

MARKET INFORMATION  
POWER GENERATION INDUSTRY



# Trimod<sup>o</sup> Besta

Solutions for the Power Generation Industry



High quality and utmost product reliability are vital in power generation plants. Besta offers robust and durable level switches, indicators and transmitters, manufactured according to ISO 9001, for monitoring in all areas of the water and steam cycles.

Trimod Besta level switches carry ATEX, IECEx, GostR Ex and Rostechnadzor (RTN) approvals. The level switches and the Besta float chambers are available acc. to PED 97/23/EC.

### Typical applications

- Water/steam systems
- Cooling systems
- Demineralized water
- Desalination
- Low/High power heaters
- Water recycling systems
- Heavy water production



**SIL**  
IEC 61508/61511  
SIL 3 Capable



**RTN**

## Level switch for high temperature application

### Type HAA 22C01 041

Nominal pressure	DIN PN 40
Operating temperature	0 to 400°C
Ambient temperature	0 to 135°C
Density of the liquid	min. 0.7 kg/dm <sup>3</sup>
Operating differential	12 mm, fixed
Wetside material	Stainless steel (CrNiMo/316 equiv.)
Flange material	
Seal part	Stainless steel (CrNiMo/316 equiv.)
Slip-on flange	High temperature carbon steel (13CrMo44), zinc galvanised, passivated (not in contact with medium)
Housing material	Seawater resistant die cast aluminium
Flange	DN 65, PN 40 acc. to DIN 2501
Flange facing	Raised face type C acc. to DIN 2526
Switch element	Dual SPDT Microswitches, galvanically isolated, with silver contacts
Switch rating	250 VAC, 5 A 30 VDC, 5 A
Enclosure	IP65
Cable gland	Internal thread M20x1.5
Safety Integrity Level (SIL)	SIL 2



### Options

- Nominal pressure up to DIN PN 320 and ANSI cl. 2500
- All stainless steel version
- Material wet side in Hastelloy C
- Switch element: self checking proximity switch
- Flange facing: male, tongue, groove and ring joint
- Float chambers for by-pass installation
- Microswitches with gold plated contacts

## Level switch for severe environment

### Type 5HA 134RF 02

Nominal pressure	ANSI cl. 600
Operating temperature	0 to 400°C
Ambient temperature	0 to 135°C
Density of the liquid	min. 0.7 kg/dm <sup>3</sup>
Operating differential	12 mm, fixed
Wetside material	Stainless steel (CrNiMo/316 equiv.)
Flange material	
Fixed flange	Stainless steel (CrNiMo/316 equiv.)
Housing material	Stainless steel (CrNiMo/316 equiv.)
Flange	DN 3", PN cl. 600, ANSI B16.5
Flange facing	Raised face
Switch element	Microswitch SPDT with silver contacts
Switch rating	250 VAC, 5 A 30 VDC, 5 A
Enclosure	IP65
Cable gland	Internal thread M20x1.5
Safety Integrity Level (SIL)	SIL 1 (Type 5HAA 134RF 02: SIL 2)



#### Options

- Nominal pressure up to ANSI cl. 2500 and DIN PN 320
- Material wet side in Hastelloy C
- Switch element: self checking proximity switch
- Flange facing: male, tongue, groove and ring joint
- Dual SPDT Microswitches, galvanically isolated
- Microswitches with gold plated contacts
- Float chambers for by-pass installation

## A typical switch of the industrial range

### Type AA 131R 04

Nominal pressure	ANSI cl. 150
Operating temperature	0 to 330°C
Ambient temperature	0 to 70°C
Density of the liquid	min. 0.7 kg/dm <sup>3</sup>
Operating differential	12 mm, fixed
Wetside material	Stainless steel (CrNiMo/316 equiv.)
Flange material	
Seal part	Stainless steel (CrNiMo/316 equiv.)
Slip-on flange	Carbon steel (HII), zinc galvanised, passivated (not in contact with medium)
Housing material	Seawater resistant die cast aluminium
Flange	DN 3", PN cl. 150, ANSI B16.5
Flange facing	Raised face
Switch element	Dual SPDT Microswitches, galvanically isolated, with silver contacts
Switch rating	250 VAC, 5 A 30 VDC, 5 A
Enclosure	IP65
Cable gland	Internal thread M20x1.5
Safety Integrity Level (SIL)	SIL 2



#### Options

- Nominal pressure up to ANSI cl. 2500 and DIN PN 320
- All stainless steel version
- Material wet side in Hastelloy C
- Switch element: self checking proximity switch
- Flange facing: male, tongue, groove and ring joint
- Microswitches with gold plated contacts
- Float chambers for by-pass installation

### Level switch for use in hazardous areas

#### Type XB8 43E 02

Type of protection	Ex ia d IIC T6   EPS 09 ATEX 1238 X
Nominal pressure	PN 63 acc. to DIN
Operating temperature	-10 to 330°C
Ambient temperature	-10 to 80°C
Density of the liquid	min. 0.7 kg/dm <sup>3</sup>
Operating differential	12 mm, fixed
Wetside material	Stainless steel (CrNiMo/316 equiv.)
Flange material	
Seal part	Stainless steel (CrNiMo/316 equiv.)
Slip-on flange	Carbon steel (HII), zinc galvanised, passivated (not in contact with medium)
Housing material	Seawater resistant chilled cast aluminium
Flange	DN 100, PN 63 acc. to DIN 2501
Flange facing	Raised face type E, DIN 2526
Switch element	SPDT Microswitch, gold plated contacts
Enclosure	IP67
Cable gland	Internal thread M20x1.5
Safety Integrity Level (SIL)	SIL 1 (Type XBB8 43E 02: SIL 2)



#### Options

- Nominal pressure up to DIN PN 320 and ANSI cl. 2500
- All stainless steel version
- Material wet side in Hastelloy C
- Switch element: self checking proximity switch
- Flange facing: male, tongue, groove and ring joint
- Float chambers for by-pass installation

#### Float chambers for by-pass installation

- Pressure range: up to ANSI cl. 2500 and DIN PN 320
- Temperature range up to +400°C
- Material: carbon steel, low and high temperature carbon steel, stainless steel 304 and 316 equiv.
- Max. hardness of HRC 22 acc. to NACE
- Manufacturing approvals
- Welding certificates
- PED conformity



Trimod Besta level switch type: HAA 22C01 041  
Besta float chamber type: I021-1C0RC1

#### Documentation and services

- Test reports acc. to EN 10204-2.2
- Inspection certificates acc. to EN 10204-3.1
- Pressure test protocols
- Detailed documentation: parts information with technical specifications, material data, incl. lot and charge information
- Non-destructive testing: ultrasonic, x-ray, dye penetration test
- Mechanical testing: tension, notch and hardness tests
- Base- and protective coatings



# BESTA

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