

Overview



Plug-in and field device

The CALOMAT 62 gas analyzer is primarily used to identify a gas component quantity (e.g. H₂, N₂, Cl₂, HCl, NH₃) in binary or quasi-binary gas mixtures.

The CALOMAT 62 is specially designed for use in corrosive gas mixtures.

Benefits

- Universally applicable hardware basis
- Integrated diagonal gas correction, no external calculation required
- Open interface architecture (RS 485, RS 232, PROFIBUS)
- SIPROM GA network for maintenance and service information (optional)
- Electronic and analyzer part: gas-tight separation, purgeable, IP65, long service life even in harsh environments (field device)

Application

- Chlorine-alkali electrolysis
- Metallurgy (steel production and processing)
- H₂ measurement in LNG (Liquefied Natural Gas) process
- Ammonia synthesis
- Fertilizer production

Special applications

In addition to the standard combinations, special applications are also available upon request (e.g. increased sample gas pressure up to 2000 hPa absolute).

Design

19" unit

- With 4HE for installation
 - in hinged frame
 - in cabinets with or without telescope rails
 - with closed or flow-type reference chambers
- Front plate for service purposes can be pivoted down (laptop connection)
- IP20 degree of protection, with purge gas connection
- Internal gas routes: Pipe made of stainless steel (mat. no. 1.4571)
- Gas connections for sample gas input and output as well as comparative gas: Internal thread 1/8" – 27 NPT
- Purge gas connections: Pipe diameter 6 mm or 1/4"
- With closed or flow-type reference chambers

Field device

- Two-door housing (IP65) for wall installation with gas-tight separation of analyzer and electronic parts, purgeable
- Individually purgeable housing halves
- Gas route with screw pipe connection made of stainless steel (mat. no. 1.4571), or Hastelloy C22
- Purge gas connections: Pipe diameter 10 mm or 3/8"
- Gas connections for sample gas input and output as well as comparative gas: Internal thread 1/8" – 27 NPT
- With closed or flow-type reference chambers

Display and control panel

- Large LCD field for simultaneous display of:
 - Measured value (digital and analog display)
 - Status bar
 - Measurement ranges
- Contrast of the LCD field adjustable via the menu
- Permanent LED backlighting
- Washable membrane keyboard with five softkeys
- Menu-driven operator control for parameterization, test functions, adjustment
- Operator support in plain text
- Graphical display of the concentration progression; time intervals parameterizable
- Bilingual operator software German/English, English/Spanish, French/English, Spanish/English, Italian/English

Input and outputs

- One analog output per measurement element (from 0, 2, 4 to 20 mA; NAMUR parameterizable)
- Two analog inputs configurable (e.g. diagonal correction or external pressure sensor)
- Six binary inputs freely configurable (e.g. measurement range changeover, processing of external signals from the sample preparation)
- Six relay outputs, freely configurable (e.g. outage, maintenance request, threshold alarm, external magnetic valves)
- Each can be expanded by eight additional binary inputs and relay outputs (e.g. for automatic adjustment with max. four test gases)

Communication

- RS 485 contained in the basic device (connection on the back side; with plug-in device also possible behind the front plate)

Options

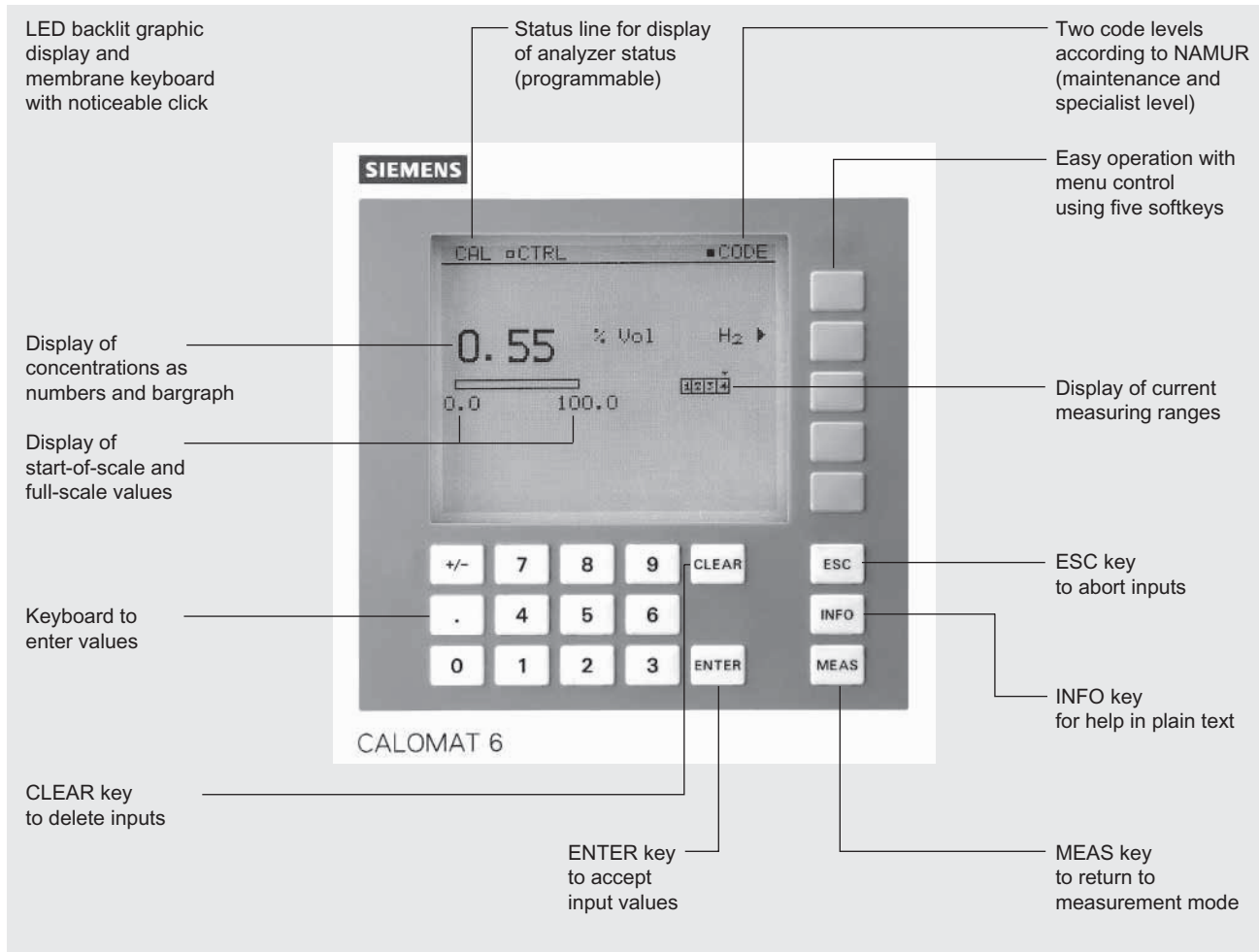
- RS 485/RS 232 converter
- RS 485/Ethernet converter
- RS 485/USB converter
- Connection to networks via PROFIBUS DP/PA interface
- SIPROM GA software as the service and maintenance tool

Continuous Gas Analyzers, extractive

CALOMAT 62

General

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CALOMAT 62, membrane keyboard and graphic display

