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1 News

1.1 ftp-site link updated with ME300 info

Just to let you know (again), you can find the latest info about our products (manuals, pictures, catalogues, application notes, presentations, software, etc) on our ftp-site.

<ftp://den-eindhoven:BuPd2175@ftp2.delta-europe.com/deltronics-eindhoven/customer-service>

Name and password are included in the link.

Name: den-eindhoven

Password: BuPd2175

2 ME300 released

2.1 NEW – ME300 released

We're happy to announce the release of ME300 for sales in EMEA.

Initial stock is available.

Prices are available. Ask your sales.

Delta's ME300 series is the new generation compact vector control drive that inherits Delta's superior drive technology with 60% volume reduction. Various essential functions are built-in as standard, including: userdefined parameter group, single and multi-pump function, built-in brake chopper and EMC filter (C2 Class). It reduces the need of additional expense and provides more installation space in the control cabinet. The ME300 also supports both induction and interior/surface permanent motors, providing more efficiency and flexibility. The option STO function ensures smooth operation while protecting facilities from damage, and the new screw-less wiring design of terminal blocks offers a simplified wiring process for quick installation.

User-friendly operation, ultra-compact size, quick installation, and flexible, durable design provide the user with a highly efficient and stable system. The ME300 is your key to increased market competitiveness that leads the way to your success.



230V single-phase

Applicable Motor Output (kW)	0.1	0.2	0.4	0.75	1.5	2.2
Applicable Motor Output (HP)	0.125	0.25	0.5	1	2	3
Frame Size	A			B	C	

230V single-phase (Built-in EMC filter)

Applicable Motor Output (kW)	0.1	0.2	0.4	0.75	1.5	2.2
Applicable Motor Output (HP)	0.125	0.25	0.5	1	2	3
Frame Size	B			C		

460V 3-phase

Applicable Motor Output (kW)	0.4	0.75	1.5	2.2	3.7/4	5.5	7.5
Applicable Motor Output (HP)	0.5	1	2	3	5	7.5	10
Frame Size	A		B	C		D	

460V 3-phase (Built-in EMC filter)

Applicable Motor Output (kW)	0.4	0.75	1.5	2.2	3.7/4	5.5	7.5
Applicable Motor Output (HP)	0.5	1	2	3	5	7.5	10
Frame Size	B			C		D	

115V single-phase

Applicable Motor Output (kW)	0.1	0.2	0.4	0.75
Applicable Motor Output (HP)	0.125	0.25	0.5	1
Frame Size	A			C

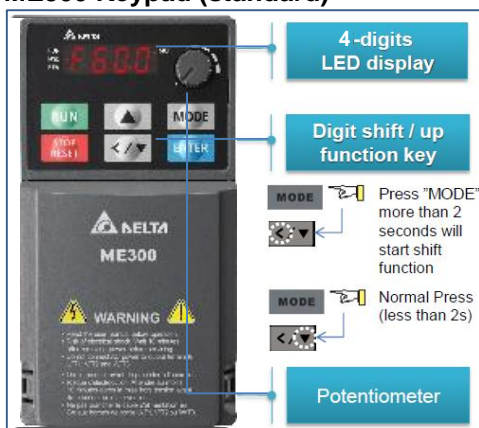
230V 3-phase

Applicable Motor Output (kW)	0.1	0.2	0.4	0.75	1.5	2.2	3.7/4	5.5
Applicable Motor Output (HP)	0.125	0.25	0.5	1	2	3	5	7.5
Frame Size	A				B	C		D

ME300 Key features

- Hardware Design. Compact and user-friendly interface
- Side-by-Side Installation: Flexible and efficient installation supports side-by-side installation with operating temperature of -20°C ~ 40°C
- Supports IM and PM Motors
- Enhanced Braking Capability. The Deceleration Energy Control Mode shortens braking time by adjusting the motor speed and current, and replaces the need for braking resistors
- High Starting Torque
- Deceleration Energy Backup (DEB)
- Enhanced Braking Capability shortens the braking time by adjusting the motor speed and current, and replaces the need for braking resistors

ME300 Keypad (standard)



Flexible Space Utilization



Side-by-Side Installation

Flexible and efficient installation supports side-by-side installation with operating temperature of $-20^{\circ}\text{C} \sim 40^{\circ}\text{C}$

Substantial space savings!



