



## Engineered Solutions for Any Application

Manufactured to the highest standards in UL approved facilities, the Engineered Solutions program takes Mitsubishi's high performance control products and engineers them into ready-to-use form.

### Standard Solutions

Based on many years of practical industry experience, Standard Engineered Solutions are pre-engineered to meet the needs of a wide range of different applications within industrial, agricultural and commercial sectors, ensuring low cost and quick delivery.

### Custom Solutions

Mitsubishi designs and constructs fully customized Engineered Solutions that meet the most exacting specifications. A Custom Solution could be anything from a single enclosure to a complete shipping container full of pre-commissioned control equipment, and can be made to US requirements or to meet the standards of any other country around the world

Every solution is supplied with full documentation and is backed up with a comprehensive 2 year warranty.

### Engineered Solutions Offer:

- Competitive and innovative designs
- Solutions built to your exact specifications
- Integrated VFD panels from 1/8th HP to 1000 HP
- Support from factory trained engineers
- Help with interpreting specifications
- Global standards compliance - UL, cUL, CSA, CE
- Full documentation including AutoCAD drawings
- Designs archived for future reference or repeat orders
- Field installation and start-up services
- A full range of Mitsubishi Electric equipment integrated with 3rd party products
- Technical support and advice from beginning to end
- Complete solutions covered by 2 year warranty



# F3IP Agricultural Pump Drives



## Intelligent Irrigation

F3IP is a dedicated controller for agricultural pumping systems. These 230VAC (up to 150 HP) and 460VAC (up to 600 HP) drives, LD rated at 120% overload for one minute, are available in a non-bypass configuration only in NEMA 3R Wall mounted cabinets. A door mounted HMI communicates (transmit/ receives) data to the drive and operator.

F3IP C □ □ □ □

Symbol	Input Voltage
2V	208 - 240V
4V	380 - 480V

Symbol	Disconnect Type
C	Circuit Breaker

Symbol	Solution
F3IP	Mitsubishi NEMA 3R Irrigation Pump Drive A700-NA5PLC non-bypass

Symbol	Choke/Reactor Type
D	DC Link Choke
3	3% Input Reactor (option)
5	5% Input Reactor (option)

Symbol	Horsepower Rating
001	1HP
002	2HP
003	3HP
005	5HP
007	7.5HP
010	10HP
015	15HP
020	20HP
025	25HP
030	30HP
(motor frame sizes up to 600HP)	
600	600HP

Symbol	Options
S4	Alphanumeric keypad

Symbol	Network Type
RS	Enhanced RS-485 Capability (BACnet, Siemens FLN, Metasys N2) Modbus RTU is standard
LN	Lonworks
ET	Ethernet Communications (Ethernet IP, Modbus TCP/IP, BACnet IP, ProfiNET)



# F8 Type 18 Pulse Controllers

## Low Harmonic Drives

F8 controllers are intended for the control of pumps and fans. 18 pulse technology is used to ensure that the quality of the site power supply is maintained. These 460VAC Drives (10-800 HP) are LD rated at 120% overload for one minute, available in both bypass and non-bypass configurations in NEMA 12 Ventilated Floor mounted cabinets. UL508A rated to meet IEEE519-1992 standards.



### Base System Includes:

- NEMA 12 ventilated construction
- Standard Hoffman ANSI 61 gray paint
- 18 Pulse Clean Power Design Technology
- 3 contactor bypass with TEST mode
- Choice of bypass or non-bypass units
- Catch a spinning load/windmill start activated
- Adjustable overload relay, class 20 equivalent
- Programming/display keypad and speed setting dial
- Choice of fused disconnect or circuit breaker (standard)
- Control transformer, fused primary and secondary
- Terminal blocks for control connections
- RS-485, Modbus RTU Communication standard, EMI/RFI filter standard
- AutoCAD documentation packet
- Instruction manuals for VFD and controller
- UL/cUL 508A
- Hardware options: Damper vane actuator relay, extended analog output, hand-off autoswitch with potentiometer, PU07 keypad/display door mounted
- Communications Options: BACnet® MS/TP, Metasys® N2, LonWorks®, Siemens® FLN(P1), Ethernet/IP™, BACnet® IP, Modbus® TCP/IP, PROFINET
- 2 year warranty

