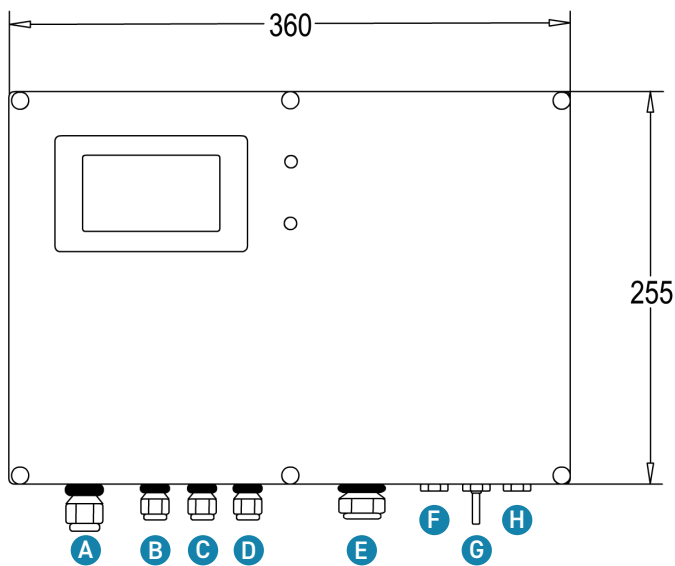


Data Sheet EMI-LOG (classic/basic)

1. OVERVIEW

Features	EMI-LOG classic	EMI-LOG	EMI-LOG basic
NO _x -Sensor	✓	✓	optionally upgradeable
Temperatursensor	✓	✓	✓
CO-Sensor	optionally upgradeable	✓	optionally upgradeable
Professional installation/commissioning*	X	X	X
Digital measurement report	optionally available	optionally available	optionally available
Cloud-Data-Backup (DSGVO-compliant)	✓	✓	✓

2. TECHNICAL DATA



- A** 230 V Power connection
- B** NO_x-Sensor
- C** Load signal
- D** Temperature sensor
- E** Internet-/Modbus-TCP-Interface
- F** Gas outlet (only for EMI-LOG)
- G** CO-Sample-Gas (only for EMI-LOG)
- H** Fresh air inlet (only EMI-LOG)

- Required connections:
- Schuko plug: 230 V
 - Network connection: RJ45-Socket
 - Load signal: 4 ... 20 mA

Standard installation length*	
Schuko	5 m
Thermo	25 m
NO _x	10/11 m
Hose	25 m

* in special cases, the length can be adapted to the local conditions

Type designation	EMI-LOG classic	EMI-LOG	EMI-LOG basic
Operating voltage	230 V AC (External security is required)		
Maximum power consumption	360 W		
Without NO _x -Sensor	15 W	35 W	-
Without LTE-Modul	5 W	25 W	5 W
Ambient temperature	0 ... 50 °C		
Protection class	IP40		
Network connection	RJ-45 Socket		
Internal memory	16 GB		

2.1 SENSORS

Temperature measurement	
Sensor type	Typ K, NiCr-Ni, Class 1 accord. DIN EN 60584
Measuring range	0 °C . . . 1000 °C
NO _x -Measurement	
Sensor type	NO _x -Sensor Continental
Measuring range	0 . . . 1600 ppm
O ₂ -Measurement	
Sensor type	BOSCH-SAEJ-1939 (CAN-Bus)
Measuring range	0 % . . . 21 %
CO-Messung	
Sensor type	4 . . . 20 mA
Measuring range	0 . . . 1000 ppm

2.2 EXTENSIONS

- Pressure module

Pressure transmitter for recording the differential pressure in the flue gas pipe incl. kit

- LTE-Module

Integrated LTE router for secure decentralised Internet access via SIM card

- Digital-to-Analogue-Converter

Converting the digital output of the EMI-LOG into analogue signals (4 . . . 20 mA)

3. MAINTENANCE AND WARRANTY

- The warranty is based on a function and stable Internet connection and online registration as well as compliance with the maintenance intervals
- To ensure the functionality of the EMI-LOG, annual maintenance must be carried out
- A 4 . . . 20 mA load signal is to be provided for the unambiguous load pickup
- A daily inspection of the EMI-LOG and its components is recommended

Applies to the following spare parts:

	NO _x -Sensor	CO-Sensor	Temperature
Change interval in operating hours	8000 ¹⁾	8000 ¹⁾	16000 ²⁾

¹⁾ 8000 Operating hours or after expiry of a calendar year.

