

## EX - CONTROL STATIONS

**Moulded plastic  
Version for Zone 1 and Zone 21**

Even under the most adverse conditions, CEAG control stations can be used and operated reliably. The enclosures consist of low-temperature impact-resistant thermoplastic which fulfils the requirements of EN 60079 and provides a high resistance to chemicals. The well thought out design with low side walls allows optimum cable connection. Quick fixing allows up to three CEAG built-in components, such as signal lamps, pushbuttons and switches, to be snapped on a rail in the enclosure. They can be snapped out of the enclosure to facilitate cable-entry feeding. Notches in the mounting rails prevent the built-in components from being twisted out of place.

Wall mounting can be carried out via easily accessible fixing apertures when the enclosure cover is sealed. CEAG mounting plates offer a time-saving fixing technique. CEAG control stations feature standard M25 moulded-plastic cable entries with an 8 to 17 mm clamping diameter. Coupling pieces link enclosures to each other and prevent them from being twisted out of place. Alternatively, metal screws and flanges can be used for mounting – the metal flanges also enable external earthing.

Free mounting areas can be provided for retrofitting certified CEAG components. These are then factory sealed with blanking elements.

**Internationally approved.**

- Flat side walls
- Quick fixing of all built-in components
- High chemical resistance
- Different enclosures can be combined




**Type 411 83**

**Type 411 82**

**Type 411 81**

## Technical data

### Ex-control stations Type 411 81 | Type 411 82 | Type 411 83

|                                                          |                                                                                                                               |                                                                                                                                 |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Marking accd. to 94/9/EC                                 | $\text{Ex}$ II 2 G Ex ed ib m IIC T6<br>$\text{Ex}$ II 2 D Ex tD A21 IP66 T80 °C                                              |                                                                                                                                 |
| EC-Type Examination Certificate                          | PTB 00 ATEX 3117                                                                                                              |                                                                                                                                 |
| IECEX Certificate of Conformity                          | IECEX BK1 04.0003                                                                                                             |                                                                                                                                 |
| Marking accd. to IECEx                                   | Ex e II T6, Ex e ib IIC T6, Ex ed IIC T6 or Ex ed ib IIC T6                                                                   |                                                                                                                                 |
| Permissible ambient temperature                          | -20 °C up to +40 °C<br>-55 °C up to +55 °C (option)                                                                           |                                                                                                                                 |
| Rated voltage                                            | 690 V AC                                                                                                                      |                                                                                                                                 |
| Rated current                                            | 16 A                                                                                                                          |                                                                                                                                 |
| Rated making-/rated breaking capacity accd. EN 60947-5-1 | Ex41<br>AC-15: $U_e$ 250 V / $I_e$ 6 A<br>$U_e$ 500 V / $I_e$ 4 A<br>DC-13: $U_e$ 24 V / $I_e$ 6 A<br>$U_e$ 220 V / $I_e$ 1 A | Ex23<br>AC-15: $U_e$ 230 V / $I_e$ 6 A<br>$U_e$ 500 V / $I_e$ 4 A<br>DC-13: $U_e$ 24 V / $I_e$ 2 A<br>$U_e$ 230 V / $I_e$ 0.5 A |
| Connecting terminals                                     | 2 x 2.5 mm <sup>2</sup>                                                                                                       |                                                                                                                                 |
| Protection class                                         | I                                                                                                                             |                                                                                                                                 |
| Degree of protection accd. to EN 60529                   | IP66 (standard)                                                                                                               |                                                                                                                                 |
| Cable glands/Gland plates/Enclosure drilling             | 1 x M25 Ex e cable glands for cables from Ø 8 - 17 mm or 1 x M20 thread with brass flange                                     |                                                                                                                                 |
| Enclosure material                                       | Polyamide                                                                                                                     |                                                                                                                                 |
| Enclosure colour                                         | black                                                                                                                         |                                                                                                                                 |

#### Type 411 81

|                        |                   |
|------------------------|-------------------|
| Dimensions (L x W x H) | 85 x 85 x 77.5 mm |
| Weight (empty)         | 0.25 kg           |

#### Type 411 82

|                        |                    |
|------------------------|--------------------|
| Dimensions (L x W x H) | 125 x 85 x 77.5 mm |
| Weight (empty)         | 0.35 kg            |

#### Type 411 83

|                        |                    |
|------------------------|--------------------|
| Dimensions (L x W x H) | 165 x 85 x 77.5 mm |
| Weight (empty)         | 0.45 kg            |

