

JUNG PUMPEN CONTROL UNITS

APPLICATION

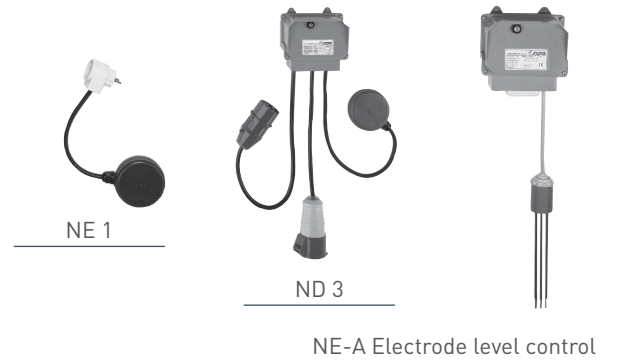
Control units for switching the pump on and off depending upon the level using float switches. Available for 230 V AC motors or 400 V DC motors and a connecting voltage of up to 3.2 kw.

In the versions with an alarm system an acoustic signal is triggered by an additional float switch in the case of high water levels. This message can be conveyed to an external transmitter using a potential-free contact to generate a signal. Through the optional use of a rechargeable battery, the alarm system can also operate independently of the mains. An integrated charging connection for the rechargeable battery is fitted as standard equipment.

Versions with a silicone pipe (NE 1/2 AH) are available for use in hot water applications up to 95°C.

The electrode level control NE-A can only be used in clean water. The set points can be adjusted to the nearest millimetre for level differences from 10 mm to 150 mm by shortening the individual electrodes.

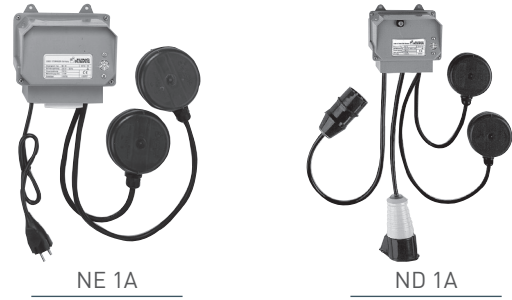
All types are supplied wired ready for connection and do not require any further electrical work.



NE 1

ND 3

NE-A Electrode level control



NE 1A

ND 1A

Separate level controls

Type	Motor rating P ₂	Cable length	Code No.
NE 1	max. 1.25 kW	3.0 m	JP16710
NE 2	max. 1.25 kW	9.5 m	JP16711
ND 1	max. 3.20 kW	3.0 m	JP16712
ND 3	max. 3.20 kW	9.5 m	JP16713

Separate level controls with alarm system

Type	Motor rating P ₂	Cable length	Code No.
NE 1 A	max. 1.25 kW	3.0 m	JP16714
NE 2 A	max. 1.25 kW	9.5 m	JP16715
NE 1 AH	max. 1.25 kW	3.0 m	JP24766
NE 2 AH	max. 1.25 kW	9.5 m	JP24767
ND 1 A	max. 3.20 kW	3.0 m	JP16716
ND 3 A	max. 3.20 kW	9.5 m	JP16717
Electrode level control NE-A	max. 1.10 kW	5.0 m	JP00301

Standard features:	NE	ND	NE	NE	ND	NE-A
	1.2	1.3	1A, 2A	1AH, 2AH	1A, 3A	
ISO casing enclosure IP44, 125 mm deep, HxW in mm	-	160x160	160x160	160x160	160x160	160x160
Operating voltage 50 Hzp	1/N/PE 230 V	3/N/PE 230/400 V	1/N/PE 230 V	1/N/PE 230 V	3/N/PE 230/400 V	1/N/PE 230 V
Motor contactor 4 kW/400 V AC3	-	1	-	-	1	-
Safety transformer for electrode circuit 230/12 V	-	-	-	-	-	1
Control transformer 230 V/12 V for alarm float switch	-	-	1	1	1	1
Cable length	-	0.5 m	0.5 m	0.5 m	0.5 m	0.5 m
Connection plug/coupling	Schuko	CEE 16A	Schuko	Schuko	CEE 16A	Schuko
Number of float switches* with fixing accessories	1	1	2	2	2	-
Float switch*/electrode cable material	Gummi	Gummi	Gummi	Silikon	Gummi	PVC
Test pushbutton	-	1	-	-	1	1
Potential free contact 5A/250 V AC1	-	-	1	1	1	1
Electronic buzzer	-	-	1	1	1	1

Optional accessories:	Code No.				
Rechargeable battery for off the line operation	JP44850	-	-	1	1

* For additional information on the float switches used, please refer to the section „Level controls“

JUNG PUMPEN

CONTROL UNITS

APPLICATION

Electronic control unit for level control of one (AD) or two (BD) d.o.l. starting submersible pump(s).

The BasicLogo with the standard features meets all the necessary requirements for the reliable control of sewage pumps. It can be adapted to individual requirements and is suitable for use with both non explosion protected and explosion protected submersible pumps (AD/BD ...Ex types).

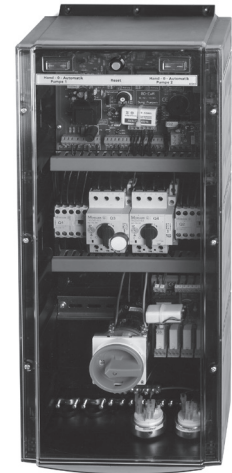
The control unit can be combined with a large variety of different level controls to suit the application concerned, and it is supplied with a buzzer as standard with a facility for off the line operation.

All BD types (for two pumps) automatically start up pumps 1 and 2 alternately. The resting pump is switched on during peak load or fault. Alternative operation of the unit without peak load function is possible, but with automatic switchover to the standby pump in the event of a fault. Variegated automatic start delay time after a power failure to prevent extreme rushes of current.

The clear and robust design of the unit enables it to be used outdoors in an empty outdoor casing at temperatures as low as -20°C without the need for any heating.