²⁾ 16,000 Operating hours or after expiry of two calendar years.

- All other components*, with the exception of the power supply unit and control unit, must be replaced if necessary, but at least at an interval of 16,000 operating hours.

* Refers to CO measuring module: Condensate trap, solenoid valve, sample gas pump

4. NETWORK SETTINGS

- A network connection with Internet access is a basic requirement and must be provided by the operator
- DHCP-capable (Standard)
- Fixed network address for integration into existing infrastructure freely adjustable (IP address, subnet mask, default gateway, DNS)

Minimum network and firewall shares

URL	Port	Description
*.amazonaws.com	8883/TCP	MQTTs - Encrypted connection to IOT for real-time communication
s3.eu-central-1.amazonaws.com/updates.elektrosolid.de/emi-log	443/TCP	HTTPS - Encrypted retrieval of firmware updates
dynamodb.eu-central-1.amazonaws.com	443/TCP	HTTPS - Encrypted database communication
europe.pool.ntp.org	123/UDP	NTP - time synchronisation

5. WARNINGS AND ALARMS

Warning

- Limit value exceeded as daily average
- Alarm value of an exhaust gas component exceeded in 6 half-hourly averages
- Half of all half-hourly mean values mean values of a day greater than the alert threshold

Alarms

- Daily mean value above the alarm value
- Temperature: Exceeding the alarm value once
- One alarm corresponds to 24 hours of downtime (max. 400 h in 12 month)
- From the time of an alarm, the operator has 48 hours to initiate measures

	Limit value (warning value)	Alarm value
NO _x /CO	0,10 g/Nm ³	≥ 0,15 g/Nm ³
	0,25 g/Nm ³	≥ 0,35 g/Nm ³
	0,50 g/Nm ³	≥ 0,60 g/Nm ³
	1,00 g/Nm ³	≥ 1,10 g/Nm ³
	0,15 g/Nm ³	≥ 0,2 g/Nm ³
	0,30 g/Nm ³	≥ 0,40 g/Nm ³
Temperature	catalyst specific	catalyst specific

6. RETRIEVE MEASUREMENT DATA

- „EMI-VIEW Customer Portal“ user interface (www.emilog-portal.de)
- Modbus-TCP-Interface via LAN cable
- Digital-to-Analogue Converter (optional)

Meaning of the holding registers Modbus-TCP-Interface

Register	Designation	Unit
0	Half-hourly average CO	mg/Nm ³
1	Half-hourly average NO _x	mg/Nm ³
2	Half-hourly average T	°C
3	Downtime	h
4	Operating hours	h
5	Status	see right

Note: The holding registers are in uint16_t format.

