

Job Name:

System Reference:

Date:



Summary (Ship Loose Components Required per QAHV):

SKU	Description
22HT-52	Belimo Contact Temperature Sensor
99833308-GF	GRDFS PUMP 32-120GF N 165 115/230V, QAHV
B16DW-81-2P-HEX	Double Wall SWEPE HX
96824796-GF	GRUNDFOS MODBUS CARD CIM200, QAHV
519652-GF	Flange Kit for Grundfos Pump Magna3 32-120GF N
A-22P-A44	Thermal contact fluid
PAC-UKPRC001-CN-1	Procon Adapter

**NOTE - QAHV Outdoor Unit Sold Separately*

Items Shown in this submittal are separate SKU's and will ship to site as separate components. Sourcing alternate items from other vendors or attempted as equal alternates is not permitted and will not be warranted.

Note: For City Water Temperatures above 72F alternate design considerations are required. Consult with a Mitsubishi representative for further guidance.

Specification Unit Type		System QAHV "CORE"
Maximum allowed piping distance from QAHV to HX (one way) ³	Ft	175ft
Heat Exchanger Type (Primary to Potable)		316/316L Stainless Steel Plates, Copper Brazing, 2 Pass, Double Wall Vented, NSF 372
HX Pressure Drop (Rated Point, Secondary Potable Side)	Psig @ GPM	0.51 Psig @ 3.4 GPM
Electrical Power Requirements	Voltage, Phase, Hertz	115-230V, 1-Phase, 60Hz
Pump Maximum Current	Amps	1.67 Amps
Pump Type (Secondary Side)		GRUNDFOS MAGNA3 32-120GF N 165 115-230V SS FLANGE BODY
Glycol Allowance (Primary Side - QAHV)	Max % / Type	30% / Polypropylene Only
Pump, Max Flow ¹	GPM	8.00
Pump Max Head (@ 8.0 gpm) ²	Ft	39Ft
Pump Max Power	Watts	187 Watts
Controls (Loose - Field Install)		Remote Pipe Temperature Sensor - Clamp on Style (Belimo)
Controls On Pump		Modulated Integrated Temperature Control w/ CIM 200 MODBUS RTU Communicaiton Card.



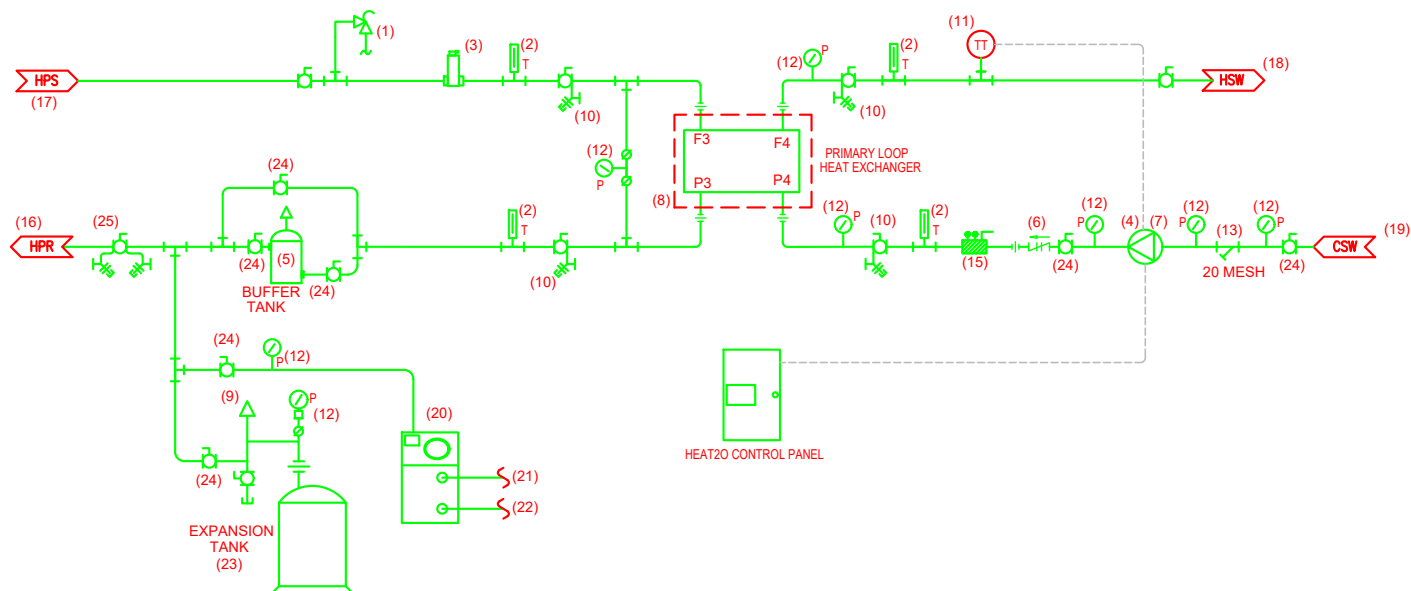
QAHV "CORE" Pump/HX Required Accessory Summary



Notes:

1. Pump flow will vary with storage tank recovery and ambient conditions - pump min/max flow at min/max pump speed curve will be determined by field balancing (field provided balance valve required).
2. Pump head is approximate and based on max tank charge flow per QAHV secondary pump of 8 gpm. Flow will be lower during majority of most tank charge cycles. Analysis of external losses must be made by designer of record for potable side when applying skid to stay below max head capability of the pump.
3. QAHV max external pressure is 10psig - losses must be evaluated by engineer of record based on pipe size selected and actual pipe routing to ensure external loss between QAHV and skid does not exceed this limit, this must include losses for field installed air separators, piping specialties, strainers, and pressure drop of skid HX, including considerations of glycol effects if present on primary side.

HEAT EXCHANGER INSTALLATION DETAIL GLYCOL SHOT FEEDER OPTION



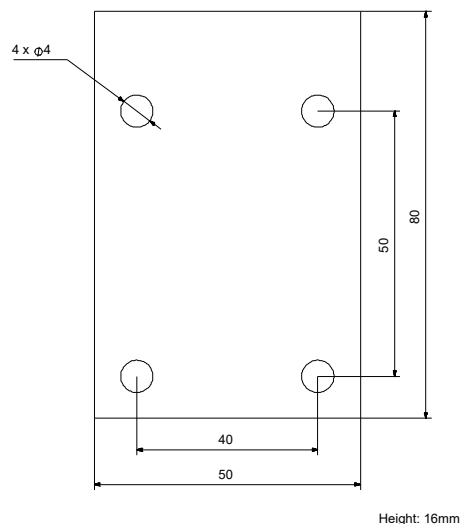
NOTES:

1. PRESSURE/TEMPERATURE RELIEF VALVE (BY CONTRACTOR). ROUTE OUTLET TO NEAREST DRAIN.
2. 200°F IMMERSION TYPE THERMOMETER (BY CONTRACTOR).
3. MICROBUBBLE AIR AND DIRT SEPARATOR (BY CONTRACTOR).
4. PROVIDE CUSH-A-THERM SUPPORTS (OR SIMILAR) WITHIN 6" OF EITHER SIDE OF PUMP (BY CONTRACTOR).
5. 10-GALLON BUFFER TANK WITH TWO 1" CONNECTIONS AND BYPASS (BY CONTRACTOR).
6. INLINE SPRING CHECK VALVE (BY CONTRACTOR).
7. SECONDARY SIDE DC PUMP WITH REMOTE DISCHARGE TEMP SENSOR, INTEGRAL TEMP CONTROLLER AND INTEGRAL FLOW METERING. PUMP SHALL BE GRUNDFOS MAGNA 3 AND PROVIDED AS PACKAGE WITH QAHV BY MANUFACTURER. TEMP SET POINT RANGE UP TO 170°F, FLOW RANGE LIMIT ADJUSTABLE FROM 0.8 GPM TO 8 GPM. AUX INPUT FOR ANTI-FREEZE MODE SIGNAL CONTACT CLOSURE FROM QAHV FOR 17 L/MIN (4.5 GPM) FIXED FLOW.
8. PROVIDE INSULATION BLANKET (BY CONTRACTOR)
9. AUTOMATIC AIR VENT (BY CONTRACTOR).
10. ISOLATION/FLUSHING VALVES USED FOR ISOLATING, DRAINING AND CLEANING (BY CONTRACTOR).
11. REMOTE TEMPERATURE SENSOR ON LEAVING POTABLE SIDE OF SEPARATION HX (BY MANUFACTURER). LOCATE SENSOR CLOSE TO STORAGE TANKS - CONSULT REPRESENTATIVE FOR GUIDANCE.
12. PROVIDE A PRESSURE GAUGE WITH NORMALLY CLOSED SHUT-OFF GAUGE VALVE/S (BY CONTRACTOR).
13. PROVIDE STRAINER WITH 20 MESH MINIMUM WITH CAPABILITY TO ACCEPT ACCESSORY STRAINER ELEMENTS UP TO 60 MESH DEPENDING ON POTABLE WATER QUALITY (BY CONTRACTOR). SIZE PUMP FOR WORST CASE INSTALLED PRESSURE DROP.
14. NOT USED.
15. PROVIDE POTABLE RATED CALIBRATED ADJUSTABLE BALANCE DEVICE WITH 0.8 GPM MINIMUM FLOW SETTING AND 8 GPM MAXIMUM FLOW SETTING (BY CONTRACTOR).
16. PRIMARY HOT WATER RETURN RETURN TO HEAT PUMP.
17. PRIMARY HOT WATER SUPPLY FROM HEAT PUMP.
18. SECONDARY HOT WATER SUPPLY TO STORAGE TANKS.
19. SECONDARY COLD WATER RETURN FROM STORAGE TANKS.
20. PROVIDE GLYCOL SYSTEM FEEDER SIZED FOR 10% OF PRIMARY LOOP VOLUME. EXPANSION TANK AIR PRESSURE TO BE ADJUSTED TO THE COLD FILL / SYSTEM FEEDER SET POINT PRIOR TO FILLING SYSTEM (BY CONTRACTOR).
21. CONTROL WIRE CONNECTION FOR MONITORING (BY CONTRACTOR).
22. ELECTRICAL POWER CONNECTION (BY CONTRACTOR).
23. PRIMARY LOOP EXPANSION TANK (BY CONTRACTOR).
24. ISOLATION VALVE (BY CONTRACTOR).
25. PURGE AND FILL VALVE OR VALVE ASSEMBLY WITH THREADED HOSE DRAIN CONNECTIONS (BY CONTRACTOR).

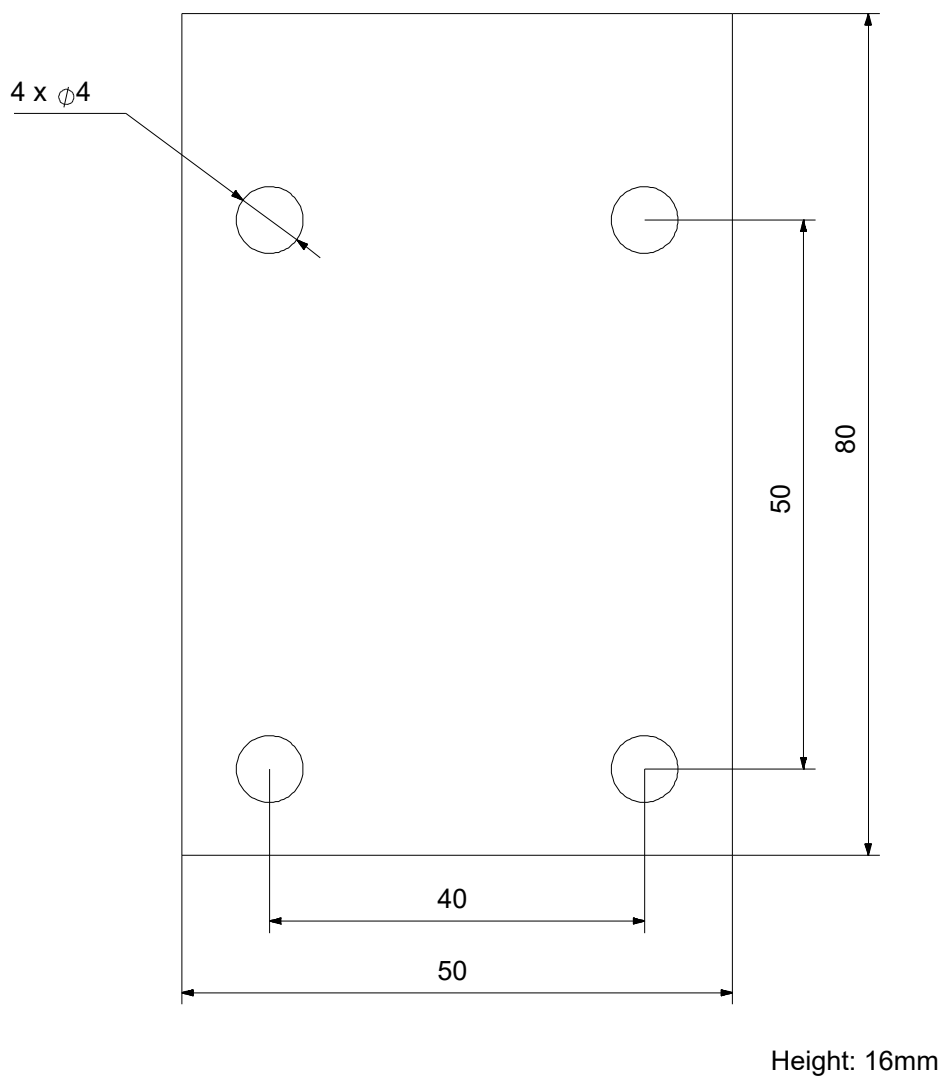
Qty.	Description
1	CIM 200 MODBUS RTU Note! Product picture may differ from actual product Product No.: 96824796 Communication interface for Modbus RTU for automation. The CIM 200 is a standard interface for data transmission between a Modbus RTU network and a Grundfos pump. It makes data exchange possible between Grundfos pump and a PLC or SCADA system. Extensive amounts of datapoints are available from each product via the CIM 200. The interface offers uncomplicated system integration with both new and legacy systems, as the Modbus RTU protocol is widely supported by existing control systems and PLCs. The CIM 200 is an add-on communication module installed internally in the Grundfos product. Supported products: - E-pumps CRE/CRNE/CRIE, MTRE, CME, TPE2 / TPE3, NBE/NKE with MGE model H/I/J and 11-22 kW - MAGNA3 circulators - CU 352 MPC controller - CU 354 DDD controller - Hydro Multi-E based on MGE model H/I/J - CU 362 Dedicated Controls for sewage pumps - LC 2x1 Level controller



Description	Value
General information:	
Product name:	CIM 200 MODBUS RTU
Product No:	96824796
EAN number:	5700311213797
Technical:	
Communication:	MODBUS RTU
Main component:	Communication Module
Others:	
Net weight:	0.07 lb
Gross weight:	0.58 lb
Danish VVS No.:	380698200
Swedish RSK No.:	5784444
Finnish LVI No.:	9414035
Norwegian NRF no.:	9040946
Country of origin:	DK
Custom tariff no.:	8413.91.9096



96824796 CIM 200 MODBUS RTU



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

Submittal Data

PROJECT:	UNIT TAG:	QUANTITY:
REPRESENTATIVE: _____	TYPE OF SERVICE:	DATE: _____
ENGINEER:	SUBMITTED BY:	DATE:
CONTRACTOR:	APPROVED BY:	DATE:
	ORDER NO.:	DATE:

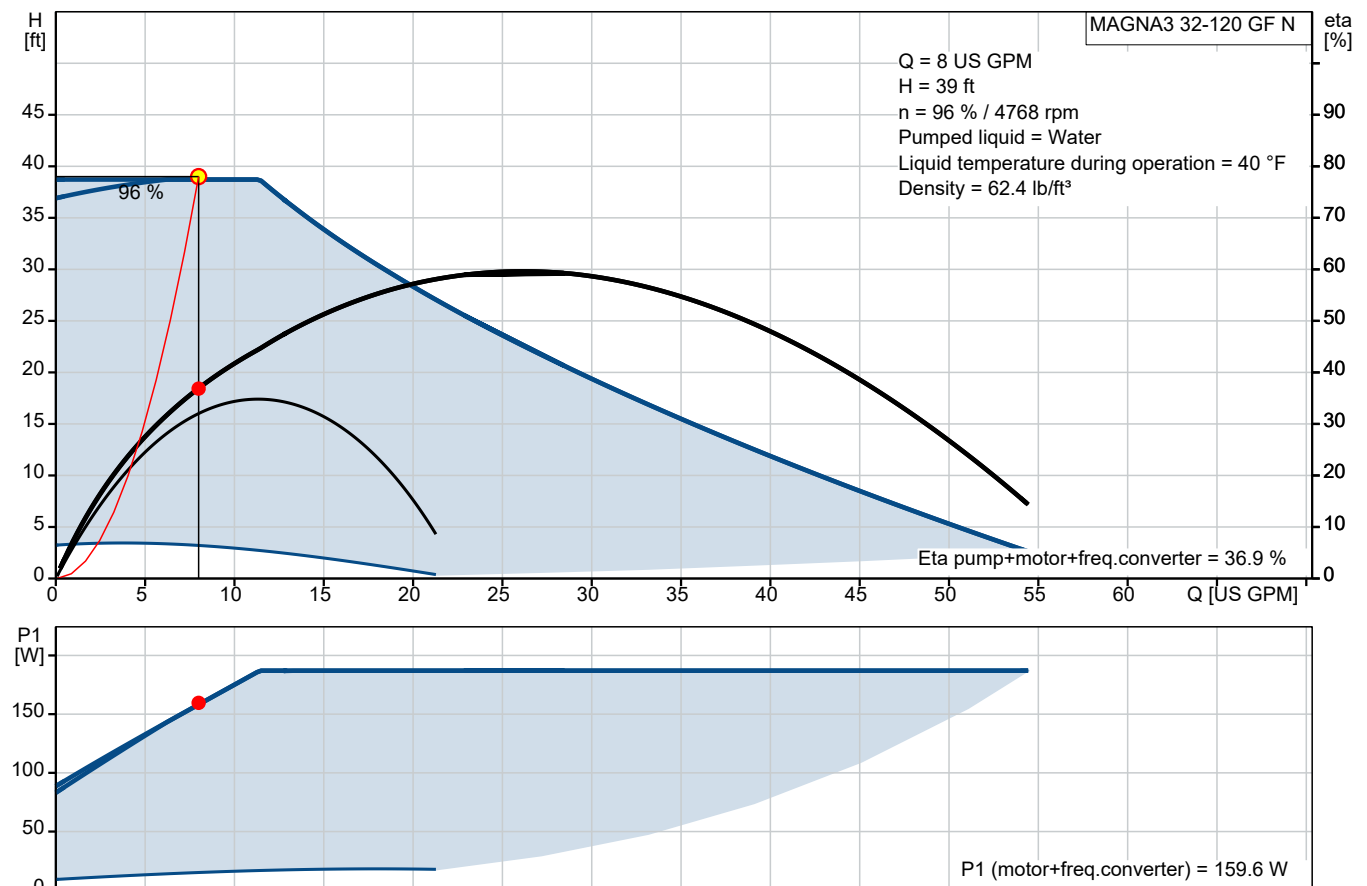


MAGNA3 32-120 GF N

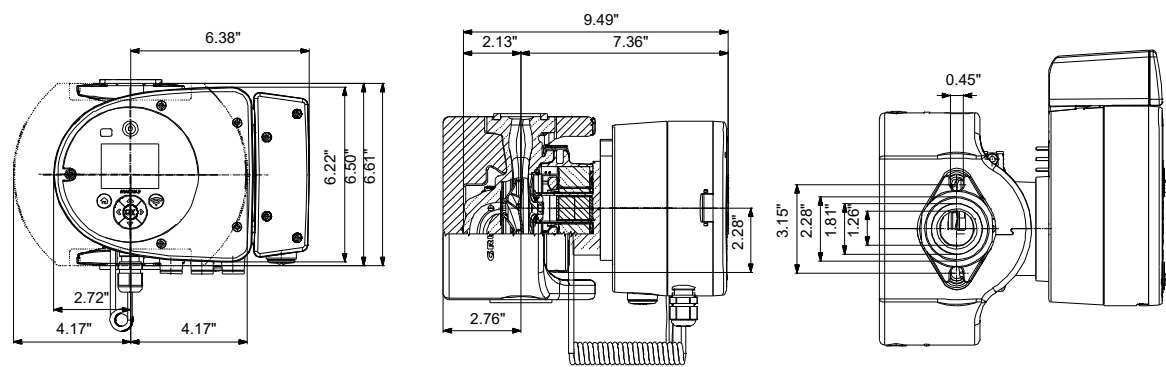
The MAGNA3 N offers all of the features of a MAGNA3 in stainless-steel, if the media requires this, for example in domestic-hot water applications. The MAGNA3 has integrated Bluetooth allowing it to connect directly with the Grundfos GO APP.

Note! Product picture may differ from actual product

Conditions of Service	Pump Data	Motor Data
Flow: 8 US GPM	Liquid temperature range: 14 .. 230 °F	Mains frequency: 60 Hz
Head: 39 ft	Maximum ambient temperature: 104 °F	Enclosure class: X4D
Efficiency: 36.9 %	Flange standard: GF	
Liquid: Water	Pipe connection: GF15/26/40/43	
Temperature: 40 °F	Product number: 99833308	
NPSH required: ft		
Specific Gravity: 1.002		



Submittal Data



Materials:
Pump housing: Stainless steel
ASTM A351-CF8
Impeller: Composite

Qty. Description

1 MAGNA3 32-120 GF N



Note! Product picture may differ from actual product

Product No.: [99833308](#)

The Grundfos MAGNA3 circulator pump is the ideal choice for almost any building project – old or new. With its unrivalled energy efficiency, all-encompassing range and built-in communication capabilities, MAGNA3 is ideal for engineers and specifiers looking to create high-performance heating and cooling systems.

The pump is maintenance-free due to the canned-rotor type design. This also means that 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.

MAGNA3 features an intuitive display and allows you to connect wirelessly with the Grundfos GO Remote app, giving you access to advanced reporting and monitoring.

MAGNA3 model E has Bluetooth, which allows you to connect directly to Grundfos Go app on your smart phone without any need for a dongle.

The pump includes fieldbus communication via CIM modules as well as analog and digital inputs and configurable relays.

Control features include AUTOADAPT and FLOWADAPT. FLOWADAPT which reduces the need for throttling valves, thus cutting costs on system components.

MAGNA3 is the superior choice for a wide range of heating and cooling applications, including:

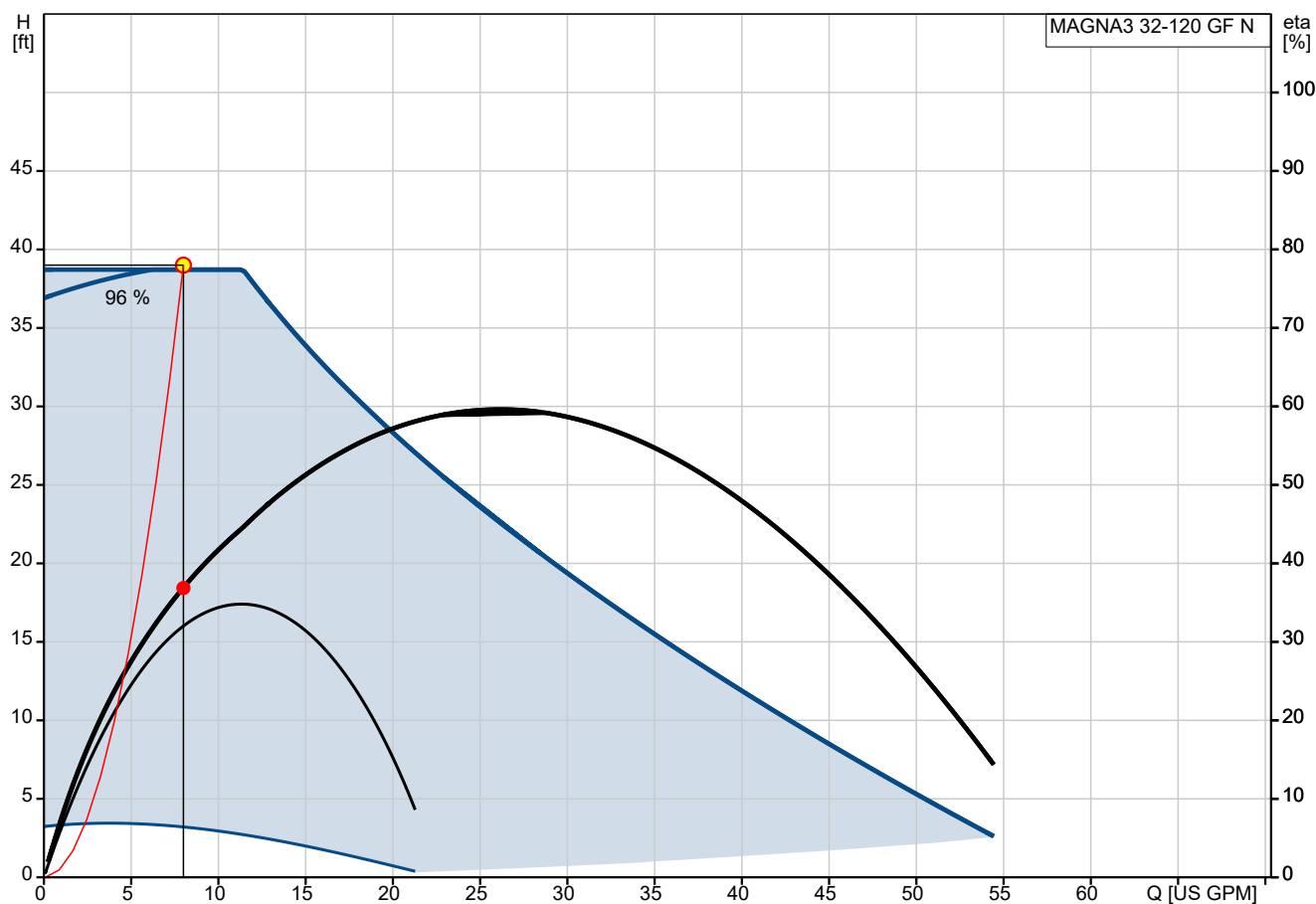
- Mixing loops
- Heating surfaces
- Air conditioning surfaces
- Ground-source heat pump systems
- Smaller chiller applications.

MAGNA3 is a single-phase pump and characterised by having the controller and control display integrated in the control box. The pump also has a built-in differential-pressure and temperature sensor.

The pump housing is available in both cast-iron and stainless-steel versions. The composite rotor can is carbon-fibre reinforced, the bearing plate and rotor cladding are made of stainless steel and the stator housing is made of aluminium. The power electronics are air-cooled.

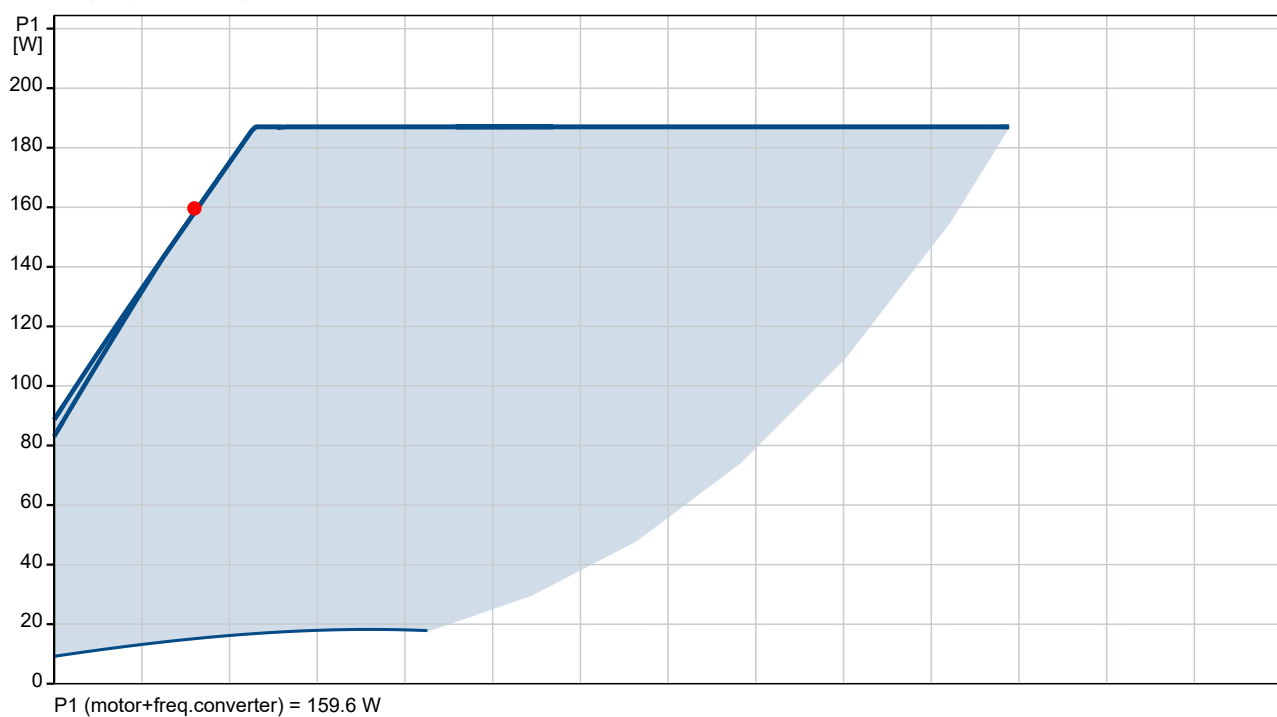
MAGNA3 incorporates a 4-pole synchronous, permanent-magnet motor (PM motor). This motor type is characterised by higher efficiency than a conventional asynchronous squirrel-cage motor. The pump speed is controlled by an integrated frequency converter.

99833308 MAGNA3 32-120 GF N 60 Hz

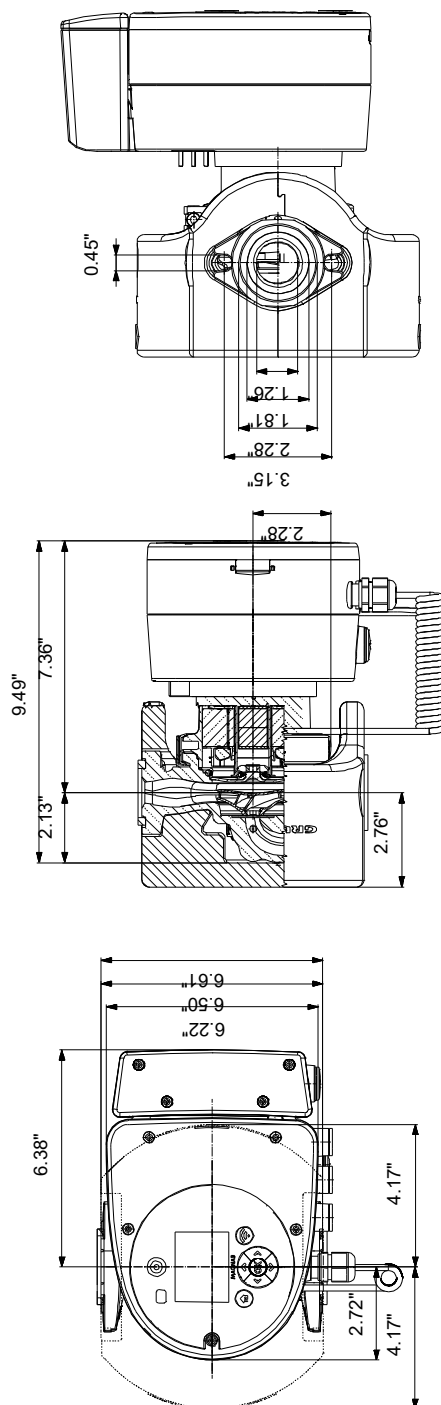


Q = 8 US GPM
 n = 96 % / 4768 rpm
 Liquid temperature during operation = 40 °F
 Eta pump+motor+freq.converter = 36.9 %