AD 46
for one pump



BD 25
for two pumps

- Proven and sturdy control systems
- User-friendly handling
- Integrated optimised standard functions
- Expandable functions
- Usable down to -20°C without heating
- Large range of level controls

Control units for one pump

Type	Motor protection A	Pre-fuse A	Code No.
AD 00E		16	JP00289
AD 00		16	JP00311
AD 25	2.4-4.0	16	JP00310
AD 46	4.0-6.0	16	JP14353
AD 610	6.0-9.0	16	JP14354
AD 4 ExW	4.0	16	JP25901
AD 8 ExW	for one 8.0	16	JP25902
AD 23 Ex	explosion 1.0-1.6	16	JP09754
AD 25 Ex	protected 2.4-4.0	16	JP09683
AD 46 Ex	pump 4.0-6.0	16	JP14355
AD 610 Ex	6.0-9.0	16	JP14356

Control units for two pumps

Type	Motor protection	Pre-fuse A	Code No.
BD 00E		Sicherung 10 20	JP45735
BD 610EC	6.3-10.0	20	JP45743
BD 00	4.0-6.3	16	JP45993
BD 25	2.5-4.0	16	JP45737
BD 46	4.0-6.3	20	JP45739
BD 610	6.3-10.0	25	JP45741
BD 23 Ex	for two 1.0-1.6	16	JP09755
BD 25 Ex	explosion 2.5-4.0	16	JP09681
BD 46 Ex	protected 4.0-6.3	20	JP14360
BD 610 Ex	pumps 6.3-10.0	25	JP14361

JUNG PUMPEN

CONTROL UNITS

BasicLogo control units for one or two pumps

Standard features:	AD 00 E	AD 00	AD 25 46,610	AD 4.8 ExW	AD 23,25, 46, 610 Ex	BD 00 E	BD 610 EC	BD 00	BD 25, 46,610	BD 23,25, 46,10 Ex
ISO casing enclosure IP 44, 155 mm deep, HxW in mm	250x250	250x250	250x250	430x250	250x250	430x250	430x250	430x250	430x250	430x250
Operating voltage 50 Hzp	1/N/PE 230V	3/N/PE 230/400V	3/N/PE 230/400V	1/N/PE 230V	3/N/PE 230/400V	1/N/PE 230V	1/N/PE 230V	3/N/PE 230/400V	3/N/PE 230/400V	3/N/PE 230/400V
Starting	Direct	Direct	Direct	Direct	Direct	Direct	Direct	Direct	Direct	Direct
Motor contactor 4 kW/400 V AC3	1	1	1	1	1	2	2	2	2	2
Excess current relay for motor protection	-	-	1	-	1	-	-	-	-	-
Motor protection switch	-	-	-	1	-	-	2	2	2	2
Neozed fuse	-	-	-	-	-	10 A	-	-	-	-
Motor capacitor	-	-	-	1	-	-	2	-	-	-
A.C. power supply 230 V/2 A	1	1	1	1	1	1	1	1	1	1
Saftey extra low voltage	1	1	1	1	1	1	1	1	1	1
Hand-Off-Automatic selector switch	1	1	1	1	1	2	2	2	2	2
Electronic buzzer	1	1	1	1	1	1	1	1	1	1
Alarm reset button	-	-	-	1	1	-	-	-	-	1
Temperature limiter with reset button	-	-	-	1	1	-	-	-	-	2
Indicator lamp for operation	1	1	1	1	1	2	2	2	2	2
Indicator lamp for sense of rotation	-	1	1	-	1	-	-	1	1	1
Indicator lamp for high water alarm	1	1	1	1	1	1	1	1	1	1
Indicator lamp for malfunction motor protection	-	-	1	1	1	-	2	2	2	2
Indicator lamp for malfunction temperature limiter	-	-	-	1	1	-	-	-	-	-
Potential free contact for collective fault, 5A/250 V AC1	1	1	1	1	1	-	-	-	-	1
Watchdog timer 8,9 - 50,7 min.	-	-	-	1	1	-	-	-	-	1
Potential free contact, as before	-	-	-	1	1	1	1	1	1	1

possible level controls:	Art.Nr.									
Air diaphragm control unit with air bubbling system**	JP01080	•	•	•	•	•	•	•	•	•
Pressure switches for MultiCut pumps**	JP17101	•	•	•	•	•	•	•	•	•
Submersible switch pack A with 2 subm. ball contact switches 9.5 m cable and fixing devices*	JP16718	•	•	•	•	•	-	-	-	-
Submersible switch pack AmG with 2 subm. ball contact switches 9.5 m cable and counterweights	JP16719	•	•	•	•	•	-	-	-	-
Subm. switch pack B with 3 subm. ball contact switches, 9.5 m cable and fixing devices*	JP16725	-	-	-	-	-	•	•	•	•
Subm. switch pack BmG with 3 subm. ball contact switches, 9.5 m cable and counterweights	JP16726	-	-	-	-	-	•	•	•	•
Auxiliary switching unit ExH-A**	JP16720	-	-	-	-	•	-	-	-	-
Auxiliary switch module Ex II**	JP14427	-	-	-	•	-	-	-	-	-
Auxiliary switch unit ExH-B**	JP00295	-	-	-	-	-	-	-	-	•
Hydrostatic level control unit HD 04	JP44547	•	•	•	-	-	•	•	•	-
Hydrostatic level control unit HD 04 Ex	JP44548	-	-	-	•	•	-	-	-	•

possible accessories:	Art.Nr.									
Main switch in separate ISO casing	JP24508	1	1	1	1	1	1	1	1	1
Main switch 6,5 kW ***	JP18011	1	1	1	1	1	1	1	1	1
LCD working hour meter, plug-in	JP23243	1	1	1	1	1	2	2	2	2
Protection against running dry	JP41881	-	-	-	1	1	-	-	-	1
ESM4, error message module***	JP28999	1	1	1	1	1	1	1	1	1
ESV-Module	JP41850	-	-	-	1	-	-	-	-	1
Rechargeable battery for off the line operation	JP44850	1	1	1	1	1	1	1	1	1

* Subm. switch packs for explosion proofed control units must only be used in conjunction with ExH-A or ExH-B auxiliary switching units.

** require separate rechargeable battery

*** Only in conjunction with housing extension. Price on request.

Explosion proofed control units must not be installed in an explosion hazard location!

JUNG PUMPEN

CONTROL UNITS

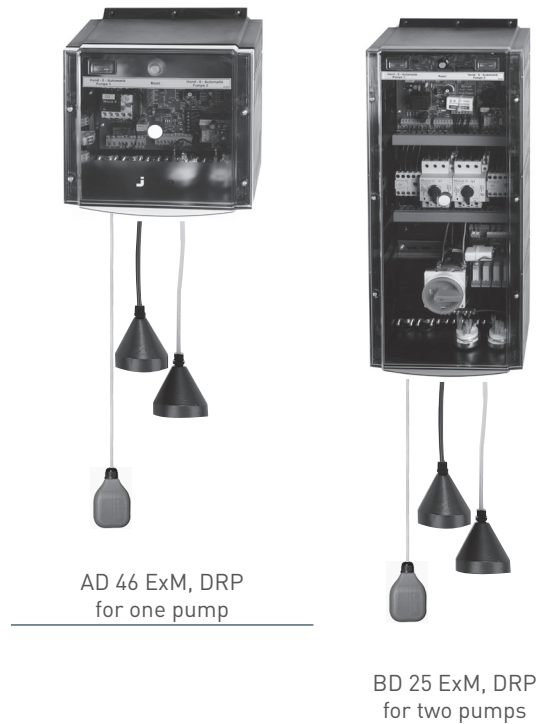
APPLICATION

Electronic control unit for level control starting and time-dependent switching off of one (AD) or two (BD) explosion proof submersible pump(s), preferably with MultiCut cutting system.