#### Type 411 82 with measuring instrument AM 72

|                                  |                                                          |                            |
|----------------------------------|----------------------------------------------------------|----------------------------|
| Movement                         | Moving iron                                              | Moving coil                |
| Marking accd. to 94/9/EC         | $\text{Ex}$ II G Ex e II                                 | $\text{Ex}$ II G Ex ib IIC |
| Accuracy                         | Class 2.5                                                | Class 1.5                  |
| Overload range                   | 10-fold -25 sec.<br>25-fold - 4 sec.<br>50-fold - 1 sec. | 10-fold -5 sec.            |
| Measuring range                  | n / 1A<br>0 - 25 A direct                                | 0 - 20 mA<br>4 - 20 mA     |
| Inductance $L_i$                 | –                                                        | ≤ 0.1 mH                   |
| Capacitance $C_i$                | –                                                        | ≤ 0.1 nF                   |
| Open circuit voltage max. $U_i$  | –                                                        | 30 V                       |
| Short circuit current max. $I_i$ | –                                                        | 150 mA                     |
| Connecting terminals             | 2 x 1.5 - 4 mm <sup>2</sup>                              |                            |
| Weight                           | 0.70 kg                                                  |                            |

<sup>1)</sup> Base enclosure can be rotated after wards (entry from top or down)

Other versions available on request

## Ex-control stations



Type 411 81...01



Type 411 81...12



Type 411 81...18



Type 411 81...04

4

### Ordering details Type 411 81 with 1 built-in component

| Content | Built-in components                                                                                                                            | Weight approx.                | Order No.                                                                           |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------|
|         | 1 x pushbutton DRT<br>1 NO + 1 NC<br>label: "0, I, START, STOP"                                                                                | 0.40 kg                       | <b>GHG 411 8100 R0001</b>                                                           |
|         | 1 x mushroom-head pushbutton SGTE<br>1 NO + 1 NC<br>"Emergency stop"                                                                           | 0.45 kg                       | <b>GHG 411 8100 R0002</b>                                                           |
|         | 1 x mushroom-head pushbutton SGTE<br>1 NO + 1 NC<br>"Emergency stop"<br>with key unlocking                                                     | 0.50 kg                       | <b>GHG 411 8100 R0012</b>                                                           |
|         | 1 x double pushbutton DDT<br>1 NO + 1 NC<br>label: "0, I, START, STOP"                                                                         | 0.45 kg                       | <b>GHG 411 8100 R0009</b>                                                           |
|         | 1 x key-operated switch SLS<br>2 NO<br>SW 5 "engaging-engaging-engaging"<br>label: "I 0 II"                                                    | 0.52 kg                       | <b>GHG 411 8100 R0018</b>                                                           |
|         | 1 x control switch SCT<br>1 change-over<br>SW 6 "engaging-engaging"<br>label: HAND – AUTO<br>label: "0 – I"<br>label: "I – II"                 | 0.45 kg<br>0.45 kg<br>0.45 kg | <b>GHG 411 8100 R0003</b><br><b>GHG 411 8100 R0004</b><br><b>GHG 411 8100 R0005</b> |
|         | 1 x control switch SCT<br>2 NO<br>SW 5 "engaging-engaging-engaging"<br>label: HAND – 0 – AUTO<br>label: "I 0 II"<br>label: "Local Remote Auto" | 0.45 kg<br>0.45 kg<br>0.45 kg | <b>GHG 411 8100 R0006</b><br><b>GHG 411 8100 R0007</b><br><b>GHG 411 8100 R0008</b> |


**Type 411 82...18**

**Type 411 82...17**

**Type 411 82...03**

**Type 411 82...01**
**Ordering details Type 411 82 with 2 built-in components**
**4**

| Content     | Built-in components                                                                                                                                                                  | Weight approx. | Order No.                 |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------------|
|             | 2 x pushbutton DRT<br>1 NO + 1 NC each<br>label: "0, I, START, STOP"                                                                                                                 | 0.54 kg        | <b>GHG 411 8200 R0001</b> |
| X1—⊗—X2<br> | 1 x signal lamp SIL<br>20-250 V AC/DC<br>coloured lens cover: „white, red, green, yellow“<br>1 x double pushbutton DDT<br>1 NO + 1 NC<br>label: "0, I, START, STOP"                  | 0.65 kg        | <b>GHG 411 8200 R0003</b> |
|             | 1 x double pushbutton DDT<br>1 NO + 1 NC<br>label: "0, I, START, STOP"<br>1 x mushroom-head pushbutton SGT<br>1 NO + 1 NC<br>"emergency stop"                                        | 0.57 kg        | <b>GHG 411 8200 R0016</b> |
|             | 1 x control switch SCT<br>1 change-over<br>SW 6 "engaging-engaging"<br>label: "0 - I"<br>1 x mushroom-head pushbutton SGTE<br>1 NO + 1 NC<br>"emergency stop"                        | 0.57 kg        | <b>GHG 411 8200 R0017</b> |
| X1—⊗—X2<br> | 1 x signal lamp SIL<br>20-250 V AC/DC<br>coloured lens cover: „white, red, green, yellow“<br>1 x key-operated switch<br>2 NO<br>SW 5 "engaging-engaging-engaging"<br>label: "I 0 II" | 0.65 kg        | <b>GHG 411 8200 R0018</b> |

