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**GMA200-MT**  
**GMA200-RT**  
**GMA200-MW**  
Modules of the  
Gas detection system

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## Modules of the GMA200 Gas detection system

### **Hardware GMA200-MT, GM200-RT, GMA200-MW**

- General description
- Connection terminals
- Technical data
- Power supply

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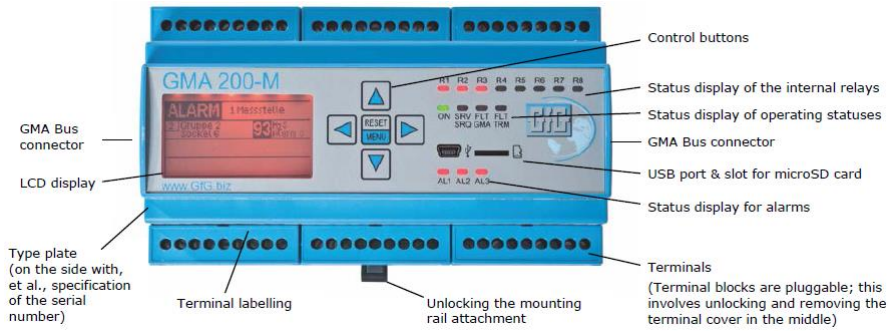
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## GMA200-MT6/-MT16 General description



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## GMA200-MT6 Connection assignment (Top hat rail mounting)

69	68	67	66	65	64	63	62	61	59	58	57	56	54	53	52	51	49	48	47	46	44	43	42	41
D1 +	D0 -	D0ND	D1 +	D0 -	GND	D1 +	D0 -	GND	REL1	REL2			REL3	REL4			REL5	REL6			REL7	REL8		
GMA-Bus (485)									CONTACTS: max. 3A/250VAC or 3A/30VDC								CONTACTS: max. 3A/250VAC or 3A/30VDC							

Screw terminals are pluggable in blocks of 9

POWER		4-20mA		TRANSMITTER 4-20mA (0,2-1mA)						TRANSMITTER 4-20mA (0,2-1mA)																
GND	24Vdc1	GND	Reset 1	IN1	24V	GND	IN2	24V	GND	IN3	24V	GND	IN4	24V	GND	IN5	24V	GND	IN6	24V	GND					
11	12	13	14	15	16	17	18	19	21	22	23	24	25	26	27	28	29	31	32	33	34	35	36	37	38	39

- Fuses F1 (GMA) and F2 (Transmitter) are behind the terminal cover 11-19
- Switches for RS485-load resistors Rt1, Rt2, Rt3 are behind the terminal cover 61-69

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## GMA200-MT16 Connection assignment (Top hat rail mounting)

69 D1 +	68 D0 -	67 DGND	66 D1 +	65 D0 -	64 GND	63 D1 +	62 D0 -	61 GND	59 REL1	58 REL2	57 REL3	56 REL4	54 REL5	53 REL6	52 REL7	51 REL8	49 REL5	48 REL6	47 REL7	46 REL8	44 REL7	43 REL8	42 REL7	41 REL8	
GMA-Bus (485)						TRM-Bus2 (485)						TRM-Bus1 (485)						CONTACTS: max. 3A/250VAC or 3A/30VDC							

Screw terminals are pluggable in blocks of 9

POWER			4-20mA						TRANSMITTER - SIGNALS 4-20mA (0,2-1mA)									TRANSMITTER - SIGNALS 4-20mA (0,2-1mA)								
GND	24V Dc1	24V Dc2	GND	R <sub>res1</sub>	R <sub>res2</sub>	GND	I <sub>out1</sub>	I <sub>out2</sub>	In1	In2	In3	In4	In5	In6	In7	In8	GND	In9	In10	In11	In12	In13	In14	In15	In16	GND
11	12	13	14	15	16	17	18	19	21	22	23	24	25	26	27	28	29	31	32	33	34	35	36	37	38	39

- Fuse F1 (GMA) is behind the terminal cover 11-19
- Switches for RS485-load resistors Rt1, Rt2, Rt3 are behind the terminal cover 61-69

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## GMA200-MT6/-MT16 Technical data - part 1