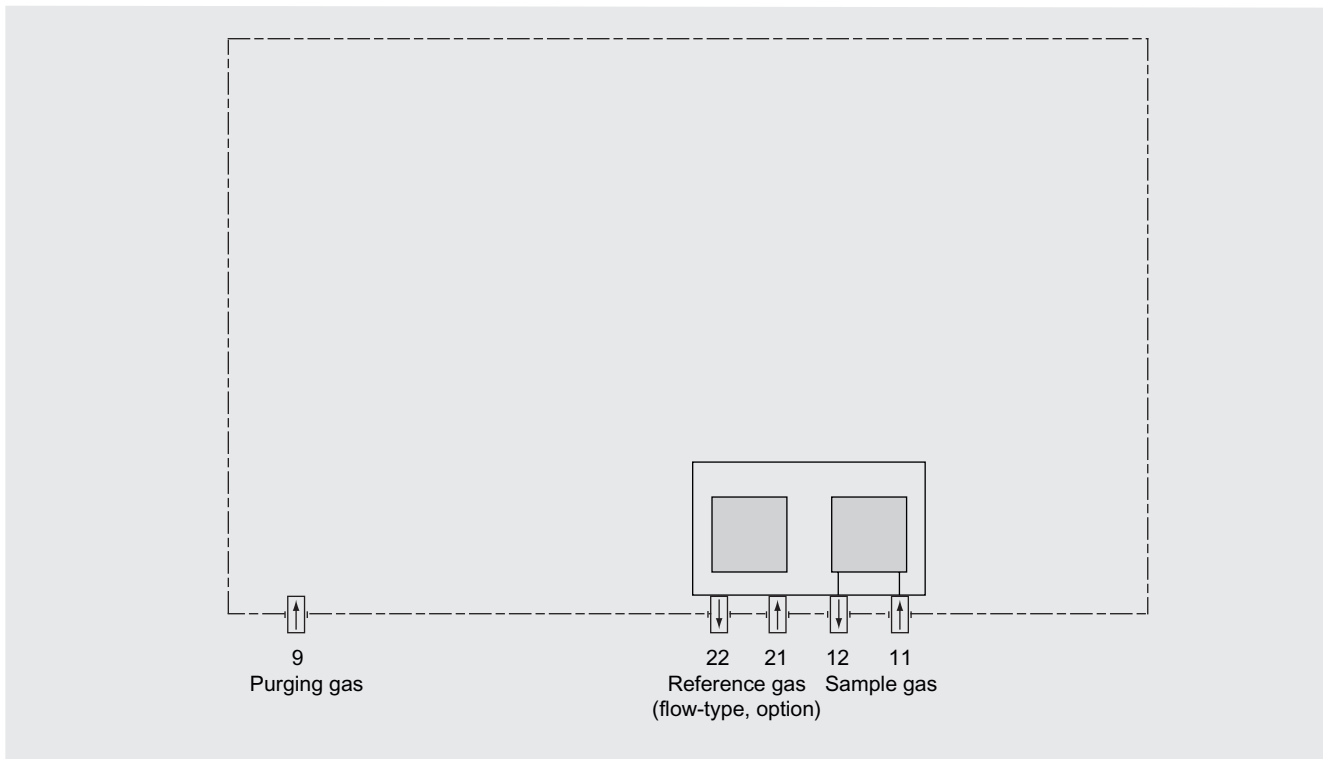
Designs – Parts touched by sample gas

Gas connection	19" unit	Field device
Input block with gas connection Seal Sensor	Stainless steel, mat. no. 1.4571 FPM (e.g. Viton) or FFPM Glass	Stainless steel, mat. no. 1.4571 FPM (e.g. Viton) or FFPM Glass
Input block with gas connection Seal Sensor		Hastelloy C22 FFPM (e.g. Kalrez) Glass

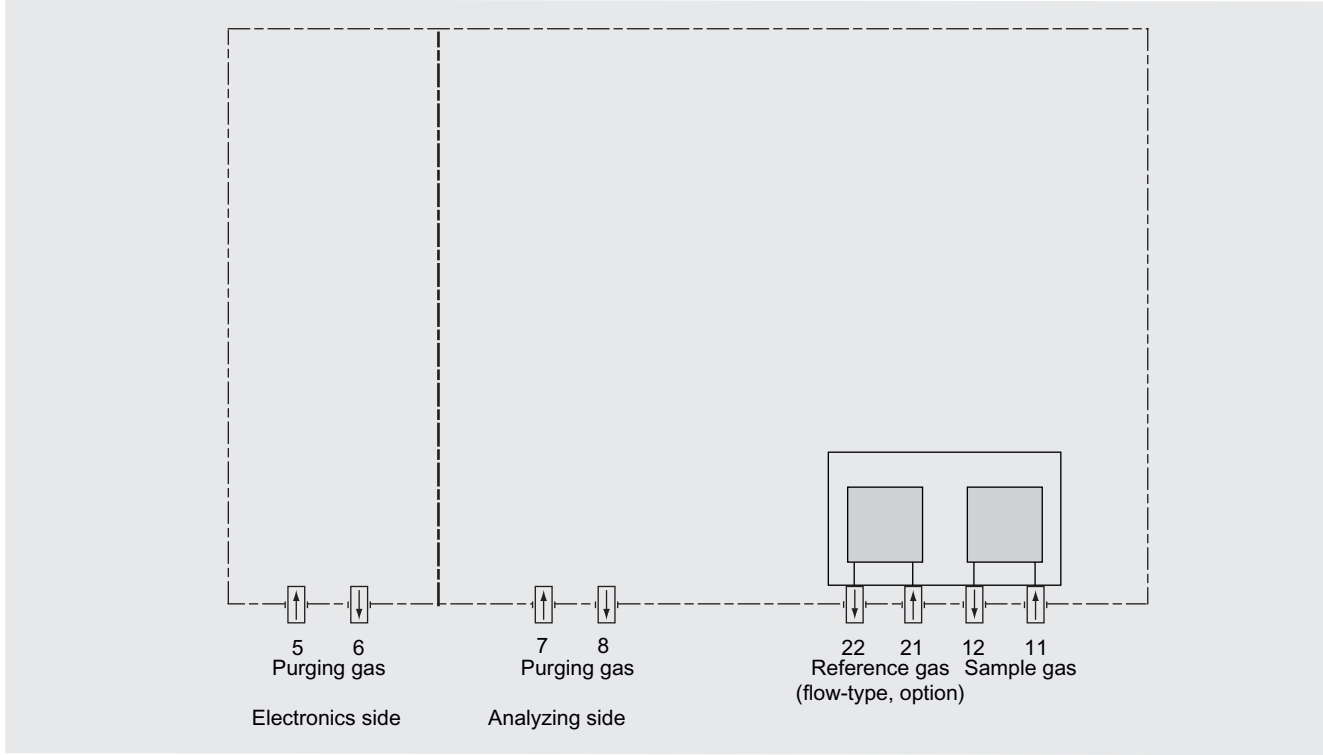
Continuous Gas Analyzers, extractive CALOMAT 62

General

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CALOMAT 62, 19* unit, gas route



CALOMAT 62, field device, gas route

Continuous Gas Analyzers, extractive

CALOMAT 62

General

Function

Principle of operation

The measuring principle is based on the different thermal conductivity of gases.

The warming of a heated measurement resistor surrounded by gas is determined by the thermal conductivity of the gas. Four such measurement resistances are switched to a bridge.

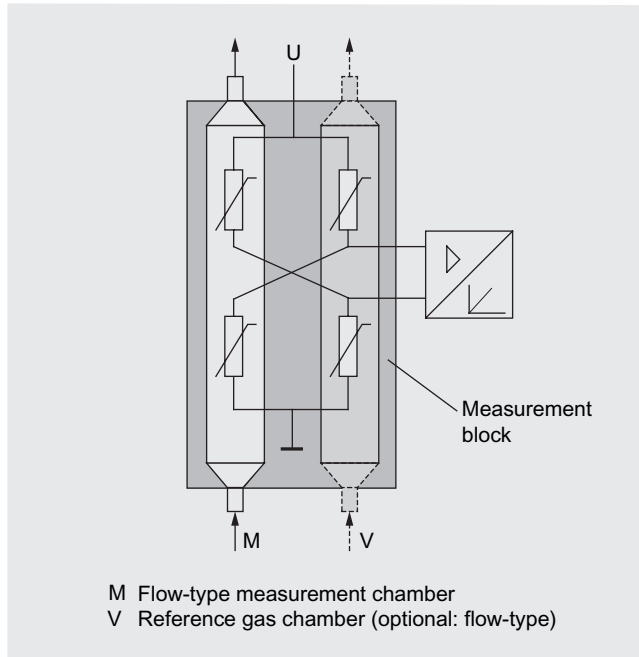
Sample gas flows around two of them, comparative gas surrounds the other two. A constant direct voltage heats the resistors via the temperature of the measurement block.

Due to the different thermal conductivity of sample gas and carrier gas, the resistors are heated through the converted thermal output to different degrees. A change in the composition of the sample gas thus also causes a change in the resistance values.

The electrical equilibrium of the measuring bridge is disrupted and energy is created in the bridge diagonals. This is a measure for the concentration of the measuring element.

Note

The sample gases must be fed into the analyzers free of oil, grease, and dust. Condensate formation (dew point sample gas < ambient temperature) is to be avoided in the measurement chambers. Therefore, gas conditioned for the measurement tasks at hand is to be provided in most application cases.



CALOMAT 62, mode of operation, example of a non-flow-type reference chamber

Important features

- Four measurement areas freely parameterizable, also with disabled zero point, all measurement ranges linear
- Smallest measuring spans up to 1% (with disabled zero point: 99 ... 100% H₂) possible
- Measurement range identification
- Galvanically isolated measurement value output 0/2/4 up to 20 mA (also inverted)
- Automatic or manual measurement range changeover selectable; remote switching is also possible
- Measurement value can be saved during adjustment

- Wide range of selectable time constants (static/dynamic noise suppression); i.e. the response time of the device can be adapted to the respective measurement task
- Short response time
- Low long-term drift
- Measuring point changeover for up to 6 measuring points (parameterizable)
- Measuring point identification
- External pressure sensor can be connected – for the correction of sample gas fluctuations
- Possibility of correcting the effect of carrier gases (diagonal gas correction)
- Automatic, parameterizable measurement range adjustment
- Operation based on the NAMUR recommendation
- Two control levels with their own authorization codes for the prevention of accidental and unauthorized operator interventions
- Ease of use thanks to a numerical membrane keyboard and operator prompting
- Customer-specific device versions, such as:
 - Customer acceptance
 - TAG labels
 - Drift recording
 - Clean for O₂ service

Measuring spans

The smallest and largest possible measuring spans depend both on the measurement element (gas type) as well as the respective application (see order schema).