## Ex-control stations



Type 411 83...01



Type 411 83...03



Type 411 83...23



Type 411 83...04

4

### Ordering details Type 411 83 with 3 built-in components

| Content      | Built-in components                                                                                                                                                                                                                                                                | Weight approx. | Order No.                 |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------------|
| <p>X1—X2</p> | <p>1 x signal lamp SIL<br/>20-250 V AC/DC<br/>coloured lens cover: „white, red, green, yellow“<br/>2 x pushbutton DRT<br/>1 NO + 1 NC each<br/>label: “0, I, START, STOP”</p>                                                                                                      | 0.76 kg        | <b>GHG 411 8300 R0001</b> |
| <p>X1—X2</p> | <p>1 x signal lamp SIL<br/>20-250 V AC/DC<br/>coloured lens cover: „white, red, green, yellow“<br/>1 x double pushbutton DDT<br/>1 NO + 1 NC<br/>label: “0, I, START, STOP”<br/>1 x mushroom-head pushbutton SGTE<br/>1 NO + 1 NC<br/>“emergency stop”</p>                         | 0.80 kg        | <b>GHG 411 8300 R0003</b> |
| <p>1—2</p>   | <p>1 x measuring instrument AM72<br/>CT connection n/1A<br/>Scale 0 –100%/150%<br/>1 x control switch SCT<br/>1 NO + 1 NC<br/>SW 8 “engaging-engaging-spring return”<br/>label: “0 – I”</p>                                                                                        | 0.92 kg        | <b>GHG 411 8300 R0023</b> |
| <p>X1—X2</p> | <p>1 x signal lamp SIL<br/>20-250 V AC/DC<br/>coloured lens cover: „white, red, green, yellow“<br/>1 x double pushbutton DDT<br/>1 NO + 1 NC<br/>label: “0, I, START, STOP”<br/>1 x control switch SCT<br/>1 change-over<br/>SW 6 “engaging-engaging”<br/>label: “HAND - AUTO”</p> | 0.80 kg        | <b>GHG 411 8300 R0004</b> |