All AD/BD ...ExM control units have a dry run protection (DRP) and an integrated static air level control with two independently operating pressure switches, which ensures high operating safety and low maintenance and therefore lower costs. In addition, the control units have a facility to adjust the pump follow-up time and start-up delay after a power failure, thereby optimising the pressure drainage system.

All BD ...ExM types for two pumps automatically start up pumps 1 and 2 alternately. The resting pump is switched on during peak load or fault. Alternative operation of the unit without peak load function is possible, but with automatic switchover to the standby pump in the event of a fault. Variegated automatic start delay time after a power failure to prevent extreme rushes of current.

The clear and robust design of the unit enables it to be used outdoors in an empty casing at temperatures as low as -20°C without the need for any heating in the casing.



- Proven and system-coordinated control technology
- User-friendly handling
- Functions optimised for pressure drainage systems
- Usable down to -20°C without heating

BasicLogo control units for a MultiCut pump with integrated static air level control

Type	Motor protection A	Pre-fuse A	Code No.
AD 8 ExME, DRP	8.0	16	JP43162
AD 12 ExME, DRP	12.0	16	JP43163
AD 25 ExM, DRP	2.4–4.0	16	JP43159
AD 46 ExM, DRP	4.0–6.0	16	JP43160
AD 610 ExM, DRP	6.0–9.0	16	JP43161
AS 610 ExM, DRP	6.0–10.0	35	JP43164

BasicLogo control units for two MultiCut pumps with integrated level control

Type	Motor protection	Pre-fuse A	Code No.	
BD 25 ExM, DRP	for two	2.5–4.0	16	JP43165
BD 46 ExM, DRP	explosion protected	4.0–6.3	20	JP43166
BD 610 ExM, DRP	pumps	6.3–10.0	25	JP43167

JUNG PUMPEN

CONTROL UNITS

BasicLogo control units for one or two MultiCut pumps with integrated level control

Standard features:	AD 8 ExME, DRP	AD 12 ExME, DRP	AD 25,46,610 ExM, DRP	AS 610 ExM, DRP	BD 25,46,610 ExM, DRP
ISO casing enclosure IP44, 155 mm deep, mm HxW	430x250	430x250	250x250	430x250	430x250
Operating voltage 50 Hz~	1/N/PE 230V	1/N/PE 230V	3/N/PE 230/400V	3/N/PE 230/400V	3/N/PE 230/400V
Starting	Direct	Direct	Direct	YΔ-Start	Direkt
Motor contactor 4 kW/400 V	1	1	1	-	2
Y-delta composite contactor 7.5 kW/400 V	-	-	-	1	-
Excess current relay for motor protection	-	-	1	1	-
Motor protection switch	-	-	-	-	2
Fixed motor protection	8 A	12 A	-	-	-
Motor capacitor	1	1	-	-	-
A.C. power supply 230 V/2 A	1	1	1	1	1
Safety extra low voltage	1	1	1	1	1
Hand-Off-Automatic selector switch	1	1	1	1	2
Electronic buzzer	1	1	1	1	1
Reset buttons for alarm and temperature limiter	1	1	1	1	1
Indicator lamp for operation	1	1	1	1	2
Indicator lamp for sense of rotation	-	-	1	1	1
Indicator lamp for high water alarm	1	1	1	1	1
Indicator lamp for malfunction motor	1	1	1	1	2
Indicator lamp for malfunction temperature limiter	1	1	1	1	-
Indicator lamp for water deficiency	1	1	1	1	1
Indicator lamp for span exceedance	1	1	1	1	1
Potential free contact for collective fault, 5A/250 V AC1	1	1	1	1	1
Potential free contact, as before, optionally pulsating	1	1	1	1	1
Pump follow-up time, adjustable from:	1-60 s	1-60 s	1-60 s	1-60 s	1-130 s
Watchdog timer, adjustable	534-3042 s	534-3042 s	534-3042 s	534-3042 s	534-3042 s
Start-up delay time, depending upon the follow-up time setting	1-10 s	1-10 s	1-10 s	1-10 s	-

Integrated static air level control and DRP					
Pressure switch for operation, operative range up to 3 m water level	1	1	1	1	1
Switch-on point 100 mm water level, switch-off point 50 mm water level					
Second pressure switch for emergency switch-on and alarm	1	1	1	1	1
Pressure sensor with 10 m air tube	2	2	2	2	2
Ex-proof level control for protection against dry running (DRP)	1	1	1	1	1

Accessories for standard casing:	Art.Nr.					
Main switch in separate ISO casing	JP24508	1	1	1	1	1
LCD working hour meter, plug-in	JP23243	1	1	1	1	2
Start delay module for freely adjustable start-up delay of 0-315 s	JP41850	1	1	1	1	1
Rechargeable battery for off the line operation	JP44850	1	1	1	1	1
Softstarting device to limit the starting current to max. 33A * only if 25/2 ME is connected	JP24138	-	1	-	-	-
Alarm system, acoustic sound emitted outside	JP27402	1	1	1	1	1
Accessories only with housing extension						
Housing extension to H 430 x W 250 mm	JP41873	-	-	1	-	-
Housing extension to H 610 x W 250 mm	JP41874	1	1	1	1	1
Amperemeter 0-10 A	JP23297	-	-	1	-	-
ESM4, single error message module**	JP28999	1	1	1	1	1
Main switch up to 6.5 kW	JP22402	1	1	1	1	1

* only with the initial order, installed in factory.

** require separate rechargeable battery

Further accessories on request

Explosion proofed control units must not be installed in an explosion hazard location!

JUNG PUMPEN

CONTROL UNITS

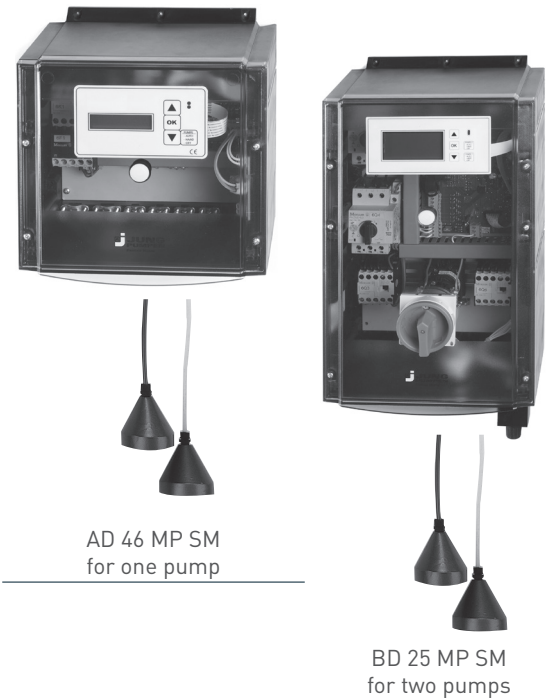
APPLICATION

Microprocessor control unit for level control switching on and off of one (AD) or two (BD) d.o.l. starting submersible pumps with or without explosion protection.