Diagonal effects

The identification of the sample gas composition is required for the determination of the diagonal effect of carrier gases with several diagonal gas components.

The zero-point offsets in % H₂ are listed in the following table, evoked by 1% carrier gas (diagonal gas); the specified values are approximate values.

It should be noted that the diagonal gas effect does not behave linearly depending on the diagonal gas concentration. The identification of the sample gas composition is required for the determination of the diagonal effect of carrier gases with several diagonal gas components.

Ar	Approx. -0.15%
O ₂	Approx. +0.02%
CO ₂	Approx. -0.13%
CH ₄	Approx. +0.17%
SO ₂	Approx. -0.31%
Air (dry)	Approx. +0.25%

Effect of 1% carrier gas component with residual gas nitrogen, expressed in % H₂

Moreover, it must be noted that - in addition to the zero-point offset - the characteristic rise can also be affected by the carrier gas. However, this effect is negligible in the case of deviations in the diagonal gas concentration under 10%.

Taking these facts into consideration and due to the fact that the diagonal gas analyzers cause other measurement inaccuracies, a larger measurement error occurs than with binary gas mixtures despite a diagonal gas correction.

Specification for the interface cable

Surge impedance	100 ... 300 Ω , with a measuring frequency of > 100 kHz
Cable capacity	Typ. < 60 pF/m
Core cross-section	> 0.22 mm ² , corresponds to AWG 23
Cable type	Twisted pair, 1 x 2 conductors of cable section
Signal attenuation	Max. 9 dB over the whole length
Shielding	Copper braided shield or braided shield and foil shield
Connection	Pin 3 and pin 8

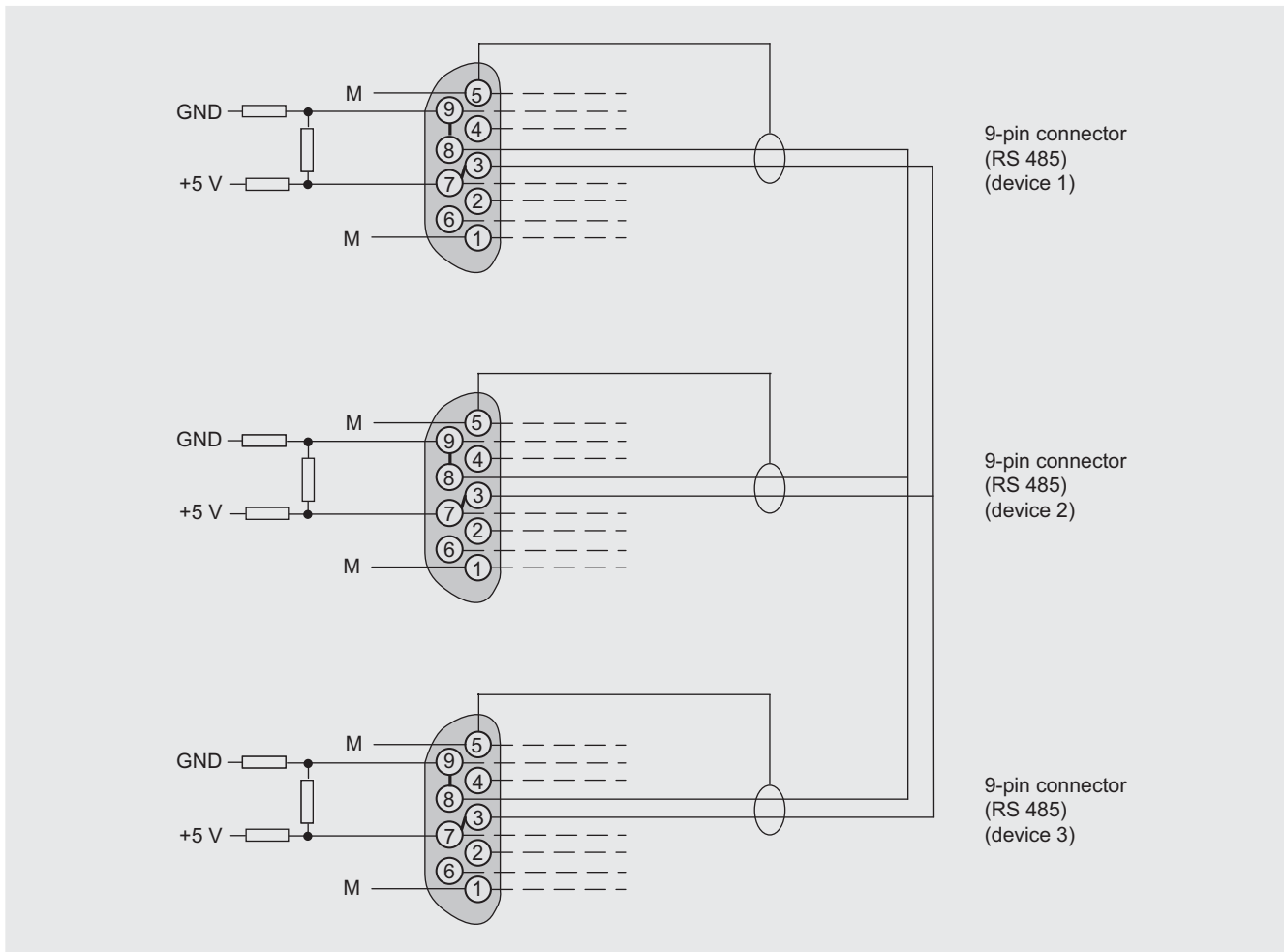
Bus terminating resistors

Pins 3-7 and 8-9 of the first and last connectors of a bus cable must be bridged (see image).

Note

It is advisable to install a repeater on the device side in the case of a cable length of more than 500 m or with high interferences.

Up to four components can be corrected via ELAN bus, a diagonal correction can take place for up to two components via analog input.



Bus cable with plug connections, example

Continuous Gas Analyzers, extractive

CALOMAT 62

19" unit

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Technical specifications

General (based on DIN EN 61207 / IEC 1207. All data refers to the binary mixture H₂ in N₂)

Measurement ranges	4, internally and externally switchable; automatic measurement range changeover also possible
Measuring span	Application-dependent (see ordering data)
Measurement ranges with disabled zero point	Application-dependent (see ordering data)
Operating position	Front wall vertical
Conformity	CE mark in accordance with EN 50081-1/EN 50081-2 and RoHS

Design, enclosure

Degree of protection	IP20 according to EN 60529
Weight	Approx. 13 kg

Electrical characteristics

EMC (Electromagnetic Compatibility)	In accordance with standard requirements of NAMUR NE21 (08/98) and EN 61326
Electrical safety	According to EN 61010-1, overvoltage category II
Auxiliary power (see rating plate)	100 -10% ... 120 V AC +10%, 47 ... 63 Hz or 200 -10% ... 240 V AC +10%, 47 ... 63 Hz
Power consumption	Approx. 30 VA
Fuse values	100 ... 120 V: 1.0T/250 200 ... 240 V: 0.63T/250

Gas inlet conditions

Sample gas pressure	800 ... 1100 hPa (absolute)
Sample gas flow	30 ... 90 l/h
Sample gas temperature	0 ... 60 °C
Temperature of the measuring cell	70 °C

Dynamic response

Heating time	< 30 min at room temperature (the technical specification is will be observed after 2 hours)
Display delay (T ₉₀)	Approx. 35 sec (including dead time)
Damping (electrical time constant)	0 ... 100 sec, parameterizable
Dead time (the diffusion to the probes is the determining size)	Approx. 34 sec

Measuring response (relating to sample gas pressure 1000 hPa absolute, 0.5 l/min sample gas flow and 25 °C ambient temperature)

Output signal fluctuation (3σ value)	< ± 1% of the smallest possible measuring span as per name plate with electronic damping constant of 1 s
Zero point drift	< 1% of the current measuring span/week
Measured value drift	< 1% of the smallest possible measuring span (as per name plate)/week
Repeat precision	< 1% of the current measuring span
Minimum detectable quantity	1% of the smallest possible measuring span as per name plate
Deviation of linearity	< ± 1% of the current measuring span

Influencing variable (relating to sample gas pressure 1000 hPa absolute, 0.5 l/min sample gas flow and 25 °C ambient temperature)

