

SUBMERSIBLE PUMPS CONTROL PANELS

- D.O.L
- STAR-DELTA
- SOFT STARTER
- AUTOTRANSFORMER



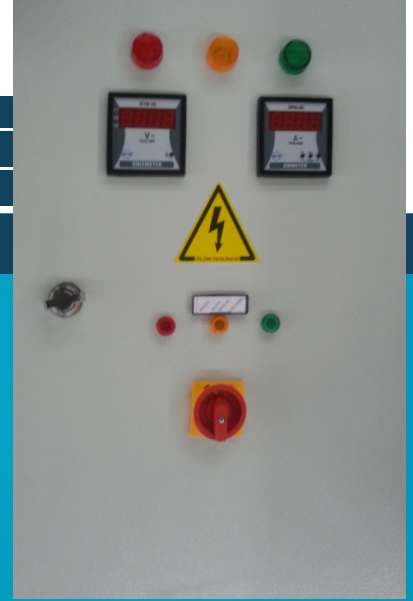
NUR DALGIÇ
VE ELEKTRİK MOTORLARI SAN.VE TİC.LTD.ŞTİ.



MANUFACTURER	Yildizsu Submersible Pumps
COUNTRY	TURKEY
HS CODE	85.37.10.98.00.19

FEATURES

- ✓ THERMAL OVER LOAD RELAYS
- ✓ FUSES , CIRCUIT BREAKER
- ✓ VOLTAGE RELAY / VOLTAGE PROTECTION
- ✓ TIME DELAY RELAYS
- ✓ PHASE REVERSAL / SEQUENCE RELAYS
- ✓ WATER LEVELCONTROL RELAY
- ✓ MOTORHIGH TEMPERATURE PROTECTION



GENERAL SPECIFICATIONS

- | | |
|--|--|
| ✓ 1-OVER CURRENT PROTECTION | ✓ Optional (D.O.L / Star-Delta Autotransformer / Soft starter) |
| ✓ 2- UNDERVOLTAGE PROTECTION | ✓ Motor Electronic Monitoring & Protection |
| ✓ 3-SUBSEQUENT SLOW START ACCELERATION | ✓ Over Load |
| ✓ 4-PUSH BUTTON CALIBRATION | ✓ Thermostat Motor Protection Relay |
| ✓ 5-EMERGENCY STOP BUTTON | ✓ Phases Monitoring |
| ✓ 6-USER FRIENDLY CONNECTION DIAGRAM | ✓ Dry Running Protection |
| ✓ 7-EASY TO INSTALL | ✓ Excess Starting Time Protection |
| ✓ 8- LONG RUNNING | ✓ Pressure Protection |
| ✓ 9- OVER VOLTAGE PROTECTION | ✓ Earth Fault Protection |
| ✓ 10- MOTOR PROTECTION | ✓ Operation Switch (manual & auto) |
| | ✓ volt, ampere & running hours meters |
| | ✓ Emergence Stop Switch |



CONTROL PANEL

MANUFACTURER	Yildizsu Submersible Pumps
COUNTRY	TURKEY
HS CODE	85.37.10.98.00.19

MATERIALS LIST USED

- ✓ 1- TERMIK (SIEMENS)
- ✓ 2-WOTOMOT 3*100 A (SIEMENS)
- ✓ 3- SOFT STARTER (SIEMENS CODE: 3RW30 - 18814)
- ✓ 4-MOTOR PROTECTION (SIEMENS)
- ✓ 5-3*100 FUSE (SIEMENS)
- ✓ 6-1*10 FUSE (SIEMENS)
- ✓ 7- AMPERMETER (OPAS)
- ✓ 8-WATER LEVEL SENSOR(OPAS)
- ✓ 9-ON-OFF BUTON(OPAS)
- ✓ 10-1.0-2 PAKO BUTON (OPAS)
- ✓ 11-VOLTMETER(OPAS)



TECHNICAL SPECIFICATIONS (ALL TYPES)

CONROL PANEL

- ✓ 3 phase 4wires, 380-415v, and 50HZ **star-delta** or **direct on line** or **autotransformer** starting or **soft** starting depending on the pump starting system.
- ✓ Short-circuit protected with a fuse disconnection switch ahead of the contactor or circuit breaker, usually a molded type case ahead of contactor.
- ✓ Analog volt meter, ammeter and frequency are preferable.
- ✓ Ranged switch boards are not acceptable; each switch board should have equivalent capacity with pump capacity.
- ✓ Systems with over current protection relay which is adjustable time and load.
- ✓ Water level monitoring relay for dry running protection.
- ✓ Voltmeter with selection switches for phase voltage.
- ✓ Ammeter for three phase current measurement and ammeter selection switch.
- ✓ Indicator lamps for pump running, power on indicator and for faulty.
- ✓ Phase failure relay. (Including under & over voltage protection relay).
- ✓ Running hour meter.
- ✓ Electrodes for water level control.
- ✓ Fuse holders and fuse for main circuit protection.
- ✓ Stop push button.
- ✓ Start push button.
- ✓ Manual and automatic selector switch.
- ✓ Time delay relay 0.1 to 30 sec.
- ✓ Control circuit voltage can be 48v or 24v with step down transformer.



