

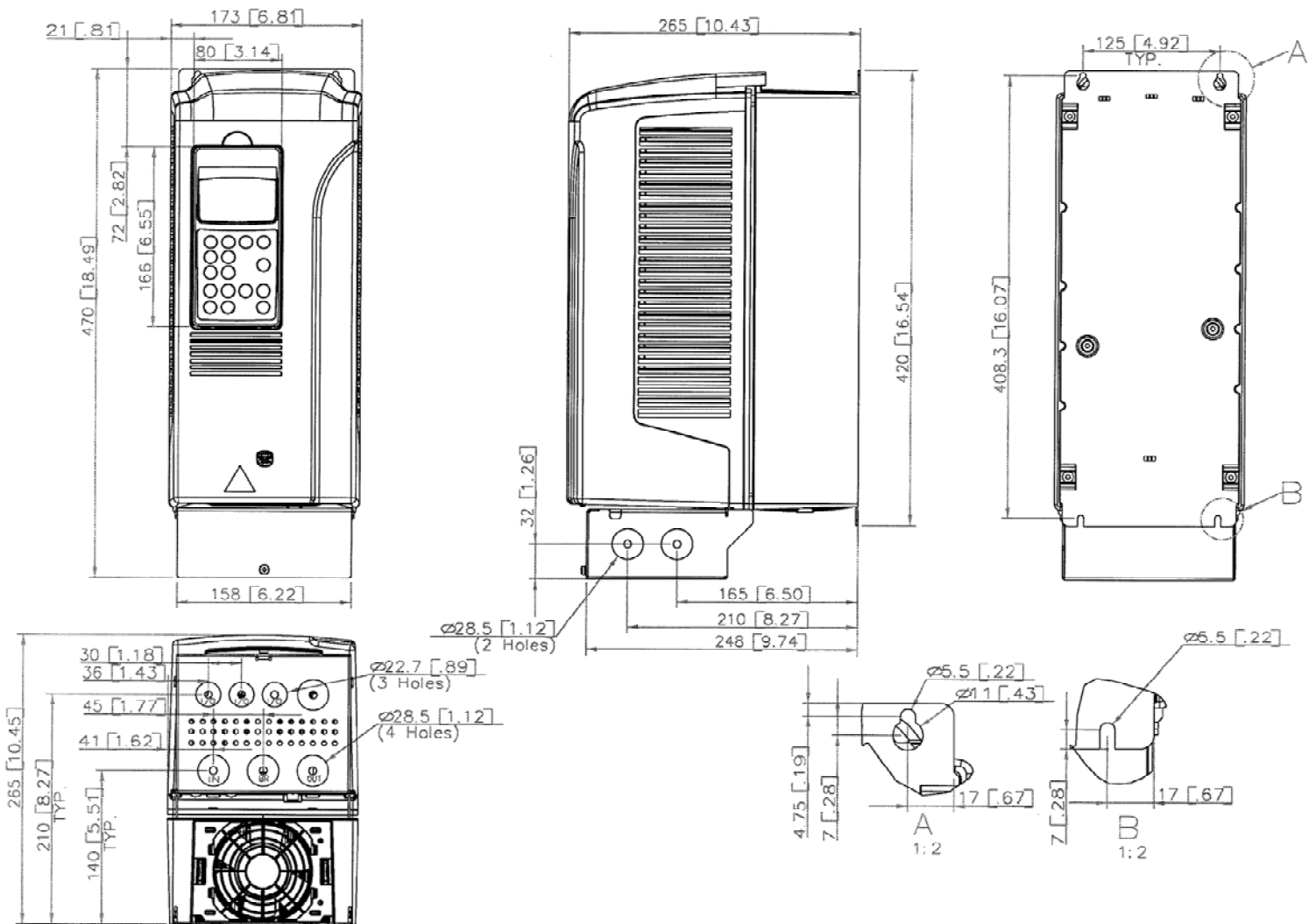


PumpSmart PS200
Drive Dimensions and Ratings
Frame R3-NEMA1/IP21

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PumpSmart PS200 Pump and Motor Control System