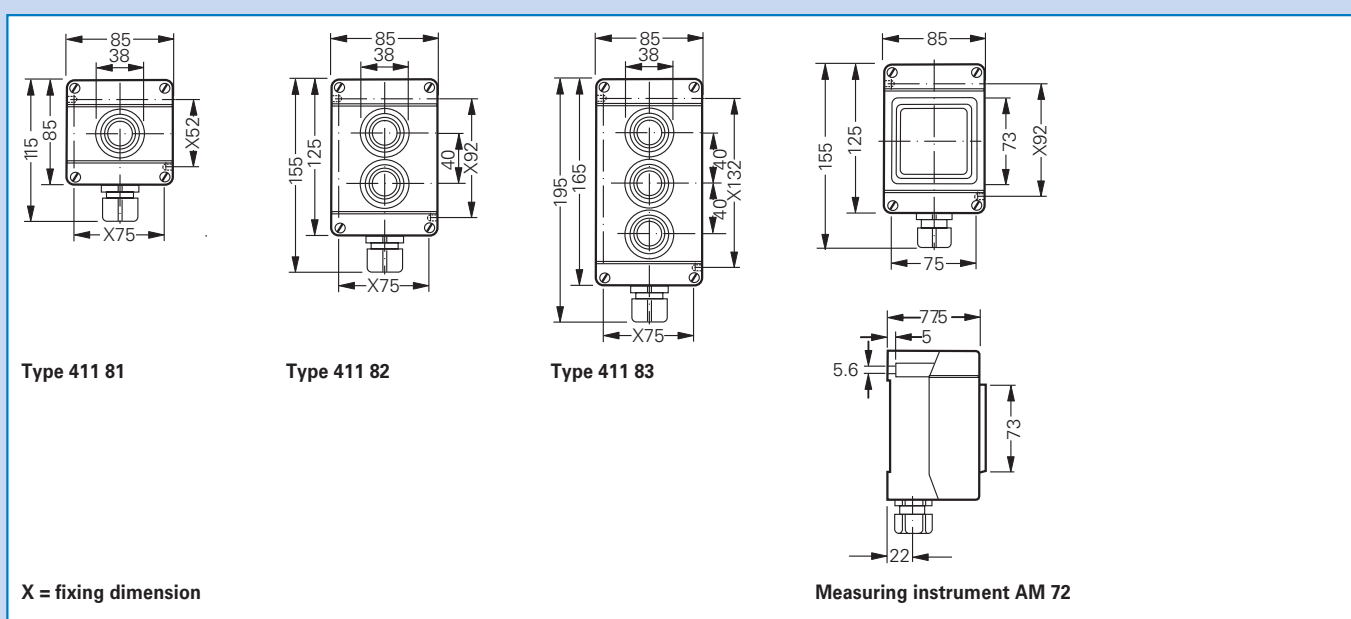


Measuring instrument AM72

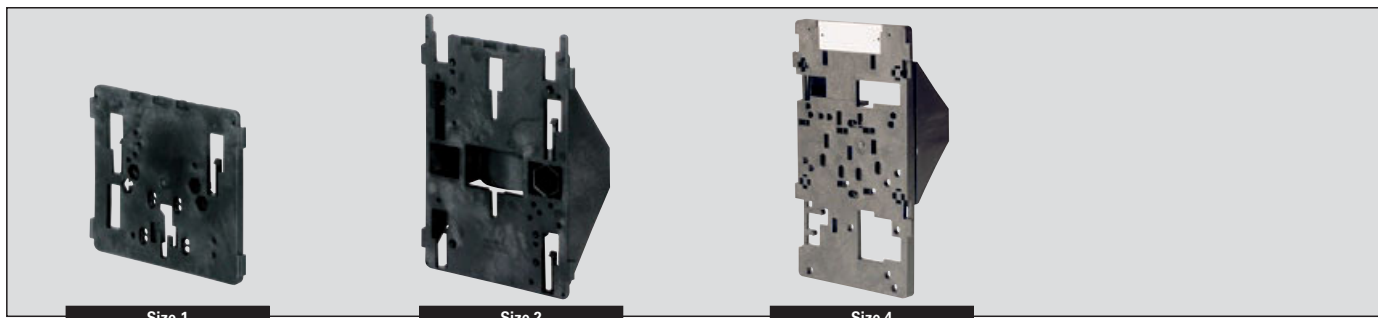
## Ordering details measuring instrument AM72, Type 411 82

| Content Movement                                                     | Weight      | Order No. |                    |
|----------------------------------------------------------------------|-------------|-----------|--------------------|
| <b>Version direct measurement with 1 x entry and cable gland M25</b> |             |           |                    |
| 0 - 1 / 1.5 A                                                        | Moving iron | 0.70 kg   | GHG 411 8281 R0002 |
| 0 - 2.5 / 3.75 A                                                     | Moving iron | 0.70 kg   | GHG 411 8281 R0003 |
| 0 - 5 / 7.5 A                                                        | Moving iron | 0.70 kg   | GHG 411 8281 R0004 |
| 0 - 10 / 15 A                                                        | Moving iron | 0.70 kg   | GHG 411 8281 R0005 |
| 0 - 16 / 24 A                                                        | Moving iron | 0.70 kg   | GHG 411 8281 R0007 |
| 0 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)                             | Moving coil | 0.80 kg   | GHG 411 8285 R0033 |
| 4 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)                             | Moving coil | 0.80 kg   | GHG 411 8286 R0035 |
| <b>Version CT connection n/1A with 1 x entry and cable gland M25</b> |             |           |                    |
| 0 - 1 / 1.5 A                                                        | Moving iron | 0.70 kg   | GHG 411 8282 R0002 |
| 0 - 2.5 / 3.75 A                                                     | Moving iron | 0.70 kg   | GHG 411 8282 R0003 |
| 0 - 5 / 7.5 A                                                        | Moving iron | 0.70 kg   | GHG 411 8282 R0004 |
| 0 - 10 / 15 A                                                        | Moving iron | 0.70 kg   | GHG 411 8282 R0005 |
| 0 - 15 / 22.5 A                                                      | Moving iron | 0.70 kg   | GHG 411 8282 R0007 |
| 0 - 20 / 30 A                                                        | Moving iron | 0.70 kg   | GHG 411 8282 R0008 |
| 0 - 30 / 45 A                                                        | Moving iron | 0.70 kg   | GHG 411 8282 R0009 |
| 0 - 40 / 60 A                                                        | Moving iron | 0.70 kg   | GHG 411 8282 R0010 |
| 0 - 50 / 75 A                                                        | Moving iron | 0.70 kg   | GHG 411 8282 R0011 |
| 0 - 60 / 90 A                                                        | Moving iron | 0.70 kg   | GHG 411 8282 R0012 |
| 0 - 75 / 112.5 A                                                     | Moving iron | 0.70 kg   | GHG 411 8282 R0013 |
| 0 - 100 / 150 A                                                      | Moving iron | 0.70 kg   | GHG 411 8282 R0014 |
| 0 - 100% / 150%                                                      | Moving iron | 0.70 kg   | GHG 411 8282 R0001 |

