PowerFlex 753 and 755 AC drives provide users with built-in features for seamless pump control. Ideal for speed control in constant torque oil well, pump jack and progressive capacity pumps (PCP) applications, these PowerFlex drives have specific pump-off features designed to provide optimal well output while helping to minimize wear on expensive rod and motor assets.

Available in 0.75-1500 kW/0.5-2000 Hp at 400/480V and 600/690V applications, the PowerFlex 753 and 755 drives can meet the demands for flexibility, space savings and end user ease of use.

**Pump-Off Control**

The pump-off feature is designed to slow down or stop the pump jack in conditions where the well cannot provide enough oil to pump and needs time to replenish. Based on the motor feedback, the drive can interpret the torque that is required to pull the rod and thus determine 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 and then will automatically resume full operation when the well has replenished.

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

*PowerFlex Low Voltage AC Drives Selection Guide (PFLEX-SG002)*
PowerFlex 753 AC Drive

- Vector Control w/ FORCE™ Technology with and without an encoder
- Sensorness Vector Control
- Volts per Hertz
- Permanent Magnet Motor Control (Surface and Interior)

Application
- Open Loop Speed Regulation
- Closed Loop Speed Regulation
- Precise Torque & Speed Regulation
- Indexer Positioning

Single-phase Input w/Derate
- Yes

Ratings 400-480V
- 0.75…250 kW 1…350 Hp (2.1…456 A)

Ratings 500-600V
- 0.5…300 Hp 1.7…289 A

Ratings 690V
- 5.5…1500 Hp 12…289 A

Ambient Temperature Limit for Enclosure Types
- 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)

EMC Filters
- Internal

Standards and Certifications
- UL, CE, cUL, C-Tick, SEMI F47, GOST-R, TÜV TS ISO/EN13849-1 (EN954-1) for Safe Torque-Off and Safe Speed Monitor options
- ROHS-compliant materials
- Conformal Coating Standard

Overload Capability
- Normal Duty Application — 110% - 60s, 150% - 3s
- Heavy Duty Application — 150% - 60s, 180% - 3s

Output Frequency Range
- 0…325 Hz @ 2 kHz PWM
- 0…650 Hz @ 4 kHz PWM

User Interface
- Local PowerFlex 750 Series HIMs
- Remote PowerFlex 750 Series HIMs
- Studio 5000™ Logix Developer
- DriveTools SP

Communications Options
- Local PowerFlex 750 Series HIMs
- Remote PowerFlex 750 Series HIMs
- Studio 5000 Logix Developer
- DriveTools SP
- RSLogix 5000 v19 Embedded Instructions
- Embedded EtherCAT IP port
- CIP Motion
- ControlNet (Gaas or Fiber)
- DeviceNet

Conformal Coating
- Standard

Analog Inputs
- Up to 7 total (bipolar voltage or current)

Analog Outputs
- Up to 7 total (bipolar voltage or current)

PTC Inputs
- Up to 3 total

Digital Inputs
- Up to 21 total (DQ 21-24V DC or DQ 19-115V AC)

Relay Outputs
- Up to 7 total

Transistor Outputs
- Up to 7 total

Internal Brake Transistor
- Standard (frames 2-5) Optional (frame 6-7)

AC Input Choke
- No

DC Link Choke
- Yes

Common Mode Choke
- External option

Integrated Safety
- Safe Torque-Off SIL CL3, PLe, Cat 3
- Safe Speed Monitor SIL CL3, PLe, Cat 4

PowerFlex 755 AC Drive

- Vector Control w/ FORCE Technology with and without an encoder
- Sensorness Vector Control
- Volts per Hertz
- Permanent Magnet Motor Control (Surface and Interior)

Application
- Open Loop Speed Regulation
- Closed Loop Speed Regulation
- Precise Torque & Speed Regulation
- Indexer Positioning

Single-phase Input w/Derate
- Yes

Ratings 400-480V
- 0.75…1400 kW 1…2000 Hp (2.1…2330 A)

Ratings 500-600V
- 0.5…1500 Hp 1.7…1530 A

Ratings 690V
- 5.5…1500 kW 12…1485 A

Ambient Temperature Limit for Enclosure Types
- 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)

EMC Filters
- Internal

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- Embedded EtherCAT IP port
- CIP Motion
- ControlNet (Gaas or Fiber)
- DeviceNet

Conformal Coating
- Standard

Analog Inputs
- Up to 10 total (bipolar voltage or current)

Analog Outputs
- Up to 10 total (bipolar voltage or current)

PTC Inputs
- Up to 10 total (bipolar voltage or current)

Digital Inputs
- Up to 10 total (bipolar voltage or current)

Relay Outputs
- Up to 10 total (form C)

Transistor Outputs
- Up to 10 total

Internal Brake Transistor
- Standard (frames 2-5) Optional (frame 6-7)

AC Input Choke
- No

DC Link Choke
- Yes

Common Mode Choke
- External option

Integrated Safety
- Safe Torque-Off SIL CL3, PLe, Cat 3
- Safe Speed Monitor SIL CL3, PLe, Cat 4