H = 39 ft
 Pumped liquid = Water
 Density = 62.4 lb/ft³



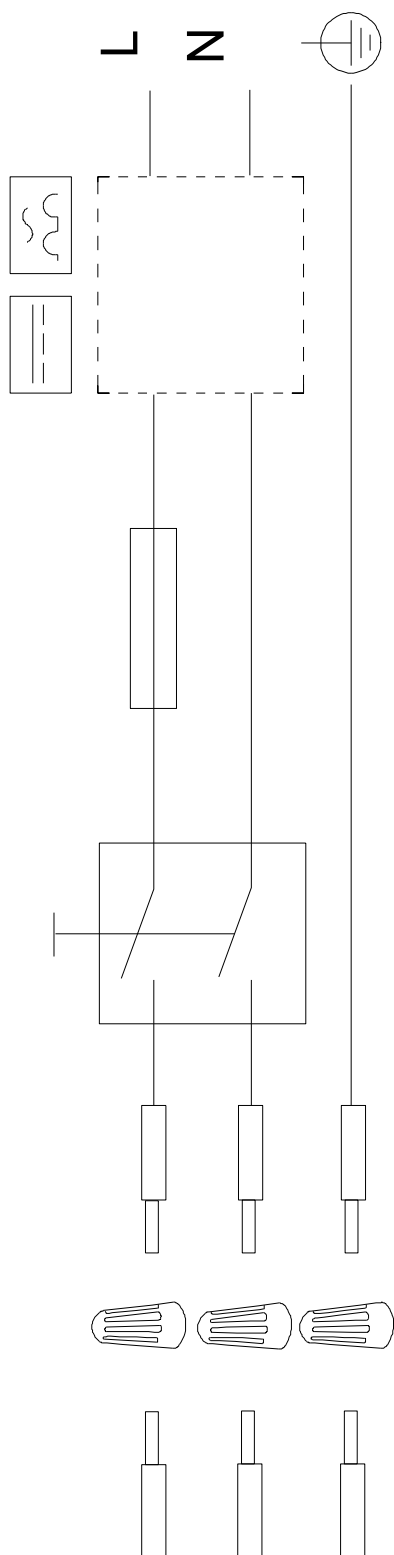
99833308 MAGNA3 32-120 GF N 60 Hz



Note! All units are in [in] unless others are stated.

Disclaimer: This simplified dimensional drawing does not show all details.

99833308 MAGNA3 32-120 GF N 60 Hz



Note! All units are in [in] unless others are stated.

Contact temperature sensor

Active surface contact temperature sensor (0...10 V) for pipe applications. Spring loaded brass contact pin to ensure fast response and accurate reading.



5-year warranty



Type Overview

Type	Output signal active temperature
22HT-52	0...5 V, 0...10 V

Technical data

Electrical Data	Nominal voltage	AC/DC 24 V
	Nominal voltage range	AC 21.6...26.4 V / DC 13.5...26.4 V
	Power consumption AC	0.8 VA
	Power consumption DC	0.4 W
	Electrical connection	Pluggable spring-loaded terminal block max. 2.5 mm ²
	Cable entry	Cable gland with strain relief ø6...8 mm (1/2" NPT conduit adapter included)
Functional Data	Application	Water
	Multirange	8 measuring ranges selectable
	Voltage output	1 x 0...5 V, 0...10 V, min. resistance 5 kΩ
	Output signal active note	output 0...5/10 V with jumper adjustable
Measuring Data	Measured values	Temperature
	Sensing element technology	based on Pt1000 1/3 DIN
Specification Temperature active	Measuring range temperature settings	Active sensor: range selectable Attention: The maximum measuring range listed does not indicate the allowable fluid temperature for the sensor. Refer to safety data for the maximum fluid temperature limits.
		Setting Range [°C] Range [°F] Factory setting
		S0 -50...50 -30...130
		S1 -10...120 0...250
		S2 0...50 40...140
		S3 0...250 30...480
		S4 -15...35 0...100
		S5 0...100 40...240
		S6 -20...80 40...90
		S7 0...160 0...150
	Accuracy temperature	±0.5°C @ 21°C [±0.9°F @ 70°F] @ measuring range setting S2 and S4
	Long-term stability	±0.07°F p.a. @ 70°F [±0.04°C p.a. @ 21°C]

Technical data

Specification	Temperature active	Time constant τ (63%) on water pipe	With thermal contact fluid Typical 16 s
Safety Data	Protection class IEC/EN	III, Protective Extra-Low Voltage (PELV)	
	Power source UL	Class 2 Supply	
	Degree of protection IEC/EN	IP54	
	Degree of protection NEMA/UL	NEMA 1	
	Enclosure	UL Enclosure Type 1	
	EU Conformity	CE Marking	
	Certification IEC/EN	IEC/EN 60730-1	
	Quality Standard	ISO 9001	
	UL 2043 Compliant	Suitable for use in air plenums per Section 300.22(C) of the NEC and Section 602 of the IMC	
	Pollution degree	2	
	Ambient humidity	Max. 95% RH, non-condensing	
	Ambient temperature	-30...120°F [-35...50°C]	
	Fluid temperature	-30...160°F [-35...70°C]	
	Housing surface temperature	max. 160°F [70°C]	
Materials	Housing	Cover: PC, orange Bottom: PC, orange Seal: NBR70, black UV resistant UL94 5VA	
	Cable gland	PA6, black	

Safety Notes



This device has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application. Unauthorized modifications are prohibited. The product must not be used in relation with any equipment that in case of a failure may threaten humans, animals or assets.

Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Only authorized specialists may carry out installation. All applicable legal or institutional installation regulations must be complied with during installation.

The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Remarks

- General Remarks Concerning Sensors** When using lengthy connection wires (depending on the cross section used) the measuring result might be falsified due to a voltage drop at the common GND-wire (caused by the voltage current and the line resistance). In this case, 2 GND-wires must be wired to the sensor - one for supply voltage and one for the measuring current.
- Sensing devices with a transducer should always be operated in the middle of the measuring range to avoid deviations at the measuring end points. The ambient temperature of transducer electronics should be kept constant. The transducers must be operated at a constant supply voltage (± 0.2 V). When switching the supply voltage on/off, onsite power surges must be avoided.
- Remark:** Occurring draft leads to a better carrying-off of dissipative power at the sensor. Thus temporally limited fluctuations might occur upon temperature measurement.

Remarks

Build-up of self-heating by electrical dissipative power

Temperature sensors with electronic components always have a dissipative power which affects the temperature measurement of the ambient air. The dissipation in active temperature sensors shows a linear increase with rising operating voltage. The dissipative power should be taken into account when measuring temperature.

In case of a fixed operating voltage (± 0.2 V), this is normally done by adding or reducing a constant offset value. As Belimo transducers work with a variable operating voltage, for reasons of production engineering only one operating voltage can be taken into consideration. Transducers 0...10 V / 4...20 mA have a standard setting at an operating voltage of DC 24 V. This means that at this voltage, the expected measuring error of the output signal will be the least. For other operating voltages, the offset error will be increased by a changing power loss of the sensor electronics.

If a readjustment directly at the active sensor should be necessary during later operation, this can be done with the following adjustment methods.

- For sensors with NFC or dongle with the corresponding Belimo app
- For sensors with a trimming potentiometer on the sensor board
- For bus sensors via bus interface with a corresponding software variable

Remark on surface measurements

When measuring temperature, humidity or condensation on a surface, both the temperature of the surface and that of the ambient air influence the measurement result. When measuring on a pipe surface, the influence of the ambient air can be minimized by using thermal contact fluid.

