SIL Declaration of Conformity

Product Type: HART® Temperature Transmitter

Product Name: **5335/5337, 6335/6337 and 7501**

Manufactured by: PR electronics A/S
                    Lerbakken 10
                    DK-8410 Rønde
                    Denmark

PR electronics as a manufacturer declares that the above listed products together with the temperature sensor are suitable for use in a safety-instrumented system up to a Safety Integrity Level of **SIL 2** if the appropriate safety instructions are observed.

The reliability data summarized in the following tables are the results of a hardware assessment according to IEC61508 carried out on the temperature transmitters 5335/5337, 6335/6337 and 7501. The hardware assessment consists of an FMEDA done by Exida.

The 5335/5337, 6335/6337 and 7501 temperature transmitters are considered to be a Type B component with a hardware fault tolerance (HFT) of 0.

RTD 4-wire sensor:

Transmitter/Sensor assembly and environment	SFF		SIL
Transmitter alone (any environment)	74 %		SIL1
Close coupled transmitter/sensor assembly in a high stress environment	90 %		SIL 2
Transmitter/sensor assembly with extension wires in a low stress environment	90 %		SIL 2
Transmitter/sensor assembly with extension wires in a high stress environment	98 %		SIL 2
	PFD_{AVG} T[proof] = 1 year	PFD_{AVG} T[proof] = 5 year	SIL
Transmitter alone [note 1] (any environment)	4.55E-4 [note 2]	1.64E-3 [note 2]	SIL 2

TC sensor:

Transmitter/Sensor assembly and environment	SFF		SIL
Close coupled transmitter/sensor assembly in a high stress environment	92 %		SIL 2
	PFD_{AVG} T[proof] = 1 year	PFD_{AVG} T[proof] = 5 year	SIL
Transmitter alone [note 1] (any environment)	4.74E-4 [note 2]	1.70E-3 [note 2]	SIL 2

[note 1] The calculated PFD_{AVG} values for the transmitter alone are better than or equal to 2.50E-3 and thereby fulfil the assumption to not claim more than 25% of the allowed range for the safety function, as required for SIL 2 according to table 2 of IEC61508-1. Calculations of PFD_{AVG} for the sensor/transmitter assembly are not carried out.

[note 2] Please refer to FMEDA report for assumptions used in calculations.

Rønde, 27 May 2020

Stig Lindemann, CTO
Manufacturer's signature