

## ★ Direct Start

*Controller for 4 pump single or three-phase motors with direct starter. (Pressurazition, Emptying, filling in waste and clean water applications).*

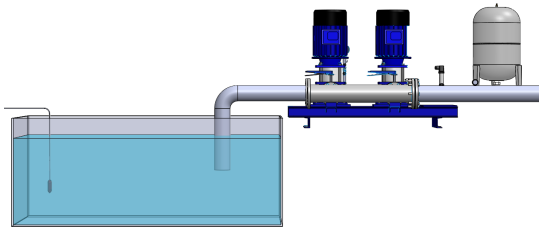
- ◇ Different types of connections to start and stop motor such as; flow switch, level electrode, pressure switches/sensors



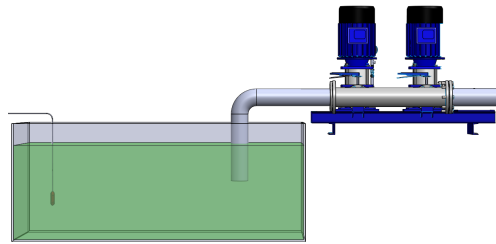
## Technical Features

- Metal Enclosure / IP 54
- Main switch with locking mechanism
- Power supply 1-50/60Hz 230V  $\pm$ %15
- Power supply 3-50/60Hz 400V  $\pm$ %15
- Green LED for Motor Running / Red LED for failures
- Input for start command
- Protections and Failures;
  - Motor Overcurrent
  - Phase Loss and incorrect sequence
  - Dry running protection
- Motor protection fuses
- Adjustable weekly test run

## Applications



Pressure Switch



Floater Control

## Technical Data

### Direct Start 1

Direct Start 1	VOLTAGE		MAX		CURRENT		BOX DIMENSIONS				WEIGHT
	CODE	V-	kW	Hp	Range	Max	D	E	G	Material	KG
Direct Start 1 - 0.37 Mono	22001	1-230	0.37	0.5	4.2-5.7	5.7	310	250	130	ABS	
Direct Start 1 - 0.55 Mono	22002	1-230	0.55	0.75	5.7-7.6	7.6	310	250	130	ABS	
Direct Start 1 - 0.75 Mono	22003	1-230	0.75	1	7.6-9	9	310	250	130	ABS	
Direct Start 1 - 1.1 Mono	22004	1-230	1.1	1.5	10-12	12	310	250	130	ABS	
Direct Start 1 - 1.5 mono	22005	1-230	1.5	2	13-16	16	310	250	130	ABS	
Direct Start 1 - 2.2 Mono	22006	1-230	2.2	3	16-20	20	310	250	130	ABS	
Direct Start 1 - 0.37	22007	3 - 400	0.37	0.5	1.0-1.3	1.3	310	250	130	ABS	
Direct Start 1 - 0.55	22008	3 - 400	0.55	0.75	1.7-2.3	2.3	310	250	130	ABS	
Direct Start 1 - 0.75	22009	3 - 400	0.75	1	2.3-3.1	3.1	310	250	130	ABS	
Direct Start 1 - 1.1	22010	3 - 400	1.1	1.5	2.3-3.1	3.1	310	250	130	ABS	
Direct Start 1 - 1.5	22011	3 - 400	1.5	2	3.1-4.2	4.2	310	250	130	ABS	
Direct Start 1 - 2.2	22012	3 - 400	2.2	3	5.7-7.6	7.6	310	250	130	ABS	
Direct Start 1 - 3	22013	3 - 400	3	4	7.6-9	9	310	250	130	ABS	
Direct Start 1 - 4	22014	3 - 400	4	5.5	7.6-9	9	310	250	130	ABS	
Direct Start 1 - 5.5	22015	3 - 400	5.5	7.5	10-12	12	310	250	130	ABS	
Direct Start 1 - 7.5	22016	3 - 400	7.5	10	13-16	16	310	250	130	ABS	
Direct Start 1 - 9.6	22017	3 - 400	9.6	12.5	16-20	20	310	250	130	ABS	
Direct Start 1 - 11	22018	3 - 400	11	15	20-24	24	310	250	130	ABS	
Direct Start 1 - 15	22019	3 - 400	11	15	29-32	32	400	300	175	ABS	
Direct Start 1 - 18.5	22020	3 - 400	18.5	25	35-38	38	400	300	175	ABS	
Direct Start 1 - 22	22021	3 - 400	22	30	44-50	50	600	400	220	Metallic	
Direct Start 1 - 30	22022	3 - 400	30	40	57-60	60	600	400	220	Metallic	
Direct Start 1 - 37	22023	3 - 400	37	50	65-78	78	600	400	220	Metallic	

