



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 BK1 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 accd. EN 60947-5-1 | <table border="0"> <tr> <td>Ex41</td> <td>Ex23</td> </tr> <tr> <td>AC-15: U<sub>o</sub> 250 V / I<sub>o</sub> 6 A</td> <td>AC-15: U<sub>o</sub> 230 V / I<sub>o</sub> 6 A</td> </tr> <tr> <td>U<sub>o</sub> 500 V / I<sub>o</sub> 4 A</td> <td>U<sub>o</sub> 500 V / I<sub>o</sub> 4 A</td> </tr> <tr> <td>DC-13: U<sub>o</sub> 24 V / I<sub>o</sub> 6 A</td> <td>DC-13: U<sub>o</sub> 24 V / I<sub>o</sub> 2 A</td> </tr> <tr> <td>U<sub>o</sub> 220 V / I<sub>o</sub> 1 A</td> <td>U<sub>o</sub> 230 V / I<sub>o</sub> 0.5 A</td> </tr> </table> with gold contact points max. 0.4 A | Ex41 | Ex23 | AC-15: U <sub>o</sub> 250 V / I <sub>o</sub> 6 A | AC-15: U <sub>o</sub> 230 V / I <sub>o</sub> 6 A | U <sub>o</sub> 500 V / I <sub>o</sub> 4 A | U <sub>o</sub> 500 V / I <sub>o</sub> 4 A | DC-13: U <sub>o</sub> 24 V / I <sub>o</sub> 6 A | DC-13: U <sub>o</sub> 24 V / I <sub>o</sub> 2 A | U <sub>o</sub> 220 V / I <sub>o</sub> 1 A | U <sub>o</sub> 230 V / I <sub>o</sub> 0.5 A |
| Ex41   | Ex23   |      |      |  |  |   |   |   |   |   |   |
| AC-15: U <sub>o</sub> 250 V / I <sub>o</sub> 6 A         | AC-15: U <sub>o</sub> 230 V / I <sub>o</sub> 6 A   |      |      |  |  |   |   |   |   |   |   |
| U <sub>o</sub> 500 V / I <sub>o</sub> 4 A                | U <sub>o</sub> 500 V / I <sub>o</sub> 4 A  |      |      |  |  |   |   |   |   |   |   |
| DC-13: U <sub>o</sub> 24 V / I <sub>o</sub> 6 A          | DC-13: U <sub>o</sub> 24 V / I <sub>o</sub> 2 A  |      |      |  |  |   |   |   |   |   |   |
| U <sub>o</sub> 220 V / I <sub>o</sub> 1 A                | U <sub>o</sub> 230 V / I <sub>o</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                    | Ⓢ II G Ex e II  | Ⓢ 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

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### 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**

| 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)