Type designation:	GMA200-MT6	GMA200-MT16
<b>Display &amp; control elements</b>	2,2" graphical display and 5 buttons 15 status LEDs for alarms, operating and relay statuses	
<b>Ambient conditions</b>	for storage: -25..+60 °C   0..99 % RH (recommended 0...+30 °C) for operation: -20..+50 °C   0..99 % RH Site of installation: in a control cabinet or in a wall housing up to a height of 2,000 m above sea level	
<b>Power supply</b>	Operating voltage: 24 V DC (20-30 V DC permissible) Power consumption: max. 5 W (without transmitter) / max. 30 W (with transmitters) Fuses: F1= T 500 mA (for GMA200) / F2= M 1 A (for transmitter)	24 V DC (20-30 V DC permissible) max. 5 W F1= T 500mA
<b>Transmitter connections</b>	Supply: 24 V DC (20-30 V DC see above) / 6x 150 mA or I <sub>total</sub> = 900 mA with other configuration Analogue signals I <sub>IN</sub> : 6x 4-20 mA or 0.2-1 mA (resistance approx. 50..100 Ω, I <sub>max</sub> = 70 mA permanently / 500 mA temporarily) Digital signals TRM Bus1+2: RS485; half-duplex; max. 38,400 Baud	not possible 16x 4-20 mA or 0.2-1 mA (resistance approx. 50..100 Ω, I <sub>max</sub> = 70 mA permanently / 500 mA temporarily)
<b>RS485 connections</b>	TRM Bus1+2: RS485; half-duplex; max. 38,400 Baud (for GMA200 relay modules only) GMA Bus: RS485; half-duplex; galvanically isolated; max. 230,400 Baud (for GMA200 relay modules, control centre, PC, PLC or Gateway)	

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## GMA200-MT6/-MT16 Technical data - part 2

<b>Relay outputs</b>	Contacts: 8 relays each with a normally open contact Contact rating: 3 A / 250 V AC or 3 A / 30 V DC Insulation distances: Basic insulation between the relays: 1&2, 3&4, 5&6, 7&8 Double insulation between the relays: 2&3, 4&5, 6&7
<b>Analogue outputs</b>	I <sub>OUT1+2</sub> : 4-20 mA (resistance max. 560 Ω)
<b>Alarm acknowledgement inputs</b>	Reset1+2: 0-3 V DC (alarm acknowledgement occurs at contact with GND; U <sub>MAX</sub> = 30 V DC)
<b>USB connection</b>	Mini USB port for device configuration via PC
<b>Housing</b>	Attachment: on mounting rail TS35 according to DIN 60715 Protection class: IP20 Material: Plastic Weight: approx. 370 g Dimensions: 162 x 97 x 62 mm (W x H x D)
<b>Connection cables</b>	Terminal blocks: 0.8..2.5 mm <sup>2</sup> cross section Cable: 2-4-wire 0.5-1.5 mm <sup>2</sup> LIYY, NYM (for GMA200 supply) 2-4-wire 0.5-1.5 mm <sup>2</sup> LIYY, LIYCY (for transmitter) 2-wire 1 x 2 x 0.22 mm <sup>2</sup> BUS-LD (for GMA Bus with a length >10 m)
<b>Approvals/Tests</b>	Electromagnetic compatibility: EN 50270:2006 Electrical safety: EN 61010:2010 Emitted interference: Type class I Interference resistance: Type class II Degree of soiling 2 Overvoltage category III for relay contacts

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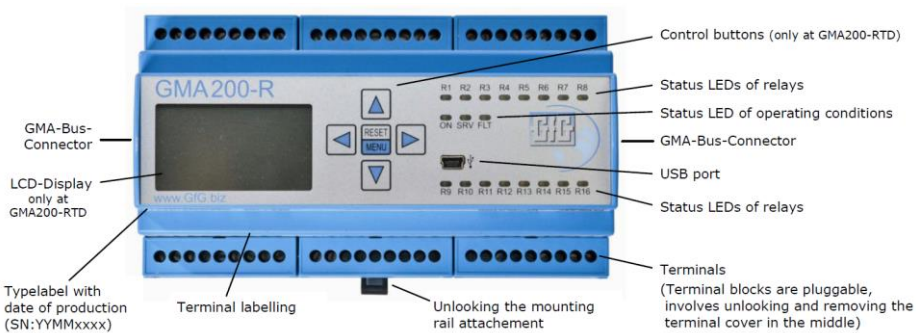
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## GMA200-RT/-RTD General description



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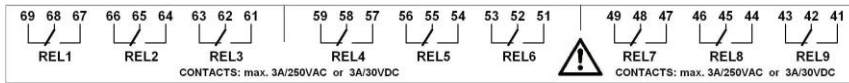
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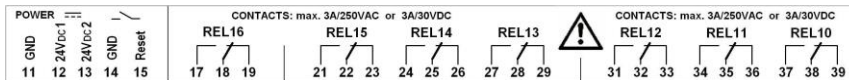