The individual adjusting options of EasyLogo make it possible to adapt individual pumping stations optimally to the conditions of a pressure drainage network. In addition, the control unit provides comfortable diagnostic options with its large event recorder of 500 messages.

The control units are equipped with an integrated static air level control, which converts the pressure sensor level into an analog signal via a sensor module. This system allows the switching points to be freely defined. A pressure switch, with a second pressure sensor attached, is incorporated as standard as an alarm and emergency switching system.

Due to the extensibility of the HighLogo control units through a data transmission unit, a SMS can be sent directly and in conjunction with the software HighControl there are various options for remote control and remote signalling of events.



- Integrated display and operating functions
- Individual adaptation to local conditions
- Analog level control via ex-proof pressure sensor module
- Event recorder for 500 messages
- Data interface
- Usable down to -20°C without heating

EasyLogo control unit for a pump with integrated level control

Type	Motor protection A	Pre-fuse A	Code No.
AD 25 MP SM	2.4–4.0	16	JP27118
AD 46 MP SM	4.0–6.0	16	JP27119
AD 610 MP SM	6.0–9.0	16	JP27120

EasyLogo control unit for two pumps with integrated level control

Type	Motor protection A	Pre-fuse A	Code No.
BD 25 MP SM	2.5–4.0	16	JP27152
BD 46 MP SM	4.0–6.3	20	JP27153
BD 610 MP SM	6.3–10.0	25	JP27154

JUNG PUMPEN EASY LOGO

CONTROL UNITS

EasyLogo control units for one or two pumps with integrated level control

Standard features:	AD 25, 46, 610 MP SM	BD 25, 46, 610 MP SM
ISO casing enclosure IP44, mm HxWxD	325x250x155	505x250x155
Operating voltage 50 Hzp	3/N/PE 230/400V	3/N/PE 230/400V
Starting Motor contactor 4 kW/400 V	Direct 1	Direct 2
Excess current relay for motor protection Motor protection switch	1 –	– 2
Electronic buzzer LED indicator lamp operation/fault Membrane keypad with Hand-Off-Automatic and menu navigation buttons LCD display with 2x16 characters	1 2 1 1	1 2 1 1
Level indicator lamp Motor current monitoring No. of switching operations and working hour meter Archive for 500 events Start delay after power failure, adjustable from 0-300 s Watchdog timing monitoring, adjustable from 0-7200 s Automatic emptying, adjustable in intervals or time of day Pump follow up time, adjustable from 0-120 s or dynamically Automatic test run, adjustable in intervals and duration	• • • • • • • • • • •	• • • • • • • • • • •
Potential free changeover for collective fault, 5A/250 V AC1 AC outlet as NO contact 230 V/2 A (external warning lamp) 24 V inlets for external fault signals (aux.) Data interface RS232, D-Sub 9pol.	1 1 2 •	1 1 3 •

Integrated level control		
Pressure sensor module for analog recording of level, 0-2 m water level	1	1
Separate pressure switch for emergency start-up and alarm	1	1
Pressure sensor with 10 m air tube	2	2

HighLogo Accessories:	Art.Nr.		
Data transmission, remote signalling and remote control (option only available from factory).			
Signal card MK3 with 3 relays, error messages to be transmitted freely selectable*	JP29793	•	•
Relay extension for MK3 (a maximum of 5 can be ordered)	JP29797	•	•
a/b modem card for analog landline*	JP28600	•	•
GSM modem card for D/E mobile telephone network	JP28813	•	•
GSM antenna for reinforcing signal, assembled	JP29671	•	•
HighControl Light, Software for MS Windows	JP27202	•	•
HighControl, connection to full version	on request		
Other accessories:			
Rechargeable battery set 18V, for emergency power supply up to 0.5 h	JP28603	•	•
Rechargeable battery 12 V, 1.2 Ah, for emergency power supply up to max. 6 h, in ext. housing	JP28604	•	•
Ex-proof level control sensor for protection against dry running**	JP41881	•	•

* only one module per control unit

** required for explosion protection

JUNG PUMPEN

MODULAR CONTROL UNITS - BASIC LOGO

APPLICATION

BasicLogo control units have a modular design and are built to order. In their basic configuration, they meet all the requirements for level-dependent starting and stopping of one or two submersible pumps.

All BD/BS types (for two pumps) start up pumps automatically, and alternate between the pumps. The resting pump is switched on during peak load (optionally) or in the event of a fault. After a power failure, pump start-up is staggered to prevent extreme rushes of current from occurring.

All control units are fitted with a Neozed 6A control fuse. A manual-0-automatic selector switch and an operational status indicator is incorporated for every pump. A winding thermostat can be connected (one per pump) from AD23 and BD23 upwards.

The control unit can be adapted to individual applications by combining it with various different level controls.

We also offer a wide range of modules and control elements for extending the control unit to meet individual requirements, including voltmeters, impulse counters, time meters, seal leak detectors, main switches, speed regulators, and connection to an emergency power generator.

The size of the sheet steel casing depends upon the electrical features required.



BD Example of configuration

- Proven and sturdy control systems
- Usable down to -20°C without heating
- Large range of level controls
- Individually configurable

JUNG PUMPEN

MODULAR CONTROL UNITS - EASY LOGO

APPLICATION

These microprocessor control units have a modular design and are built to order. The basic module is designed for level-dependent starting and stopping of one (AD) or two (BD) submersible motor pump(s), including pumps with explosion protection.

Each control unit has a Neozed 6A control fuse and an electronic alarm. Besides the LCD display, there is an LED operation/fault indicator lamp, and a manual-0-automatic push-button switch for every pump. A winding thermostat can be connected (one per pump).

The individual adjusting options offered by EasyLogo make it possible to optimally adapt individual pumping stations to the conditions of a pressure drainage network. Even the basic module trumps with extensive functions and information, such as a level indicator, time meter, start-up delay, automatic emptying, watchdog timing, and fixed or dynamic pump follow-up time, to name just a few.

Extending the control units to form HighLogo units, by including a data transmission unit, allows direct SMS messages to be sent. The use of High-Control software also provides various options for remote control and remote signalling of events.

The control unit can be adapted to individual applications by combining it with a variety of different level controls.