Excellent Drive Capability

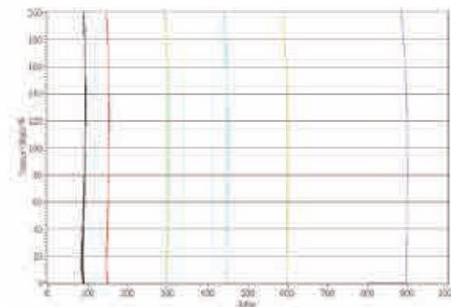
Supports IM and PM Motors

Supports 2 independent induction motor control parameter sets



High Starting Torque

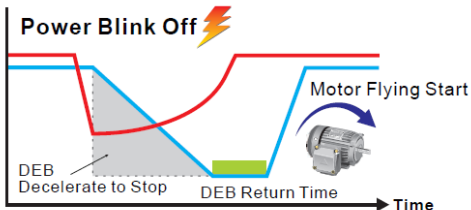
Delivers 200% high starting torque with a low speed control of 3Hz. This feature provides outstanding machine stability and is suitable for dynamic loading applications



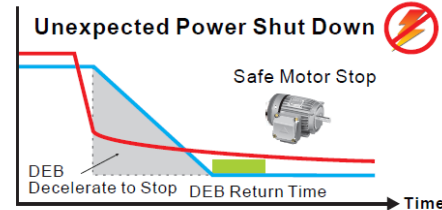
Deceleration Energy Backup (DEB)

Controls the motor deceleration to a stop when an unexpected power shut-down occurs to prevent mechanical damage. When power resumes, the motor will accelerate to its previous speed

— Input Voltage
— Motor Speed

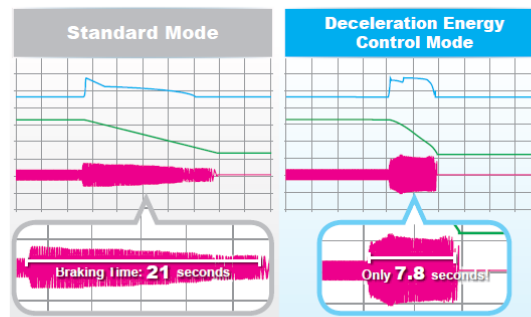


— Input Voltage
— Motor Speed



Enhanced Braking Capability

The Deceleration Energy Control Mode shortens braking time by adjusting the motor speed and current, and replaces the need for braking resistors



* Actual deceleration performance varies upon different system loads

Strong system support

Pump Control

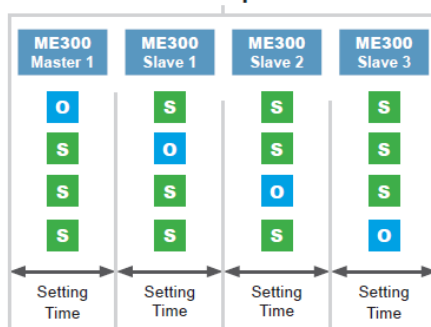
- Sleep Mode & Leakage Detection: When the system is at constant pressure, the ME300 will enter / stay in sleep mode to prevent frequent starting and stopping (Proper parameter settings required)
- Dry-run Detection: When the water supply is off, the ME300 will decelerate to stop to protect pump from dry-run

Multi-pump Control

- Alternate Operation: Alternates pump operation in cycles. Cycle can be set by hours, days or weeks
- Constant Pressure Mode: Provides consistent energy-efficient water supply by adjusting operating pump quantities based on real-time demands