## Dimension drawing







Size 1

Size 2

Size 4

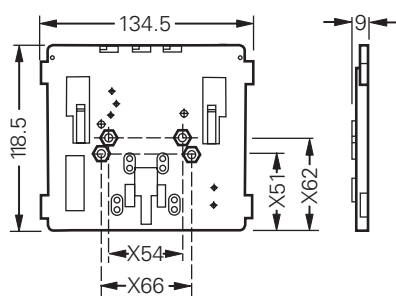
**Accessories**
**Mounting plate for type 411 81**

| Type   | Application           | Fixing method         | OU | Order No.          |
|--------|-----------------------|-----------------------|----|--------------------|
| Size 1 | Wall mounting         | screwless mounting    | 1  | GHG 610 1953 R0101 |
| Size 1 | Pipe clamp            | screwless mounting    | 1  | GHG 610 1953 R0102 |
| Size 1 | Trellis-work mounting | screwless mounting    | 1  | GHG 610 1953 R0103 |
| Size 4 | Wall mounting         | snap-on <sup>1)</sup> | 1  | GHG 610 1953 R0126 |
| Size 4 | Trellis-work mounting | snap-on <sup>1)</sup> | 1  | GHG 610 1953 R0126 |
| Size 4 | Pipe clamp            | snap-on <sup>1)</sup> | 1  | GHG 610 1953 R0130 |

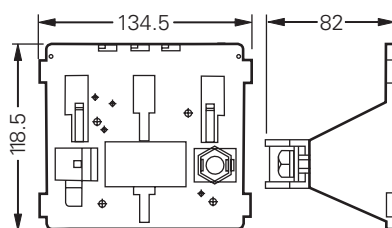
**Mounting plate for type 411 82 and 411 83**

| Type                                                                               | Application           | Fixing method         | OU | Order No.          |
|------------------------------------------------------------------------------------|-----------------------|-----------------------|----|--------------------|
| Size 2                                                                             | Wall mounting         | screwless mounting    | 1  | GHG 610 1953 R0104 |
| Size 2                                                                             | Pipe clamp            | screwless mounting    | 1  | GHG 610 1953 R0105 |
| Size 2                                                                             | Trellis-work mounting | screwless mounting    | 1  | GHG 610 1953 R0106 |
| Size 4                                                                             | Wall mounting         | snap-on <sup>1)</sup> | 1  | GHG 610 1953 R0126 |
| Size 4                                                                             | Trellis-work mounting | snap-on <sup>1)</sup> | 1  | GHG 610 1953 R0126 |
| Size 4                                                                             | Pipe clamp            | snap-on <sup>1)</sup> | 1  | GHG 610 1953 R0130 |
| Plug-in fastener for CEAG modules with 5.5 mm and 11 mm mounting size per 4 pieces |                       |                       | 10 | GHG 610 1953 R0041 |

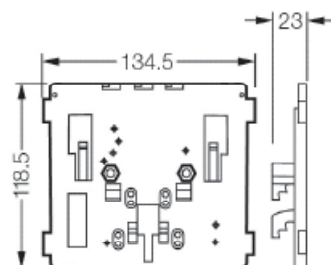
<sup>1)</sup> snap-on with snap-on mounting 5.5 mm

**Dimension drawing**


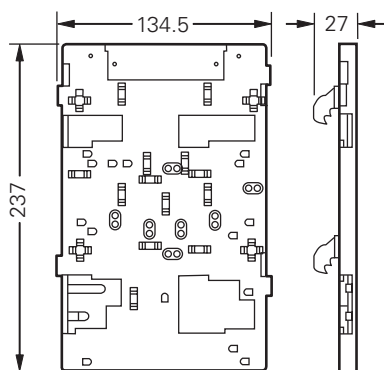
Size 1 wall mounting



Size 1 pipe mounting



Size 1 trellis-work mounting



Size 4 wall mounting

X = fixing dimension

# EX - CONTROL STATION

**Stainless steel**  
**Version for Zone 1 and Zone 21**

CEAG explosion-protected control stations made of high-grade 316L stainless steel are designed to accommodate up to four built-in components. These stainless-steel control stations with electro-polished surfaces offer protection for applications in the off-shore industry and at sites with especially severe mechanical, chemical and climatic conditions.

CEAG flameproof built-in components, such as signal lamps, pushbuttons and switches, provide snap-on mounting on rails screwed into the enclosures. To facilitate insertion of cables into the entries, the built-in components can be snapped out of the enclosures. Notches in the mounting rails define the position of the built-in components and prevent them from being twisted out of place.