F8 □ 4V □ □ □

Symbol	Horsepower Rating
010	10HP
015	15HP
020	20HP
025	25HP
030	30HP
040	40HP
(motor frame sizes up to 800HP)	
800	800HP

Symbol	Input Voltage
4V	380 - 480V

Symbol	Disconnect Type
C	UL489 circuit breaker
F	Fused disconnect (100kA) (option)

Symbol	Solution
F8	18 Pulse NEMA 12V

Symbol	Network Type
RS	Enhanced RS-485 capability (BACnet, Siemens FLN, Metasys N2) Modbus RTU is standard
LN	Lonworks
ET	Ethernet Communications (Ethernet IP, Modbus TCP/IP, BACnet IP, ProfiNET)

Select one option if required.

Symbol	Bypass Type
B	Manual 3 contactor bypass
N	3 contactor non-bypass (option)

Symbol	Options
S1	Damper vane actuator relay fitted
S2	Hand Off auto switch with potentiometer
S3	Extended analog output
S4	Alphanumeric keypad
S5	Drive trip/run relay (non-bypass only)

Up to 3 options may be selected.



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# Type P66 Decentralized Drives

## Drives for Harsh Environments

The P66 series of decentralized controllers are designed for use in harsh environments where the drive will be mounted without the protection of a control panel.

P66 has a NEMA 4 (IP66) protection rating, making it ideal for installation in wet areas or where 'hose-down' is a common occurrence. The extensive range of communications options available for the E700 VFD enables simple connection to virtually any network.

P66-E 

Symbol	Input/Output Voltage	Symbol	Horsepower Rating
2V	3/60/208 (230/240) VAC	05	0.5HP
4V	3/60/460 (480) VAC	1	1HP
		2	2HP
		3	3HP
		5	5HP

## Main Features

- IP66 / NEMA 4 Protection
- Available in sizes 1-5HP, 230 or 480V
- Padlock able disconnect switch for safe isolation
- Fitted with 10 button keypad and alphanumeric LCD display for simple programming
- Compatible with all standard E700 Series options and accessories
- 5 year warranty for VFD (Other parts : 2 – years)



## Type CK Conduit Mounting Kits:

The CK range of Type 1 Conduit Mounting Kits is intended for use with D700 and E700 Series VFDs. This kit allows the drive to be mounted outside of a normal enclosure.

### Main Features

- Available for all 3 phase D700 and E700 VFDs
- Provides conduit holes on both sides and bottom
- Knockout conduits provided
- Supplied as a kit to be installed in the field
- Units available from stock
- Drive mounting screws provided
- Ample box area for easy wiring with generous wire bend radius
- Suitable for 208/230V and 460/480V drives

### Conduit Kit Selection Chart

D700 Series VFD	Kit Ref.	E700 Series VFD	Kit Ref.
FR-D720-008-NA	CKDE1	FR-E720-008	CKDE1
FR-D720-025-NA		FR-E720-015	
FR-D720-042-NA		FR-E720-030	
FR-D720-070-NA		FR-E720-050	
FR-D720-100-NA	CKDE3	FR-E720-080	CKDE3
FR-D720-165-NA		FR-E720-110	
FR-D720-238-NA	CKDE4	FR-E720-175	CKDE3
FR-D720-318-NA		FR-E720-240	
FR-D740-012-NA	CKDE1	FR-E720-330	CKDE5
FR-D740-022-NA		FR-E720-470	
FR-D740-036-NA		FR-E720-600	
FR-D740-050-NA		FR-E720-016	
FR-D740-080-NA	CKDE4	FR-E740-026	CKDE2
FR-D740-120-NA		FR-E740-040	
FR-D740-160-NA		FR-E740-060	
		FR-E740-095	
		FR-E740-120	CKDE4
		FR-E740-170	
		FR-E740-230	CKDE5
		FR-E740-300	

# TYPE G GENERAL PURPOSE CONTROLLERS

For D700 AND E700 VFD – NEMA 12 OR NEMA 3R

## Stand-Alone Drives

Type G controllers are general purpose packaged drives suitable for a wide range of applications where a remote mounted VFD is required. Any Mitsubishi VFD up to 700HP can be configured into a type G package with either a NEMA 12 or NEMA 3R enclosure.