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## GMA200-RT Connection assignment (Top hat rail mounting)



Screw terminals are pluggable in blocks of 9



- Fuse F1 (GMA) is behind the terminal cover 11-19
- Switches for RS485-load resistors Rt are behind the terminal cover 11-19



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## GMA200-RT/-RTD Technical data - part 1

Type designation:	GMA200-RT	GMA200-RTD
<b>Display &amp; control elements</b>	19 status LEDs for operating and relay statuses	19 status LEDs for operating and relay statuses, 2.2" graphical display and 5 buttons
<b>Ambient conditions</b>	For storage: -25..+60 °C   0..99 % RH (recommended 0...+30 °C) For operation: -20..+50 °C   0..99 % RH Site of installation: in a control cabinet or in a wall housing up to a height of 2,000 m above sea level	
<b>Power supply</b>	Operating voltage: 24 V DC (20-30 V DC permissible) Power consumption: max. 6 W Fuses: F1= slow-blow T 500 mA	
<b>RS485 connection</b>	GMA Bus: RS485; half-duplex; galvanically isolated; max. 230400 Baud (for GMA200-M, control centre, PC, PLC or Gateway)	
<b>Relay outputs</b>	Contacts: 16 relays each with a changeover contact Contact rating: 3 A / 250 V AC or 3 A / 30 V DC Insulation distances: Basic insulation between the relays: 1&2, 2&3, 4&5, 5&6, 7&8, 8&9, 10&11, 11&12, 13&14, 14&15 Double insulation between the relays: 3&4, 6&7, 9&10, 12&13, 15&16	



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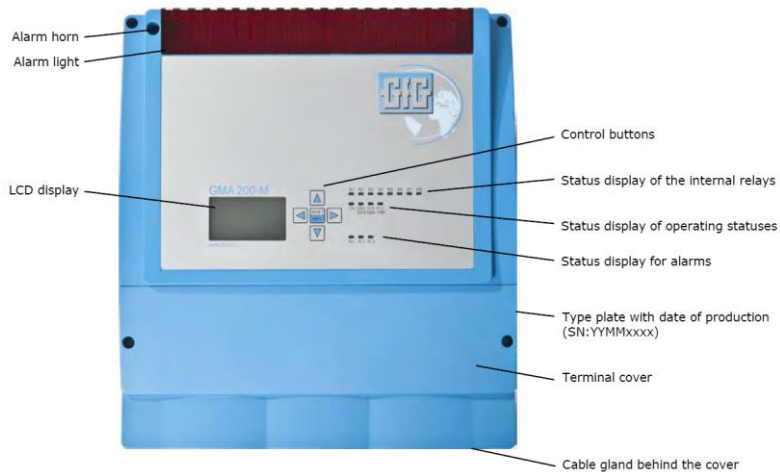
## GMA200-RT/-RTD Technical data - part 2

<b>Alarm acknowledgement inputs</b>	Reset: 0-3 V DC (alarm acknowledgement occurs at contact with GND; $U_{MAX}=30$ V DC)
<b>USB connection</b>	Mini USB port for device configuration via PC
<b>Housing</b>	Attachment: on mounting rail TS35 according to DIN 60715 Protection class: IP20 Material: Plastic Weight: approx. 410 g Dimensions: 162 x 97 x 62 mm (W x H x D)
<b>Connection cables</b>	Terminal blocks: 0.8..2.5 mm <sup>2</sup> cross section Cable: 2-4-wire 0.5-1.5 mm <sup>2</sup> LiYY, NYM (for GMA200 supply) 2-wire 1 x 2 x 0.22 mm <sup>2</sup> BUS-LD (for GMA Bus with a length >10 m)
<b>Approvals/Tests</b>	Electromagnetic compatibility: EN 50270:2006 Electrical safety: EN 61010:2010 Emitted interference: Type class I Interference resistance: Type class II Degree of soiling 2 Overvoltage category III for relay contacts



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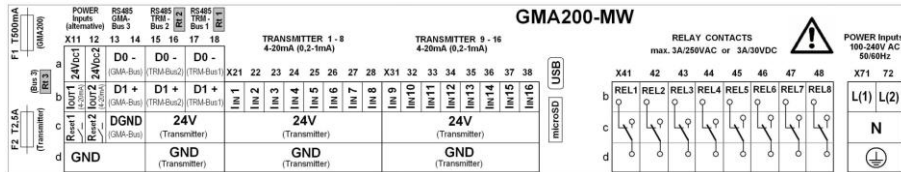
## GMA200-MW16 General description





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## GMA200-MW16 Connection assignment (Wall mounting)



