

## Electronic control panels

# STAR DELTA PLUS 3 RANGE 7,5÷60HP

Star delta starting electronic control panel 3 motors for pressure booster, clean water and sewage with display

- Multi application control panel
- Motor's data auto learning
- Events and alarms data logger
- Motors maintenance data logger
- Remote control
- Motherboard protection



## GENERAL SPECIFICATIONS

- Operating voltage 400Vac  $\pm 10\%$  50/60Hz
- General disconnecting switch with door lock
- Button for automatic operation
- Button for manual operation (stable/unstable)
- Siren shut-off button
- N°3 adjustable star delta timers
- Auxiliary circuit protection fuse
- Protection fuse for each motor
- N°9 contactors
- Connection terminal board
- External metal box
- Protection degree IP55
- Operating temperature  $-5/+40^{\circ}\text{C}$

## ADVANTAGES

- Multilingual Display LCD to visualize:
  - Operating voltage
  - Current for each motor
  - Hour counter for each motor
  - Pressure switches status
  - Level status
  - System pressure with pressure transducer
  - Tank level in meters with piezoresistive probe
  - All information concerning the operation of the motors
- Maximum and minimum current auto learning for each motor
- Dry running with level control and minimum current
- Deactivable alternance of the 3 motors
- 3s delay between the starting of the 2 motors
- Automatic switching in case of motor failure
- Loss of pressure control
- Adjustable supply mains waiting
- Siren shut-off
- Operation with pressure switches, float switches, probes, pressure transducer and piezoresistive probe 4-20mA

## INPUTS / OUTPUTS

- N°5 very low voltage inputs
- Input 4-20mA
- N°3 very low voltage inputs for motor klixon
- N°2 alarm outputs 12Vdc max 200mA for siren and flashing Led lamp
- Alarm output max 5A NC-COM-NO (pure contact)

## PROTECTIONS

- Maximum and minimum current protection for each motor with alarm
- Lack and sequence of phases protection with automatic reset and alarm
- Minimum and maximum voltage protection with automatic reset and alarm
- Klixon protection for each motor with automatic reset and alarm

**THREE-PHASE 400Vac ±10% 50/60Hz**

CODE	TYPE	POWER		OPERATING CURRENT [A]	DIMENSIONS mm			WEIGHT Kg	BOX
		kW	Hp		A-H	L-W	P-D		
SQ696.00/SD	STAR DELTA PLUS 3 400 7,5	5,5	7,5	3x(10÷17)	800	600	290	33	80
SQ696.01/SD	STAR DELTA PLUS 3 400 10	7,5	10	3x(13÷21)	800	600	290	33	80
SQ696.02/SD	STAR DELTA PLUS 3 400 12,5	9,2	12,5	3x(19÷26)	800	600	290	33	80
SQ696.03/SD	STAR DELTA PLUS 3 400 15	11	15	3x(22÷30)	800	600	290	33	80
SQ696.04/SD	STAR DELTA PLUS 3 400 17,5	13	17,5	3x(25÷33)	800	600	290	33	80
SQ696.05/SD	STAR DELTA PLUS 3 400 20	15	20	3x(32÷40)	800	600	290	34	80
SQ696.06/SD	STAR DELTA PLUS 3 400 25	18,5	25	3x(38÷50)	800	600	290	35	80
SQ696.07/SD	STAR DELTA PLUS 3 400 35	22÷26	30÷35	3x(45÷65)	1000	800	370	40	103
SQ696.08/SD	STAR DELTA PLUS 3 400 40	30	40	3x(60÷75)	1000	800	370	41	103
SQ696.09/SD	STAR DELTA PLUS 3 400 50	37	50	3x(65÷90)	1000	800	370	64	103
SQ696.10/SD	STAR DELTA PLUS 3 400 60	45	60	3x(70÷105)	1000	800	370	66	103

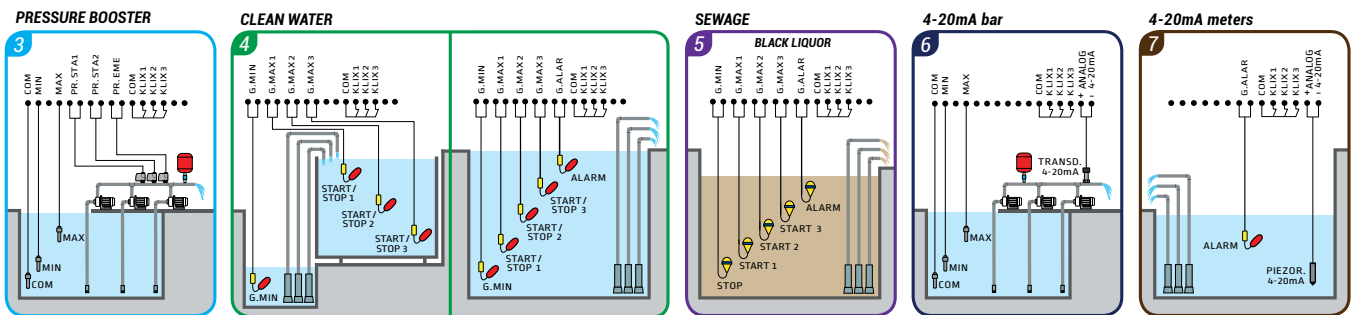
**OPTIONALS**

CODE	TYPE
OP100.29/B	On board GPRS expansion
OP100.49/B	On board MODBUS RS-485 expansion
OP100.59/B	On board Ethernet - WiFi expansion
OP100.69/B	On board BMS expansion up to 3 motors
OP100.99/B	On board expansion to detect water in the oil chamber up to 3 motors
OP100.01	3 level probes kit
OP100.05/1	Wired three-phase surge arrester type 2
SS100.00	Visual and acoustic alarm indicator (BASIC ALARM VA 012) <b>see page 20</b>
SS101.01	Visual and acoustic alarm indicator with buffer battery (TOP ALARM VAB 230) <b>see page 19</b>
AC300.11.10-004.20	Pressure transducer 0-10bar 4-20mA with 4m cable
AC300.11.16-004.20	Pressure transducer 0-16bar 4-20mA with 4m cable
AC300.11.25-004.20	Pressure transducer 0-25bar 4-20mA with 4m cable
AC300.20.01-005.31	Piezoresistive probe 4-20mA with 5m cable
AC300.20.01-010.31	Piezoresistive probe 4-20mA with 10m cable
AC300.20.02-010.20	Piezoresistive probe 4-20mA with 10m cable per SEWAGE

For more optionals see page 78

**SPARE PARTS**

CODE	TYPE
AC100.22/1/50	Display electronic board with flat cable 20pin 50cm
AC100.22/1/80	Display electronic board with flat cable 20pin 80cm
AC100.22/1/100	Display electronic board with flat cable 20pin 100cm
SD696.20	Three-phase MULTIPLUS 3 electronic board 20A
SD696.30-40	Three-phase MULTIPLUS 3 electronic board 30-40A
SD696.60	Three-phase MULTIPLUS 3 electronic board 60A
SD696.100	Three-phase MULTIPLUS 3 electronic board 100A
SD696.200	Three-phase MULTIPLUS 3 electronic board 200A



**COMPONENTS KEY**

- Float switch for clean water**
- Float switch for sewage**
- Pressure switch**
- Level probes**
- Piezoresistive probe 4-20mA**
- Pressure transducer 4-20mA**

The addition of some optionals can imply changes on the size of the control panel. For further details please contact our technical/commercial department.