

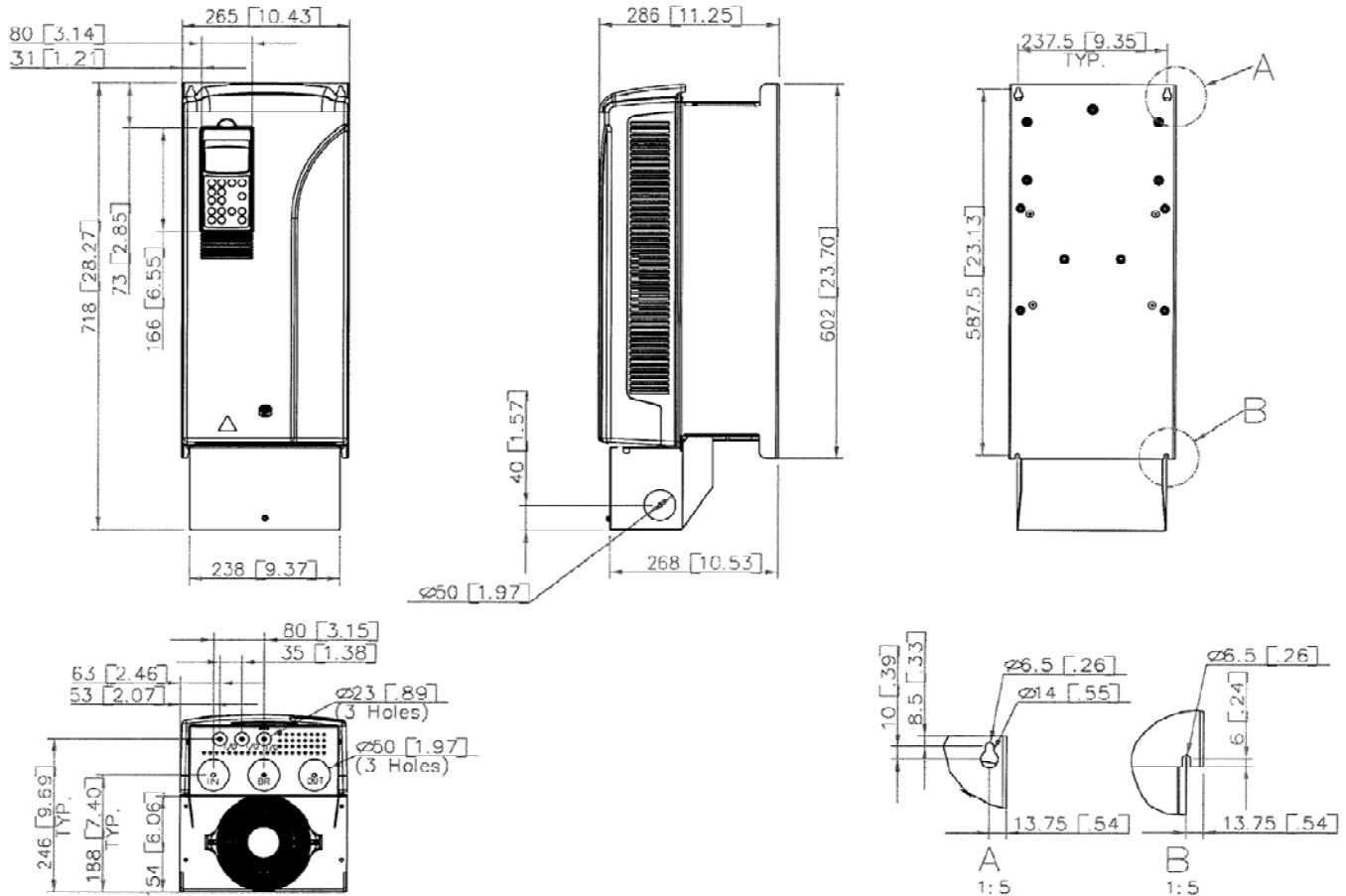


**PumpSmart PS200
Drive Dimensions and Ratings
Frame R5-NEMA1/IP21**

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]
R5	718 [28.27]	265 [10.43]	286 [11.26]	34 [75]

*Dimensions not for construction



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Drive Ratings

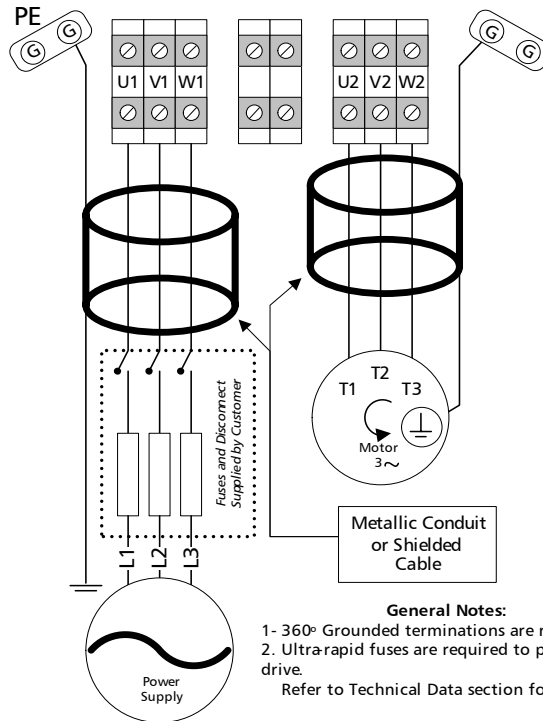
ITT P/N	Input Voltage VAC	Power P ^{N1}		Nominal Current I ^{2N2} Amps IEC/NEMA	Heat Dissipation		Air Flow		Frame	Enclosure Rating	Recommended Main Fuses		
		KW	HP		Watts	BTU/hr	M ³ /hr	CFM			IEC269gG (A)	UL class T (A)	Bussmann Type
A08098A08	230	18.5	25	69/69	525	1790	250	147	R5	NEMA 1 IP21	80	90	JJS -90
A08098A09	230	22	30	80/80	613	2090					100	100	JJS -100
A08098A10	230	22	40	94/104	812	2770					125	125	JJS -125
A08100A10	380*/460	30	50	61/65	988	3370					80	80	JJS -80
A08100A11	380*/460	37	60	75/79	1187	4050					100	100	JJS -100
A08100A12	380*/460	45	75	88/96	1439	4910					125	125	JJS -125
A08186A07	575	30	40	46/46	850	2900					63	70	JJS -70
A08186A08	575	37	50	52/52	1011	3450					63	80	JJS -80

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
R5	6..70	10-2/0	15	11.1	6..70	10-2/0	15	11.1



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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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