

Electronic control panels

MULTIPLUS 1

RANGE 0,5÷20HP

Direct starting electronic control panel 1 motor for the dry running control, clean water and sewage with display

- Multi-application control panel
- Motor's data auto learning
- Adaptive filling system of the well
- Events and alarms data logger
- Remote control
- Single-phase version equipped with power relay for inductive loads (up to 31A)
- Motherboard protection



GENERAL SPECIFICATIONS

- Operating voltage 230Vac +15/-20% 50/60Hz (SA684.xx)
- Operating voltage 400Vac +15/-20% 50/60Hz (SA687.xx)
- General disconnecting switch with door lock
- Button for automatic operation
- Button for manual operation (stable/unstable)
- Siren shut-off button
- Auxiliary circuit protection fuse
- Motor protection fuse
- Contactor (SA687.xx)
- External thermoplastic box
- Cable glands
- Protection degree IP65
- Operating temperature -5/+50°C
- Relative humidity 60% at 50°C (not condensed)

INPUTS / OUTPUTS

- N°4 very low voltage inputs
- Input 4-20mA
- Very low voltage input 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)

ADVANTAGES

- Multilingual Display LCD to visualize:
 - Operating voltage
 - Current
 - Cosφ
 - Hour counter
 - Level status
 - System pressure with pressure transducer
 - Tank level in meters with piezoresistive probe
 - All information concerning the operation of the motor
- Motor's data autolearning:
 - Cosφ
 - Maximum and minimum current
- Adaptive filling system of the well
- Adjustable maximum number of starts per hour
- Adjustable motor start test (24-48-72-96h)
- Dry running with level control, cosφ and minimum current
- Adjustable probe sensitivity
- Emptying (1 input)/Filling (2 inputs) function
- 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

PROTECTIONS

- Maximum and minimum current protection with alarm
- Lack and sequence of phases protection with automatic reset and alarm
- Minimum and maximum voltage protection with automatic reset and alarm
- Motor klixon protection with automatic reset and alarm

SINGLE-PHASE 230Vac +15/-20% 50/60Hz

CODE	TYPE	POWER		OPERATING CURRENT [A]	DIMENSIONS mm			WEIGHT Kg	BOX
		kW	Hp		A-H	L-W	P-D		
SA684.00	MULTIPLUS 1 230	0,37÷2,2	0,5÷3	2÷18	285	245	140	2,3	03

THREE-PHASE 400Vac +15/-20% 50/60Hz

CODE	TYPE	POWER		OPERATING CURRENT [A]	DIMENSIONS mm			WEIGHT Kg	BOX
		kW	Hp		A-H	L-W	P-D		
SA687.02L	MULTIPLUS 1 400 10	0,37÷7,5	0,5÷10	0,5÷16	285	245	140	2,8	03
SA687.03L	MULTIPLUS 1 400 15	2,2÷11	3÷15	4÷25	345	285	165	3,4	04
SA687.04L	MULTIPLUS 1 400 20	7,5÷15	10÷20	16÷32	345	285	165	3,5	04

OPTIONALS

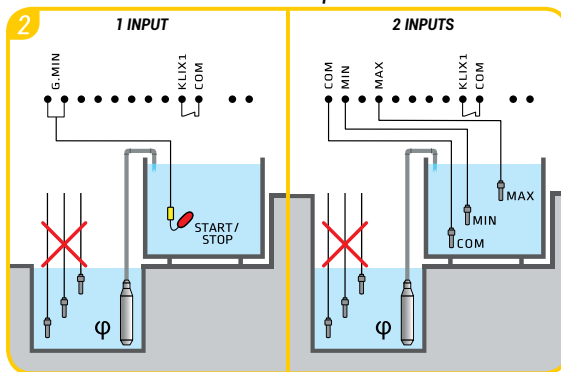
CODE	TYPE
OP100.29/B	On board GPRS expansion
OP100.49/B	On board MODBUS RS-485 expansion
OP100.59/B	On board Ethernet - WiFi expansion
OP100.69/B	On board BMS expansion up to 3 motors
OP100.99/B	On board expansion to detect water in the oil chamber up to 3 motors
OP100.01	3 level probes kit
OP100.17/024	Wired 24Vac relay complete with socket
OP100.17/230	Wired 230Vac relay complete with socket
OP100.03/00	Wired circuit breaker for capacitor up to 100µF
OP100.05	Wired single-phase surge arrester type 2
OP100.05/1	Wired three-phase surge arrester type 2
OP100.13/1/12	Wired siren 12Vdc
OP100.13/2/12L	Wired flashing Led lamp 12Vdc
SS100.00	Visual and acoustic alarm indicator (BASIC ALARM VA 012) see page 20
SS101.01	Visual and acoustic alarm indicator with buffer battery (TOP ALARM VAB 230) see page 19
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
AC300.20.02-010.31	Piezoresistive probe 4-20mA with 10m cable per SEWAGE
OP00.10	Couple of brackets for collar (reference BOX 03-04)