Free mounting areas can be provided for retrofitting certified CEAG components. These are then factory sealed with blanking elements.

**Internationally approved.**

- High mechanical, chemical and thermal resistance
- Individual configuration
- Clean-room applications






**Type 414 81..**
**Type GHG 414 82**
**Type GHG 414 81**
**Technical data**
**Ex-control stations Type 414 81 | Type 414 82**

|                                                             |                                                                                                                                                                                                                                              |                                                                                                                                                                                                         |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Marking accd. to 94/9/EC                                    |  II 2 G Ex ed ib m IIC T6<br> II 2 D Ex tD A21 IP66 T80 °C                 |                                                                                                                                                                                                         |
| EC-Type Examination Certificate                             | PTB 00 ATEX 3117                                                                                                                                                                                                                             |                                                                                                                                                                                                         |
| IECEX Certificate of Conformity                             | IECEX BKI 04.0003                                                                                                                                                                                                                            |                                                                                                                                                                                                         |
| Marking accd. to IECEx                                      | Ex e II T6, Ex e ib IIC T6, Ec ed IIC T6 or Ex ed ib IIC T6                                                                                                                                                                                  |                                                                                                                                                                                                         |
| Permissible ambient temperature                             | -20 °C up to +40 °C<br>-55 °C up to +55 °C (option)                                                                                                                                                                                          |                                                                                                                                                                                                         |
| Rated voltage                                               | 690 V AC (with control switch GHG 23 up to 500 V)                                                                                                                                                                                            |                                                                                                                                                                                                         |
| Rated current                                               | 16 A (with control switch GHG 23 max. 10 A)                                                                                                                                                                                                  |                                                                                                                                                                                                         |
| Rated making-/rated breaking capacity<br>accd. EN 60947-5-1 | Ex41<br>AC-15: U <sub>e</sub> 250 V / I <sub>e</sub> 6 A<br>U <sub>e</sub> 500 V / I <sub>e</sub> 4 A<br>DC-13: U <sub>e</sub> 24 V / I <sub>e</sub> 6 A<br>U <sub>e</sub> 220 V / I <sub>e</sub> 1 A<br>with gold contact points max. 0.4 A | Ex23<br>AC-15: U <sub>e</sub> 230 V / I <sub>e</sub> 6 A<br>U <sub>e</sub> 500 V / I <sub>e</sub> 4 A<br>DC-13: U <sub>e</sub> 24 V / I <sub>e</sub> 2 A<br>U <sub>e</sub> 230 V / I <sub>e</sub> 0.5 A |
| Connecting terminals                                        | 2 x 4 mm <sup>2</sup>                                                                                                                                                                                                                        |                                                                                                                                                                                                         |
| Protection class                                            | I                                                                                                                                                                                                                                            |                                                                                                                                                                                                         |
| Degree of protection accd. to EN 60529                      | IP66                                                                                                                                                                                                                                         |                                                                                                                                                                                                         |
| Cable glands/Gland plates/Enclosure drilling                | 1 x thread Ø 21 mm for cable gland M20                                                                                                                                                                                                       |                                                                                                                                                                                                         |
| Enclosure material                                          | Stainless steel AISI 316 L                                                                                                                                                                                                                   |                                                                                                                                                                                                         |

**Type 414 81**

|                        |                   |
|------------------------|-------------------|
| Dimensions (L x W x H) | 166 x 140 x 76 mm |
| Weight (empty)         | 1.40 kg           |

**Type 414 82**

|                        |                   |
|------------------------|-------------------|
| Dimensions (L x W x H) | 286 x 140 x 76 mm |
| Weight (empty)         | 2.10 kg           |

**Type 414 81 with measuring instrument AM 72**

|                               |                                                                             |                        |
|-------------------------------|-----------------------------------------------------------------------------|------------------------|
| Movement                      | Moving iron                                                                 | Moving coil            |
| Marking accd. to 94/9/EC      | Ex II G Ex e II                                                             | Ex II G Ex ib IIC      |
| Accuracy                      | Class 2.5                                                                   | Class 1.5              |
| Overload range                | 10-fold -25 sec.<br>25-fold - 4 sec.<br>50-fold - 1 sec.<br>indicated 1:1.5 | 10-fold -5 sec.        |
| Measuring range               | n / 1A<br>0 - 25 A direct                                                   | 0 - 20 mA<br>4 - 20 mA |
| Inductance Li                 | –                                                                           | ≤ 0.1 mH               |
| Capacitance Ci                | –                                                                           | ≤ 0.1 nF               |
| Open circuit voltage max. Ui  | –                                                                           | 30 V                   |
| Short circuit current max. Ii | –                                                                           | 150 mA                 |
| Connecting terminals          | 2 x 1.5 - 4 mm <sup>2</sup>                                                 |                        |
| Weight                        | 1.25 kg                                                                     |                        |