Ambient temperature	< 2%/10 K relating to the smallest possible measuring span as per name plate
Carrier gases	Zero point deviation (diagonal gas effect see "Diagonal effects" paragraph)
Sample gas flow	0.2% of the current measuring span with a flow change of 1 l/h within the permissible flow range
Sample gas pressure	< 1% of the current measuring span with a pressure change of 100 hPa
Auxiliary power	< 0.1% of the current measuring span with nominal voltage ± 10%

Electrical inputs and outputs

Analog output	0/2/4 ... 20 mA, potential-free; apparent ohmic resistance max. 750 Ω
Relay outputs	6, with changeover contacts, freely parameterizable, e.g. for measurement range identification; load capacity: 24 V AC/DC/1 A, potential-free
Analog inputs	2, designed for 0/2/4 ... 20 mA for external pressure sensor and diagonal gas correction
Binary inputs	6, designed for 24 V, potential-free, freely parameterizable, e.g. for measurement range change-over
Serial interface	RS 485
Options	AUTOCAL function with 8 additional binary inputs and relay outputs each, also with PROFIBUS PA (upon request) or PROFIBUS DP (upon request)

Climatic conditions

Permissible ambient temperature	-40 ... +70 °C during storage and transportation, 5 ... 45 °C during operation
Permissible humidity (no passing below the dew point)	< 90% relative humidity within average annual value, during storage and transportation

Continuous Gas Analyzers, extractive CALOMAT 62

19" unit

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Selection and Ordering Data

Order No.

CALOMAT 62 gas analyzer

D) 7MB2541- - A

Cannot be combined

19" unit for installation in cabinets

Material sample gas route

Stainless steel, Mat. No. 1.4571; non-flow-type reference chamber

Stainless steel, Mat. No. 1.4571; non-flow-type reference chamber

Application**Possible with measuring range identification**

H ₂ in N ₂	0; 1; 5; 6
NH ₃ in N ₂	4; 8
SO ₂ in air	2; 6
CO ₂ in H ₂	0; 1; 5; 6
CO ₂ in N ₂	2; 6

Smallest measuring range**Largest measuring range****Reference gas or filling gas**

0 ... 1%	0 ... 5%	
0 ... 1%	0 ... 20%	
0 ... 5%	0 ... 60%	Carrier gas components
0 ... 10%	0 ... 100%	
0 ... 20%	0 ... 100%	
100 ... 99%	100 ... 90%	
100 ... 95%	100 ... 50%	Sample gas component or replacement gas
100 ... 90%	100 ... 20%	
100 ... 80%	100 ... 0%	

Supplementary electronics

Without

AUTOCAL function

- With 8 additional binary inputs and outputs
- With 8 additional binary inputs/outputs and PROFIBUS PA interface¹⁾
- With 8 additional binary inputs/outputs and PROFIBUS DP interface¹⁾
- With 8 additional binary inputs and outputs and PROFIBUS PA Ex i¹⁾

Auxiliary power

100 ... 120 V AC, 48 ... 63 Hz

200 ... 240 V AC, 48 ... 63 Hz

Ex protection

Without

Language (supplied documentation, software)

German
English
French
Spanish
Italian

0
4
AN
DN
EL
KA
KN
0
1
2
3
4
5
6
7
8
0
1
A
0
1
0
1
2
3
4

¹⁾ On request

D) Subject to AL export regulations: 91999, ECCN: N

Continuous Gas Analyzers, extractive

CALOMAT 62

19" unit

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Selection and Ordering Data

Further versions

Order code

Add "-Z" to order no. and specify order codes.

Set of Torx screwdrivers, allen screwdrivers

A32

TAG labels (specific lettering based on customer information)

B03Clean for O₂ service (specially cleaned gas route)**Y02**

Measurement range indication in plain text, if different from the standard setting

Y11

Retrofit kits

Order No.

RS 485/Ethernet converter

A5E00852383

RS 485/RS 232 converter

D) **C79451-Z1589-U1**

RS 485/USB converter

A5E00852382

AUTOCAL function with 8 binary inputs/outputs

D) **C79451-A3480-D511**AUTOCAL function with 8 binary inputs/outputs and PROFIBUS PA¹⁾D) **A5E00057315¹⁾**AUTOCAL function with 8 binary inputs/outputs and PROFIBUS DP¹⁾D) **A5E00057318¹⁾**¹⁾ On request

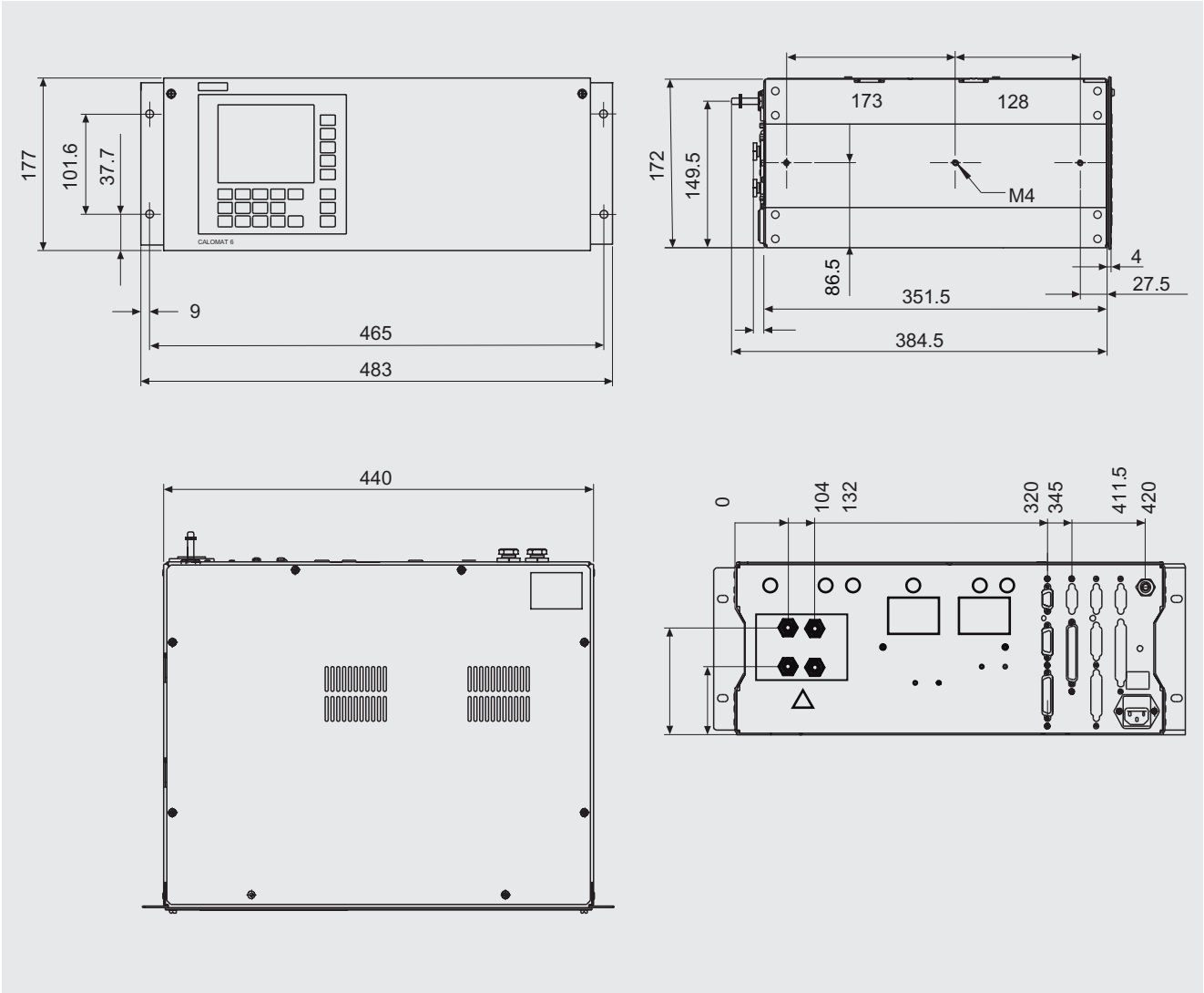
D) Subject to AL export regulations: 91999, ECCN: N

