

Manufactured and designed by
Elster GmbH.
Located at
Lotte, Germany

FUNCTIONAL SAFETY CERTIFICATE

Kiwa hereby declares that the **Electronic Safety Control.**

FCU-500

Is suitable for inclusion in a S.I.L. 3 loop.

The compliance is based on an evaluation to EN 13611 A2 (2011) and
EN 61508 (2010)

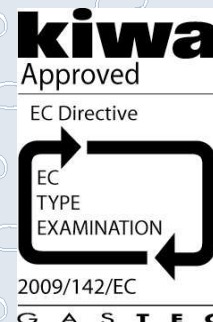
Report number : 125388 (For available models see the Annex)

The systems and their associated components only comply with the above listed
safety requirements if the specifications and instructions as detailed in the
commissioning manual are met.

The FCU-500 Electronic Safety Control provides the following functions :

- Automatic soundness check
- Emergency stop
- Minimum air flow
- Minimum purge time
- Zone purge
- Air damper ignition position correct
- Minimum gas pressure
- Maximum gas pressure
- Safety chain

Where a safety function is mandatory for the application, the system shall be
included with fail safe sensors and valves.

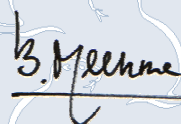


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GASTEC





Bouke Meekma
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Electronic Safety Control.

List of all available types:

Model:	Characteristics:
FCU500	Standard control.
FCU500	STB/STW mode
FCU500	STB/STW and high temperature mode
FCU500	STB/STW and high temperature mode (16 bit microprocessors)

Safety critical function	PFH (fit)	SFF	SIL function
Tightness control (normal)	4.5	≥ 99%	3
Tightness control (reduced testing time)	4.6	≥ 99%	3
Emergency stop (normal)	4.5	≥ 99%	3
Emergency stop (with optional input)	4.5	≥ 99%	3
Minimum air flow safeguard	4.5	≥ 99%	3
Minimum air flow safeguard (with optional input)	4.5	≥ 99%	3
Purge safeguard	4.8	≥ 99%	3
Purge safeguard (with optional input)	4.7	≥ 99%	3
Purge safeguard with feedback	4.8	≥ 99%	3
Purge zone safeguard	4.8	≥ 99%	3
Air damper ignition position check with IC20	6.1	≥ 99%	3
Air damper ignition position check with RBW	6.3	≥ 99%	3
Minimum gas pressure safeguard	4.5	≥ 99%	3
Minimum gas pressure safeguard (with optional input)	4.5	≥ 99%	3
Maximum gas pressure safeguard	4.5	≥ 99%	3
Maximum gas pressure safeguard (with optional input)	4.5	≥ 99%	3
Feedback safety interlock safeguard	4.5	≥ 99%	3
STB/STW mode	6.6	≥ 99%	3
STB/STW and high temperature mode	6.7	≥ 99%	3
SIL overall F1 H0	11.1	≥ 99%	3
SIL overall F2 H0	11.0	≥ 99%	3
SIL overall F1 H1	11.9	≥ 99%	3
SIL overall F2 H1	11.8	≥ 99%	3