

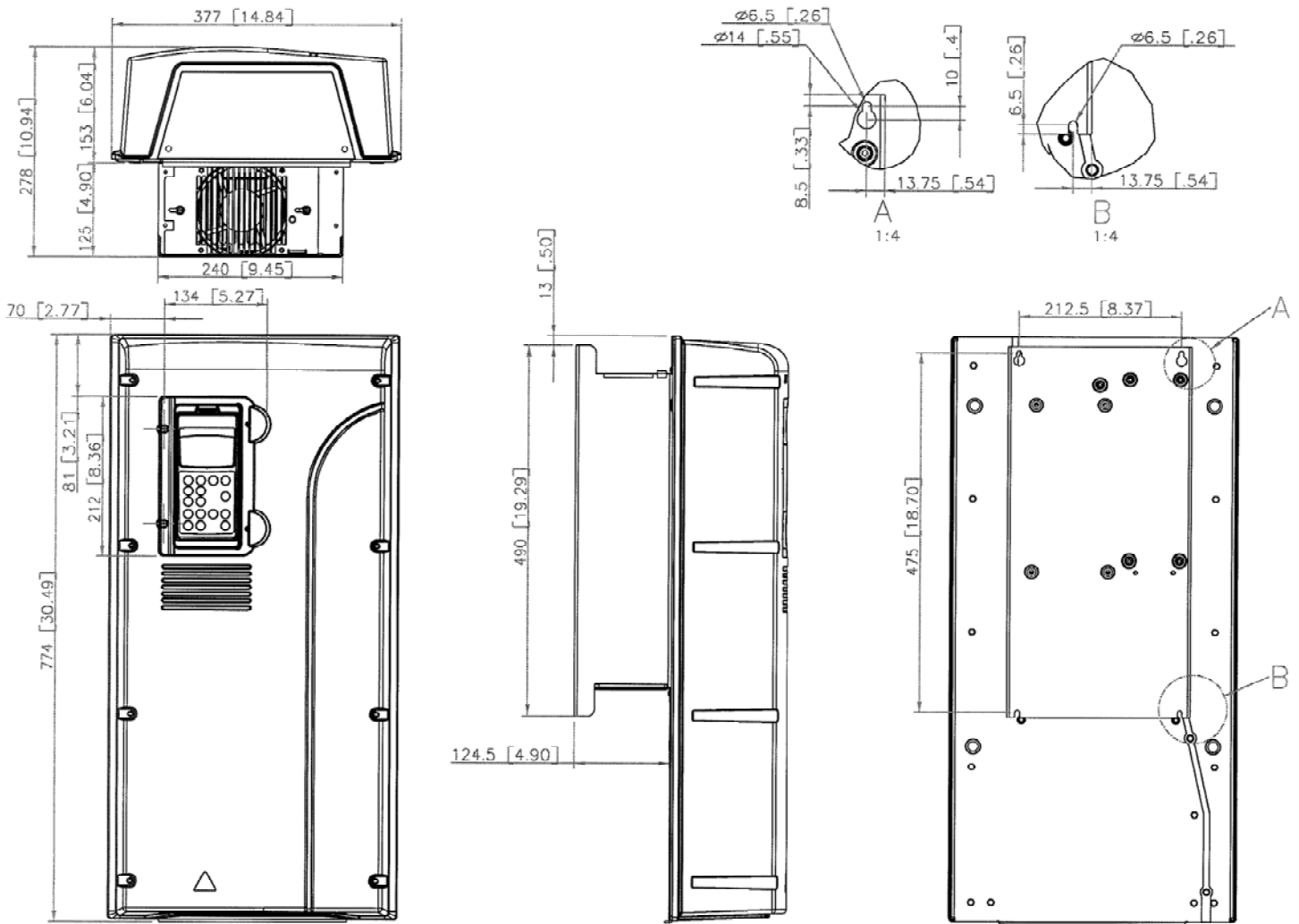


**PumpSmart PS200  
Drive Dimensions and Ratings  
Frame R4-NEMA12/IP55**

**PUMPSMART**

**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]
R4	774 [30.5]	377 [14.84]	278 [10.94]	33 [73]

\*Dimensions not for construction



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# PUMPSMART

## Drive Ratings

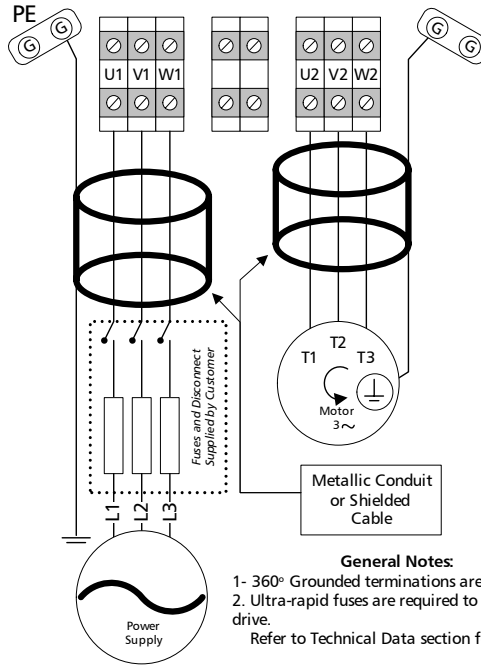
ITT P/N	Input Voltage VAC	Power P <sup>N1</sup>		Nominal Current I <sub>2N2</sub> Amps IEC/NEMA	Heat Dissipation		Air Flow		Frame	Enclosure Rating	Recommended Main Fuses		
		KW	HP		Watts	BTU/hr	M <sup>3</sup> /hr	CFM			IEC269gG (A)	UL class T (A)	Bussmann Type
A08099A06	230	11	15	42/42	337	1150	104	61	R4	NEMA 12 IP 55	50	50	JJS -50
A08099A07	230	11	20	50/54	436	1490					63	70	JJS -70
A08101A08	380*/460	18.5	30	39/42	612	2090					63	50	JJS -50
A08101A09	380*/460	22	40	44/52	811	2770					80	70	JJS -70
A08187A01	575	7.5	10	11.5/11.5	307	1050					16	20	JJS -20
A08187A02	575	7.5	10	15/15	351	1200					20	20	JJS -20
A08187A03	575	11	15	20/20	454	1550					25	30	JJS -30
A08187A04	575	15	20	23/23	542	1850					32	30	JJS -30
A08187A05	575	18	25	30/30	615	2100					35	45	JJS -45
A08187A06	575	22	30	34/34	703	2400					50	45	JJS -45

<sup>1</sup> P<sub>N</sub> - Nominal Power Rating at listed voltage rating for variable torque loads

<sup>2</sup> I<sub>2N</sub> - Continuous base current with 10% overload for 1 min / 5 minutes

\* KW rating applies to drives with 380VAC input voltage

Power Cabling Schematic



**General Notes:**

- 1- 360° Grounded terminations are required
- 2. Ultra-rapid fuses are required to protect drive.

Refer to Technical Data section for details

Frame Size	U1/V1/W1 - U2/V2/W2 R+, R- Terminals				Earthing PE Terminal			
	Max. Wire Size		Torque		Max. Wire Size		Torque	
	mm <sup>2</sup>	AWG	Nm	Lb-ft	mm <sup>2</sup>	AWG	Nm	Lb-ft
R4	25	4	2-4	1.5-3.0	16	5	3	2.2



**PumpSmart PS200**  
**Drive Dimensions and Ratings**  
**Frame R4-NEMA12/IP55**

**PUMPSMART**

**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<sup>2</sup> (23 ft/s<sup>2</sup>) 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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