

Engineering Release Notice (ERN)	Location	Change Description	A = Added D = Deleted	W = Was	Document Release Status RELEASED
					Date
					Modification Count

Sensors Control and Monitoring System							Switches Engine Shutdown System	
Sensors	Signal	Unit	Range	Warning Initial Delay / Warning Delay	Warning Level	Derating Level	Shutdown Initial Delay / Shutdown Delay	Shutdown Level (Tolerance)
Charge air pressure	0,5-4,5 V	kPa	50 - 400±4,2kPa (150-500 abs).	30 sec from start / 2.25 sec	300 (400 absolute)	NA	NA	NA
Charge air temperature after turbine	50-0 kΩ	°C	-40 - 130±4%	90 sec from start / 2.25 sec	80	NA	NA	NA
Coolant level switch	Digital		ON/OFF	30 sec from start / 7.5 sec	Low (OFF / Open contact)	NA	NA	NA
Coolant temperature	50-0 kΩ	°C	-40 - 140±1,5%	30 sec from start / 2.25 sec	98	NA	1 sec	105 (± 2°C) SDU Ch. S1 (NA for EME. Valid for AUX and HBR modes)*
Engine speed cam	Frequency	rpm		Instant	Lost signal	NA	NA	NA
Engine speed crank	Frequency	rpm		Instant	Lost signal	NA	NA	NA
Eng. overspeed SDU 1500+15%	Frequency	rpm / Hz	153 puls./rev.	Instant	Lost signal	NA	Instant	1725 / 4399 Hz (-1 to 0%)
Eng. overspeed SDU 1800+15%	Frequency	rpm / Hz	153 puls./rev.	Instant	Lost signal	NA	Instant	2070 / 5279 Hz (-1 to 0%)
Exhaust gas temperature	PT200	°C	0 - 850±2,5°C	30 sec from start / 5 sec	650	NA	NA	NA
Oil level sensor	Digital		ON/OFF	30 sec from start / 5 sec	Low level	NA	NA	NA
Oil temperature	50-0 kΩ	°C	-40 - 140±1,5°C	30 sec from start / 2.25 sec	125	NA	NA	NA
Piston cooling switch	Digital	kPa	ON/OFF	20 sec from start / 2.25	120 ±20	NA	NA	NA
Water In fuel switch	Digital		ON/OFF	NA	Water in fuel	NA	NA	NA

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	<p>The legal owner of this document is stated as Design Location in KOLA and in associated Part Version Report</p>		<p>Document No</p> <p>3849968</p>	<p>Issue Index</p> <p>11</p>	<p>Volume No</p> <p>01</p>	<p>Page No</p> <p>1(2)</p>

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Sensors (rpm dependent)	Signal	Unit	Range	Initial Delay / Delay	Warning Level / Derating Level / Shutdown Level rpm					Switches Shutdown System
					Map					
Coolant pressure	0,5-4,5 V	kPa	0-300±3%		0 rpm	900 rpm	1000 rpm	1500 rpm	1800 rpm	
Warning Level		kPa		30 sec from start / 1.5 sec	NA	43	55	100	123	
Derating Level		kPa		NA	NA	NA	NA	NA	NA	
Shutdown Level (Shutdown Unit Channel S4)*	Digital	kPa	ON/OFF	11 sec ± 20% from start / 1 sec	NA	NA	NA	NA	NA	Shutdown Unit Setting S4: 800 rpm ±2%* 2040 Hz ±2% 153 pulses / revolution
Differential oil pressure	NA	kPa	NA		0 rpm	900 rpm	1000 rpm	1500 rpm	1800 rpm	
Warning Level		kPa		NA	NA	NA	NA	NA	NA	
Derating Limit		kPa		NA	NA	NA	NA	NA	NA	
Fuel pressure	0,5-4,5 V	kPa	0-700±1,5%		0 rpm	900 rpm	1000 rpm	1500 rpm	1800 rpm	
Warning Level		kPa		30 sec from start / 5 sec	NA	69	75	175	200	
Derating Level		kPa		NA	NA	NA	NA	NA	NA	
Oil pressure	0,5-4,5 V	kPa	0-700±1,5%		0 rpm	900 rpm	1000 rpm	1500 rpm	1800 rpm	
Warning Level		kPa		20 sec from start / 2.25 sec	NA	230	250	250	250	
Derating Level		kPa		NA	NA	NA	NA	NA	NA	
Shutdown Level (Shutdown Unit Channel S4)	Digital	kPa	ON/OFF	11 sec ± 20% from start / 1 sec	NA	200±20	200±20	200±20	200±20	Shutdown Unit Setting S2, S3: 800 rpm ±2% 2040 Hz ±2% 153 pulses / revolution (NA for EME. Valid for AUX and HBR modes)*
Seawater pressure	0,5-4,5 V	kPa	0-300±3%		0 rpm	900 rpm	1000 rpm	1500 rpm	1800 rpm	Only HE
Warning Level		kPa		30 sec from start / 3.75 sec	NA	13	15	28	38	
Derating Level		kPa		NA	NA	NA	NA	NA	NA	

* S4 channel calibrated in production even if not used

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Document Title
TECHNICAL SPECIFICATION

Document Type
TECHNICAL DATA

Document No

3849968

Issue Index

11

Volume No

01

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