The PumpSmart PS200 is a pump and motor control system that provides integral starting, right-sizing, pump protection and process control for all pumping applications. The PumpSmart PS200 is based upon the ABB ACS800 variable frequency drive platform. PumpSmart Control Solutions has worked with ABB to incorporate proprietary pump protection, process control and configuration algorithms into the drive to make it more suitable for pumping applications



Drive Dimensions

Frame	Height mm [inches]	Width mm [inches]	Depth mm [inches]	Weight kg [lbm]
R3	470 [18.5]	173 [6.81]	265 [10.43]	14 [31]

*Dimensions not for construction



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Drive Ratings

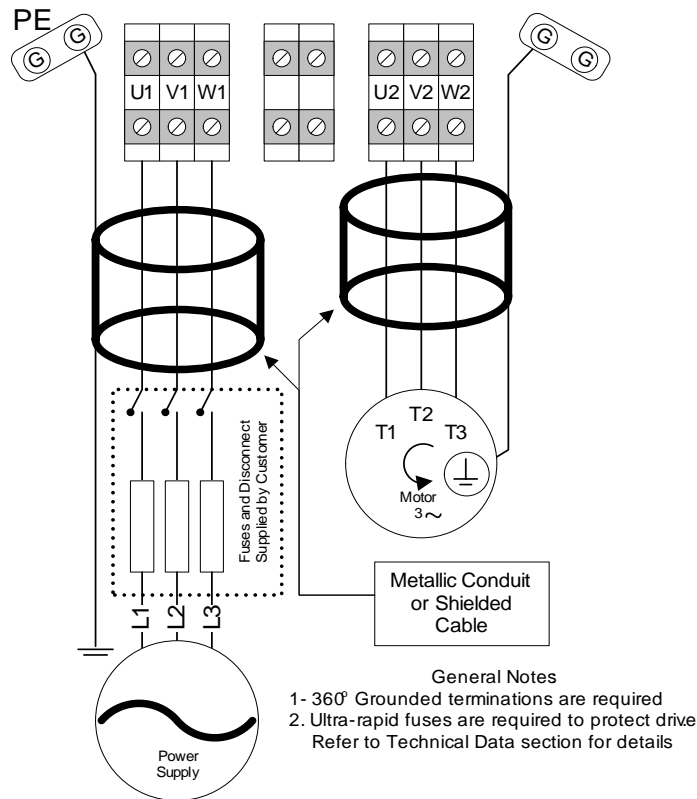
ITT P/N	Input Voltage VAC	Power P ^{N1}		Nominal Current I ^{2N2} Amps IEC/NEMA	Heat Dissipation		Air Flow		Frame	Enclosure Rating	Recommended Main Fuses		
		KW	HP		Watts	BTU/hr	M ³ /hr	CFM			IEC269gG (A)	UL class T (A)	Bussmann Type
A08098A03	230	4	5	18/21	161	550	70	41	R3	NEMA 1 IP21	20	30	JJS-30
A08098A04	230	5.5	7.5	24/27	199	680					25	40	JJS-40
A08098A05	230	7.5	10	31/34	249	850					40	50	JJS-50
A08100A05	380*/460	7.5	15	18/21	337	1150					25	25	JJS-25
A08100A06	380*/460	11	20	23/27	437	1490					40	35	JJS-35
A08100A07	380*/460	15	25	31/34	525	1790					50	40	JJS-40

¹ P^N - Nominal Power Rating at listed voltage rating for variable torque loads

² I^{2N} - Continuous base current with 10% overload for 1 min / 5 minutes

* KW rating applies to drives with 380VAC input voltage

Power Cabling Schematic



Frame Size	U1/V1/W1 - U2/V2/W2 R+,R- Terminals				Earthing PE Terminal			
	Max. Wire Size		Torque		Max. Wire Size		Torque	
	mm ²	AWG	Nm	Lb-ft	mm ²	AWG	Nm	Lb-ft
R3	16*	6*	1.2-1.5	.9-1.1	10	8	1.5	1.1

