

Please send the completed request by mail to info@stuewe.de.

Project Information**Customer:** _____

Address: _____

Person in charge: _____ Department: _____

Phone: _____ Email: _____

Person in charge: _____ Department: _____

Phone: _____ Email: _____

Project Name: _____

Ship Name and/or Type: _____

Classification Society + Class _____

Number of ships: _____ Shafts per ship: _____

Propulsion (electric, hybrid, LNG,...): _____

Ship / Propulsion Data:

Power per main shaft: _____ kW

Nominal torque main shaft: _____ kNm

Turn speed main shaft: _____ rpm

Power per auxiliary shaft: _____ kW

Nominal torque aux. shaft: _____ kNm

Turn speed: aux.shaft: _____ rpm

Mass moment of Inertia at the disc _____ kgm²

Torque on the disconnected propeller while sailing _____ kNm

Diameter of main propeller shaft _____ mm

Mass of shaft and propeller _____ kg

Functions Stopp Turn Block System required:Stopp (Brake): Turn: Block: **Power supply on board for STB System:**Voltage Three Phase: U_{AC} _____ V _____ Hz ;Voltage Direct Curent U_{DC} _____ V

Air Pressure (if available): _____ bar

Air debit (if available) _____ l/min

Hydraulic Pressure (if available and have to be used): _____ bar

Oil debit (if available and have to be used) _____ l/min

Environmental Conditions:

Ambient Temperature: min: _____ °C max.: _____ °C

Humidity max. _____ Others: _____

Schock requirements:

Please specify if required: _____

Corrosion Protection:

Standard: ISO xxxx C4M

Standard colour: RAL 5010 (Enzianblue)

Other if different: ISO _____

Colour: _____

Turn device

Nominal turn torque while rotating _____ kNm

Max. tur torque starting (static friction and inertia) _____ kNm

 Requested turn speed (main shaft) standard 0,5rpm

 other : _____ rpm

Manual engagement of pinion with disc by lever

 Indication pinion engaged by sensor

 additional (redundancy) sensor.

 Indication pinion disengaged by sensor

 additional (redundancy) sensor.

Block device = Locking pin

 Actuation: by hand

 with hand wheel

 electric

 others

Locking torque required _____ kNm

 Indication : lock pin engaged (inserted) sensor

 additional sensor

 Indication : lock pin not engaged (not inserted) sensor

 additional sensor

STB Control cabinet

 Control cabinet for local control yes no

 Including interface to MCC / Bridge yes no

Approx. distance between cabinet and STB device: _____ m

 Mounting: on a wall on the floor

 Hand Operation Panel (HOP) yes no

 Halogen free single wire: Standard: H07Z-K90°C / H05Z-K 90°C

 Other Wire: _____

 Single wire marking yes no

 Connection cable with shielding: yes no

Other requirements wiring:

Documentation and QM Requirements:

 Instruction and maintenance manual English(Standard) _____
 End of production test report

 3.1 Test report according EN

 2D Drawings 3D Data (stp)

 Circuit diagram

 PLC program

Special features and requirements:

Special standards to be met:

Control Definitions

Interface control cabinet (front panel)

Function	Control device	Type	Status lamp (signal lamp name)	Colour	Remarks
Power supply	Main switch	rotary switch	Power on	white	
Emergency Stopp	Switch ES	push			
Reset ES	Reset ES	push	Reset needed	white	
Stop (Brake)	Release Brake	rotary switch	Brake released	green	
	Apply Brake		Brake applied	red	
HPU oil level			Oil level low	red	Sensor In HPU
HPU oil temp.			Oil temp. high	red	In HPU
Turn	Turn CW	rotary switch	Turn disengaged	green	
	Turn CCW		Turn engaged	red	
	No turn		Turn engaged but off	White	
Turn motor current	Amperemeter			visual	
Block	(Disengage lock pin)	(rotary switch-electric lock pin only)	Lock disengaged	green	
	(Engage lock pin)		Lock engaged	red	
Operation mode	Switch between local / remote (only brake) / HOP	rotary switch	Local operation	white	
			Remote oper.	red	
			HOP operation	green	
Interlocks			Brake interlock	red	
			Turn interlock	red	
			Lock interlock	red	
System status	Acknowledge system status	?- push ??	System fault /error	red	

