>60 Hz</td></tr><tr><td>Rated voltage:</td><td>1 x 208-230 V</td></tr><tr><td>Maximum current consumption:</td><td>0.18 .. 2.65 A</td></tr><tr><td>Enclosure class (IEC 34-5):</td><td>X4D</td></tr><tr><td>Insulation class (IEC 85):</td><td>F</td></tr></table> <p><b>Others:</b></p> <table><tr><td>Energy (EEI):</td><td>0.19</td></tr><tr><td>Net weight:</td><td>30.8 lb</td></tr><tr><td>Gross weight:</td><td>34.1 lb</td></tr><tr><td>Shipping volume:</td><td>1060 ft³</td></tr><tr><td>Country of origin:</td><td>US</td></tr><tr><td>Custom tariff no.:</td><td>8413.70.2005</td></tr></table>	Pumped liquid:	Water	Liquid temperature range:	14 .. 230 °F	Selected liquid temperature:	140 °F	Density:	61.35 lb/ft³	Actual calculated flow:	60.1 US gpm	Resulting head of the pump:	32.2 ft	TF class:	110	Approvals on nameplate:	98544605	Pump housing:	Cast iron EN-GJL-250 ASTM A48-250B	Impeller:	PES 30%GF	Range of ambient temperature:	32 .. 104 °F	Maximum operating pressure:	174.05 psi	Flange standard:	GF	Pipe connection:	GF15/26/40/43	Pressure stage:	PN12	Port-to-port length:	8 9/16 in	Power input - P1:	16 .. 600 W	Main frequency:	60 Hz	Rated voltage:	1 x 208-230 V	Maximum current consumption:	0.18 .. 2.65 A	Enclosure class (IEC 34-5):	X4D	Insulation class (IEC 85):	F	Energy (EEI):	0.19	Net weight:	30.8 lb	Gross weight:	34.1 lb	Shipping volume:	1060 ft³	Country of origin:	US	Custom tariff no.:	8413.70.2005
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## 98126836 MAGNA3 40-180 F 60 Hz



Description	Value
<b>General information:</b>	
Product name:	MAGNA3 40-180 F
Product No.:	98126836
EAN:	5710629499981
	5710629499981
<b>Technical:</b>	
Actual calculated flow:	60.1 US gpm
Resulting head of the pump:	32.2 ft
Head max:	59.06 ft
TF class:	110
Approvals on nameplate:	98544605
Model:	D
<b>Materials:</b>	
Pump housing:	Cast iron
	EN-GJL-250
	ASTM A48-250B
Impeller:	PES 30%GF
<b>Installation:</b>	
Range of ambient temperature:	32 .. 104 °F
Maximum operating pressure:	174.05 psi
Flange standard:	GF
Pipe connection:	GF15/26/40/43
Pressure stage:	PN12
Port-to-port length:	8 9/16 in
<b>Liquid:</b>	
Pumped liquid:	Water
Liquid temperature range:	14 .. 230 °F
Selected liquid temperature:	140 °F
Density:	61.35 lb/ft³
<b>Electrical data:</b>	
Power input - P1:	16 .. 600 W
Main frequency:	60 Hz
Rated voltage:	1 x 208-230 V
Maximum current consumption:	0.18 .. 2.65 A
Enclosure class (IEC 34-5):	X4D
Insulation class (IEC 85):	F
<b>Others:</b>	
Energy (EEI):	0.19
Net weight:	30.8 lb
Gross weight:	34.1 lb
Shipping volume:	1060 ft³
Country of origin:	US
Custom tariff no.:	8413.70.2005