Parts included

Fixing strap for pipes up to $\varnothing 110$ mm
1/2" NPT conduit adapter

Accessories

Optional accessories

Description

Type

Fixing strap, with thermal contact fluid for pipes $\varnothing 20...110$ mm
[0.8...4.3"]

A-22P-A40

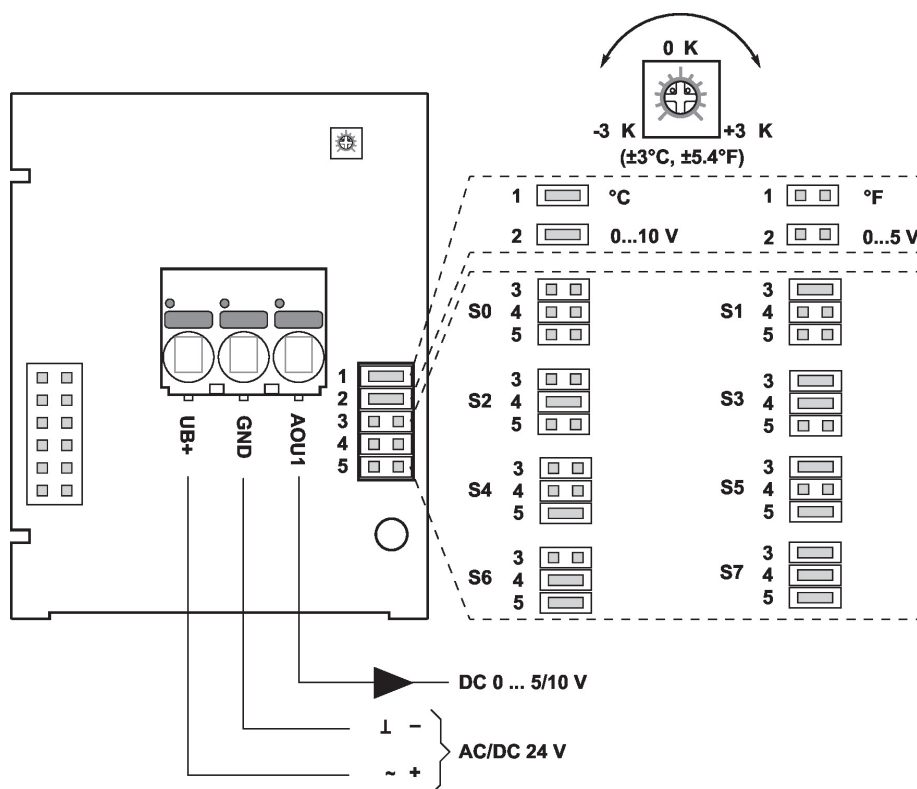
Fixing strap, with thermal contact fluid for pipes $\varnothing 20...250$ mm
[0.8...9.8"]

A-22P-A42

Syringe with thermal contact fluid

A-22P-A44

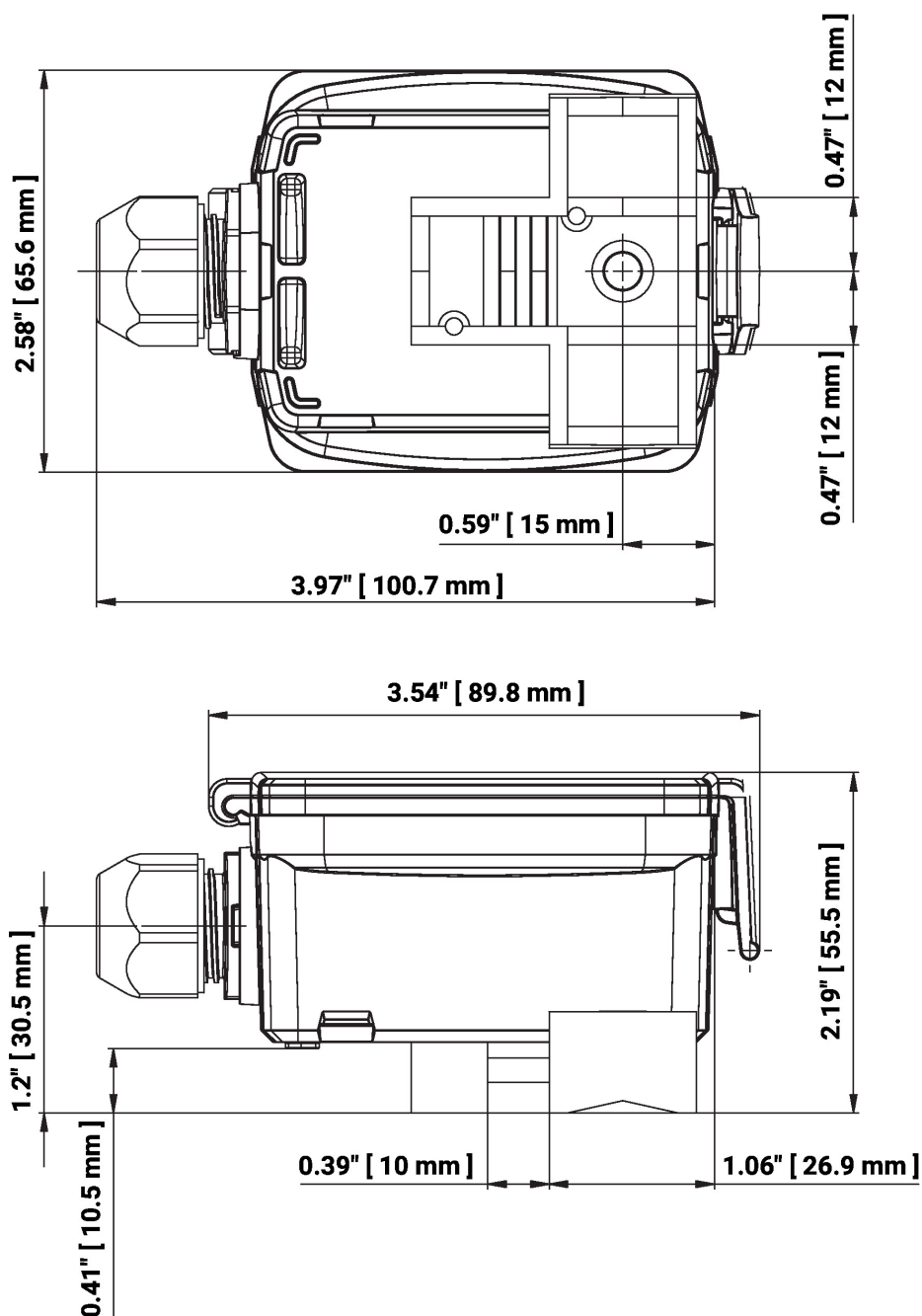
Wiring Diagram



The following measuring ranges can be adjusted through the jumper settings:

Setting	Range [°C]	Range [°F]	Factory setting
S0	-50...50	-30...130	
S1	-10...120	0...250	
S2	0...50	40...140	
S3	0...250	30...480	
S4	-15...35	0...100	
S5	0...100	40...240	
S6	-20...80	40...90	
S7	0...160	0...150	

Dimensions



Further documentation

- Installation instructions



This HX selection is for nominal sizing purposes and not representative of any specific project sizing conditions. Actual performance must be assessed from QAHV corrected capacity with selection software tools from which resulting output capacity and approximate leaving water can be derived. Consult with Mitsubishi representative for guidance on project specific QAHV selections.

SWEP International AB
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Järvigatan 3B
SE-261 44 Landskrona, Sweden
www.swepgroup.com

SINGLE PHASE - PERFORMANCE

SWEP SSP G8 2025.910.5.0

HEAT EXCHANGER: BDW16DWHx81/2P

Heat Exchanger

Date: 16/09/2025

SSP Alias: B16DW2P/2P

DUTY REQUIREMENTS		Side 1	Side 2
Fluid		Propylene Glycol - Water (30.0 mass%)	Water
Flow type		Counter-Current	
Circuit		primary	secondary
Heat load	Btu/h	188400	
Inlet temperature	°F	176.0	41.0
Outlet temperature	°F	70.0	151.9
Flow rate	US gpm	3.800	3.400
Thermal length		4.01	4.19

PLATE HEAT EXCHANGER		Side 1	Side 2
Total heat transfer area	sqft	34.9	
Heat flux	Btu/h,sqft	5400	
Mean temperature difference	°F	26.5	
Overall heat transfer coefficient required	Btu/sqft,h,°F	204	
Pressure drop - total*	psi	0.715	0.532
- in ports	psi	0.0117	9.69e-3
Port diameter (up/down)	in	1.06/1.06	1.06/1.06
Number of channels per pass		20	20
Number of plates		81	
Oversurfacing	%	0	
Fouling factor	sqft,h,°F/Btu	0.000	
Reynolds number		172.8	267.9
Port velocity (up/down)	ft/s	1.35/1.35	1.24/1.24
Channel velocity	ft/s	0.227	0.209
Shear stress	Pa	6.33	4.70
Average wall temperature	°F	108.2	107.3
Largest wall temperature difference	°F	1.7	
Min./Max. wall temperature	°F	54.2/162.9	52.5/161.5

*Excluding pressure drop in connections.