Continuous Gas Analyzers, extractive CALOMAT 62

19" unit

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Dimensional drawings



CALOMAT 62, 19" unit, dimensions in mm

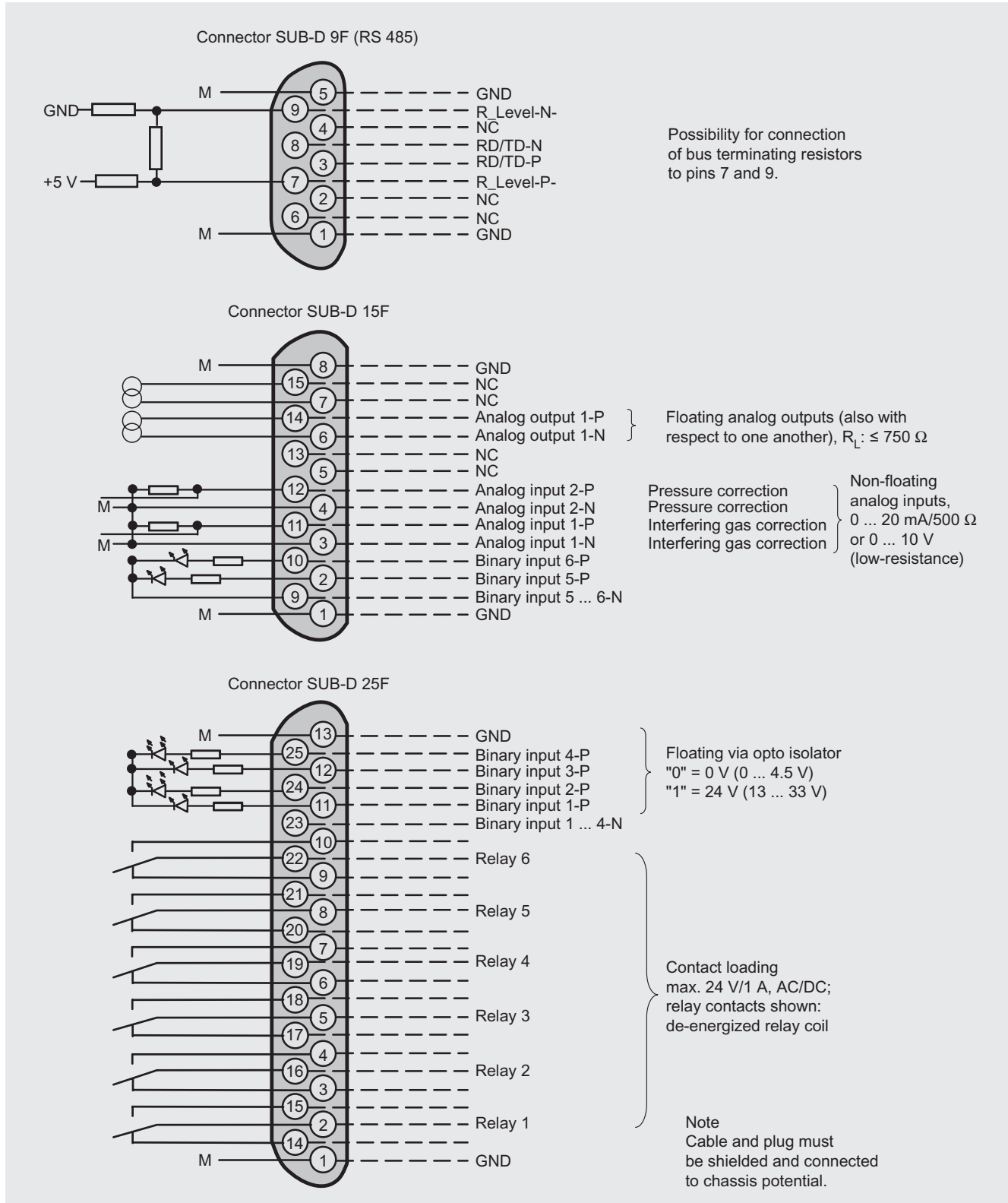
Continuous Gas Analyzers, extractive CALOMAT 62

19" unit

Schematics

Pin assignment (electrical and gas connections)

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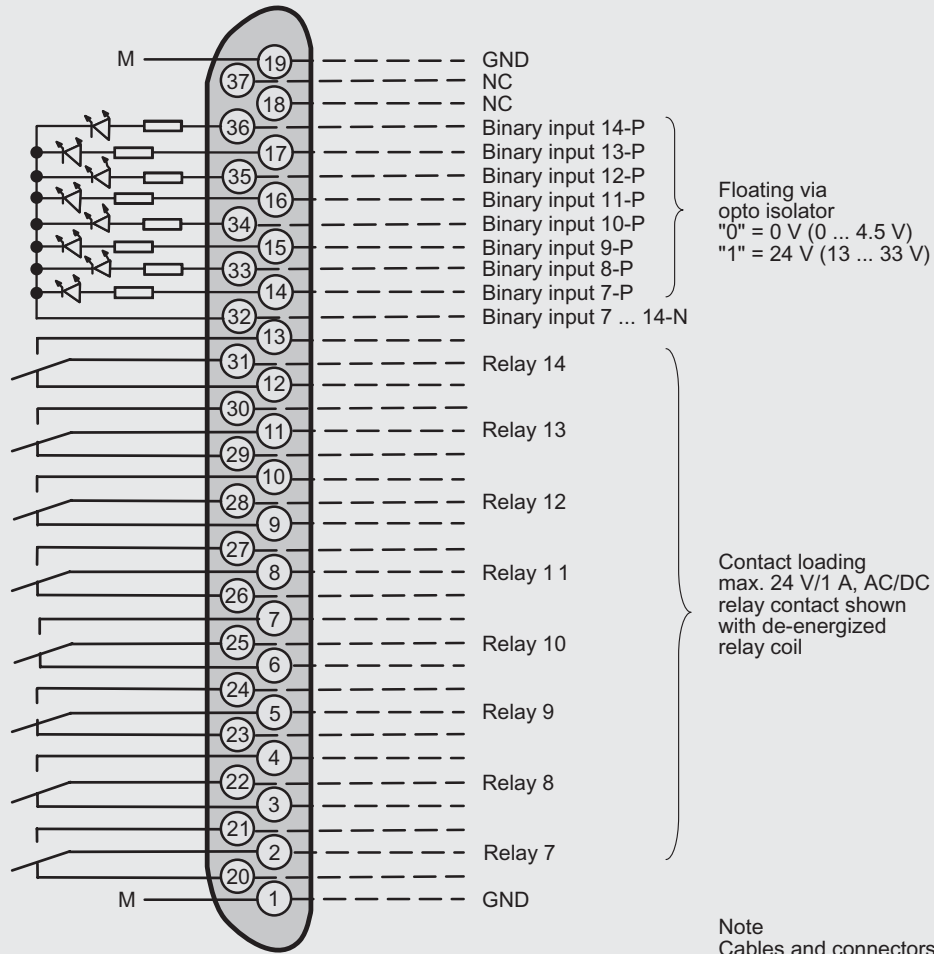
CALOMAT 62, 19" unit, pin assignment

Continuous Gas Analyzers, extractive CALOMAT 62

19" unit

2

Connector SUB-D 37F (Option)

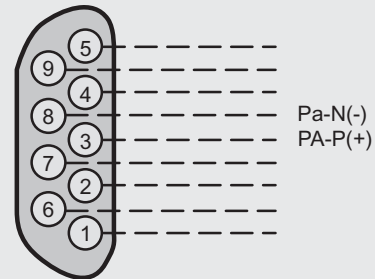
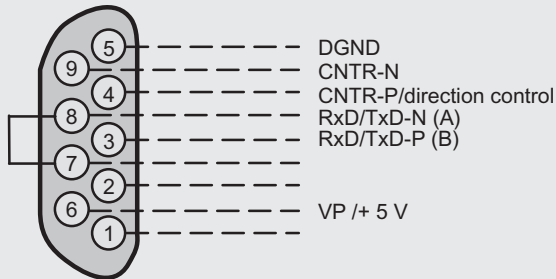


Note
Cables and connectors must be shielded and connected to chassis potential.