ACK					
Lamps okay	Lamps control	push		All intact	green

Interface hand operation panel (HOP) - Option

Function	Control		Status (signal lamp)	Colour	Remarks
Emergency stop	Switch ES				Reset on front panel only
HOP active			Active if on	green	
Stop (Brake)	Release Brake	push	Brake released	green	
	Apply Brake	push	Brake applied	red	
Turn	Turn CW	push	Turn disengaged	green	
	Turn CCW	push	Turn engaged	red	
Block (only electric pins)	(Disengage lock pin)	(push)	Lock disengaged	green	
	(Engage lock pin)	(push)	Lock engaged	red	
System status ACK			System fault /interlocks /error	red	Information only

STB control cabinet - Input power and signals

Function	Control signals		Type	From	When	From	When
Power supply		440V / 60Hz	3ph + GRd	Ship power supply			
S	Release Brake	1= release	Hard wired	Ship control system	If Remote control	HOP	If HOP active
	Apply Brake	1= apply	?	dito	dito	dito	dito
	Brake released	0 = released		Pressure sensor HPU			
	Brake applied	1 = applied		Pressure sensor HPU			
	Pad worn	0 = worn		Sensors Brake calipers	Sensors serial connected		
	Oil level	1= low		Switch HPU			
	Temperature oil to high	1= high		PT 100 HPU			
T	Turn CW	1=turn CW				HOP	If HOP active
	Turn CCW	1=turn				dito	dito
	No turn	0= no turn					
	Turn pinion disengaged	1= disengaged		Sensors turn device	Serial connected if more than one		
	Turn pinion engaged	1=engaged		dito			
B	(Disengage lock pin)					HOP	If electric pin and HOP active
	(Engage lock pin)					dito	dito
	Lock disengaged	1= disengaged		Sensors on STB	Serial connected if more than one		
	Lock engaged	1= engaged		dito			

Feedback and output signals

Function	Control	Value	Type	To ship control	To alarm and monitoring system
S	Brake released	1=released	Hard wire	X	
	Brake applied	1= applied	?	X	X
T	Turn disengaged	1 =		X	
	Turn engaged	1 =		X	X
	(Turn engaged but off)				
	Turning CW	1 =		X	
	Turning CCW	1 =		X	
B	Lock disengaged	1 =		X	
	Lock pin engaged	1 =		X	X
Operation mode	Local operation active	1 =		X	X
	Remote operation active	1 =		X	
System status ACK	System fault /error	?		X	
Others				X	

Power Supply

Source	Consumer	Voltage	Power max	Usual Power STB size 2 and (1)	Connection wire	Remarks
Ship	STB Control complete	440VAC / 60Hz			?	
Control STB	Turn motor	dito	Max. 10kW size 4	3kW (1kW)	?	Size 3-6kW
Control STB	HPU motor	dito	Max. 4kW	2kW (2kW)		
Control STB	Sensors Baumer	24VDC				Min 4 – max 16 pieces
Control STB	HPU pressure sensor	24VDC			?	
Control STB	HPU oil level	24VDC				
Control STB	HPU Oil Temp	24VDC				
Control STB	HPU 2/2 Way valve	24VDC	0,2kW			Max. 3 pcs
Control STB	HPU Pressure sensor 2	24VDC				
Control STB	(Lock pin electric motor)	440VAC	1kW	0,5kW		Option

Description Interlocks / Inside Control Operation Restrictions

Function	Information from	Must	Reaction if not	Remarks
Brake is applied	Sensor applied =1	Turn not possible		
		Signal applied is out to ship control	System error	
Turn pinion engaged	Sensor engaged=1	Signal is out to ship control	System error	Main engine must be disconnected and locked
Lock pin engaged	Sensors engaged = 1	Turn not possible		
		Signal is out to ship control		Main engine must be disconnected and locked
Local operation active	Switch	Remote control not possible		
Remote operation active	Switch or lamp	Local control can interrupt remote control		Lamp remote control is activated by any remote signal and by the switch on the local panel