We also offer a wide range of modules and control elements for extending the control unit to meet individual requirements, including voltmeters, impulse counters, time meters, seal leak detectors, 12V or 18V rechargeable battery, main switches, speed regulators, and connection to an emergency power generator.

The size of the sheet steel casing depends upon the electrical features required.



BD Example of configuration

- Integrated display and operating functions
- Large range of level controls
- Individually configurable
- Event recorder for 500 messages
- Data interface
- Usable down to -20°C without heating

JUNG PUMPEN

CONTROL UNITS - HIGHLOGO

APPLICATION

The easiest way to communicate with an EasyLogo control unit is the software HighControl Light. This provides a low-cost option for comfortably adapting pumping stations to site requirements and for scanning events from the control unit memory.

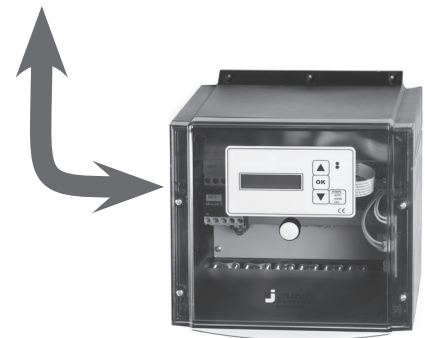
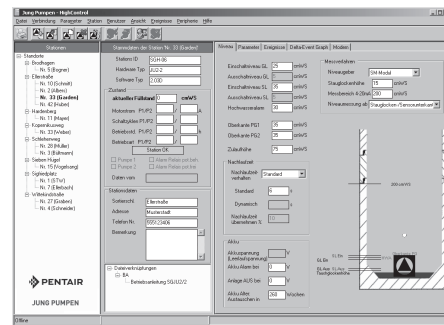
A total of four pumping stations can be controlled and managed in this way.

By incorporating data transmission components such as a modem or signal card, the EasyLogo becomes a HighLogo control unit. This provides the basis for comprehensive remote signalling and remote controlling functions.

By connecting the HighControl software to the full version, it is possible to remotely control the pumping station as if you were right there on site. The cost of servicing a pressure drainage network can be considerably reduced by using this combination.

Data can be transmitted via direct connection with the RS 232 interface, the GSM mobile network or via a landline telephone connection. By fitting a signal card in an EasyLogo control unit, it is possible to program individual event messages on relay contacts which can be connected to a higher control unit.

Automatic entries in the operations journal and the transmission of freely programmable events in the form of an SMS are possible, as is the presentation and evaluation of the stored archive data. With the full version, up to 999 pumping stations can be controlled and managed.



- Easy and clear processing of control parameters
- Remote signalling and remote controlling through various data transmission options
- Saving of operational data for up to 999 pumping stations
- Graphic presentation of operational actions
- Software connection to process control systems

HighLogo components


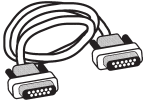
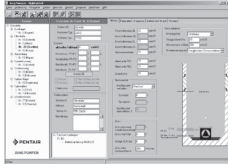
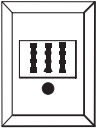

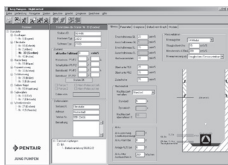
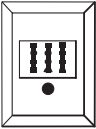

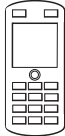
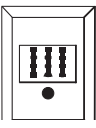

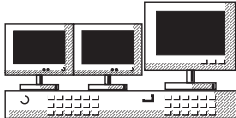
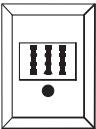

Type	Code No.
HighControl Light *	JP27202
Connection of HighControl full version	on request
a/b-Modem card for analog telephone landline **	JP28600
GSM modem card for D/E mobile network **	JP28813
GSM antenna for reinforcing signal, assembled	JP29671
Signal card MK3 with 3 relays **	JP29793
Relay extension for MK3 (a maximum of 5 can be ordered)	JP29797

*] Software for Microsoft Windows 2000/XP, at least Pentium 300Mhz, 128 MB RAM and 10 MB memory capacity on the data carrier

**] Can only be ordered in conjunction with an EasyLogo control unit, only one module possible per control unit

JUNG PUMPEN

CONTROL UNITS - HIGHLOGO - DATA TRANSMISSION COMPONENTS

EasyLogo	Transmission route	Software	Functions
 <p>mit: + a/b Modem + GSM Modem</p>	Data cable 	HighControl Light 	Parameterisation
	Telephone  Data cable RS232 Mobile network 	HighControl 	Parameterisation, remote signalling and/or remote controlling (closed system)
	Telephone  Mobile network 	SMS to mobile telephone 	Remote signalling
	Telephone  Mobile network 		Parameterisation, remote signalling and/or remote controlling with process control system (open system)
+ Signal card + Compatible hardware for third-party software	Telephone  Data cable RS232 Mobile network 	Third-party software e.g. Siemens, Schramml, Intellution, SAE, GEFEC, BGU	Remote signalling and/or remote controlling with process control system (open system)

JUNG PUMPEN

LEVEL CONTACT SENSOR

APPLICATION

Submersible ball contact switches for direct level control of one single phase pump or for level control of 3-phase pumps and duplex units by control unit.

The hysteresis (difference between switch-on/switch-off) can be adjusted by altering the cable length of the submersible switch (= length of the cable from the fastening point to the float switch) within the range of 150-500 mm. A fixing device is available for fastening the submersible float switch cable inside the sump; for a suspended installation of the switch a counterweight is available which can be attached to the submersible switch cable.

For metallic isolation between the submersible ball contact switches and a control unit in the Ex-area. The auxiliary control device used provides intrinsically safe circuits for submersible switches or other operating units. Intrinsically safe means: explosion protection for the

control circuits in accordance with EN 50014/50020.

In case of a power failure the transmission of switching commands is only possible if the auxiliary units are equipped with a rechargeable battery, the necessary automatic battery charger is standard scope of supply.