Connector SUB-D 9F -X90
PROFIBUS DP

optional

Connector SUB-D 9M -X90
PROFIBUS PA

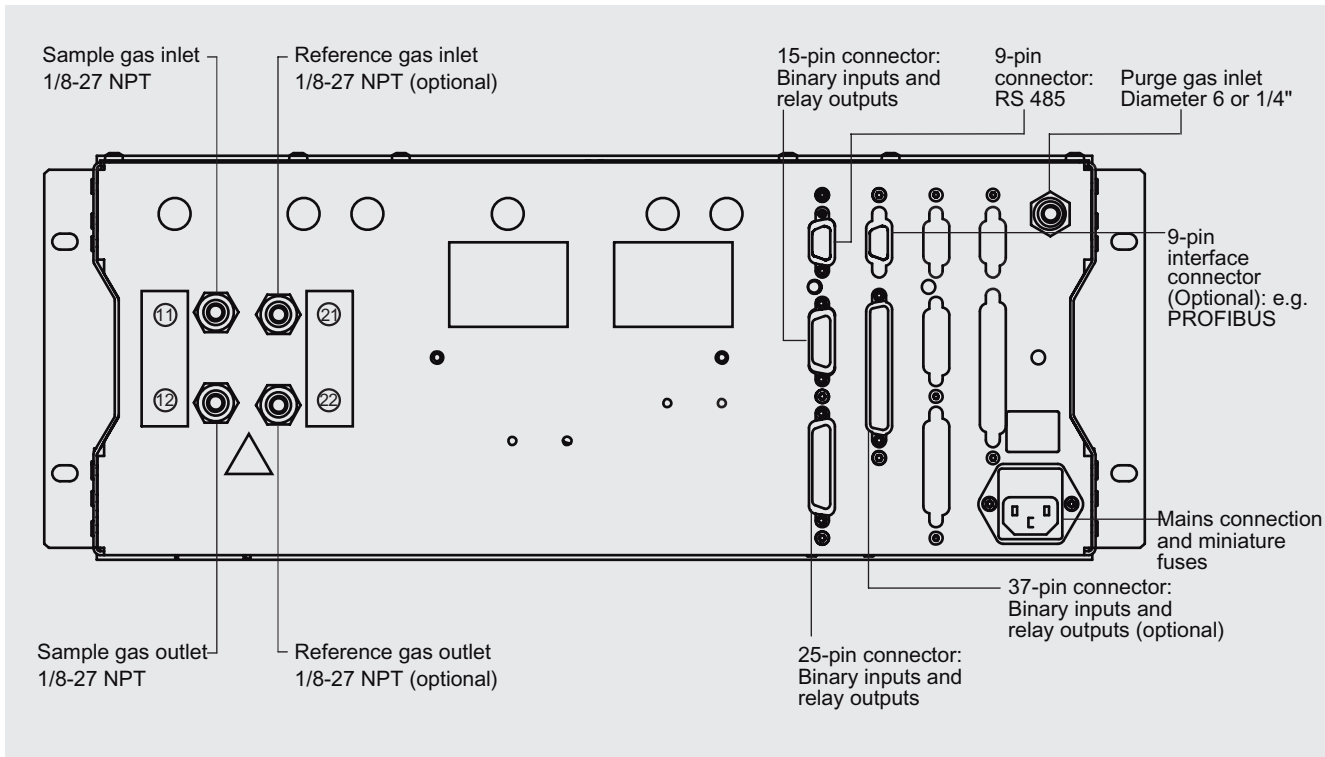


CALOMAT 62, 19" unit, pin assignment of the AUTOCAL plate and PROFIBUS plug

Continuous Gas Analyzers, extractive CALOMAT 62

19" unit

2



CALOMAT 62, 19" unit, gas connections and electrical connections

Technical specifications

General (based on DIN EN 61207 / IEC 1207. All data refers to the binary mixture H₂ in N₂)

Measurement ranges	4, internally and externally switchable; automatic measurement range changeover also possible
Measuring span	Application-dependent (see ordering data)
Measurement ranges with disabled zero point	Application-dependent (see ordering data)
Operating position	Front wall vertical
Conformity	CE mark in accordance with EN 50081-1/EN 50081-2 and RoHS

Design, enclosure

Degree of protection	IP65 according to EN 60529
Weight	Approx. 25 kg

Electrical characteristics

EMC (Electromagnetic Compatibility)	In accordance with standard requirements of NAMUR NE21 (08/98) and EN 61326
Electrical safety	According to EN 61010-1, overvoltage category II
Auxiliary power (see type nameplate)	100 -10% ... 120 V AC +10%, 47 ... 63 Hz or 200 -10% ... 240 V AC +10%, 47 ... 63 Hz
Power consumption	Approx. 25 VA (gas connection block unheated) Approx. 330 VA (gas connection block heated)
Fuse values (gas connection unheated)	100 ... 120 V F3 1T/250 F4 1T/250 200 ... 240 V F3 0.63T/250 F4 0.63T/250
Fuse values (gas connection heated)	100 ... 120 V F1 1T/250 F2 4T/250 F3 4T/250 F4 4T/250 200 ... 240 V F1 0.63T/250 F2 2.5T/250 F3 2.5T/250 F4 2.5T/250

Gas inlet conditions

Sample gas pressure	800 ... 1100 hPa (absolute)
Sample gas flow	30 ... 90 l/h
Sample gas temperature	0 ... 60 °C
Temperature	
• of the measurement cell (sensor)	70 °C
• of the measurement cell block (base)	70 °C (heated)
Sample gas humidity	< 90% relative humidity
Purge gas pressure	
• Permanent	165 hPa over ambient pressure
• Short-term	Max. 250 hPa over ambient pressure

Dynamic response (relating to sample gas pressure 1000 hPa absolute, 0.5 l/min sample gas flow and 25 °C ambient temperature)

Heating time	< 30 min at room temperature (the technical specification is will be observed after 2 hours)
Display delay (T ₉₀)	Approx. 35 sec (including dead time)
Electrical damping	0 ... 100 sec, parameterizable
Dead time (the diffusion to the probes is the determining size)	Approx. 34 sec

Measuring response (relating to sample gas pressure 1000 hPa absolute, 0.5 l/min sample gas flow and 25 °C ambient temperature)

Output signal fluctuation (3σ value)	< ± 1% of the smallest possible measuring span as per nameplate with electronic damping constant of 1 s
Zero point drift	< 1% of the current measuring span/week
Measured value drift	< 1% of the smallest possible measuring span (as per nameplate)/week
Repeat precision	< ± 1% of the current measuring span
Minimum detectable quantity	1% of the smallest possible measuring span as per nameplate
Deviation of linearity	< ± 1% of the current measuring span

Influencing variable (relating to sample gas pressure 1000 hPa absolute, 0.5 l/min sample gas flow and 25 °C ambient temperature)

Ambient temperature	< 2%/10 K relating to the smallest possible measuring span as per nameplate
Carrier gases	Zero point deviation (diagonal gas effect see "Diagonal effects" paragraph)
Sample gas flow	0.2% of the current measuring span with a flow change of 1 l/h within the permissible flow range
Sample gas pressure	< 1% of the measuring span with a pressure change of 100 hPa
Auxiliary power	< 0.1% of the output signal span with nominal voltage ± 10%

Electrical inputs and outputs

Analog output	0/2/4 ... 20 mA, potential-free; apparent ohmic resistance max. 750 Ω
Relay outputs	6, with changeover contacts, freely parameterizable, e.g. for measurement range identification; load capacity: 24 V AC/DC/1 A, potential-free
Analog inputs	2, designed for 0/2/4 ... 20 mA for external pressure sensor and diagonal gas correction
Binary inputs	6, designed for 24 V, potential-free, freely parameterizable, e.g. for measurement range changeover
Serial interface	RS 485
Options	AUTOCAL function with 8 additional binary inputs and relay outputs each, also with PROFIBUS PA (upon request) or PROFIBUS DP (upon request)

Climatic conditions

Permissible ambient temperature	-40 ... +70 °C during storage and transportation, +5 ... +45 °C during operation
Permissible humidity (no passing below the dew point)	< 90% relative humidity within average annual value, during storage and transportation

Continuous Gas Analyzers, extractive

CALOMAT 62

Field unit

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Selection and Ordering Data

Order No.

CALOMAT 62 gas analyzer
for field installation

D) 7MB2531- - - - -

Cannot be combined

Material sample gas route

Stainless steel, Mat. No. 1.4571; non-flow-type reference chamber		0
Hastelloy C22; non-flow-type reference chamber	Purging gas stub 10 mm	2
Hastelloy C22; flow-type reference chamber		3
Stainless steel, Mat. No. 1.4571; non-flow-type reference chamber		4
Hastelloy C22; non-flow-type reference chamber	Purging gas stub ¼"	6
Hastelloy C22; flow-type reference chamber		7

Application²⁾

Possible with measuring range identification

H ₂ in N ₂	0; 1; 5; 6	AN
H ₂ in Cl ₂	0; 1; 5; 6	AB
H ₂ in HCl	0; 1; 5; 6	AC
Cl ₂ in air	2; 6	BL
Cl ₂ in HCl	3; 7	BC
HCl in air	2; 6	CL
NH ₃ in N ₂	4; 8	DN
SO ₂ in air	2; 6	EL
CO ₂ in H ₂	0; 1; 5; 6	KA
CO ₂ in N ₂	2; 6	KN

Smallest measuring range	Largest measuring range	Reference gas or filling gas
0 ... 1%	0 ... 5%	
0 ... 1%	0 ... 20%	
0 ... 5%	0 ... 60%	Carrier gas components
0 ... 10%	0 ... 100%	
0 ... 20%	0 ... 60%	
100 ... 99%	100 ... 90%	
100 ... 95%	100 ... 50%	Sample gas component
100 ... 90%	100 ... 20%	
100 ... 80%		

Supplementary electronics

Without	0
AUTOCAL function	
• With 8 additional binary inputs and outputs	1
• With 8 additional binary inputs/outputs and PROFIBUS PA interface ¹⁾	6
• With 8 additional binary inputs/outputs and PROFIBUS DP interface ¹⁾	7
• With 8 additional binary inputs and outputs and PROFIBUS PA Ex-i	8

