

★ Star Delta Start

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

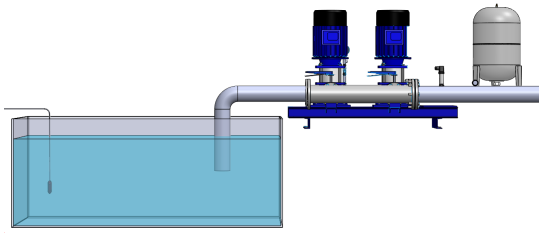
- ◇ Different types of connections to start and stop motor such as; flow switch, level electrode, pressure switches/sensors



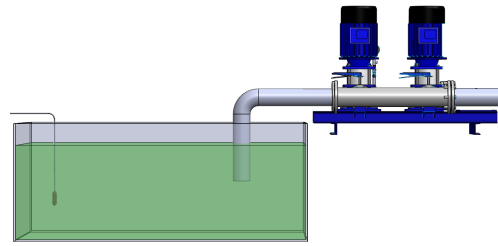
Technical Features

- Metal Enclosure / IP 54
- Main switch with locking mechanism
- Power supply 3-50/60Hz 400V ±%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 | CODE | VOLTAGE | | MAX POWER | | CURRENT | | BOX DIMENSIONS | | | WEIGHT |
|--------------------------|-------|----------|------|-----------|-----------|---------|------|----------------|-----|----------|--------|
| | | 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 |