PHYSICAL PROPERTIES		Side 1	Side 2
Reference temperature	°F	123.0	96.5
Dynamic viscosity	cP	1.22	0.709
Density	lb/cuft	63.29	62.04
Heat capacity	Btu/lb,°F	0.9399	0.9980
Thermal conductivity	Btu/ft,h,°F	0.2712	0.3608
Film coefficient	Btu/sqft,h,°F	376	514

TOTALS		Side 1	Side 2
Total weight empty (no connections)*	lb	47.5 - 161.51	
Total weight filled (no connections)*	lb	58.3 - 172.31	
Hold-up volume (Inner Circuit)	cuft	0.09	
Hold-up volume (Outer Circuit)	cuft	0.09	
Port size F1/P1	in	1.06	
Port size F2/P2	in	1.06	
Port size F3/P3	in	1.06	
Port size F4/P4	in	1.06	

*Weight depends on the selected product.

DIMENSIONS



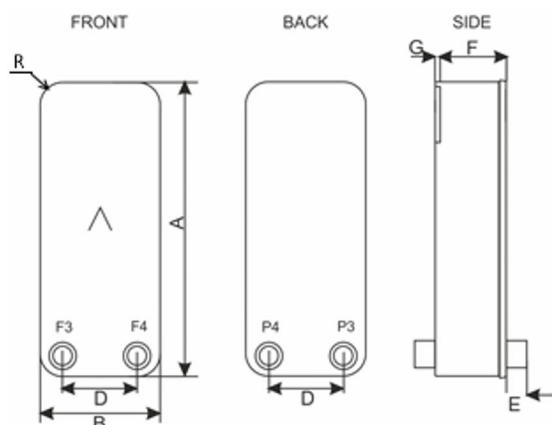
www.swepgroup.com

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Date: 16/09/2025

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DIMENSIONS



A*	in	14.84 - 16.42 ±0.08
B*	in	4.7 - 6.28 ±0.04
C	in	12.95 ±0.04
D	in	2.83 ±0.04
E*	in	1 - 3 ±0.04
F*	in	6.57 - 9.95 +1%/-1.5%
G	in	0.24 ±0.04
P	in	1.54
R*	in	0.87 - 0.93

*Dimensions depend on the selected product.

*This is a schematic sketch. For correct drawings please use the order drawing function or contact your SWEF representative.

Legal notice:

By using the SSP/DThermX software the Licensee confirms that the input data is not subject to export control laws including ITAR (International Traffic in Arms Regulations). Licensee further agrees and confirms that the configured products are not subject to export control laws including ITAR and do not qualify as "specially designed" for export control purposes. If you would like to discuss configuration of export controlled products including ITAR-qualifying products, or if your data is export controlled, please reach out to your SWEF representative or email info@swep.net.

Disclaimer:

Data used in this calculation is subject to change without notice. SWEF strives to use "best practice" for the calculations leading to the above results. Calculation is intended to show thermal and hydraulic performance, no consideration has been taken to mechanical strength of the product. Product restrictions - such as pressure, temperatures and corrosion resistance- can be found in SWEF product sheets and other technical documentation. SWEF may have patents, trademarks, copyrights or other intellectual property rights covering subject matter in this document. Except as expressly provided in any written license agreement from SWEF, the furnishing of this document does not give you any license to these patents, trademarks, copyrights, or other intellectual property. To the maximum extent permitted by applicable law, the software, the calculations and the results are provided without warranties of any kind, whether express or implied. No advice or information obtained through use of the software (including information provided in the results), will create any warranty not expressly stated in the applicable license terms. Without limiting the foregoing, SWEF does not warrant that the content (including the calculations and the results) is accurate, reliable or correct. SWEF does not warrant that any system comprising heat exchanger and other components, installed on the basis of calculations in this software, will meet your requirements or function to your satisfaction or expectations.



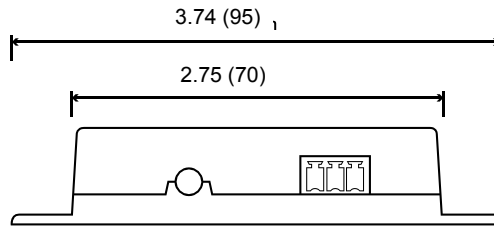
PROCON MELCOBEMS MINI (A1M)



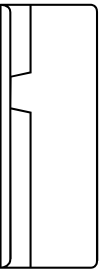
DIMENSIONS

Units: in. (mm)

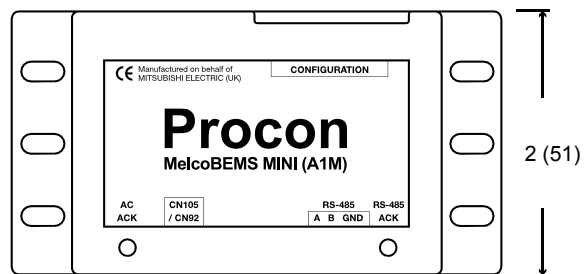
Front View



Side View

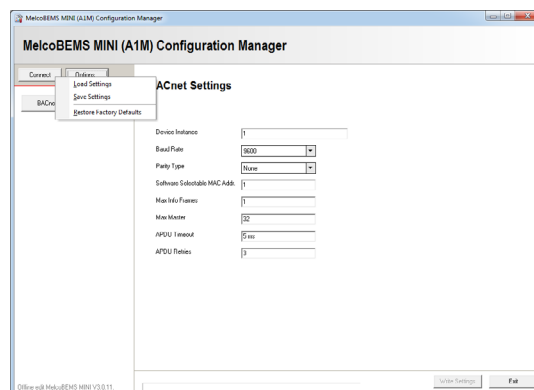


Top View



CONFIGURATION TOOL: MELCOBEMS MINI V1.0.1.0B.EXE

- Software downloadable from MyLinkDrive.com
- Software tool to setup BACnet® setting through Modbus Points Table
- Requires field supplied part: USB to RS-485 adapter



USB to RS-485

1340 Satellite Boulevard, Suwanee, GA 30024
Toll Free: 800-433-4822 www.mehvac.com

BMS Data Table

BACnet Points Table Continued

Type	Object ID	Name	Default Value	Units
Analog Input	101	Tank Temp TS1		*F
Analog Input	102	Tank Temp TS2		*F
Analog Input	103	Tank Temp TS3		*F
Analog Input	104	Tank Temp TS4		*F
Analog Input	105	Tank Temp TS5		*F
Analog Input	106	Tank Temp TS6		*F
Binary Value	1	ControlMode	Active	
Binary Value	2	TankLowTempAlm	Inactive	
Binary Value	3	Override_NormalMode	Inactive	
Binary Value	4	EcoPort_Override	Inactive	
Binary Value	5	EcoPortCommStatus	Inactive	
Binary Value	6	QAHV1Alarm	Inactive	
Binary Value	7	QAHV2Alarm	Inactive	
Binary Value	8	QAHV3Alarm	Inactive	
Binary Value	9	QAHV4Alarm	Inactive	
Binary Value	10	QAHV5Alarm	Inactive	
Binary Value	11	QAHV6Alarm	Inactive	
Binary Value	12	QAHV7Alarm	Inactive	
Binary Value	13	QAHV8Alarm	Inactive	
Binary Value	14	QAHV9Alarm	Inactive	
Binary Value	15	QAHV10Alarm	Inactive	
Binary Value	16	QAHV11Alarm	Inactive	
Binary Value	17	QAHV12Alarm	Inactive	
Binary Value	18	QAHV13Alarm	Inactive	
Binary Value	19	QAHV14Alarm	Inactive	
Binary Value	20	QAHV15Alarm	Inactive	
Binary Value	21	QAHV16Alarm	Inactive	
Binary Value	22	QAHV1EnableCmd	Inactive	
Binary Value	23	QAHV2EnableCmd	Inactive	
Binary Value	24	QAHV3EnableCmd	Inactive	
Binary Value	25	QAHV4EnableCmd	Inactive	
Binary Value	26	QAHV5EnableCmd	Inactive	
Binary Value	27	QAHV6EnableCmd	Inactive	
Binary Value	28	QAHV7EnableCmd	Inactive	
Binary Value	29	QAHV8EnableCmd	Inactive	
Binary Value	30	QAHV9EnableCmd	Inactive	
Binary Value	31	QAHV10EnableCmd	Inactive	
Binary Value	32	QAHV11EnableCmd	Inactive	
Binary Value	33	QAHV12EnableCmd	Inactive	
Binary Value	34	QAHV13EnableCmd	Inactive	
Binary Value	35	QAHV14EnableCmd	Inactive	
Binary Value	36	QAHV15EnableCmd	Inactive	
Binary Value	37	QAHV16EnableCmd	Inactive	
Binary Output	101	System Status	Inactive	

