

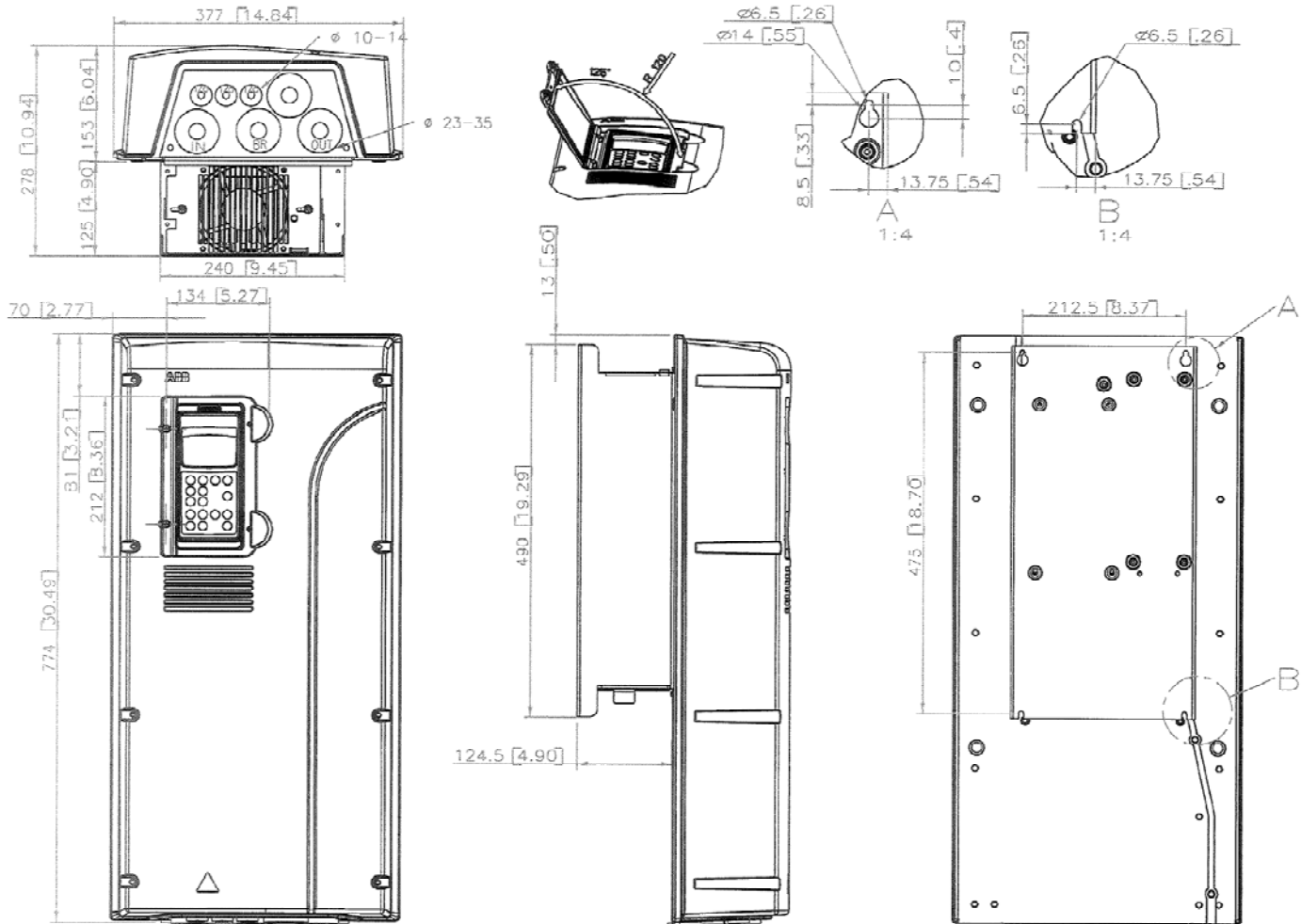


# PumpSmart PS200 Drive Dimensions and Ratings Frame R4-IP55

# 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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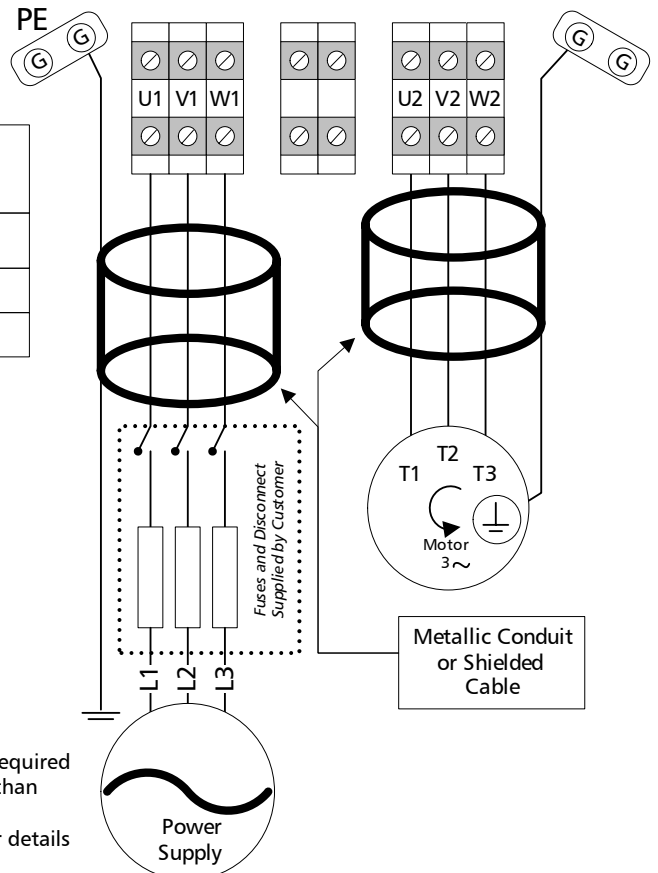
## Drive Ratings

ITT Type Code	Input Voltage VAC	Power P <sup>N1</sup> KW	Nominal Current I <sub>2N2</sub> Amps	Heat Dissipation Watts	Air Flow M <sup>3</sup> /Hr	Noise Level dBA	Frame	Enclosure Rating	Recommended Main Fuses		
									gG or aR	V	IEC Size
ACS800-01-0016-2	230	11	42	340	103	62	R4	IP55	50	500	000
ACS800-01-0020-2	230	11	50	440					63		
ACS-ITT-01-0025-3	400	18.5	41	530					50		
ACS-ITT-01-0030-3	400	22	50	610					63		
ACS-ITT-01-0030-5	500	22	39	610					50		
ACS-ITT-01-0040-5	500	30	44	810					63		
ACS-ITT-01-0011-7	690	7.5	11.5	300					16	690	000
ACS-ITT-01-0016-7	690	11	15	340					20		
ACS-ITT-01-0020-7	690	15	20	440					25		
ACS-ITT-01-0025-7	690	18.5	23	530					32		
ACS-ITT-01-0030-7	690	22	30	610					35		
ACS-ITT-01-0040-7	690	30	34	690					50		

<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 at 40° C

Frame Size	U1/V1/W1 - U2/V2/W2 R+, R- Terminals			Earthing PE Terminal	
	Max. Wire Size	Cable Dia.	Torque	Max. Wire Size	Torque
	mm <sup>2</sup>	mm	Nm	mm <sup>2</sup>	Nm
R 4	25	23-35	2-4	16	3

### Power Cabling Schematic



- General Notes:**
- 1- 360° Grounded terminations are required
  2. Fuse operating time must be less than 0.5 seconds to protect drive.
- Refer to Technical Data section for details