## Direct Start 2

Direct Start 2	CODE	VOLTAGE	MAX POWER		CURRENT		BOX DIMENSIONS				WEIGHT
		V-	kW	Hp	Range (A)	Max (A)	D	E	G	Material	KG
Direct Start 2 - 0.37 Mono	22201	1-230	0.37	0.5	4.2-5.7	5.7	400	300	175	ABS	
Direct Start 2 - 0.55 Mono	22202	1-230	0.55	0.75	5.7-7.6	7.6	400	300	175	ABS	
Direct Start 2 - 0.75 Mono	22203	1-230	0.75	1	7.6-9	9	400	300	175	ABS	
Direct Start 2 - 1.1 Mono	22204	1-230	1.1	1.5	10-12	12	400	300	175	ABS	
Direct Start 2 - 1.5 Mono	22205	1-230	1.5	2	13-16	16	400	300	175	ABS	
Direct Start 2 - 2.2 Mono	22206	1-230	2.2	3	16-20	20	400	300	175	ABS	
Direct Start 2 - 0.37	22207	3 - 400	0.37	0.5	1.0-1.3	1.3	400	300	175	ABS	
Direct Start 2 - 0.55	22208	3 - 400	0.55	0.75	1.7-2.3	2.3	400	300	175	ABS	
Direct Start 2 - 0.75	22209	3 - 400	0.75	1	2.3-3.1	3.1	400	300	175	ABS	
Direct Start 2 - 1.1	22210	3 - 400	1.1	1.5	2.3-3.1	3.1	400	300	175	ABS	
Direct Start 2 - 1.5	22211	3 - 400	1.5	2	3.1-4.2	4.2	400	300	175	ABS	
Direct Start 2 - 2.2	22212	3 - 400	2.2	3	5.7-7.6	7.6	400	300	175	ABS	
Direct Start 2 - 3	22213	3 - 400	3	4	7.6-9	9	400	300	175	ABS	
Direct Start 2 - 4	22214	3 - 400	4	5.5	7.6-9	9	400	300	175	ABS	
Direct Start 2 - 5.5	22215	3 - 400	5.5	7.5	10-12	12	400	300	175	ABS	
Direct Start 2 - 7.5	22216	3 - 400	7.5	10	13-16	16	400	300	175	ABS	
Direct Start 2 - 9,6	22217	3 - 400	9,6	12,5	16-20	20	400	300	175	ABS	
Direct Start 2 - 11	22218	3 - 400	11	15	20-24	24	400	300	175	ABS	
Direct Start 2 - 15	22219	3 - 400	11	15	29-32	32	400	300	175	ABS	
Direct Start 2 - 18.5	22220	3 - 400	18.5	25	35-38	38	400	300	175	ABS	
Direct Start 2 - 22	22221	3 - 400	22	30	44-50	50	600	400	220	Metallic	
Direct Start 2 - 30	22222	3 - 400	30	40	57-60	60	600	400	220	Metallic	
Direct Start 2 - 37	22223	3 - 400	37	50	65-78	78	600	400	220	Metallic	