Auxiliary power

100 ... 120 V AC, 48 ... 63 Hz	0
200 ... 240 V AC, 48 ... 63 Hz	1

Ex protection

Without

Language (supplied documentation, software)

German	0
English	1
French	2
Spanish	3
Italian	4

¹⁾ Only in connection with an authorized purge unit; upon request

²⁾ See release dates

D) Subject to AL export regulations: 9I999, ECCN: N

Continuous Gas Analyzers, extractive

CALOMAT 62

Field unit

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Selection and Ordering Data

<i>Further versions</i>	Order code
Add "-Z" to order no. and specify order codes.	
Set of Torx screwdrivers, allen screwdrivers	A32
TAG labels (specific lettering based on customer information)	B03
Clean for O ₂ service (specially cleaned gas route)	Y02
Measurement range indication in plain text, if different from the standard setting	Y11
<i>Retrofitting sets</i>	Order No.
RS 485/Ethernet converter	A5E00852382
RS 485/RS 232 converter	D) C79451-Z1589-U1
RS 485/USB converter	A5E00852383
AUTOCAL function with 8 binary inputs/outputs	D) A5E00064223
AUTOCAL function with 8 binary inputs/outputs and PROFIBUS PA ¹⁾	D) A5E00057315¹⁾
AUTOCAL function with 8 binary inputs/outputs and PROFIBUS DP ¹⁾	D) A5E00057318¹⁾
RS 485/Ethernet converter	D) A5E00057317¹⁾

¹⁾ Upon request

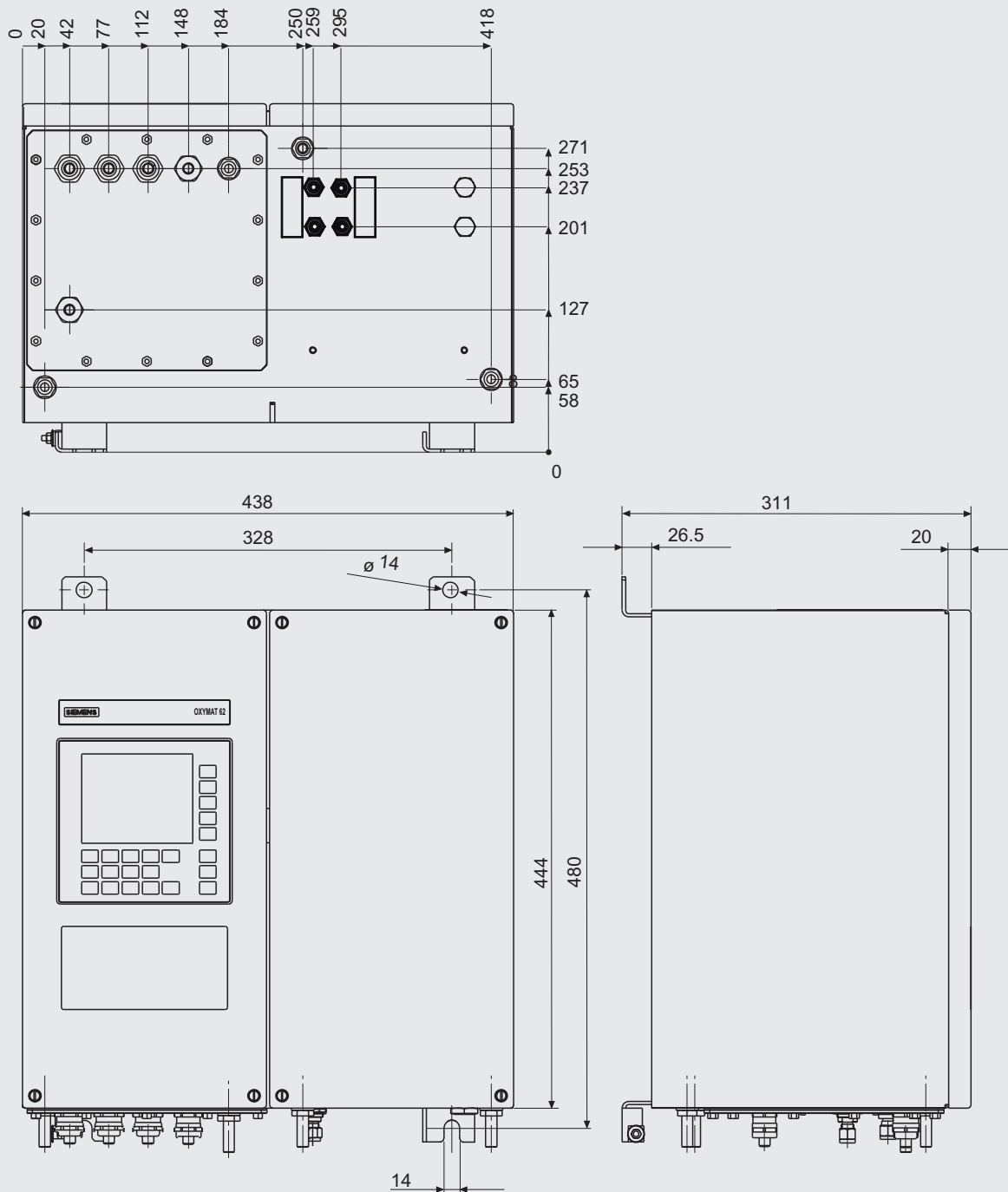
D) Subject to AL export regulations: 91999, ECCN: N

Continuous Gas Analyzers, extractive CALOMAT 62

Field unit

Dimensional drawings

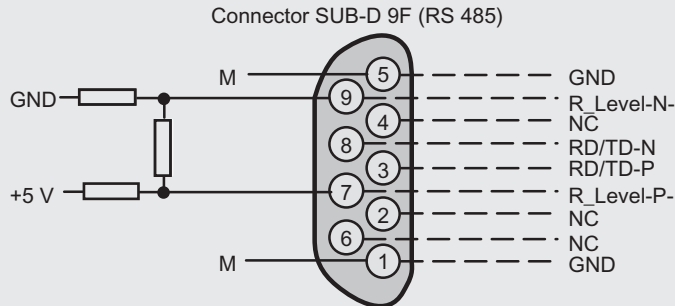
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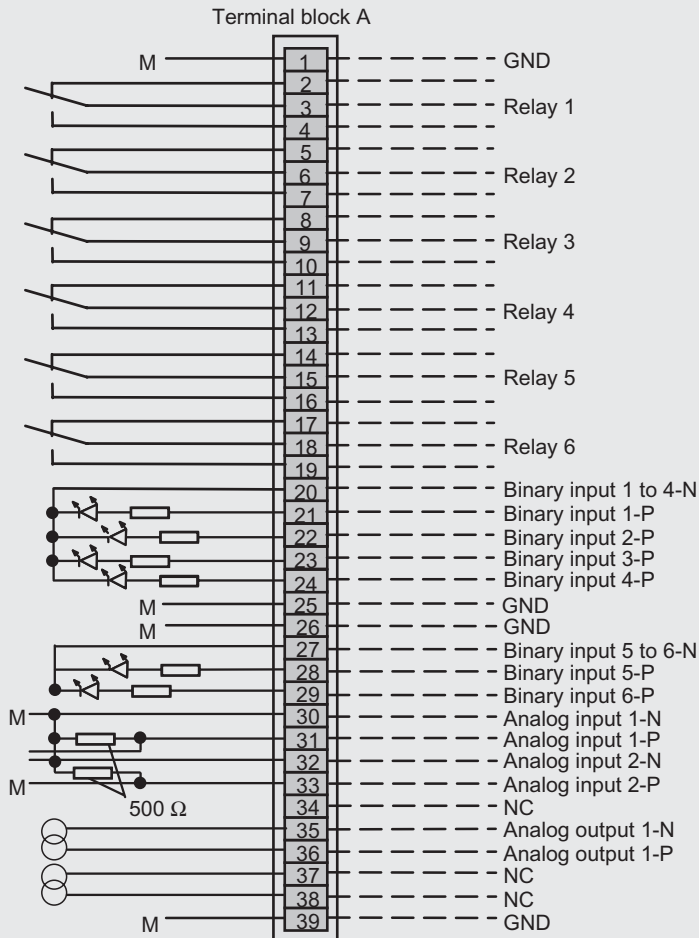
CALOMAT 62, field device, dimensions in mm

Schematics

Pin assignment (electrical and gas connections)



Possibility for connection of bus terminating resistors to pins 7 and 9.