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

**PUMPSMART**

**PumpSmart® PS200**

Drive Hardware: ABB ACS800 -6 Pulse PWM

**CERTIFICATIONS**

<u>USA/Canada</u> 600 VAC and Below UL, C-UL, CSA	<u>Europe</u> CE Marked Bureau Veritas Cert 14370/AO BV EMC 89/336/EEC as amended by 93/68 DNV Cert. E-7039
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**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.....	COSΦ <sub>1</sub> = 0.98 (fundamental)
Factor (COSΦ <sub>1</sub> )	COSΦ <sub>1</sub> = 0.93...95 (total)
Efficiency.....	98% (at nominal power)

**MOTOR CONNECTION**

Voltage.....	0..V <sub>1in</sub> /V <sub>3in</sub>
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	Over Current
Earth Fault	Under Voltage
Over Voltage	Over Temperature (Motor)
Over Temperature (VFD)	Over Torque
Phase Loss	Motor Stall

**PUMP PROTECTION**

Loss of Suction/Dry Run	General Condition
Low Flow	Sleep Function
Run-out Flow	Sensor Failure
Shut-off/Dead Head	Safe Speed Operation
Critical Speed Lockout	

**FEATURES:**

Smartflow	Multipump (Synchronous Control)
Smartcontrol (PID Torque)	Multipump (Backup)
Cavitation Control	System Curve Compensation
Automatic Fault Reset	Pump Cleaning Sequence

**FIELDBUS**

Communication Modules.....	Modbus, Profibus DP Ethernet, DeviceNet ControlNet
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Certified for Construction Purposes only when signed     Date.....	Customer Name.....  Goulds S/N.....  Customer P.O #.....  Item No.....
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