## Direct Start 3

Direct Start 3	VOLTAGE	MAX		CURRENT		BOX DIMENSIONS			WEIGHT		
	CODE	V-	kW	Hp	Range (A)	Max (A)	D	E	G	Material	KG
Direct Start 3 - 0.37 Mono	22301	1-230	0.37	0.5	4.2-5.7	5.7	600	400	220	Metallic	
Direct Start 3 - 0.55 Mono	22301	1-230	0.55	0.75	5.7-7.6	7.6	600	400	220	Metallic	
Direct Start 3 - 0.75 Mono	22301	1-230	0.75	1	7.6-9	9	600	400	220	Metallic	
Direct Start 3 - 1.1 Mono	22301	1-230	1.1	1.5	10-12	12	600	400	220	Metallic	
Direct Start 3 - 1.5 Mono	22301	1-230	1.5	2	13-16	16	600	400	220	Metallic	
Direct Start 3 - 2.2 Mono	22301	1-230	2.2	3	16-20	20	600	400	220	Metallic	
Direct Start 3 - 0.37	22301	3 - 400	0.37	0.5	1.0-1.3	1.3	600	400	220	Metallic	
Direct Start 3 - 0.55	22301	3 - 400	0.55	0.75	1.7-2.3	2.3	600	400	220	Metallic	
Direct Start 3 - 0.75	22301	3 - 400	0.75	1	2.3-3.1	3.1	600	400	220	Metallic	
Direct Start 3 - 1.1	22301	3 - 400	1.1	1.5	2.3-3.1	3.1	600	400	220	Metallic	
Direct Start 3 - 1.5	22301	3 - 400	1.5	2	3.1-4.2	4.2	600	400	220	Metallic	
Direct Start 3 - 2.2	22301	3 - 400	2.2	3	5.7-7.6	7.6	600	400	220	Metallic	
Direct Start 3 - 3	22301	3 - 400	3	4	7.6-9	9	600	400	220	Metallic	
Direct Start 3 - 4	22301	3 - 400	4	5.5	7.6-9	9	600	400	220	Metallic	
Direct Start 3 - 5.5	22301	3 - 400	5.5	7.5	10-12	12	600	400	220	Metallic	
Direct Start 3 - 7.5	22301	3 - 400	7.5	10	13-16	16	600	400	220	Metallic	
Direct Start 3 - 9,6	22301	3 - 400	9.6	12,5	16-20	20	600	400	220	Metallic	
Direct Start 3 - 11	22301	3 - 400	11	15	20-24	24	600	400	220	Metallic	
Direct Start 3 - 15	22301	3 - 400	11	15	29-32	32	600	400	220	Metallic	
Direct Start 3 - 18.5	22301	3 - 400	18.5	25	35-38	38	600	400	220	Metallic	
Direct Start 3 - 22	22301	3 - 400	22	30	44-50	50	600	400	220	Metallic	
Direct Start 3 - 30	22301	3 - 400	30	40	57-60	60	700	500	260	Metallic	
Direct Start 3 - 37	22301	3 - 400	37	50	65-78	78	700	500	260	Metallic	

## Direct Start 4

Direct Start 4	VOLTAGE		MAX POWER		CURRENT		BOX DIMENSIONS			WEIGHT	
	CODE	V-	kW	Hp	Range (A)	Max (A)	D	E	G	Material	KG
Direct Start 4 - 0.37	22401	3 - 400	0.37	0.5	1.0-1.3	1.3	700	500	260	Metallic	
Direct Start 4 - 0.55	22402	3 - 400	0.55	0.75	1.7-2.3	2.3	700	500	260	Metallic	
Direct Start 4 - 0.75	22403	3 - 400	0.75	1	2.3-3.1	3.1	700	500	260	Metallic	
Direct Start 4 - 1.1	22404	3 - 400	1.1	1.5	2.3-3.1	3.1	700	500	260	Metallic	
Direct Start 4 - 1.5	22405	3 - 400	1.5	2	3.1-4.2	4.2	700	500	260	Metallic	
Direct Start 4 - 2.2	22406	3 - 400	2.2	3	5.7-7.6	7.6	700	500	260	Metallic	
Direct Start 4 - 3	22407	3 - 400	3	4	7.6-9	9	700	500	260	Metallic	
Direct Start 4 - 4	22408	3 - 400	4	5.5	7.6-9	9	700	500	260	Metallic	
Direct Start 4 - 5.5	22409	3 - 400	5.5	7.5	10-12	12	700	500	260	Metallic	
Direct Start 4 - 7.5	22410	3 - 400	7.5	10	13-16	16	700	500	260	Metallic	
Direct Start 4 - 9,6	22411	3 - 400	9.6	12.5	16-20	20	700	500	260	Metallic	
Direct Start 4 - 11	22412	3 - 400	11	15	20-24	24	700	500	260	Metallic	
Direct Start 4 - 15	22413	3 - 400	11	15	29-32	32	700	500	260	Metallic	
Direct Start 4 - 18.5	22414	3 - 400	18.5	25	35-38	38	700	500	260	Metallic	
Direct Start 4 - 22	22415	3 - 400	22	30	44-50	50	700	500	260	Metallic	
Direct Start 4 - 30	22416	3 - 400	30	40	57-60	60	800	600	260	Metallic	
Direct Start 4 - 37	22417	3 - 400	37	50	65-78	78	800	600	260	Metallic	

*\*It is possible to realize the panel for 45 kW and largest capacity according to demand*

*\*\*Please contact us for custom design production*

## Optional Accessories

### Floater



Model	mt
F-S/5	5
P-T/10	10
P-T/15	15
P-T/20	20

### Level Electrode



Model	Power (V)	Range
L-E/5	12	10 Bar

### Pressure Switch



Model	Range	Differential
P-S/10	1-5 Bar	10 Bar
P-S/16	3-12 Bar	16 Bar
P-S/25	2-14 Bar	25 Bar

### Pressure Transmitter



Model	Power (V)	Range
P-T/10	12	10 Bar
P-T/16	12	16 Bar
P-T/25	12	25 Bar
P-T/40	12	40 Bar