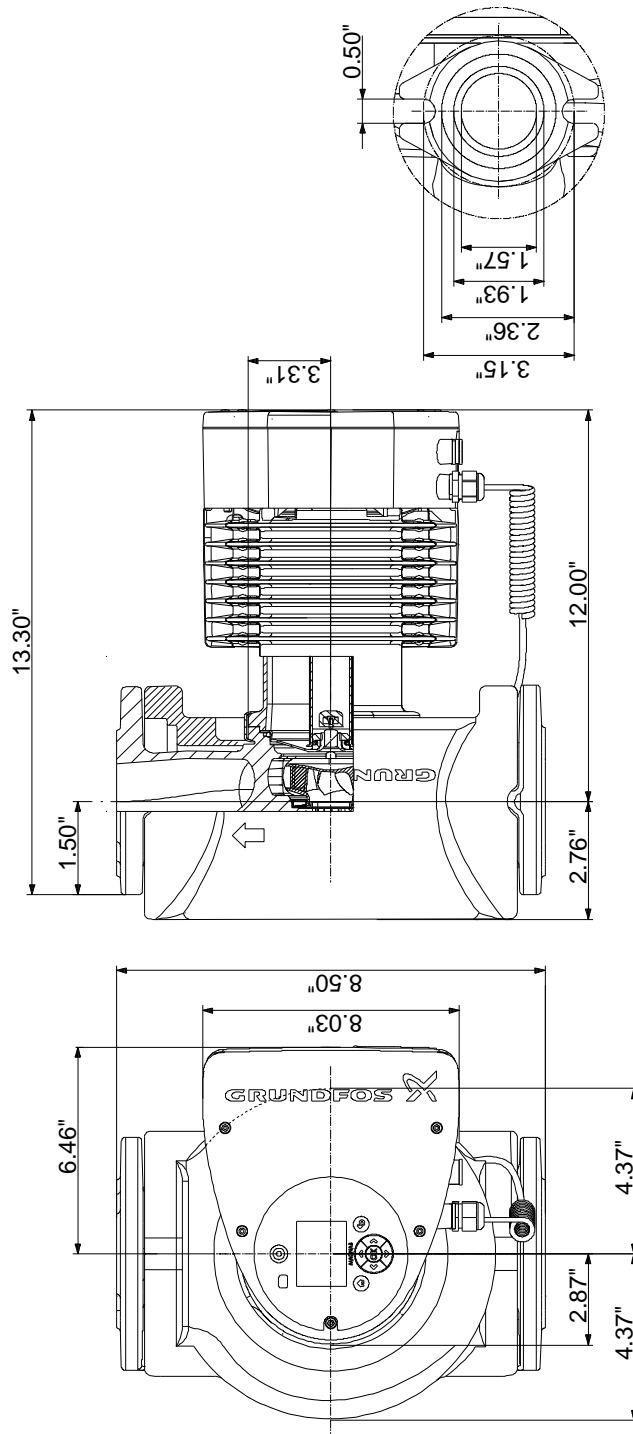




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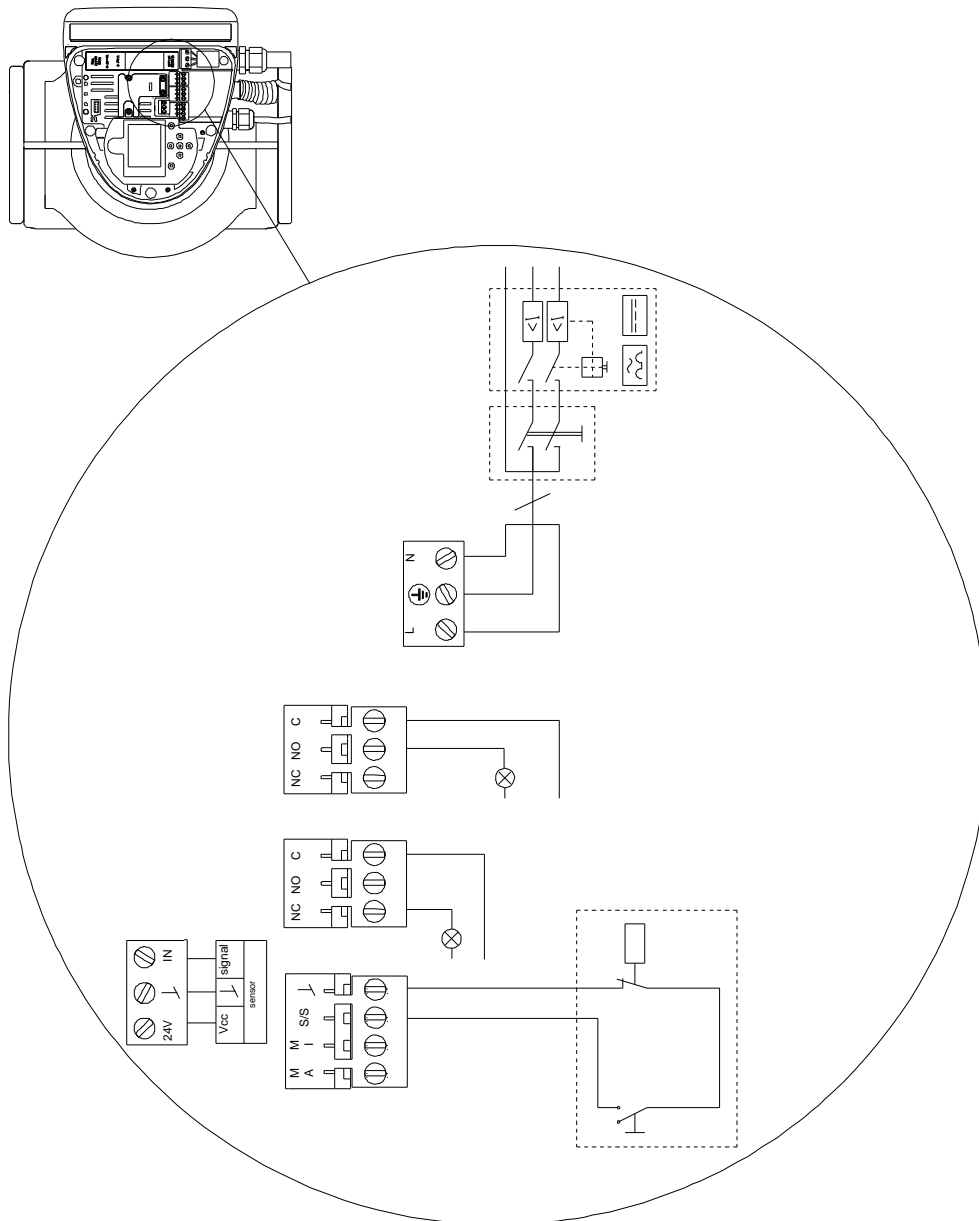
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## 98126836 MAGNA3 40-180 F 60 Hz



Note! All units are in [in] unless otherwise stated.  
Disclaimer: This simplified dimensional drawing does not show all details.

## 98126836 MAGNA3 40-180 F 60 Hz



All units are [in] unless otherwise presented.