

Save significant Energy and Money on Pool / Feature pumps, using time-tested Precision Control PFD with VFD Technology



Join many CES customers that have implemented rock solid and reliable direct control of pumping costs. Cut power consumption by 20-87% while protecting your pumping and pool piping systems.

Manufactured, pre-wired and UL 508 listed by the US VFD industry leader with over 50 years of manufacturing / service expertise.

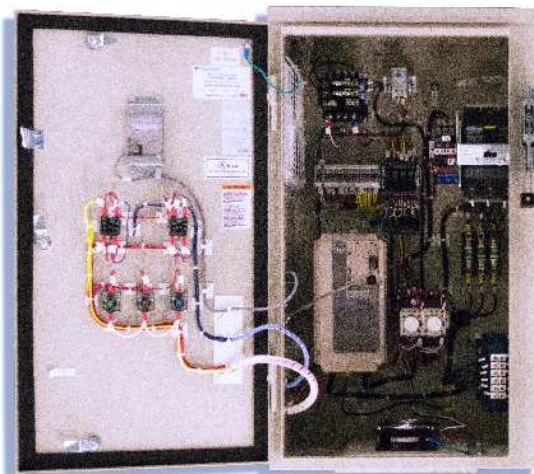


- Integrated 3% line reactor provides protection against power surges, over-voltage situations, and minimizes electrical interference at your site.

- Interfaces with your CES controller to provide reliable DIRECT control of system GPM regardless of filter soiling, heaters, and valve settings.

- Automatically uses only minimum power required to maintain desired Flow (GPM) for maximum savings 24/7. Approved for DOH use.

- Energy saving programs allow night-time flow reductions for huge power and money savings.



CES Self-Funding program lets the installation "pay its own way" out of electrical and demand charge savings.

- Takes the place of a motor starter, with additional phase protection, Hand-Off-Auto switch, and integrated bypass system to prevent down-time.

- Easy installation with pre-wired design and construction.

- Soft Start circuit ramps up pump flow to avoid water hammer and protect piping.

- Save thousands of dollars in power company Demand Charges by avoiding peak starts. Proven savings.

- Supported by CES on-site Factory certified warranty program so there is no risk.



All CES Precision Control PFD Motor Control Center MCC-VFD packages are UL508C listed and coordinated with NEMA ICS 7.1 standards to exceed minimum UL short circuit requirements. Installation is available via CES' s network of qualified licensed, insured electrical contractors. Start up, training, and on-site support by CES factory-certified ASP Service Provider Team.



Nema 1
Indoor Applications



- 12-gauge steel
- Enhanced Cooling
- Pump specific software
- Pump Protection Pkg
- Integrated Real-time clock functions
- Digital/Analog inputs
- Hand-off-auto
- Multiple Network Communication options

HP	AMPS	MODEL NUMBER	H	W	D	Weight
208 240V	Rated	CES Part Number	inch	inch	inch	lbs
3	9.6	CES-PFD-2-1-2XX-009	28.8	18.3	13.8	140
5	15.2	CES-PFD-3-1-2XX-015	28.8	18.3	13.8	140
7.5	22	CES-PFD-5-1-2XX-022	34.8	20.6	14.4	200
10	28	CES-PFD-7.5-1-2XX-028	34.8	20.6	14.4	200
15	42	CES-PFD-10-1-2XX-042	39.8	25.9	15.2	250
20	54	CES-PFD-15-1-2XX-054	39.8	25.9	15.2	270
25	68	CES-PFD-20-1-2XX-068	39.8	25.9	15.2	290
30	80	CES-PFD-25-1-2XX-080	39.8	25.9	15.2	290
40	104	CES-PFD-30-1-2XX-114	50.8	32.6	18.9	360
50	130	CES-PFD-40-1-2XX-130	50.8	32.6	18.9	480
460V						
3	4.8	CES-PFD-5-1-4XX-004	28.8	18.3	13.8	140
5	7.6	CES-PFD-5-1-4XX-007	28.8	18.3	13.8	140
7.5	11	CES-PFD-7.5-1-4XX-011	28.8	18.3	13.8	140
10	14	CES-PFD-10-1-4XX-014	28.8	18.3	13.8	140
15	21	CES-PFD-15-1-4XX-021	34.8	20.6	14.4	200
20	27	CES-PFD-20-1-4XX-027	34.8	20.6	14.4	200
25	34	CES-PFD-25-1-4XX-034	39.8	25.9	15.2	260
30	40	CES-PFD-30-1-4XX-040	39.8	25.9	15.2	260
40	52	CES-PFD-40-1-4XX-052	50.8	32.6	18.9	410
50	65	CES-PFD-50-1-4XX-065	50.8	32.6	18.9	420
60	77	CES-PFD-60-1-4XX-077	50.8	32.6	18.9	475
75	96	CES-PFD-75-1-4XX-096	50.8	32.6	18.9	500
100	124	CES-PFD-100-1-4XX-124	50.8	32.6	18.9	525