ME300 Status O Operating S Standby

Alternate Operation

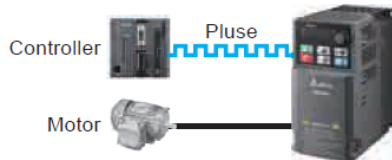


Constant Pressure Mode



Pulse Input

Supports single pulse and PWM input (10 kHz) from controller as frequency command



Built-in Modbus Communication

Built-in RS-485 (Modbus) communication

Built-in Braking Chopper

Larger braking torque capability with an additional braking resistor

High Overload Capability

- Normal duty: rated current 120% for 60 seconds; 150% for 3 seconds
- Heavy duty: rated current 150% for 60 seconds; 200% for 3 seconds

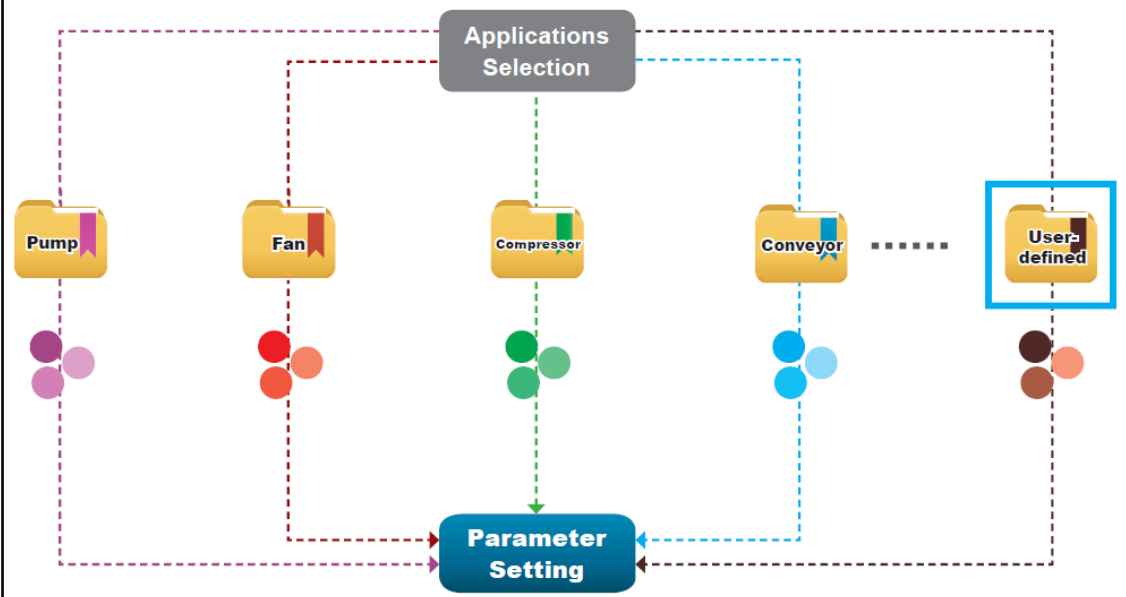
Common DC Bus

DC \pm terminals for common DC bus wiring; the drives share the regeneration power during deceleration to save energy and the braking resistor

Easy to Use

Application Groups (Macro)

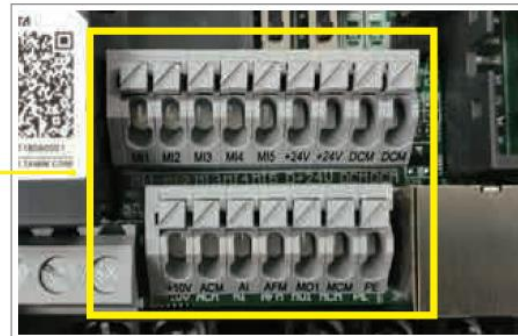
- Simplifies the parameter setting process by grouping the parameters for different applications to use
- Users can establish own parameter group for different customer or equipment
- User-defined parameter values can be retained when resetting to default