Submersible ball contact switch



ExH-A/B

Submersible ball contact switch

Type	Cable type	Cable length	Code No.
Single			
Subm. ball contact switch, cable black	H07RN-F-3G1.0	1.0 m	JP44802
Subm. ball contact switch, cable black	H07RN-F-3G1.0	3.0 m	JP44800
Subm. ball contact switch, cable black	H07RN-F-3G1.0	5.0 m	JP44804
Subm. ball contact switch, cable black	H07RN-F-3G1.0	9.5 m	JP44801
Subm. ball contact switch, cable red (up to 95°C)	SiH-F-3G1.0	3.0 m	JP44806
Subm. ball contact switch, cable red (up to 95°C)	SiH-F-3G1.0	9.5 m	JP44805
as a package			
A: 2 units with set of fixing accessories	H07RN-F-3G1.0	2 x 9.5 m	JP16718
CmG: 1 unit with counterweight	H07RN-F-3G1.0	1 x 9.5 m	JP16739
AmG: 2 units with counterweight	H07RN-F-3G1.0	2 x 9.5 m	JP16719
B: 3 units with set of fixing accessories	H07RN-F-3G1.0	3 x 9.5 m	JP16725
BmG: 3 units with counterweight	H07RN-F-3G1.0	3 x 9.5 m	JP16726
BH: 3 units with set of fixing accessories	SiH-F-3G1.0	3 x 9.5 m	JP24768
BHmG: 3 units with counterweight	SiH-F-3G1.0	3 x 9.5 m	JP24769
Float switch pack with PUR cable		3 x 9.5 m	JP42230

Ex-proof auxiliary control devices

Type	Code No.
ExH-A for control unit A...Ex in conjunction with subm.ball contact switches	JP16720
ExH-B or control unit A...Ex in conjunction with subm.ball contact switches	JP00295

Standard features:	KT	KT Hot water
Temperature resistance constantly/temporarily in °C	60/90	95/95
Breaking capacity 250 VAC	10 A (8 A)	10 A (8 A)
Breaking capacity 400 VAC	10 A (4 A)	10 A (4 A)
Contact closes with rising water level*	NO contact	NO contact
Protection (up to 4 bar)	IP 68	IP 68
Protection class (with earth conductor)	I	I
Optional accessories:		
Set of fixing accessories	JP16688	•
Counterweight for suspended installation	JP44803	•

Standard features:	ExH-A	ExH-B
ISO casing, enclosure IP54, 100 mm deep HxW in mm	220x130	220x130
Operating voltage 50 Hzp	1/N/PE 230 V	1/N/PE 230 V
Number of intrinsically safe circuits	2	3
Optional accessories:		
Rechargeable battery for off the line operation	JP44850	1

*1) Special versions with reverse operation or with changeover contact on request

JUNG PUMPEN

LEVEL CONTACT SENSOR

APPLICATION

Level contact sensors are used to monitor and control the water level in tanks and sumps. Once the water levels set have been reached, signals are sent through relay contacts to the higher control (BasicLogo AD/BD...) which switches the pumps on and starts the alarm in the event of high water.

The pneumatic level contact sensors M and LM are principally used in explosion-protected areas.

Type M works according to the open static air pressure system. As the water level rises the air pressure in the piping increases. A pressure switch is actuated and the pump is switched on. The pump is switched off depending upon the water level and the time. A second pressure sensor is used as an alarm and emergency start-up system. Both sensors are located beyond the wastewater once the switch-off point has been reached.

Type LM works according to the air bubbling system. The switch-on and switch-off points are indicated by a pressure switch for each. The pressure sensor for the switch-off point remains underwater. A compressor provides the necessary aeration for this system at intervals.

The HD 04 series works with a hydrostatic, electronic pressure sensor which is permanently underwater. It gives an analog electronic signal to an evaluation electronic unit which can be programmed to certain threshold water levels. The process can recognise minimal differences in water level and is usable in all areas.



M/LM



HD 04

Pneumatic level contact sensor

Type	Code No.
Static air level control (M) for single and duplex units	JP17101
Air diaphragm control unit (LM) for single and duplex units	JP01080

Standard features:	M	LM
ISO casing, enclosure IP44, 155 mm deep, HxW in mm	250x250	250x250
Operating voltage 50 Hzp	1/N/PE 230 V	1/N/PE 230 V
Connection cable with safety plug	–	1,5 m
Compressor and electrovalve	–	•
Level monitoring	Static air pressure	Air bubbling
Static air pressure switch for operation, operative range: 3 m water level, switch-on point 100 mm, switch-off point 50 mm	1	1
Second pressure switch for emergency switch-on and alarm	1	1
Pressure sensor with 10 m air tube	2	2
Follow-up time, adjustable from 1-120 s	•	–
Watchdog timer, adjustable from 10-180 s	•	–
Alarm delay, adjustable from 15-240 s	–	•
Potential-free NO contact for basic load, peak load and alarm	3	3
Optional accessories:		
Rechargeable battery for off the line operation	JP44850	1
Bracket for air tubs	JP23100	1

Hydrostatic level contact sensor

Type	Code No.
HD 04	JP44547
HD 04 Ex with explosion protection (Zone 1/2)	JP44548

Standard features:	HD 04	HD 04 Ex
ISO casing, enclosure IP44, 155 mm deep, HxW in mm	250x250	250x250
Operating voltage 50 Hzp	1/N/PE 230 V	1/N/PE 230 V
Freely programmable switch-on and switch-off points	•	•
Minimum programmable level difference	1 cm	1 cm
Submersible sensor made of stainless steel 1.4571	•	•
PUR cable with integrated air tube for pressure equalisation 10 m	•	•
Diaphragm material	Keramik	Keramik
Compression Strength	10 mWS	10 mWS
Measuring range in m water level	0-4	0-4
Measured value signal in two-wire system, temperature-compensated	4-20 mA	4-20 mA
Programmable switch-on points	4	4
Programmable switch-off points	4	4
Potential-free contacts for model	4	4
Saftey Barrier Ex ia II C	–	•
Optional accessories:		
Analog output 4-20 mA+	JP24206	•
Analog output 0-10 V*	JP24207	•
Protective pipe for submers. sensor**	JP09257	•

* per device only 1 analog output possible

** for mounting on a concrete sump wall. Other mounting configurations on request. Length = 0.6 m.

JUNG PUMPEN

ALARM UNITS

APPLICATION

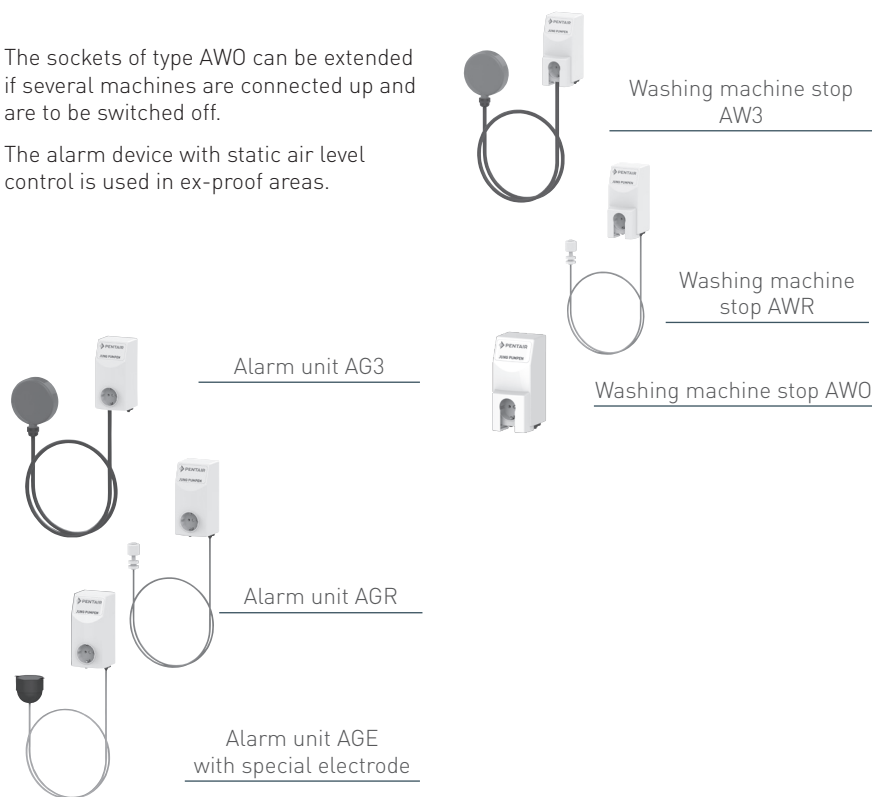
Alarm devices notify undesirably high water levels using a submersible ball contact switch or float switch, an electrode or a static air pressure system. They are useful where pumps are operated directly from the mains in a tank or sump without a control unit or level contact sensor.