Nema 3R
Outdoor Applications



- 50C Temperature Package (122F) std
- Sun Reflective White Powder Coating
- Exclusive External Keypad
- Indicator Lights and switches
- Stainless Steel Hardware Package
- Optional floor mount

HP	AMPS	MODEL NUMBER	H	W	D	Weight
208-240V	Rated	CES Part Number	inch	inch	inch	lbs
3	9.6	CES-PFD-2-3-2XX-009	28.5	18.0	21.5	140
5	15.2	CES-PFD-3-3-2XX-015	28.5	18.0	21.5	140
7.5	22	CES-PFD-5-3-2XX-022	34.8	20.5	21.7	200
10	28	CES-PFD-7.5-3-2XX-028	34.8	20.5	21.7	200
15	42	CES-PFD-10-3-2XX-042	39.8	25.5	21.6	260
20	54	CES-PFD-15-3-2XX-054	39.8	25.5	21.6	260
25	68	CES-PFD-20-3-2XX-068	39.8	25.5	21.6	260
30	80	CES-PFD-25-3-2XX-080	39.8	25.9	21.5	290
40	104	CES-PFD-30-3-2XX-104	50.8	39.0	21.5	525
50	130	CES-PFD-40-3-2XX-130	50.8	39.0	21.5	525
460V						
3	4.8	CES-PFD-3-3-4XX-004	28.5	18.0	21.5	140
5	7.6	CES-PFD-5-3-4XX-007	28.5	18.0	21.5	140
7.5	11	CES-PFD-7.5-3-4XX-011	28.5	18.0	21.5	140
10	14	CES-PFD-10-3-4XX-014	28.5	18.0	21.5	140
15	21	CES-PFD-15-3-4XX-021	34.8	20.5	21.5	200
20	27	CES-PFD-20-3-4XX-027	34.8	20.5	21.5	200
25	34	CES-PFD-25-3-4XX-034	39.8	25.5	21.6	260
30	40	CES-PFD-30-3-4XX-040	39.8	25.5	21.6	260
40	52	CES-PFD-40-3-4XX-052	39.8	25.5	21.6	260
50	65	CES-PFD-50-3-4XX-065	50.8	39.0	21.5	400
60	77	CES-PFD-60-3-4XX-077	50.8	39.0	21.5	400
75	96	CES-PFD-75-3-4XX-096	50.8	39.0	21.5	525
100	124	CES-PFD-100-3-4XX-124	50.8	39.0	21.5	525



Excellence in
Water Quality Control

Commercial Energy Specialists, Inc.
952 Jupiter Park Lane, Suite 1
Jupiter, FL 33458-8958
Tel: (800) 940-1557
Fax: (561) 746-5898
www.CESWaterQuality.com

Manufactured for CES by Yaskawa USA

Yaskawa USA is the US's largest manufacturer of motor control and AC drives, with 50 years of experience. Each system is custom configured to exact CES aquatic pumping specifications, and provides plug-and-play interface with CES mechanical packages. CES is a factory authorized ASP Program Field Service Provider, and delivers on-site technical support and warranty administration to assure your PFD drive will save energy for many years to come.