Optimize Productivity with Pump-off Control

PowerFlex drives for Pump Jack Applications

Pump-Off Feature

- Easy setup routine prompts users for pump data and automatically sets torque limits so the drive helps protect the pump
- Helps reduce startup wear on mechanical pumping equipment with adjustable speed ramp
- Improves productivity by reducing speed to maintain operation rather than stopping
- Saves maintenance time and costs by reducing rod breaks
- Eliminates the need for load sensors and additional controls
- Remote access to drive data via EtherNet/IP and other industrial networks
- Easily programmed, monitored and controlled with DriveTools™ and RSLogix 5000® software

TotalFORCE Technology

PowerFlex 755T drives are equipped with TotalFORCE® Technology. This technology combines high-performance motor control, advanced self-monitoring capabilities with a contemporary digital platform.

You can achieve a faster, more precise response from your PowerFlex drive with this technology.

Using a PowerFlex 755T drive delivers the additional benefits of harmonic mitigation, regeneration and common bus solutions along with TotalFORCE Technology.

If you are looking for a greater return on investment and improved productivity for your pump jack application, PowerFlex® 753, 755 and 755T drives can help. They are ideal for this artificial lift application because they help provide improved safety, high motor control performance and application flexibility.

These AC drives are highly functional, cost-effective and have built-in features in that help you achieve seamless pump control, working very well for speed control in pump jack applications.

This family of drives has specific pump-off features designed to provide optimal well output while helping to minimize wear on expensive rod and motor assets. The features are designed to slow down or stop the pump when the well can't provide enough oil to pump and needs time to replenish. Based on the motor feedback, the drive can interpret the torque needed to pull the rod. This action lets you know when the flow in the well has decreased. Based on the user configuration, the drive will either slow down or stop pumping while the well replenishes. The drive will automatically resume full operation when the well has replenished.

PowerFlex drives are an ideal solution because this dynamic motor control does not use external sensors to retrieve the information, which eliminates additional parts and installation and maintenance costs. The result helps protect the rod and motor, and helps keep production up and running.

Available in 0.75-4500 kW/0.5-6000 Hp at 400/480V and 600/690V applications, PowerFlex 753, 755, and 755T drives can help meet the demands for flexibility, space savings and ease of use. When this technology is combined with the petro-technical knowledge of our partner, Sensia, you can further optimize the performance of your assets, extract more insights from your data and gain more value from your investment.

Rockwell Automation

Technical Specifications

	PowerFlex 753 AC Drive	PowerFlex 755 AC Drive	PowerFlex 755 TL, TR, TM
			
Ratings: 280-240V	0.5...200 Hp 2.2...477 A	0.5...200 Hp 2.2...477 A	N/A
Ratings 400-480V	• 0.5...300 Hp 1.7...289A	• 0.5...1500 Hp 1.7...1530 A	• 10...5100 Hp 11...4960 A
Ratings 600V	• 5.5...250 kW 12...263A	• 5.5...1500 kW 12...1485 A	• 11...4550 kW 15...4596 A
Ratings 690V	• 5.5...250 kW 12...263A	• 5.5...1500 kW 12...1485 A	• 11...4550 kW 15...4596 A
Communications	Optional • EtherNet/IP • ControlNet (Coax or Fiber) • DeviceNet • RS485 DFI • PROFIBUS DP • Modbus/TCP • HVAC (Modbus RTU, FLN P1, N2) • CANopen • LonWorks	• Embedded EtherNet/IP Optional • CIP Motion • ControlNet (Coax or Fiber) • DeviceNet • RS485 DFI • PROFIBUS DP • Modbus/TCP • HVAC (Modbus RTU, FLN P1, Metasys N2) • Bluetooth • CANopen • LonWorks	• Embedded Dual-Port EtherNet/IP Optional • ControlNet • DeviceNet • PROFIBUS DP* • PROFINET*
Safety Options	• Hardwired Safe Torque-Off • Hardwired Safe Speed Monitor	• Hardwired Safe Torque Off • Networked Safe Torque Off • Hardwired Safe Speed Monitor • Networked Integrated Safety Functions – 8 safety instructions based on IEC 61800-5-2	• Hardwired Safe Torque Off • Networked Safe Torque Off • Hardwired Safe Speed Monitor • Networked Integrated Safety Functions – 8 safety instructions based on IEC 61800-5-2
Ambient Temperature Ratings	IP00/IP10/IP20, NEMA/UL Open Type = 0-50 °C (32-122 °F) • Flange Mount Front: IP00/IP20, NEMA/UL Open Type = 0-50 °C (32-122 °F) • Flange Mount Back: IP66, NEMA/UL Type 4X = 0-40 °C (32-104 °F) • IP54, NEMA/UL Type 12 = 0-40 °C (32-104 °F)	IP00/IP10/IP20, NEMA/UL Open Type = 0-50 °C (32-122 °F) • Flange Mount Front: IP00/IP20, NEMA/UL Open Type = 0-50 °C (32-122 °F) • Flange Mount Back: IP66, NEMA/UL Type 4X = 0-40 °C (32-104 °F) • IP54, NEMA/UL Type 12 = 0-40 °C (32-104 °F)	• -20 °C...40 °C • -20...60°C with derate
TotalFORCE Technology	No	No	Yes
Motor Control	• Vector Control w/FORCE™ Technology with and without an encoder • Sensorless Vector Control • Volts per Hertz • PM but only interior	• Vector Control w/FORCE Technology with and without an encoder • Sensorless Vector Control • Volts per Hertz • Permanent Magnet Motor Control (Surface and Interior) • Open Loop Speed Regulation • Closed Loop Speed Regulation	• Vector Control w/TotalFORCE Technology with and without an encoder • Sensorless Vector Control • Volts per Hertz • Permanent Magnet Motor Control (Surface and Interior) • Open Loop Speed Regulation • Closed Loop Speed Regulation
Standards and Certifications	ABS (Frames 2...7, 400/480V AC) ATEX Certified with appropriate options • CE • C-Tick • cUL • UL • TÜV FS ISO/EN13849-1 (EN954-1) with Safe Torque-Off option	ABS (Frames 2...8, 400/480V AC) ATEX Certified with appropriate options • CE • C-Tick • cUL • UL • TÜV FS ISO/EN13849-1 (EN954-1) with Safe Torque-Off option	ABS (Frames 5...8, 400/480/600/690V AC) • CE • C-Tick • EAC • ICC • RCM • RoHS • UL• WEEE; TÜV FS ISO/EN13849-1 (EN954-1) with Safe Torque-Off option
Output Frequency Range	• 0...325 Hz @ 2 kHz PWM • 0...590 Hz @ 4 kHz PWM	• 0...325 Hz @ 2 kHz PWM • 0...590 Hz @ 4 kHz PWM	• 0...325 Hz @ 1.33 kHz carrier • 0...325 Hz @ 2 kHz carrier • 0...590 Hz @ 4 kHz carrier
EMC Category	See 750-TD001	See 750-TD001	See T55T-100

* Ask your Rockwell Automation sales office about availability.

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