Screwless Wiring of Control Terminal

Spring clamp terminal blocks provide fast and easy wiring

Saves wiring time

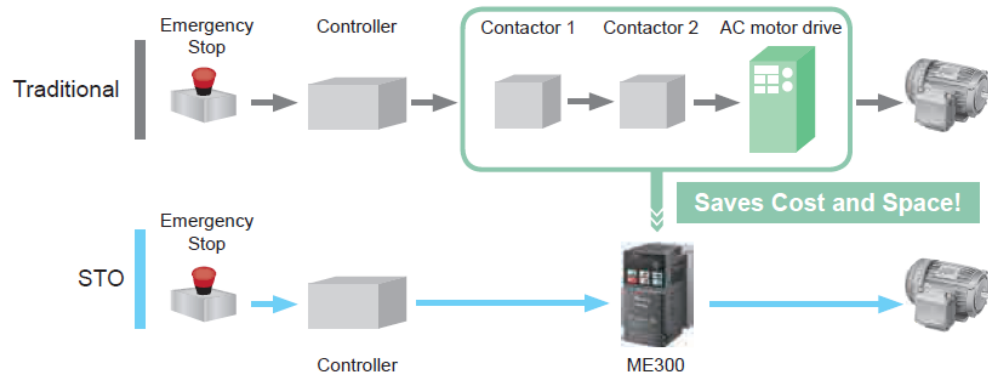


High Reliability

Safe Torque Off (special models)

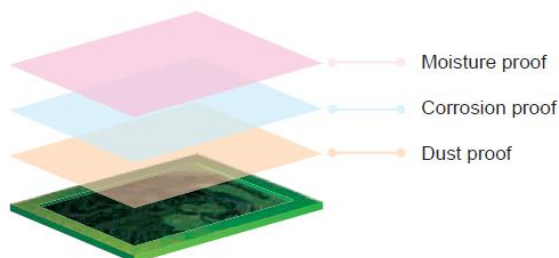
Compliant with:

- ▶ ISO 13849-1:2015 Category 3 PL d
- ▶ EN 61508 SIL2
- ▶ EN 60204-1 Category 0
- ▶ EN 62061 SIL CL 2



PCB Coating

100% PCB coating (IEC 60721-3-3 class 3C2 standard) ensures drive operation stability and safety in critical environments



NEMA 1 Kit (Optional)

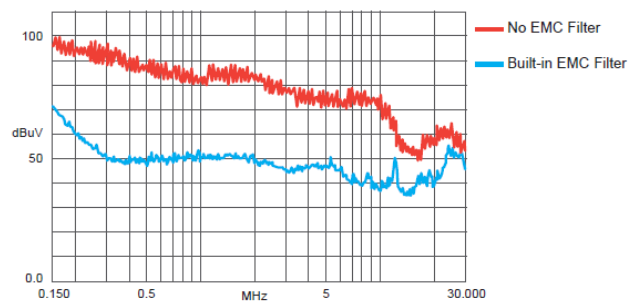
Provides NEMA 1 kit to prevent dust and other particles from entering the drive and avoids risk from electric shock. It is suitable for applications under critical conditions