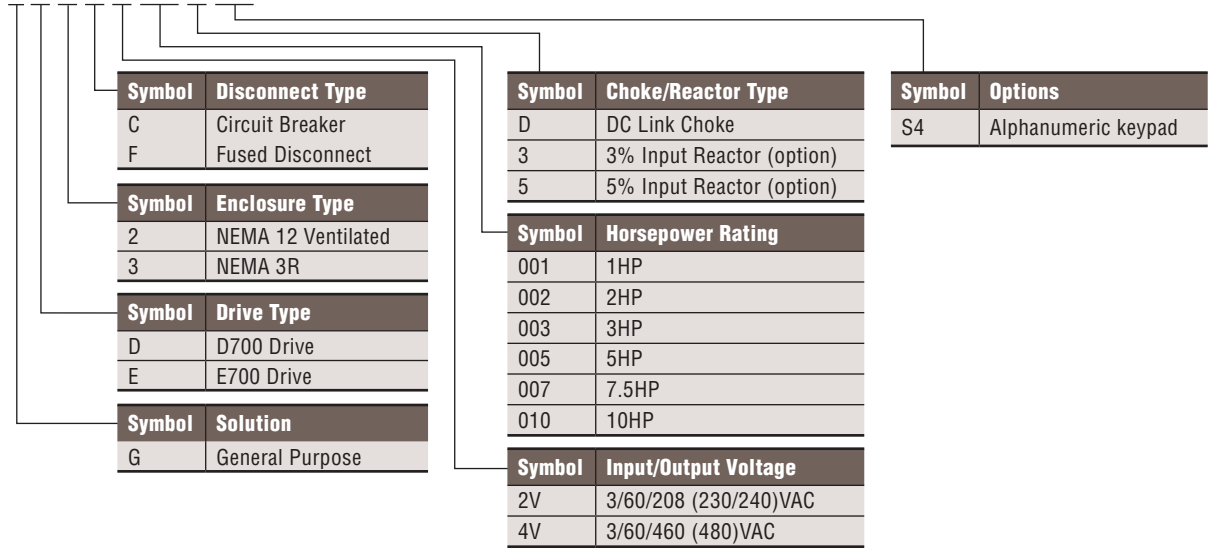


## Base System Includes:

- NEMA 3R ventilated construction outdoor duty
- RAL 7035 light gray paint
- Bottom mounted inlet and exhaust vents
- D700 controller with LCD keypad / display
- Rated 150% overload for one minute, 200% for 3 seconds
- DC link choke included as standard
- Thermostatically controlled space heater
- Choice of fused disconnect or UL 489 circuit breaker (standard)
- Modbus RTU communication standard
- AutoCAD documentation package
- VFD instruction manual
- UL / cUL 508
- Hardware options: Input reactor, (3% or 5%), door mounted PU07 keypad / display
- 2 year warranty