<sup>1)</sup> Base enclosure can be rotated after wards (entry from top or down)

Other versions available on request

## Ex-control stations



Type 414 81...01



Type 414 81...02



Type 414 81...03



Type 414 81...04

4

### Ordering details Type 414 81 with 2 built-in components

| Content* | Built-in components                                                                                                                                                 | Weight approx. | Order No.                 |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------------|
|          | 2 x pushbutton DRT<br>NO + 1 NC each<br>label: "0, I, START, STOP"                                                                                                  | 1.80 kg        | <b>GHG 414 8100 R0001</b> |
|          | 1 x signal lamp SIL<br>20-250 V AC/DC<br>coloured lens cover: „white, red, green, yellow“<br>1 x double pushbutton DDT<br>1 NO + 1 NC<br>label: "0, I, START, STOP" | 1.85 kg        | <b>GHG 414 8100 R0002</b> |
|          | 1 x double pushbutton DDT<br>1 NO + 1 NC<br>label: "0, I, START, STOP"<br>1 x mushroom-head pushbutton SGTE<br>1 NO + 1 NC<br>"emergency stop"                      | 1.85 kg        | <b>GHG 414 8100 R0003</b> |
|          | 1 x measuring instrument AM45<br>CT connection n/1A<br>Scale 0 –100%/150%<br>1 x double pushbutton DDT<br>1 NO + 1 NC<br>label: "0, I, START, STOP"                 | 1.85 kg        | <b>GHG 414 8100 R0004</b> |

\*Without external fixing lugs (see accessories NO. 9.30)



Type 414 82...03

Type 414 82...02

Type 414 82...01

## Ordering details Type 414 82 with 4 built-in components

4

| Content*                      | Built-in components                                                                                                                                                                                                                                                                                                                                      | Weight approx. | Order No.                 |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------------|
| <p>X1—⊗—X2</p>                | <p>1 x signal lamp SIL<br/>20-250 V AC/DC<br/>coloured lens cover: „white, red, green, yellow“<br/>2 x pushbutton DRT<br/>1 NO + 1 NC<br/>label: “0, I, START, STOP”<br/>1 x mushroom-head pushbutton SGT<br/>1 NO + 1 NC<br/>“emergency stop”</p>                                                                                                       | 2.80 kg        | <b>GHG 414 8200 R0001</b> |
| <p>X1—⊗—X2</p> <p>X1—⊗—X2</p> | <p>2 x signal lamp SIL<br/>20-250 V AC/DC<br/>coloured lens cover: „white, red, green, yellow“<br/>2 x double pushbutton DDT<br/>1 NO + 1 NC<br/>label: “0, I, START, STOP”</p>                                                                                                                                                                          | 2.80 kg        | <b>GHG 414 8200 R0002</b> |
| <p>X1—⊗—X2</p>                | <p>1 x signal lamp SIL<br/>20-250 V AC/DC<br/>coloured lens cover: „white, red, green, yellow“<br/>1 x double pushbutton DDT<br/>1 NO + 1 NC<br/>label: “0, I, START, STOP”<br/>1 x mushroom-head pushbutton SGT<br/>1 NO + 1 NC<br/>“emergency stop”<br/>1 x key-operated switch<br/>2 NO<br/>SW 5 “engaging-engaging-engaging”<br/>label: “I 0 II”</p> | 2.90 kg        | <b>GHG 414 8200 R0003</b> |

\*Without external fixing lugs (see accessories NO. 9.30)



Type 414 81..