* 6 AWG(16 mm²) rigid solid cable 8 AWG(10mm²) flexible stranded cable



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PumpSmart® PS200

Drive Hardware: ABB ACS800 -6 Pulse PWM

CERTIFICATIONS

600 VAC and Below
UL Listed
Canadian UL Listed

CSA Certified
CE Marked

INPUT POWER

Voltage..... 208..690 VAC 3 Phase ±10%
Overload..... 110% for 1 min/5 min,
140-150% for 10 sec at startup
Frequency..... 48..63Hz

Fundamental Power..... $\text{COS}\Phi_1 = 0.98$ (fundamental)
Factor ($\text{COS}\Phi_1$)..... $\text{COS}\Phi_1 = 0.93..95$ (total)
Efficiency..... 98% (at nominal power)

MOTOR CONNECTION

Voltage..... $0..V_{1in}/V_{3in}$
Frequency..... 0..300 Hz
0..120 Hz with dV/dT Filters
Motor Control..... ABB Direct Torque Control Software
Static Accuracy: 10% of Motor Slip
Speed Control..... Dynamic Accuracy: 0.3-0.4% second
with 100% Torque Step

ENVIRONMENTAL LIMITS

Enclosures..... NEMA 1/IP21
NEMA 12/IP54
Temperature..... 5..104° F (-15 to 40°C) Standard
104..122° F (40-50 C) with
de-rating (1%/1 C)
Humidity..... 5..95% Relative Humidity
Altitude..... 0..3300 Ft (0..1000M) Standard
3300..13,123Ft (1000..4000M) with
de-rating (1%/100M)
Vibration..... Max. 1 mm (0.04 in.) 5-13.2 HZ
Max. 7 m/s^2 (23 ft/s^2) 13.2 – 100
HZ, Sinusoidal
Shock, Free Fall Not Allowed

STANDARD INPUT/OUTPUT

2 Current Analog Inputs..... 4...20mA
100Ω Input Resistance
11 bit resolution
1 Voltage Analog Input..... 2-10 VDC
200Ω Input Resistance
11 bit resolution
Galvanically isolated as a group

2 Current Analog Output.....
4...20mA
700Ω Max load impedance
10 bit resolution
Galvanically isolated as a group

Digital Inputs (7).....
2 Wire Start/Stop
Hand-off Auto (HOA)
3-Wire Start/Stop
Setpoint 1-2
Speed Override
Specific Gravity
Secondary Protect A/B
Digital Reset
E Stop/Permissive
Motor Thermistor
24 VDC Input Voltage
1 mS filtering time

Relay Outputs (3)
Configurable.....
Form-C Switchover Contact
24 VDC or 250 VAC
2A max continuous current

Reference Voltage.....
Output
10 VDC ± 0.5%
10mA max current

Auxiliary Voltage Output...
24 VDC ±10%
250 mA max current output

DRIVE PROTECTION

Keypad Failure
Earth Fault
Over Voltage
Over Temperature (VFD)
Phase Loss

Over Current
Under Voltage
Over Temperature (Motor)
Over Torque
Motor Stall

PUMP PROTECTION

Loss of Suction/Dry Run
Low Flow
Run-out Flow
Shut-off/Dead Head
Critical Speed Lockout

General Condition
Sleep Function
Sensor Failure
Safe Speed Operation

FEATURES:

Smartflow
Smartcontrol (PID Torque)
Cavitation Control
Automatic Fault Reset

Multipump (Synchronous Control)
Multipump (Backup)
System Curve Compensation
Pump Cleaning Sequence

FIELDBUS

Communication Modules.....
Modbus, Profibus DP
Ethernet, DeviceNet
ControlNet

Certified for Construction Purposes only when signed Date.....	Customer Name..... Goulds S/N..... Customer P.O #..... Item No.....
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