

★ Star Delta Start

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

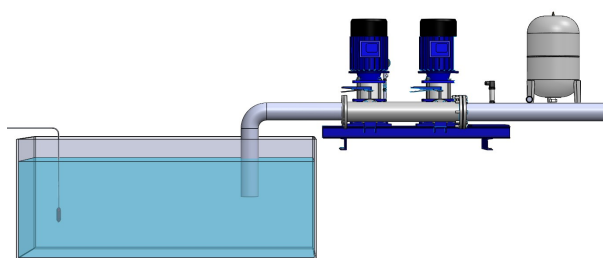
- ◇ Different types of connections to start and stop motor such as; flow switch, level electrode, pressure switches/sensors



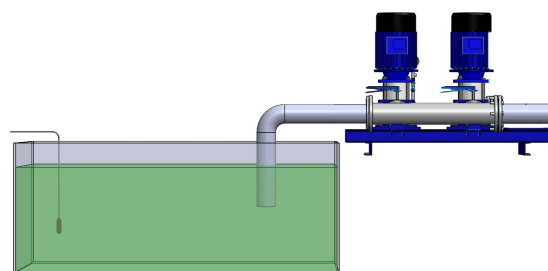
Technical Features

- Metal Enclosure / IP 54
- Main switch with locking mechanism
- Power supply 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
- Star Delta Contactor AC3
- Adjustable weekly test run
- Solenoid Valve output

Applications



Pressure Switch



Float Control

Technical Data

Star Delta Start 1

Stardelta Start 1		VOLTAGE	MAX		CURRENT		BOX DIMENSIONS				WEIGHT
	CODE	V-	kW	Hp	Range	Max	D	E	G	Material	KG
Stardelta Start 1 - 5.5	23001	3 - 400	5.5	7.5	7.6-10	15	400	300	175	ABS	
Stardelta Start 1 - 7.5	23002	3 - 400	7.5	10	7.6-10	17	400	300	175	ABS	
Stardelta Start 1 - 11	23003	3 - 400	11	15	13-16	24	400	300	175	ABS	
Stardelta Start 1 - 15	23004	3 - 400	11	15	16-20	31	600	400	220	Metallic	
Stardelta Start 1 - 18.5	23005	4 - 400	18.5	25	20-24	38	600	400	220	Metallic	
Stardelta Start 1 - 22	23006	5 - 400	22	30	29-35	50	600	400	220	Metallic	
Stardelta Start 1 - 30	23007	6 - 400	30	40	35-38	60	600	400	220	Metallic	
Stardelta Start 1 - 37	23008	7 - 400	37	50	44-53	75	600	400	220	Metallic	
Stardelta Start 1 - 45	23009	8 - 400	45	60	50-60	100	600	400	220	Metallic	
Stardelta Start 1 - 55	23010	9 - 400	55	75	65-78	124	700	500	260	Metallic	
Stardelta Start 1 - 75	23011	10 - 400	75	100	75-87	135	700	500	260	Metallic	
Stardelta Start 1 - 90	23012	11 - 400	90	125	80-110	155	800	600	260	Metallic	
Stardelta Start 1 - 110	23013	12 - 400	110	150	100-135	200	800	600	260	Metallic	
Stardelta Start 1 - 132	23014	13 - 400	132	180	110-142	241	1000	700	320	Metallic	
Stardelta Start 1 - 160	23015	14 - 400	160	220	150-200	300	1000	700	320	Metallic	
Stardelta Start 1 - 200	23016	15 - 400	185	250	115-380	410	1200	800	320	Metallic	

Star Delta Start 2

Stardelta Start 2		VOLTAGE	MAX POWER		CURRENT		BOX DIMENSIONS				WEIGHT
	CODE	V-	kW	Hp	Range (A)	Max (A)	D	E	G	Material	KG
Stardelta Start 2 - 5.5	23201	3 - 400	5.5	7.5	7,6-10	15	600	400	220	Metallic	
Stardelta Start 2 - 7.5	23202	3 - 400	7.5	10	7,6-10	17	600	400	220	Metallic	
Stardelta Start 2 - 11	23203	3 - 400	11	15	13-16	24	600	400	220	Metallic	
Stardelta Start 2 - 15	23204	3 - 400	11	15	16-20	31	600	400	220	Metallic	
Stardelta Start 2 - 18.5	23205	4 - 400	18.5	25	20-24	38	700	500	260	Metallic	
Stardelta Start 2 - 22	23206	5 - 400	22	30	29-35	50	700	500	260	Metallic	
Stardelta Start 2 - 30	23207	6 - 400	30	40	35-38	60	800	600	260	Metallic	
Stardelta Start 2 - 37	23208	7 - 400	37	50	44-53	75	800	600	260	Metallic	
Stardelta Start 2 - 45	23209	8 - 400	45	60	50-60	100	1000	700	320	Metallic	
Stardelta Start 2 - 55	23210	9 - 400	55	75	65-78	124	1000	700	320	Metallic	
Stardelta Start 2 - 75	23211	10 - 400	75	100	75-87	135	1200	800	320	Metallic	
Stardelta Start 2 - 90	23212	11 - 400	90	125	80-110	155	1200	800	320	Metallic	
Stardelta Start 2 - 110	23213	12 - 400	110	150	100-135	200	1200	800	320	Metallic	
Stardelta Start 2 - 132	23214	13 - 400	132	180	110-142	241	1600	900	400	Metallic	
Stardelta Start 2 - 160	23215	14 - 400	160	220	150-200	300	1600	900	400	Metallic	
Stardelta Start 2 - 200	23216	15 - 400	185	250	115-380	410	1800	1100	450	Metallic	