Legend of register 5 „Status“

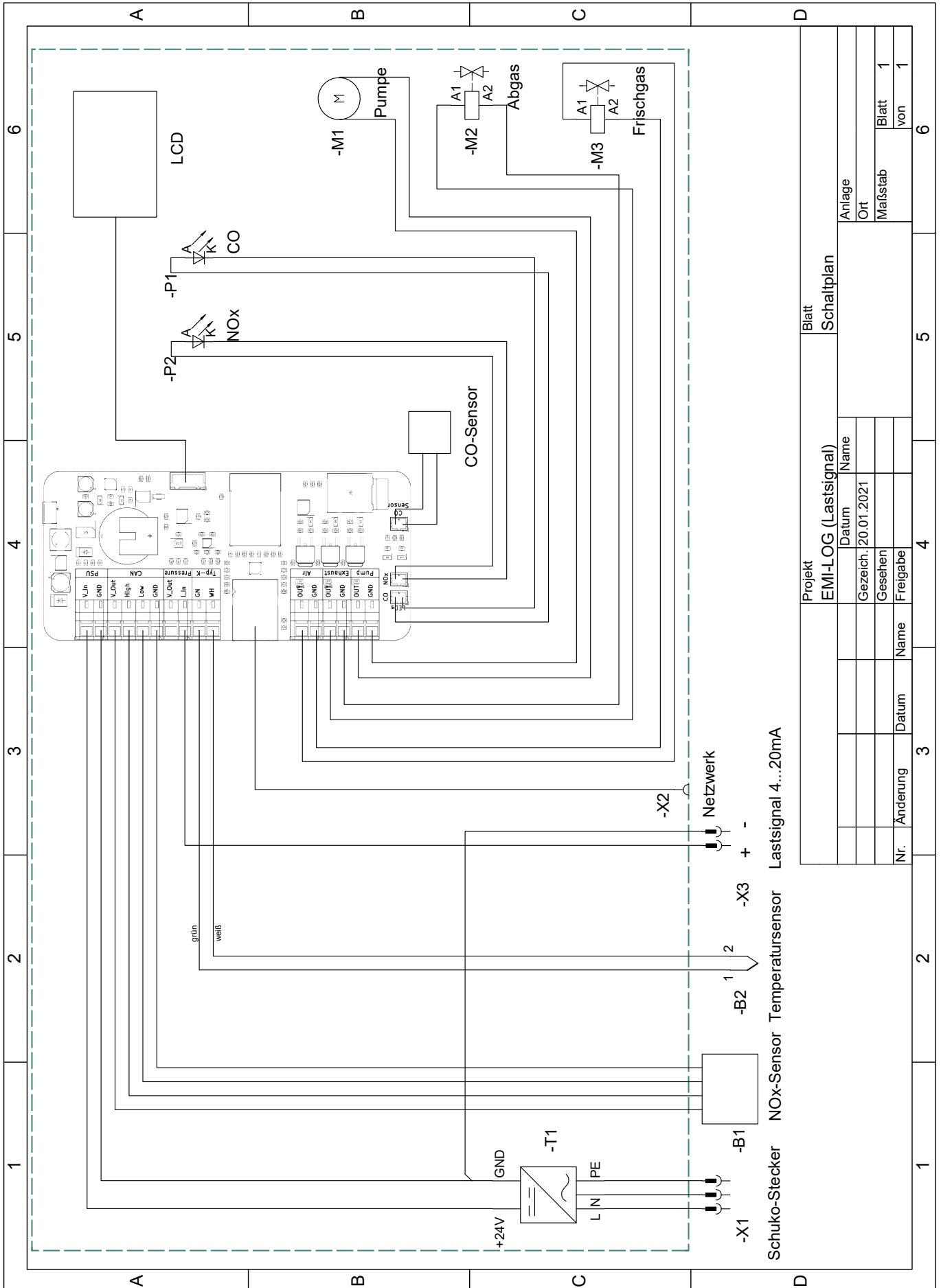
Wert	Bedeutung
0	Passive - No measurement takes place
1	Active - Measurement is taking place
2	Ok - Sensor status ok
3	Warning type 1 - Warning value exceeded
4	Warning type 2 - Warning value exceeded
5	Alarm - Alarm value exceeded
6	Sensor defective

Basic settings

The background standard is as follows:

	4 mA	20 mA
NO _x	0 mg/Nm ³	1300 mg/Nm ³
CO	0 mg/Nm ³	1200 mg/Nm ³
T	0 °C	1000 °C

The values can be adjusted individually. For this purpose, it is absolutely necessary to contact the manufacturer Emission Partner.



Projekt	Blatt	Schaltplan	Anlage
EMI-LOG (Lastsignal)			
Gezeich.	Datum	Name	Ort
	20.01.2021		
Gesehen			Maßstab
			1
Nr.	Aenderung	Datum	Name
			von
			1