All alarm devices emit an acoustic signal and have a potential-free contact for remote alarm signalling (not in the case of AW ...). They can be extended for mains-independent operation using a rechargeable battery, thereby providing protection from flooding in the sump in which the pump is located in the event of a power failure. The integrated socket enables the operation of both pump and alarm unit on one 230V socket. Either a washing machine or a dishwasher can be plugged into the alarm device.

If a high water level is detected, an acoustic signal follows and the machine connected will be switched off. The plug retainer prevents the continued operation of the machine connected as long as the problem persists.

The sockets of type AWO can be extended if several machines are connected up and are to be switched off.

The alarm device with static air level control is used in ex-proof areas.



Alarm units

Type	Code No.
AG3 with ball contact switch and 3 m cable	JP44891
AG10 with ball contact switch and 9.5 m cable	JP44892
AGR with reed switch and 3 m cable	JP44893
AGE with special electrode and 1.5 m cable	JP44894
Ex-proof alarm unit, static air level control with 10 m hose	JP09724

Standard features:	AG3/10	AGR	AGE	Static air level control
enclosure IP44, 125 mm deep HxW in mm	–	–	–	160x160
ISO casing with shock proof plug, IP20, 70 mm deep, HxW in mm	147x71	147x71	147x71	–
Operating voltage 50 Hz	1/N/PE 230 V	1/N/PE 230 V	1/N/PE 230 V	1/N/PE 230 V
Connection cable with safety plug	–	–	–	0,5 m
Power via alarm unit's socket	4000 VA	4000 VA	4000 VA	4000 VA
Level monitoring	KT-	Reed-	Electrode	Static air
Temperature resistance constantly/temporarily in °C	60/90	100/100	40/60	40/60
Set of fixing accessories	1	–	–	–
Static air level control for alarm, operating range: 3 m water level	–	–	–	1
Pressure sensor with 10 m air tube	–	–	–	1
Test button	–	–	–	1
Potential-free NO contact 5A/250VAC1	1	1	1	–
Potential-free changeover contact 5A/250VAC1	–	–	–	2
Electronic alarm buzzer	1	1	1	1
Optional accessories:				
Rechargeable battery for off the line operation	JP44850	1	1	1

Alarm units with washing machine stop

Type	Code No.
AW3 with ball contact switch and 3 m cable	JP44895
AWR with reed switch and 3 m cable (for Hebefix)	JP44897
AWO without level control sensor, for further machines	JP44899

Standard features:	AW3	AWR	AWO
ISO casing with shock proof plug, IP20, 70 mm deep, HxW in mm	147x71	147x71	147x71
Operating voltage 50 Hz	1/N/PE 230 V	1/N/PE 230 V	1/N/PE 230 V
Control transformer 230/12 V	1	1	1
Level monitoring	Subm. ball contact switch	Reed switch	–
Temperature resistance constantly/temporarily in °C	60/90	100/100	–
Set of fixing accessories	1	–	–
Breaking capacity of integrated socket	4000 VA	4000 VA	4000 VA
Safety plug 230 V, switched off if alarm is set off	1	1	1
Electronic alarm buzzer	1	1	1
Optional accessories:			
Rechargeable battery for off the line operation	JP44850	1	1

JUNG PUMPEN

CONTROL UNITS

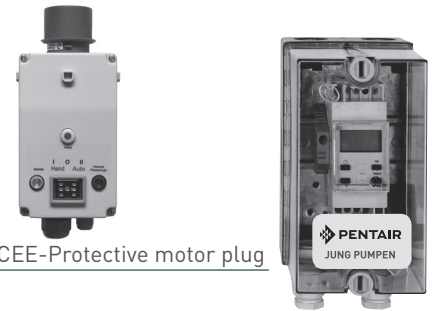
APPLICATION

The components on this page promote the operating safety of pumps or lifting stations.

The **protective motor plug** protects the d.o.l. pump connected from electrical, mechanical and thermal overload up to a connected load of 4 kW. The protective device is fitted in an ISO casing and besides the integrated excess-current release it also includes a connection for a motor winding thermostat. The model with level control switches the pump on and off with the submersible ball contact switch connected.

The **seal leak detector** is used to monitor the sealing of the oil chamber between the motor and the hydraulic section of the oil chamber in the case of submersible pumps of the US/UB and MultiCut/MultiStream/MultiFree series. In the event of water penetrating the oil chamber, an integrated buzzer is activated. The device must be mounted in a location which allows it to be monitored easily and in a well ventilated room.

The **switching device for the automatic test run** of pumping stations with extended idle and dry phases prevents the shaft sealings in the pump from becoming stuck as it causes automatic short-term test runs. The StP is an additional device ready for connection to control units of the AD/BD and ND series.



CEE-Protective motor plug



Seal leak detector

Switching device for test run

Equipment with CEE protective motor plug

Operating voltage 3/N/PE-230/400 V
Enclosure IP 44, cable inlet M 25 + 16
Temperature range -25° bis +50° C
Max. breaking capacity 4 kW AC3
Max. switching frequency 30 switches/hour.

Features:

- 1 CEE-protective motor plug 16 A / 400 V, 5-pole with phase inverter 270 x 120 x 100 mm (H x B x T)
- 1 Motor contactor 4 KW
- 1 Motor contactor with motor protection relay [reset button can be activated from the exterior]
- 1 ON/OFF switch
- 1 Indicator lamp, red, for indicating rotational direction
- 1 Indicator lamp, white, for operation display

For devices with level control:

- 1 Submersible ball contact switch with 9.5 m cable H07RN-F-3G1
- The electrical connection between the pump and the protective motor plug must be carried out by the customer.