Star Delta Start 3

Stardelta Start 3		VOLTAGE	MAX		CURRENT		BOX DIMENSIONS				WEIGHT
	CODE	V-	kW	Hp	Range (A)	Max (A)	D	E	G	Material	KG
Stardelta Start 3 - 5.5	23301	3 - 400	5.5	7.5	7,6-10	15	700	500	260	Metallic	
Stardelta Start 3 - 7.5	23302	3 - 400	7.5	10	7,6-10	17	700	500	260	Metallic	
Stardelta Start 3 - 11	23303	3 - 400	11	15	13-16	24	700	500	260	Metallic	
Stardelta Start 3 - 15	23304	3 - 400	11	15	16-20	31	700	500	260	Metallic	
Stardelta Start 3 - 18.5	23305	4 - 400	18.5	25	20-24	38	800	600	260	Metallic	
Stardelta Start 3 - 22	23306	5 - 400	22	30	29-35	50	800	600	260	Metallic	
Stardelta Start 3 - 30	23307	6 - 400	30	40	35-38	60	1000	700	320	Metallic	
Stardelta Start 3 - 37	23308	7 - 400	37	50	44-53	75	1000	700	320	Metallic	
Stardelta Start 3 - 45	23309	8 - 400	45	60	50-60	100	1200	800	320	Metallic	
Stardelta Start 3 - 55	23310	9 - 400	55	75	65-78	124	1200	800	320	Metallic	
Stardelta Start 3 - 75	23311	10 - 400	75	100	75-87	135	1600	900	400	Metallic	
Stardelta Start 3 - 90	23312	11 - 400	90	125	80-110	155	1600	900	400	Metallic	
Stardelta Start 3 - 110	23313	12 - 400	110	150	100-135	200	1800	1100	450	Metallic	
Stardelta Start 3 - 132	23314	13 - 400	132	180	110-142	241	1800	1100	450	Metallic	
Stardelta Start 3 - 160	23315	14 - 400	160	220	150-200	300	1800	1100	450	Metallic	
Stardelta Start 3 - 200	23316	15 - 400	185	250	115-380	410	2100	1400	500	Metallic	

Star Delta Start 4

Stardelta Start 4		VOLTAGE	MAX POWER		CURRENT		BOX DIMENSIONS				WEIGHT
	CODE	V-	kW	Hp	Range (A)	Max (A)	D	E	G	Material	KG
Stardelta Start 4 - 5.5	23401	3 - 400	5.5	7.5	7.6-10	15	800	600	260	Metallic	
Stardelta Start 4 - 7.5	23402	3 - 400	7.5	10	7.6-10	17	800	600	260	Metallic	
Stardelta Start 4 - 11	23403	3 - 400	11	15	13-16	24	800	600	260	Metallic	
Stardelta Start 4 - 15	23404	3 - 400	11	15	16-20	31	800	600	260	Metallic	
Stardelta Start 4 - 18.5	23405	4 - 400	18.5	25	20-24	38	1000	700	320	Metallic	
Stardelta Start 4 - 22	23406	5 - 400	22	30	29-35	50	1000	700	320	Metallic	
Stardelta Start 4 - 30	23407	6 - 400	30	40	35-38	60	1200	800	340	Metallic	
Stardelta Start 4 - 37	23408	7 - 400	37	50	44-53	75	1200	800	340	Metallic	
Stardelta Start 4 - 45	23409	8 - 400	45	60	50-60	100	1200	800	340	Metallic	
Stardelta Start 4 - 55	23410	9 - 400	55	75	65-78	124	1750	940	450	Metallic	
Stardelta Start 4 - 75	23411	10 - 400	75	100	75-87	135	1750	940	450	Metallic	
Stardelta Start 4 - 90	23412	11 - 400	90	125	80-110	155	2100	1400	500	Metallic	
Stardelta Start 4 - 110	23413	12 - 400	110	150	100-135	200	2100	1400	500	Metallic	
Stardelta Start 4 - 132	23414	13 - 400	132	180	110-142	241	2100	1400	500	Metallic	
Stardelta Start 4 - 160	23415	14 - 400	160	220	150-200	300	2100	1400	500	Metallic	
Stardelta Start 4 - 200	23416	15 - 400	185	250	115-380	410	2100	1400	500	Metallic	

*It is possible to realize the panel for 200 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