4

## Ordering details Type 414 81 with measuring instrument AM72

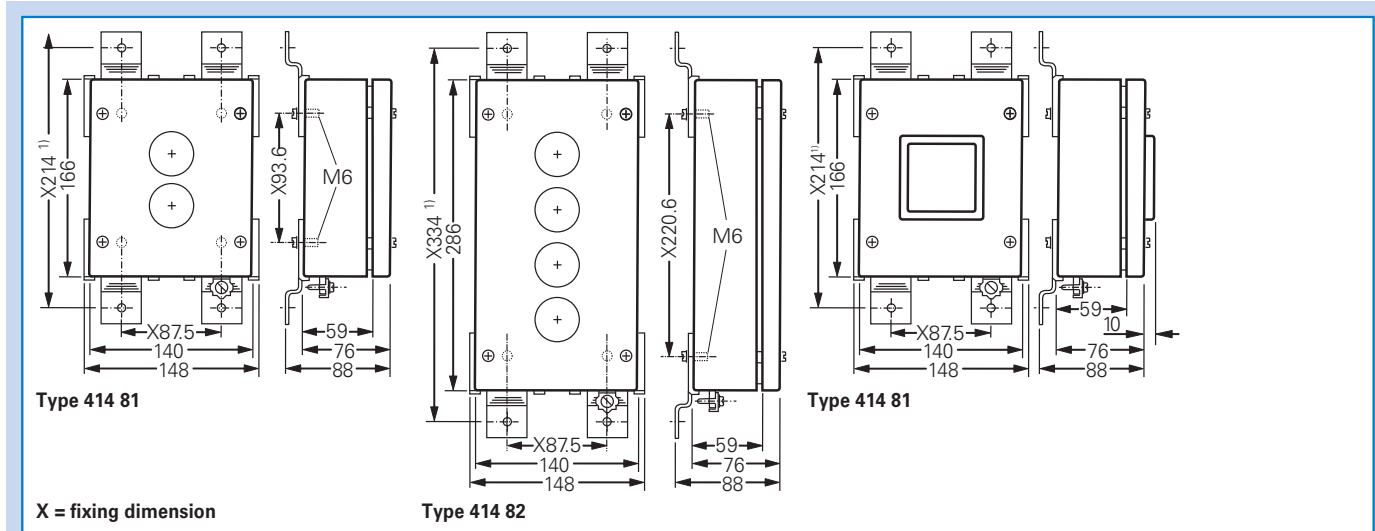
| Content                                                                                          | Movement    | Weight approx. | Order No.          |
|--------------------------------------------------------------------------------------------------|-------------|----------------|--------------------|
| <b>Version direct measurement with 1 x threaded entry Ø 21 mm (without external fixing lugs)</b> |             |                |                    |
| 0 - 1 / 1.5 A                                                                                    | Moving iron | 1.25 kg        | GHG 414 8181 R0002 |
| 0 - 2.5 / 3.75 A                                                                                 | Moving iron | 1.25 kg        | GHG 414 8181 R0003 |
| 0 - 5 / 7.5 A                                                                                    | Moving iron | 1.25 kg        | GHG 414 8181 R0004 |
| 0 - 10 / 15 A                                                                                    | Moving iron | 1.25 kg        | GHG 414 8181 R0005 |
| 0 - 16 / 24 A                                                                                    | Moving iron | 1.25 kg        | GHG 414 8181 R0007 |
| 0 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)                                                         | Moving coil | 1.35 kg        | GHG 414 8181 R0033 |
| 4 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)                                                         | Moving coil | 1.35 kg        | GHG 414 8181 R0035 |

|                                                                                                  |             |         |                    |
|--------------------------------------------------------------------------------------------------|-------------|---------|--------------------|
| <b>Version CT connection n/1A with 1 x threaded entry Ø 21 mm (without external fixing lugs)</b> |             |         |                    |
| 0 - 1 / 1.5 A                                                                                    | Moving iron | 1.25 kg | GHG 414 8182 R0002 |
| 0 - 2.5 / 3.75 A                                                                                 | Moving iron | 1.25 kg | GHG 414 8182 R0003 |
| 0 - 5 / 7.5 A                                                                                    | Moving iron | 1.25 kg | GHG 414 8182 R0004 |
| 0 - 10 / 15 A                                                                                    | Moving iron | 1.25 kg | GHG 414 8182 R0005 |
| 0 - 15 / 22.5 A                                                                                  | Moving iron | 1.25 kg | GHG 414 8182 R0007 |
| 0 - 20 / 30 A                                                                                    | Moving iron | 1.25 kg | GHG 414 8182 R0008 |
| 0 - 30 / 45 A                                                                                    | Moving iron | 1.25 kg | GHG 414 8182 R0009 |
| 0 - 40 / 60 A                                                                                    | Moving iron | 1.25 kg | GHG 414 8182 R0010 |
| 0 - 50 / 75 A                                                                                    | Moving iron | 1.25 kg | GHG 414 8182 R0011 |
| 0 - 60 / 90 A                                                                                    | Moving iron | 1.25 kg | GHG 414 8182 R0012 |
| 0 - 75 / 112.5 A                                                                                 | Moving iron | 1.25 kg | GHG 414 8182 R0013 |
| 0 - 100 / 150 A                                                                                  | Moving iron | 1.25 kg | GHG 414 8182 R0014 |
| 0 - 100% / 150%                                                                                  | Moving iron | 1.25 kg | GHG 414 8182 R0033 |

## Accessories

| Type                         | Order No.          |
|------------------------------|--------------------|
| External fixing lugs (2 pcs) | GHG 610 1941 R0013 |

## Dimension drawing



<sup>1)</sup> Scope of delivery without fixing lugs