For more optionals see page 78

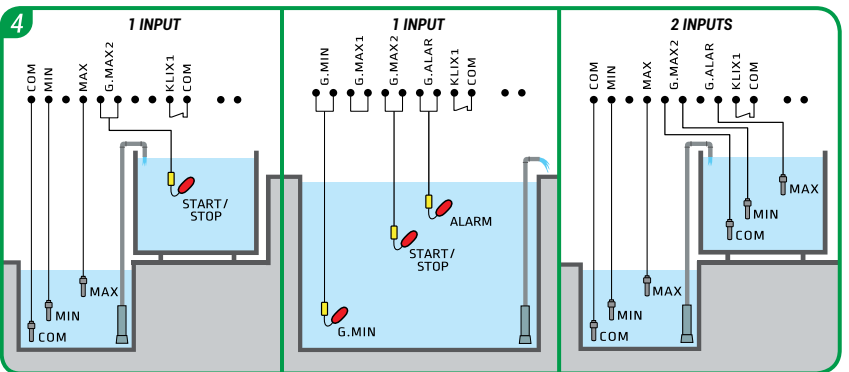
SPARE PARTS

CODE	TYPE
AC100.22/1/30	Display electronic board with flat cable 20pin 30cm
SD684.20/1	Single-phase MULTIPLUS 1 electronic board
SD687.20/1	Three-phase MULTIPLUS 1 electronic board 20A
SD687.30-40/1	Three-phase MULTIPLUS 1 electronic board 30-40A

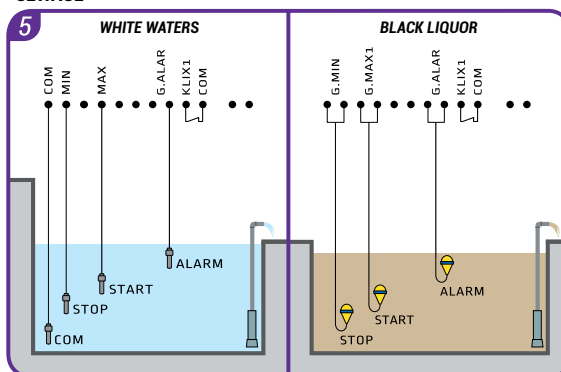
DRY CONTROL RUNNING WITH COSFφ



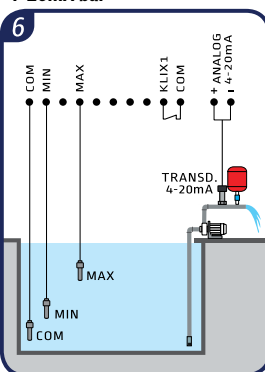
CLEAN WATER



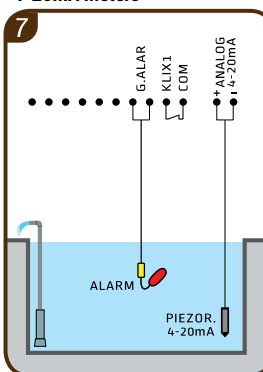
SEWAGE



4-20mA bar



4-20mA meters



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.