Contact loading
max. 24 V/1 A, AC/DC;
relay contacts shown:
de-energized relay coil

Floating via opto isolator
"0" = 0 V (0 ... 4.5 V)
"1" = 24 V (13 ... 33 V)

Floating via opto isolator
"0" = 0 V (0 ... 4.5 V)
"1" = 24 V (13 ... 33 V)

Interfering gas corr. } Non-floating analog inputs,
Interfering gas corr. } 0 to 20 mA or 0 ... 10 V
Pressure correction } (int. resistance ≤ 500 Ω)
Pressure correction }

Analog outputs
floating

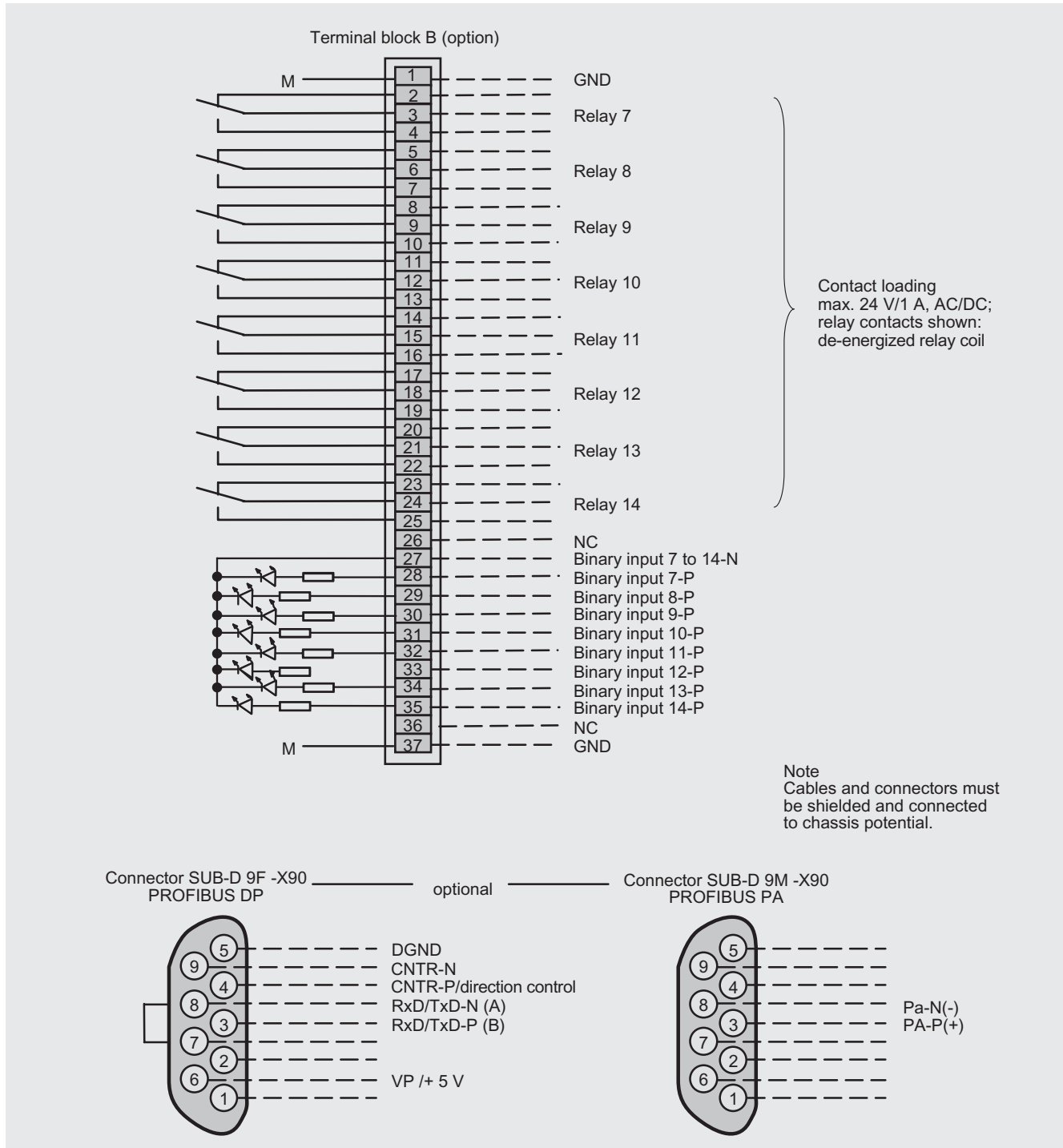
Note
Cables and connectors must
be shielded and connected
to chassis potential.

CALOMAT 62, field device, pin and clamp assignment

Continuous Gas Analyzers, extractive CALOMAT 62

Field unit

2

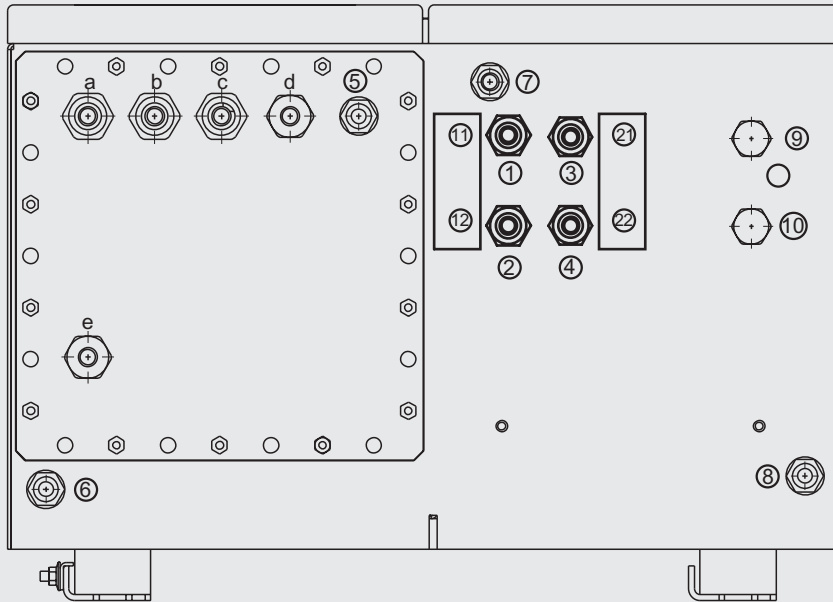


CALOMAT 62, field device, pin and clamp assignment of the AUTOCL plate and PROFIBUS plug

Continuous Gas Analyzers, extractive CALOMAT 62

Field unit

2



Gas connections

- | | | |
|-----|--------------------------|------------------------------------|
| ① | Sample gas outlet | } Internal thread
1/8" - 27 NPT |
| ⑫ | Sample gas inlet | |
| ⑳ | Reference gas outlet | |
| ㉑ | Reference gas inlet | |
| ⑤-⑧ | Purge gas inlets/outlets | Fittings Ø 10 mm or 3/8" |
| ⑨ | Unassigned | |
| ⑩ | Unassigned | |

Electrical connections

- | | |
|-------|--|
| a - c | Signal line
(Analog + Digital): Pg 16 |
| d | Interface connection:
Pg 13.5 |
| e | Mains connection: Pg 13.5 |

CALOMAT 62, field device, gas connections and electrical connections

Continuous Gas Analyzers, extractive

CALOMAT 62

Documentation

2

Selection and Ordering Data

Manual		Order No.
CALOMAT 6 Wärmeleitfähigkeitsgasanalysator (German)	D)	A5E00116454
CALOMAT 6 Thermal Conductivity Gas Analyzer (English)	D)	A5E00116455
CALOMAT 6 Analyseur de gaz à conductivité thermique (French)	D)	A5E00116456

Manual		Order No.
CALOMAT 6 Analizzatore di gas a conductivita termica (Italian)	D)	A5E00116457
CALOMAT 6 Analizador de gases por conductividad térmica (Spanish)	D)	A5E00116458
ULTRAMAT 6, OXYMAT 6, OXYMAT 61, CALOMAT 6, ULTRAMAT 23 Schnittstelle/Interface PROFIBUS DP/PA (German and English)	D)	A5E00054148

D) Subject to AL export regulations: 91999, ECCN: N

Proposition of spare parts

Selection and Ordering Data

Description	7MB2541	7MB2531	2 years (quantity)	5 years (quantity)		Order No.
Temperature limiter		x	—	1		A5E00891855
Adapter plate, LC display/keypad	x	x	—	1	D)	C79451-A3474-B605
Temperature sensor		x	—	1	D)	C79451-A3480-B25
LC display	x		—	1	D)	W75025-B5001-B1
Line transformer, 115 V	x	x	—	1	D)	W75040-B21-D80
Line transformer, 230 V	x	x	—	1	D)	W75040-B31-D80
Fusible plug (fuse), T 0.63 A, supply voltage 200 ... 240 V	x	x	2	4	D)	W79054-L1010-T630
Fusible plug (fuse), T 1 A, supply voltage 200 ... 240 V	x	x	2	4	D)	W79054-L1011-T100
Heating cartridge		x	—	1	D)	W75083-A1004-F120

D) Subject to AL export regulations: 91999, ECCN: N