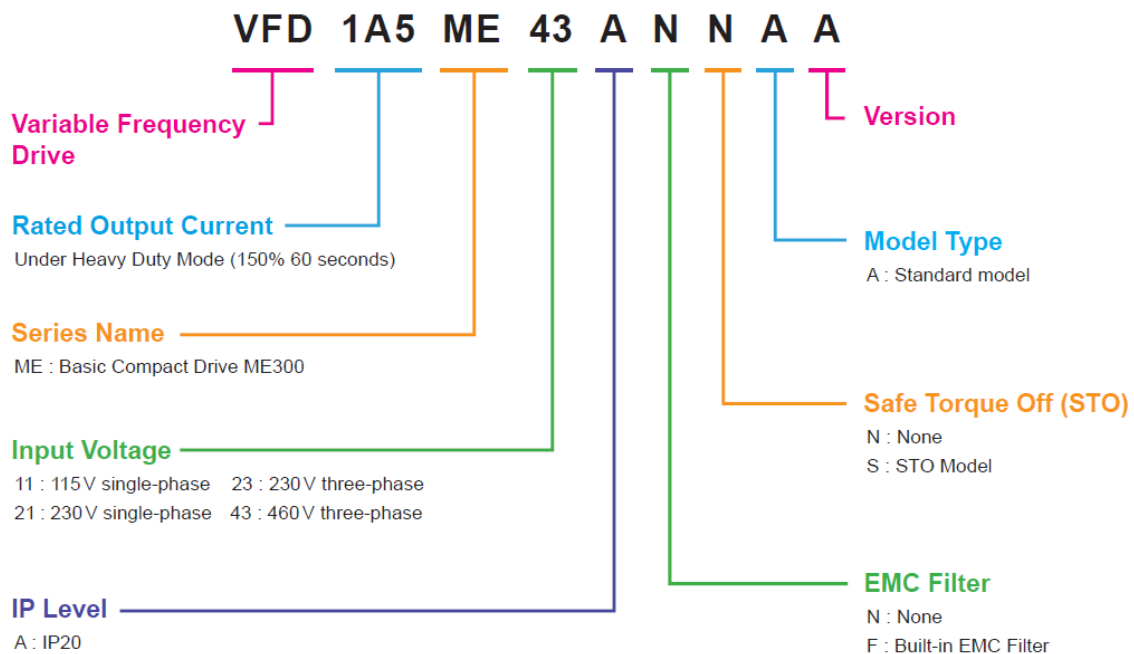
Built-in EMC Filter

Built-in **C2 & C3** * standard EMC filter saves additional procurement cost and wiring time, and provides more cabinet space for other devices to use

* For 230V 1phase & 400V drives



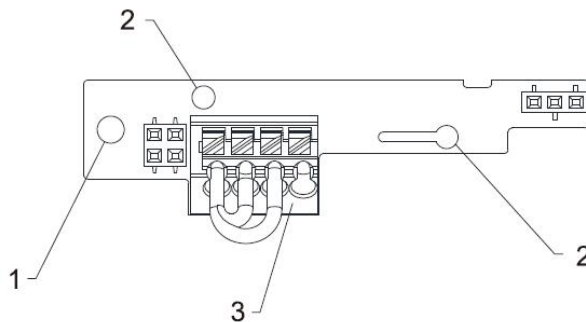
2.2 ME300 Model Name



2.3 ME300 Accessories

Brake Resistor	DC Reactor	AC Reactor	Zero Phase Reactor	EMC Filter	KPC-CC01
125% braking torque / 10%ED 					
Conduit Box	Fan Kit	DIN Rail		Capacitor-type Noise Filter	Earthing Plate

2.4 ME300 STO: Option EMM-SAF01



1. Screw fixing hole
2. Positioning hole
3. STO terminal block

Wire: 0.25–0.75 mm² [24–18 AWG]

Stripping length: 9 mm

After installing this option card, the drive meets the following international standards.

- ISO 13849-1: 2015 Category 3 PL d
- IEC 61508 SIL2
- EN 62061 SIL CL 2

+24V	Digital control signal common (Source)
S1, S2	<p>Default: S1/S2 shorted for +24 V</p> <p>Rated voltage: 24 V_{DC} ±10%; Maximum voltage: 30 V_{DC}</p> <p>Activation current: 6.67 mA ±10%</p> <p>STO activation mode</p> <p>Input voltage level: S1-DCM > 0 V_{DC} or S2-DCM < 5 V_{DC}</p> <p>STO response time ≤ 20 ms. S1/S2 operates until the AC motor drive stops outputting current.</p> <p>STO cut-off mode</p> <p>Input voltage level: S1-DCM > 11 V_{DC} and S2-DCM < 30 V_{DC}</p> <p>Power removal safety function according to EN 954-1 and IEC/EN 61508</p> <p>Note: refer to user manual Chapter 15 SAFE TORQUE OFF FUNCTION for more information.</p>
DCM	Digital frequency signal common (Sink)

