

ELECTRIFICATION SERVICE

Life cycle services for 7700, Spectra and 8000-line motor control centers

Retrofit Variable Frequency Drive (VFD) Units up to 50HP



01

01, 02
10 HP VFD unit, 36 inches high

03
25 HP VFD unit 42 inches high



02

Reliable components to repair, expand and modernize existing Motor Control Centers (MCCs)
Legacy GE Industrial Solutions (GEIS) motor control products have been manufactured since 1960 and are still in use extensively for ANSI / NEMA applications globally.

Our new VFD units are designed to operate seamlessly with the existing equipment.

The new ACS580 VFD units allow repair, expansion, life extension, and modernization for existing motor control centers at customer sites globally. It is a UL 845 rated product, which is designed to work seamlessly with the existing customer equipment, that may be up to 60 years old. All ABB VFD units contain SACE® Tmax® XT circuit breakers and ACS580 variable frequency drives.

The overall structure is very similar to the existing Fastrac™ units with SACE Tmax XT circuit breakers and 300-line contactors. Note that the door is right hinged and mounted to the unit, matching the original 8000-line design. A rotary operating handle is used, similar to the original 7700-line design.

Features:

- ABB's Tmax XT circuit breaker as the disconnect device
- Available line reactor – 3% or 5%
- Existing UL 845 MCC ratings maintained
- ACS580 variable frequency drive at the core
- Retrofit is equal in size or smaller than the original AF300 VFD
- Plug-in units up to 50HP at 480V
- Construction: plug in/stab in + stab-bolt for low voltage & high HP
- Has remote communication options
- Unit sizes: NEMA 1 – NEMA 4
- VFD Frames: R1 – R5
- Can be connected to ABB Ability™ asset monitoring



03

Retrofitting VFD units with the ABB solution is beneficial for the following reasons:



Maintaining your installed base and replacing obsolete components



50% cheaper cost and faster delivery of a retrofit in comparison to opting for a new motor control center



A more sustainable option that extends the lifespan of existing equipment, reduces the need for new manufacturing, and minimizes waste generation

Fast and easy replacement of existing units:

New VFD units are functionally equivalent to the existing GE units. Once field wiring is disconnected, the old bucket is removed by loosening the jack screw. Installation procedure is the reverse of removal. The new bucket stabs into the existing

vertical section, it is bolted in with the jack screw, and field wires are terminated.

For repairs at an operating facility, replacement of an entire unit is the fastest option to return the downstream load to service.

Additionally, when reconfiguring loads in a facility or modernizing an entire MCC lineup, new Fastrac™ units can be a cost-effective option.

When considering a replacement alternative, site labor is extensive to:

- Disconnecting all field cabling and pulling it from the lineup.
- Disassembling and removing the existing lineup.
- Assembling and installing a new lineup.
- Testing and commissioning the new lineup.
- Repulling and terminating all cabling.

An upgrade can be accomplished much faster and less invasively by simply removing and replacing each unit.

VFD Frame	NEMA Size	Bus Design	Width (in)	Height (in)	208V		230/240V		380/415V		440/480V		Line Reactor
					Light-Duty (HP)	Light-Duty (HP)	Light-Duty (HP)	Light-Duty (HP)	Light-Duty (HP)	Light-Duty (HP)	Light-Duty (HP)	Light-Duty (HP)	
R1	1	Stab	15	30	0.5-5	0.33-3	0.5-5	0.33-3	0.5-5	0.5-3	0.5-7.5	0.5-5	None
R1	1	Stab	15	30	0.5-5	0.33-3	0.5-5	0.33-3	0.5-5	0.5-3	0.5-7.5	0.5-5	+3% or +5%
R2	1	Stab	15	36	7.5	5	7.5	5	7.5-10	5-7.5	10	7.5	None
R2	2	Stab	15	36	10	7.5	10	7.5			15	10	
R2	1	Stab	15	36	7.5	5	7.5	5	7.5-10	5-7.5	10	7.5	+3% or +5%
R2	2	Stab	15	36	10	7.5	10	7.5			15	10	
R3	2	Stab	15	42					15-25	10-20	20-25	15-20	None
R3	3	Stab	15	42	15-20	10-15	15-20	10-15			30	25	
R3	2	Stab	15	42					15-25	10-20	20-25	15-20	+3% or +5%
R3	3	Stab	15	42	15-20	10-15	15-20	10-15			30	25	
R4	3	Stab	15	48	25	20	25	20	30-40	25-30	40-50	30-40	None
R4	3	Stab-Bolt	20	48	25	20	25	20	30-40	25-30	40-50	30-40	+3% or +5%
R4	3	Stab-Bolt	24	48	25	20	25	20	30-40	25-30	40-50	30-40	+3% or +5%
R5	3	Stab	15	48					50	40			None
R5	4	Stab	15	48	30	25	30	25					
R5	3	Stab-Bolt	20	54					50	40			+3% or +5%
R5	4	Stab-Bolt	20	54	30	25	30	25					
R5	3	Stab-Bolt	24	54					50	40			+3% or +5%
R5	4	Stab-Bolt	24	54	30	25	30	25					

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