### Four-level and Three-level terminal blocks

- Fuse F1 (GMA) accessible only by opening the housing cover
- Fuse F2 (Transmitter) easy accessible
- Switch for RS485-load resistors Rt1, Rt2 behind the Dreistock-Klemmen

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## GMA200-MW16 Technical data - part 1

<b>Type designation:</b>	<b>GMA200-MW16</b>
<b>Display &amp; control elements</b>	2.2" graphical display and 5 buttons 15 status LEDs for alarms, operating and relay statuses
<b>Ambient conditions</b>	For storage: -25...+60 °C   0..99 % RH (recommended 0...+30 °C) For operation: -20...+55 °C   0..99 % RH Site of installation: only indoors up to a height of 2,000 m above sea level
<b>Power supply</b>	Operating voltage: 100-240 V AC 50-60 Hz or/and 24 V DC (20-30 V DC permitted) Power consumption: max.10 W (without transmitter) max.90 W (with transmitter) Fuses: F1 = slow-blow T 500 mA (for GMA200) F2 = slow-blow T 2.5 A (for transmitter)
<b>Transmitter connections</b>	Supply: 24 V DC ±3 % with installed power supply unit, otherwise 20-30 V DC (see above) 16x 150 mA or Itotal=2.4 A with other configuration Analogue signals IIN1-16: 4-20 mA or 0.2-1 mA (resistance approx. 50..100 Ω, I <sub>max</sub> =70 mA permanently / 500 mA temporarily) Digital signals TRM Bus1+2: RS485; half-duplex; max. 38,400 Baud
<b>RS485 outputs</b>	TRM Bus1+2: RS485; half-duplex; max. 38,400 Baud (for GMA200 relay modules only) GMA Bus: RS485; half-duplex; galvanically isolated; max. 230,400 Baud (for GMA200 relay modules, control centre, PC, PLC or Gateway)

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## GMA200-MW16 Technical data - part 2

<b>Relay outputs</b>	Contacts: Contact rating: Insulation distances:	8 relays each with a changeover contact 3 A / 250 V AC or 3 A / 30 V DC Basic insulation between the relays: 1&2, 3&4, 5&6, 7&8 Double insulation between the relays: 2&3, 4&5, 6&7
<b>Analogue outputs</b>	IOUT1+2:	4-20 mA (resistance max. 560 Ω)
<b>Alarm acknowledgement inputs</b>	Reset1+2:	0-3 V DC (alarm acknowledgement occurs at contact with GND; U <sub>MAX</sub> =30 V DC)
<b>Data logger</b> (optional)		2 GB microSD card with FAT (FAT16) format
<b>USB connection</b>		Mini USB port for device configuration via PC
<b>Connection cables</b>	Cable glands: Terminal blocks: Cable:	max. 20 pieces M16x1.5 (for cable cross section of 4.5-10 mm) 0.8..2.5 mm <sup>2</sup> cross section 3-4-wire ≥0.75 mm <sup>2</sup> LIYY, NYM (for GMA200 supply) 2-4-wire 0.5-1.5 mm <sup>2</sup> LIYY, LIYCY (for transmitter) 2-wire 1 x 2 x 0.22 mm <sup>2</sup> BUS-LD (for GMA Bus with a length > 10 m)
<b>Housing</b>	Protection class: Material: Weight: Dimensions:	IP65 Plastic approx. 2.0 kg 270 x 290 x 98 mm (W x H x D)
<b>Approvals/Tests</b>	Electromagnetic compatibility: Electrical safety:	EN 50270:2006 DIN EN 61010:2010 Emitted interference: Type class I Interference resistance: Type class II Degree of soiling 2 Overvoltage category II for mains power supply Overvoltage category III for relay contacts

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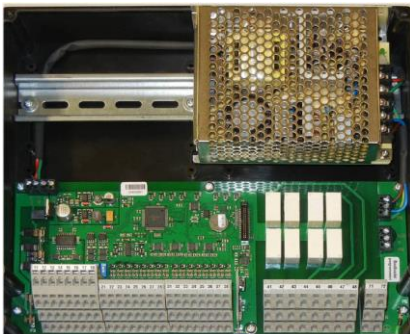
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## GMA200-MW16 Variants of Power supplies

Example for Power supply SET1



Example for Power supply SET2



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## GMA200-MW16 Variants of Power supplies

Example of Power supply SET3



UPS-Detail



## GMA200 Relay-Module for Wall mounting

- Relay-Module GMA200-RTW
  - Wall enclosure with closed upper casing
  - Relay-Module GMA200-RT
  - 15W Power supply





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Thank you for your attention!