



SIL-DECLARATION of CONFORMITY <i>SIL-DICHIARAZIONE DI CONFORMITA'</i>	EN 50402 ; EN 61508
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N.E.T. S.r.l. – 20010 Cornaredo (MI) ITALY Via Legnano, 2, hereby declares under its own responsibility that the gas detection units

Model Cyber ++ IR – Intelligent Infrared 4-20mA gas sensing transmitter

comply with the following European / International Standards for Functional Safety:

EN 50402:2005 + A1:2008 ; EN/IEC 61508:2010 parts 1 to 7

The Functional Safety Assessment was carried out by GWW GasWarn Dr. Wenker GmbH in cooperation with of N.E.T. S.r.l. see the enclosed Compliance Statement CST2707 of GWW dated May 13th 2011. The results are given in the Report FSR2735 by GWW GasWarn Dr. Wenker GmbH (Dortmund / Germany) as independent consultant for SIL specifying the following data for the use of single channel (1 out of 1) or redundant (1 out of 2) sensors. To achieve the claimed SIL-compliance for the sensors the conditions for use overleaf have to be obeyed.

	Single sensor 1oo1	Redundant sensors 1oo2
Safety function	4-20mA output equivalent to measured gas concentration	
Measuring range	0 – 100 % LEL	
SIL Capability Hardware	2	3
SIL Capability Software	2	2
Type of device	B	
Proof test interval	1 year	
MTTR	24 h	
SFF	96,09 %	
HFT	0	1
β Factor	—	5 %
PFD	$1,29 \times 10^{-4}$	$6,46 \times 10^{-6}$
λ_{du}	$2,65 \times 10^{-8}$ (per h)	
λ_{dd}	$5,06 \times 10^{-7}$ (per h)	
λ_{su}	$1,45 \times 10^{-7}$ (per h)	
λ_{sd}	0 (per h)	

Cornaredo Date: May 13th 2011

Dott. Giacomo Frigo
(General Director / Amministratore Unico)



Nano Environmental Technology
The Reliable Alternative



Conditions for use

The values for the SIL-Capability of the CYBER IR Transmitter and the determined failure rates are valid only if the following conditions for use will be obeyed (responsibility of the user).

The detector has to be placed at a position suitable for the measuring application, to be connected correctly to the central unit and to be put into operation by the detector manufacturer or an authorized installer company.

Output signals of the transmitter of < 2 mA (fail low) and > 22 mA (fail high) have to be recognized by the central unit as transmitter failure.

The environmental parameters (e.g. the ranges for temperature, humidity and pressure) specified in the users manual have to be observed and followed.

The transmitter has to be maintained regularly following the instructions of N.E.T. and to be calibrated using a certified calibration gas mixture.

As intelligent IR-sensors IRIS-P-32, IRNET-P-32 or IRNET-P-20 may be implemented into the Cyber IR. The failure rates of these three types are very similar. The highest rates are those of IRIS-P-32 which are implemented into this declaration. So it is automatically also valid for IRNET-P-32 and IRNET-P-20.

The proof test has to be carried out once per year. As proof test a regular calibration has to be carried out without additional requirements.