3 Application

3.1 NEW – ME300 Application Notes

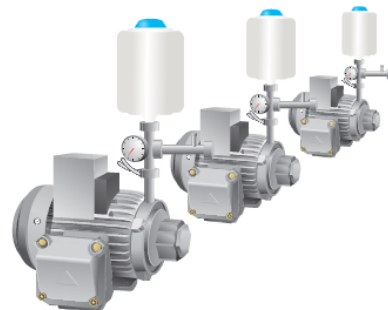
New ME300 application notes have been published recently on our ftp-site:

- [ME300 PTC.pdf](#)
- [Applications of common DC-BUS for M300 & C Family.pdf](#)

3.2 ME300 Focus Applications

Single / Multi-pumps

- Built-in PID feedback control, no additional PID controller required
- Supports multi-pumps (constant pressure) and alternate operation
- Equipped with liquid leakage detection function and sleep mode
- Displays actual and target value at the same time for easy operation
- Pump or self-defined parameter groups for easy setting
- Wide range voltage input for various types of pumps and areas



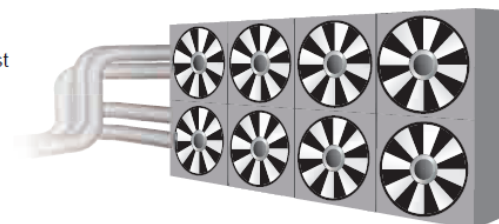
Conveyors

- VR knob for easy adjustment
- High starting torque; up to 200% at 0.5 Hz
- Outstanding acceleration / deceleration performance improves production efficiency
- Built-in braking chopper saves space and purchasing costs
- 2 sets of motor parameters for more flexibility
- Compact design for space savings
- STO function enhances system safety



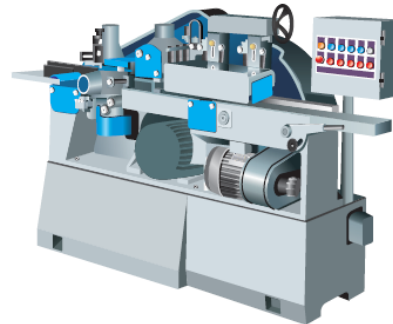
Fans

- Supports both induction motor and permanent motor (IPM/SPM)
- VR knob for easy adjustment
- Speed search function allows motor start without stopping
- Optimized hardware layout and anti-pollution design resist dust and fiber
- Compact design for space savings



Woodworking Machines

- Outstanding acceleration / deceleration performance improves production efficiency
- STO function enhances system safety
- Built-in EMC filter effectively reduces electromagnetic interference
- Compact in size and weight, easy to install and maintain



Packaging Machines

- Compact design provides more cabinet space
- STO function enhances system safety
- Built-in braking chopper saves system construction cost
- Built-in RS-485 (Modbus)
- Supports high speed pulse and PWM input as frequency command to improve control precision



Textile Machines

- Optional NEMA1 kit provides excellent protection in environment with dust, fiber and moisture
- Improved heatsink design prevents fiber clogging the air way; modular design of fan is easy to clean and provides longer lifetime
- Improved braking capability shortens the deceleration to stop time, suitable for sudden stop requirements
- Deceleration to stop function protects the equipment from damage when sudden power failure occurs
- STO function enhances system safety
- Supports both induction motors and permanent motors (IPM/SPM)



4 FAQ

4.1 VFD-series AC Motor drives

ME300 series

- Q** What class and motor cable length for the ME300 built-in filter?
- A** 230V 1phase: Class C2 20m shielded motor cable.
400V: Class C3 30m shielded motor cable.

Carrier frequency can be over the whole setting range.