

SIL DECLARATION OF CONFORMITY MANUFATURER DECLARATION

As manufacturer

PR electronics A/S Lerbakken 10 DK-8410 Rønde

hereby declares that the following product:

Туре:	4114/4116		
From serial no.:	060094001		

is suitable for the use in safety instrumented systems up to a Safety Integrity Level of SIL 2 AC¹ if the appropriate instructions are observed.

The reliability data summarized in the following table are the result of a hardware assessment according to IEC 61508 carried out on the 4114/4116. The hardware assessment consists of an FMEDA analysis (done by exida) which uses the $2_{\rm H}$ approach with the $2_{\rm H}$ qualified failure rates from the exida component reliability database. To apply the $2_{\rm H}$ approach on a Type B device, the diagnostic coverage must be at least 60%.

4114/4116 is considered a Type B component with HFT= 0.

When 2_H data is used for all the devices in an element, then the element meets the hardware architectural constraints up to SIL 2 at HFT=0 for low demand mode applications or SIL 2 / SIL 3 at HFT=1 for high and low demand mode applications.

	λSafe	λDD	λDU	DC	SIL AC ¹
4114/4116 - current output	0	401	82	83%	2
4116 - relay output	179	191	82	69%	2

1: SIL AC (Architectural Constraints) means that the calculated values are within the range for hardware architectural constraints for SIL2 but does not imply all related IEC 61508 requirements are fulfilled. In addition, the end-user needs to prove that the device has a suitable systematic capability, and that the entire safety function can fulfil the required PFD / PFH values.

Systematic Capability can be proved by prior use justification according to IEC 61511, clause 11.5.3.

Roende, 29 April 2025

Mehre

Stig Lindemann, CTO Manufacturer's signature