Equipment with seal leak detector

- Operating voltage: 1/N/PE-230 V
ISO casing IP 20 (DKG)
147 x 71 x 70 mm (H x B x T)
or ISO-casing with transparent cover IP 55 (DKG-Ex), 200 x 130 x 102 mm (H x B x T)
- 1 Electronic unit with transformer and control light
 - 1 Ex-proof syft barrier for type DKG-Ex-(Ex) II (2) G [Ex ia] IIC/IIB
 - 1 Special electrode with 10 m cable
 - 1 Potential-free NO contact for error messages
 - 1 Acoustic alarm
- [For duplex units 2 units required]

Equipment with switching device for test run

- Operating voltage: 1/N-230 V
- 1 ISO-casing with transparent cover, dimensions including screw joint 205 x 130 x 100 mm (H x B x T) with PG screw joint H 220 mm, IP 54
 - 1 Power supply cable 0,5 m and plug
 - 1 Digital timer with automatic changeover between summer and winter time, shortest operation: 1 sec., power reserve: approx. 20 h

Pump accessories

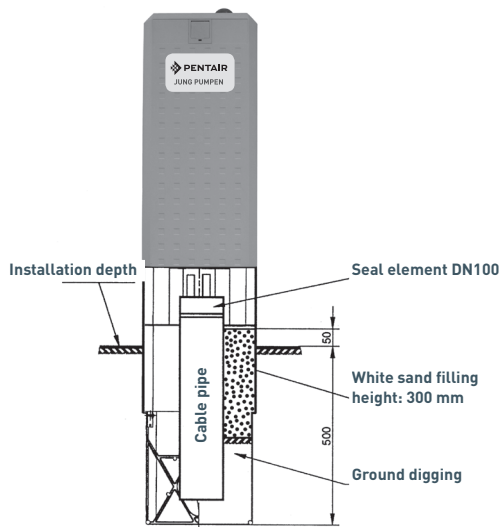
Type	Motor protection	for pump type	Code No.
Protective safety motor plug	8	US 151 E	JP40264
	8	US 152 E/153 E/155 E	JP40770
CEE-Protective motor plug	2,5-4,0	US 152 D, 153 D, 155 D	JP40773
CEE-Protective motor plug without level control	2,8-4,0	UAK*, US 151 D	JP12262
	4,0-6,0	UAK*, US 251 D	JP12266
	6,0-9,0	UAK*	JP12267
CEE-Protective motor plug with level control	2,8-4,0	UAK*	JP09725
	4,0-6,0	UAK*	JP09726
	6,0-9,0	UAK*	JP09727
* The nominal current of the pump type required must be suitable for the activating range of the motor protection.			
DKG - seal leak detector			JP44900
DKG Ex - seal leak detector only for ex-proof pumps			JP00249

Switching and control units

Type	Code No.
StP - Switching device for automatic test run	JP01264

JUNG PUMPEN

CASING AND INSTALLATION MATERIALS



Casing	Protection category	Usable installation area		Depth of device		Outside dimensions			Pitch of holes		Code No.	Code No.
		H	B	Area	Lock area	H	B	T	A	C	Basement	
Size 0	IP 44	700	545	240	200	862	596	322	495	160	JP24854	JP12710
Size 1	IP 43	915	675	260	225	1100	785	327	690	160	JP24855	JP12711
Size 2*	IP 43	915	1000	255	205	1125	1115	320	1020	160	JP24856	JP12712
Size 3*	IP 44	955	1340	255	205	1125	1445	320	1350	160	JP24857	JP12713
Size 3G*	IP 44	1185	1350	270	240	1350	1450	350	1350	160	JP24857	JP20864
Typ A	IP 44	700	250	194	168	1415	316	224	integrated		integrated	JP23735
Typ B	IP 44	650	400	195	180	1620	440	240	integrated		integrated	JP19024
Typ C	IP 43	840	400	190	140	1895	425	240	integrated		integrated	JP19026

* preassembled for a double lock

Plastic base kit with M 12 threads for installation of the casing. Assembling and installation by the customer.

To avoid the development of condensation water inside the outdoor casing the bottom of the base should be filled with approx. 5 cm of white sand above the ground level. aufzufüllen! Alternative a special base stuffing could also be used.

Installation materials	Code No.
Lock with 3 keys	JP22408
Heating facility 230V/55W	JP01918
Thermostat for heating of casing	JP24531
Warning light, unmounted	JP22375
Flashlight, unmounted	JP22859
Horn, unmounted	JP17591
Cast resin bushing 6-20 mmØ	JP11125
Cast resin bushing 8-24 mmØ	JP13763
Sealing cone DN 100, vapour-proof	JP44843
Seal element DN 100, pressure-tight	JP44848
Seal element DN 100, pressure-tight, universal	JP44849
Ventilation pipe DN 100, stainless steel	JP44858

Functions and specifications

Warning light

Orange, shock-resistant in accordance with EN 50014, burglar-proof, enclosure IP 65, for short flashes, with 7 W/230 V

Flashlight

Orange, shock-resistant in accordance with EN 50014, burglar-proof, enclosure IP 65, for flashlight with short but very intense flashes 230 V/15 mA.

Horn

Thermoplast (ABS) shock-resistant, grey 88 dB (A) / 1 m for mounting inside of the housing. Dimensions: 170 x 80 x 78 (H x W x D), enclosure IP 33, 230 V, 15 mA.

Cast resin bushing

Cast resin bushing complete with funnel and cast-resin. Approved for use in explosion hazardous areas.

Seal element

For the separation of explosion-hazardous areas (pmp sump) and ventilated rooms above respectively below the backpressure level with non explosion protected electrical equipment (e.g. housings for outdoor installation).

Above backpressure level (Code No. JP44843):

TÜV-certified water vapour proof sealing element (not tight against pressing water) for cable ducts DN 100 in accordance with VDE 0165.

Equipped with the following drills:

- 2 holes of 20 mm
- 2 holes of 14 mm
- 5 holes of 7 mm

Below backpressure level (Code No. JP44848 or JP44849):

Sealing element for cable ducts DN 100. In case of possible backpressure the sealing element ensures that the waste water can not flow into the connected building. Equipped with the following drills:

- 2 holes of 15 mm
- 2 holes of 8 mm
- 1 hole of 5 mm

The universal seal element 40133 is adaptable as far as the cable inlets are concerned. The following inlets are possible through combining individual elements:

- 4 x diameter of 3 to 11 mm
- 3 x diameter of 10 to 25 mm

Ventilation pipe

For the ventilation of sumps, it can be installed as the top end of the ventilation pipe that leads approx 400 mm above the ground level. Material 1.4301. Dimensions: d = 108/168 x h = 700 mm