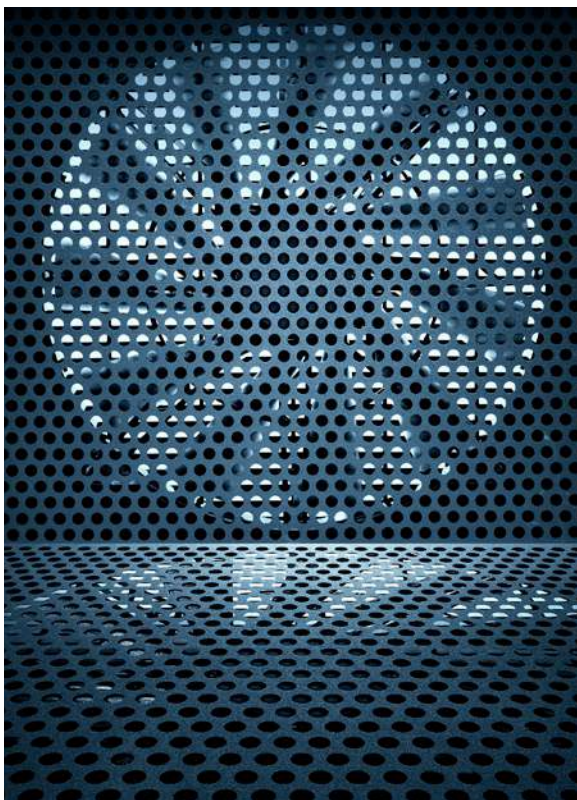


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# TYPE G GENERAL PURPOSE CONTROLLERS

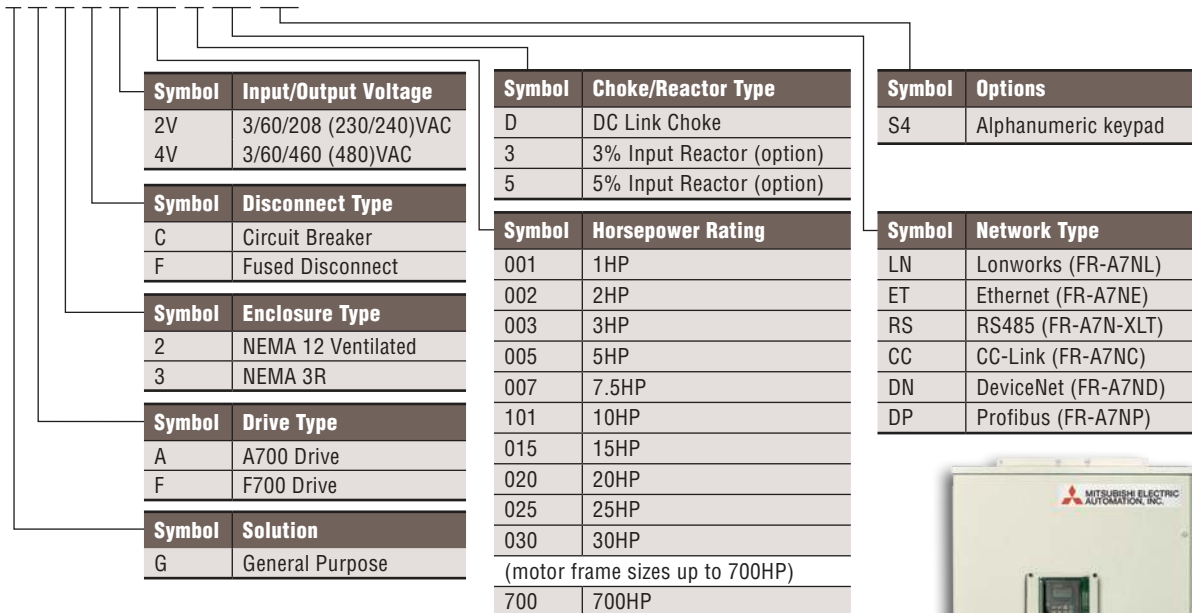
For A700 and F700 VFD – NEMA 12 or NEMA 3R



## Base System Includes:

- NEMA 12 ventilated construction
- RAL 7035 light gray paint
- Bottom mounted inlet and exhaust vents
- F700 controller with LCD keypad / display
- LD Rated 120% overload for one minute
- DC link choke included as standard
- Choice of fused disconnect or UL 489 circuit breaker (standard)
- RS-485, Modbus RTU communication standard, EMI/RFI filter standard
- AutoCAD documentation package
- Instruction manuals for VFD and controller
- UL / cUL 508
- Hardware options: Input reactor, (3% or 5%), PU07 keypad / display
- Communications Options: BACnet® MS/TP, Metasys® N2, LonWorks®, Siemens® FLN(P1), Ethernet/IP™, BACnet® IP, Modbus® TCP/IP, CC-Link®, DeviceNet™, PROFIBUS-DP
- 2 year warranty

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