Type	Object ID	Name	Default Value	Units
Binary Output	102	Alarm Output	Inactive	
Binary Output	103	Backup Heat Output	Inactive	
Multi State Value	1	SystemRequestType	6	
Multi State Value	2	EcoPort_OpState	1	
Multi State Value	3	EcoPort_Event	1	
Multi State Value	8000	Version	5	
Analog Value	1	SysOnTempSPNormal	130	*F
Analog Value	2	SystemOffTempSPNormal	140	*F
Analog Value	3	SysOnSensorSelNumNormal	1	*F
Analog Value	4	SysOffSensorSelNumNormal	1	*F
Analog Value	5	PriLoopTempSPNormal	150	*F
Analog Value	6	TankLowTempAlmSP	120	*F
Analog Value	7	StagesRequired	0	
Analog Value	9	SecondaryPumpTempSetpoint	150	
Analog Value	10	SystemOnTempSP_LoadUp	130	*F
Analog Value	11	SystemOffTempSP_LoadUp	140	*F
Analog Value	12	PriLoopTempSP_LoadUp	150	
Analog Value	14	TotalEnergyUse	0	*F
Analog Value	15	EcoPort_Duration	0	s
Analog Value	17	OffSensorSelNum_Shed	1	
Analog Value	19	OnSensorSelNum_Shed	1	
Analog Value	21	SystemOnTempSP_Shed	120	*F
Analog Value	22	PriLoopTempSP_Shed	150	*F
Analog Value	23	SystemOffTempSP_Shed	130	*F
Analog Value	24	OffSensorSelNum_Crit Peak	1	
Analog Value	26	OnSensorSelNum_Crit Peak	1	
Analog Value	28	SystemOnTempSP_CritPeak	130	*F
Analog Value	29	PriLoopTempSP_CritPeak	150	*F
Analog Value	30	SystemOffTempSP_CritPeak	140	*F
Analog Value	31	QAHV1OutletTemp	0	*F
Analog Value	32	QAHV2OutletTemp	0	*F
Analog Value	33	QAHV3OutletTemp	0	*F
Analog Value	34	QAHV4OutletTemp	0	*F
Analog Value	35	QAHV5OutletTemp	0	*F
Analog Value	36	QAHV6OutletTemp	0	*F
Analog Value	37	QAHV7OutletTemp	0	*F
Analog Value	38	QAHV8OutletTemp	0	*F
Analog Value	39	QAHV9OutletTemp	0	*F
Analog Value	40	QAHV10OutletTemp	0	*F
Analog Value	41	QAHV11OutletTemp	0	*F

BMS Data Table

BACnet Points Table

Type	Object ID	Name	Default Value	Units
Analog Value	42	QAHV12OutletTemp	0	°F
Analog Value	43	QAHV13OutletTemp	0	°F
Analog Value	44	QAHV14OutletTemp	0	°F
Analog Value	45	QAHV15OutletTemp	0	°F
Analog Value	46	QAHV16OutletTemp	0	°F
Analog Value	47	QAHV1InletTemp	0	°F
Analog Value	48	QAHV2InletTemp	0	°F
Analog Value	49	QAHV3InletTemp	0	°F
Analog Value	50	QAHV4InletTemp	0	°F
Analog Value	51	QAHV5InletTemp	0	°F
Analog Value	52	QAHV6InletTemp	0	°F
Analog Value	53	QAHV7InletTemp	0	°F
Analog Value	54	QAHV8InletTemp	0	°F
Analog Value	55	QAHV9InletTemp	0	°F
Analog Value	56	QAHV10InletTemp	0	°F
Analog Value	57	QAHV11InletTemp	0	°F
Analog Value	58	QAHV12InletTemp	0	°F
Analog Value	59	QAHV13InletTemp	0	°F
Analog Value	60	QAHV14InletTemp	0	°F
Analog Value	61	QAHV15InletTemp	0	°F
Analog Value	62	QAHV16InletTemp	0	°F
Analog Value	63	QAHV1CompressorFreq	0	Hz
Analog Value	64	QAHV2CompressorFreq	0	Hz
Analog Value	65	QAHV3CompressorFreq	0	Hz
Analog Value	66	QAHV4CompressorFreq	0	Hz
Analog Value	67	QAHV5CompressorFreq	0	Hz
Analog Value	68	QAHV6CompressorFreq	0	Hz
Analog Value	69	QAHV7CompressorFreq	0	Hz
Analog Value	70	QAHV8CompressorFreq	0	Hz
Analog Value	71	QAHV9CompressorFreq	0	Hz
Analog Value	72	QAHV10CompressorFreq	0	Hz
Analog Value	73	QAHV11CompressorFreq	0	Hz
Analog Value	74	QAHV12CompressorFreq	0	Hz
Analog Value	75	QAHV13CompressorFreq	0	Hz
Analog Value	76	QAHV14CompressorFreq	0	Hz
Analog Value	77	QAHV15CompressorFreq	0	Hz
Analog Value	78	QAHV16CompressorFreq	0	Hz
Analog Value	79	SecPump1Flow	0	g/min
Analog Value	80	SecPump2Flow	0	g/min
Analog Value	81	SecPump3Flow	0	g/min
Analog Value	82	SecPump4Flow	0	g/min
Analog Value	83	SecPump5Flow	0	g/min
Analog Value	84	SecPump6Flow	0	g/min
Analog Value	85	SecPump7Flow	0	g/min

Type	Object ID	Name	Default Value	Units
Analog Value	86	SecPump8Flow	0	g/min
Analog Value	87	SecPump9Flow	0	g/min
Analog Value	88	SecPump10Flow	0	g/min
Analog Value	89	SecPump11Flow	0	g/min
Analog Value	90	SecPump12Flow	0	g/min
Analog Value	91	SecPump13Flow	0	g/min
Analog Value	92	SecPump14Flow	0	g/min
Analog Value	93	SecPump15Flow	0	g/min
Analog Value	94	SecPump16Flow	0	g/min
Analog Value	95	Secondary1ReturnTemp	0	°F
Analog Value	96	Secondary2ReturnTemp	0	°F
Analog Value	97	Secondary3ReturnTemp	0	°F
Analog Value	98	Secondary4ReturnTemp	0	°F
Analog Value	99	Secondary5ReturnTemp	0	°F
Analog Value	100	Secondary6ReturnTemp	0	°F
Analog Value	101	Secondary7ReturnTemp	0	°F
Analog Value	102	Secondary8ReturnTemp	0	°F
Analog Value	103	Secondary9ReturnTemp	0	°F
Analog Value	104	Secondary10ReturnTemp	0	°F
Analog Value	105	Secondary11ReturnTemp	0	°F
Analog Value	106	Secondary12ReturnTemp	0	°F
Analog Value	107	Secondary13ReturnTemp	0	°F
Analog Value	108	Secondary14ReturnTemp	0	°F
Analog Value	109	Secondary15ReturnTemp	0	°F
Analog Value	110	Secondary16ReturnTemp	0	°F
Analog Value	111	Secondary1SupplyTemp	0	°F
Analog Value	112	Secondary2SupplyTemp	0	°F
Analog Value	113	Secondary3SupplyTemp	0	°F
Analog Value	114	Secondary4SupplyTemp	0	°F
Analog Value	115	Secondary5SupplyTemp	0	°F
Analog Value	116	Secondary6SupplyTemp	0	°F
Analog Value	117	Secondary7SupplyTemp	0	°F
Analog Value	118	Secondary8SupplyTemp	0	°F
Analog Value	119	Secondary9SupplyTemp	0	°F
Analog Value	120	Secondary10SupplyTemp	0	°F
Analog Value	121	Secondary11SupplyTemp	0	°F
Analog Value	122	Secondary12SupplyTemp	0	°F
Analog Value	123	Secondary13SupplyTemp	0	°F
Analog Value	124	Secondary14SupplyTemp	0	°F
Analog Value	125	Secondary15SupplyTemp	0	°F
Analog Value	126	Secondary16SupplyTemp	0	°F