TECHNICAL SPECIFICATIONS

CIRCUIT BREAKER

PROTECTION FUNCTIONS

The circuit breakers should have at least the following protections

- ✓ Against overload with short time delay trip.
- ✓ Against short-circuit with short time delay trip.
- ✓ Against short-circuit with instantaneous trip.
- ✓ Against earth fault with short time delay trip.

DESIGN & CONSTRUCTION REQUIREMENTS

- ✓ Breakers described in this specification are suitable for operation in 380-415V, 50Hz, 3 wires distribution system with solidly earthed neutral.
- ✓ Breakers shall be latest revision for "Molded Case Circuit Breakers" with the following additional requirements:
- ✓ Break trip free-mechanism (latest revision).
- ✓ Breaker can be equipped by an electronic solid state trip-control unit for overload and short circuit protection.
- ✓ Breakers should be with current limiting functions.
- ✓ The breaker shall have instantaneous short circuit tripping characteristics such that the fault will trip the breaker in a fraction of a second.
- ✓ Incoming and outgoing terminals shall be designed to accept a size of cable lugs suitable for the breaker rated current.
- ✓ All outgoing terminals shall be equipped with terminal separators and terminal covers.
- ✓ All breakers shall be without lock or locking device.

CONTINUOUS CURRENT RATINGS

- ✓ The Circuit Breakers shall be in one fixed capacity of the desired amps, adjustable type below the maximum (desired) within the range of 0- 20% is acceptable.
- ✓ The breakers shall be designed to work at full rating in an ambient temperature of max 50°C.

ADDITIONAL REQUIREMENTS

- ✓ Name plate and manufacturer's identification number (coding) should be submitted.
- ✓ Testing, Inspection, Packing & Shipping document should be attached.

TECHNICAL SPECIFICATIONS

SWITCH BOARD

- ✓ 3 Phase 4 wires, 380-415v, and 50HZ star-delta or direct on line or autotransformer starting depending on the pump starting system.
- ✓ Short-circuit protected with a fuse disconnection switch ahead of the contactor or circuit breaker, usually a molded type case ahead of contactor.
- ✓ Analog volt meter, ammeter and frequency are preferable.
- ✓ Ranged switch boards are not acceptable; each switch board should have equivalent capacity with pump capacity.
- ✓ Systems with over current protection relay which is adjustable time and load.
- ✓ Water level monitoring relay for dry running protection.
- ✓ Voltmeter with selection switches for phase voltage.
- ✓ Ammeter for three phase current measurement and ammeter selection switch.
- ✓ Indicator lamps for pump running, power on indicator and for faulty.
- ✓ Phase failure relay. (Including under & over voltage protection relay).
- ✓ Running hour meter.
- ✓ Electrodes for water level control.
- ✓ Fuse holders and fuse for main circuit protection.
- ✓ Stop push button.
- ✓ Start push button.
- ✓ Manual and automatic selector switch.
- ✓ Time delay relay 0.1 to 30 sec.
- ✓ Control circuit voltage can be 24v or 48v with step down transformer.

CONTROL PANEL MODELS

CAPACITY (POWER)

MODELS

HP	KW	DOL	STAR-DELTA	AUTO TRANS.	SOFT STARTER
7,5	5,5	YCD 5.5	YCSD 5.5	YCA 5.5	YCSSL 5.5
10	7,5	YCD 7.5	YCSD 7.5	YCA 7.5	YCSSL 7.5
12,5	9,3	YCD 9.3	YCSD 9.3	YCA 9.3	YCSSL 9.3
15	11	YCD 11	YCSD 11	YCA 11	YCSSL 11
20	15	YCD 15	YCSD 15	YCA 15	YCSSL 15
25	18,5	YCD 18.5	YCSD 18.5	YCA 18.5	YCSSL 18.5
30	22	YCD 22	YCSD 22	YCA 22	YCSSL 22
35	26,5	YCD 26.5	YCSD 26.5	YCA 26.5	YCSSL 26.5
40	30	YCD 30	YCSD 30	YCA 30	YCSSL 30
50	37	YCD 37	YCSD 37	YCA 37	YCSSL 37
60	45	YCD 45	YCSD 45	YCA 45	YCSSL 45
70	52	YCD 52	YCSD 52	YCA 52	YCSSL 52
75	55	YCD 55	YCSD 55	YCA 55	YCSSL 55
80	60	YCD 60	YCSD 60	YCA 60	YCSSL 60
90	67	YCD 67	YCSD 67	YCA 67	YCSSL 67
100	75	YCD 75	YCSD 75	YCA 75	YCSSL 75
125	92	YCD 92	YCSD 92	YCA 92	YCSSL 92

Head Office

T : + 90 414 314 00 35 • + 90 414 314 39 49

F : + 90 414 314 01 18

Harran University St. No : 18

Haliliye / **SANLIURFA / TURKEY**

Factory

T : + 90 414 369 15 15 • F : + 90 414 369 15 14

1. Organize Industrial Zone St. 03 - No : 20

Eyubiye / **SANLIURFA / TURKEY**

info@yildizsu.com.tr



www.yildizsu.com.tr