



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	ⓧ II 2 G Ex ed ib m IIC T6 ⓧ 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 -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 AC-15: U <sub>e</sub> 250 V / I <sub>e</sub> 6 A U <sub>e</sub> 500 V / I <sub>e</sub> 4 A DC-13: U <sub>e</sub> 24 V / I <sub>e</sub> 6 A U <sub>e</sub> 220 V / I <sub>e</sub> 1 A	Ex23 AC-15: U <sub>e</sub> 230 V / I <sub>e</sub> 6 A U <sub>e</sub> 500 V / I <sub>e</sub> 4 A DC-13: U <sub>e</sub> 24 V / I <sub>e</sub> 2 A U <sub>e</sub> 230 V / I <sub>e</sub> 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	ⓧ II G Ex e II	ⓧ II G Ex ib IIC
Accuracy	Class 2.5	Class 1.5
Overload range	10-fold -25 sec. 25-fold - 4 sec. 50-fold - 1 sec.	10-fold -5 sec.
Measuring range	n / 1A 0 - 25 A direct	0 - 20 mA 4 - 20 mA
Inductance L <sub>i</sub>	-	≤ 0.1 mH
Capacitance C <sub>i</sub>	-	≤ 0.1 nF
Open circuit voltage max. U <sub>i</sub>	-	30 V
Short circuit current max. I <sub>i</sub>	-	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

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

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

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

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



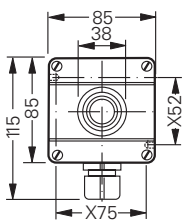
Measuring instrument AM72

Ordering details measuring instrument AM72, Type 411 82

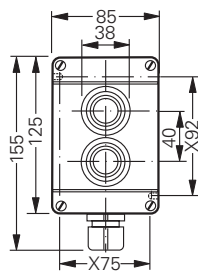
Content Movement	Weight	Order No.	
<b>Version direct measurement with 1 x entry and cable gland M25</b>			
0 - 1 / 1.5 A	Moving iron	0.70 kg	<b>GHG 411 8281 R0002</b>
0 - 2.5 / 3.75 A	Moving iron	0.70 kg	<b>GHG 411 8281 R0003</b>
0 - 5 / 7.5 A	Moving iron	0.70 kg	<b>GHG 411 8281 R0004</b>
0 - 10 / 15 A	Moving iron	0.70 kg	<b>GHG 411 8281 R0005</b>
0 - 16 / 24 A	Moving iron	0.70 kg	<b>GHG 411 8281 R0007</b>
0 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	Moving coil	0.80 kg	<b>GHG 411 8285 R0033</b>
4 - 20 / 24 mA 0-100% / 120% (Ri =320 Ω)	Moving coil	0.80 kg	<b>GHG 411 8286 R0035</b>

<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	<b>GHG 411 8282 R0002</b>
0 - 2.5 / 3.75 A	Moving iron	0.70 kg	<b>GHG 411 8282 R0003</b>
0 - 5 / 7.5 A	Moving iron	0.70 kg	<b>GHG 411 8282 R0004</b>
0 - 10 / 15 A	Moving iron	0.70 kg	<b>GHG 411 8282 R0005</b>
0 - 15 / 22.5 A	Moving iron	0.70 kg	<b>GHG 411 8282 R0007</b>
0 - 20 / 30 A	Moving iron	0.70 kg	<b>GHG 411 8282 R0008</b>
0 - 30 / 45 A	Moving iron	0.70 kg	<b>GHG 411 8282 R0009</b>
0 - 40 / 60 A	Moving iron	0.70 kg	<b>GHG 411 8282 R0010</b>
0 - 50 / 75 A	Moving iron	0.70 kg	<b>GHG 411 8282 R0011</b>
0 - 60 / 90 A	Moving iron	0.70 kg	<b>GHG 411 8282 R0012</b>
0 - 75 / 112.5 A	Moving iron	0.70 kg	<b>GHG 411 8282 R0013</b>
0 - 100 / 150 A	Moving iron	0.70 kg	<b>GHG 411 8282 R0014</b>
0 - 100% / 150%	Moving iron	0.70 kg	<b>GHG 411 8282 R0001</b>

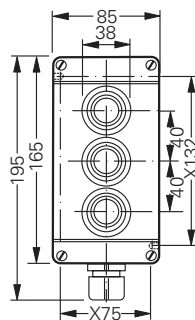
Dimension drawing



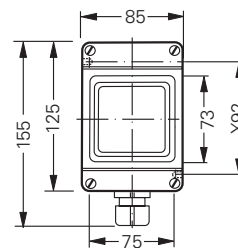
Type 411 81



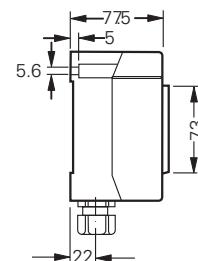
Type 411 82



Type 411 83

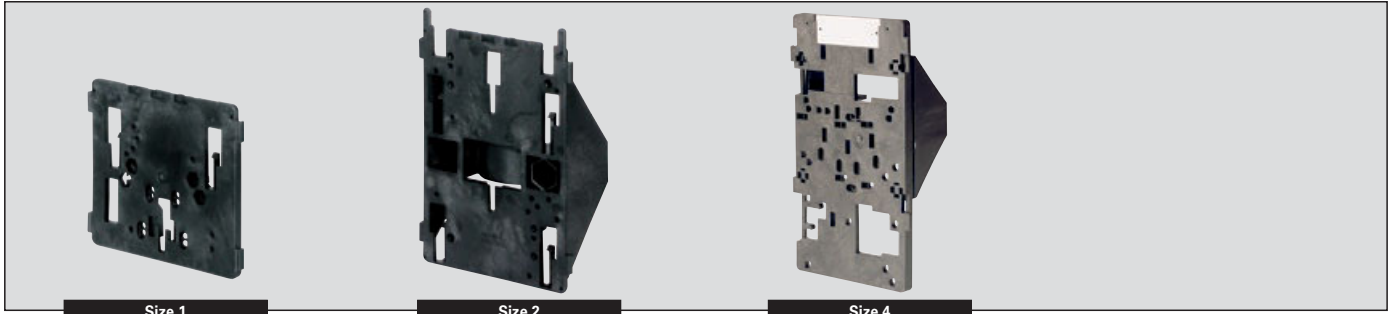


Measuring instrument AM 72



X = fixing dimension

## Ex-control stations



Size 1

Size 2

Size 4

4

## Accessories

### Mounting plate for type 411 81

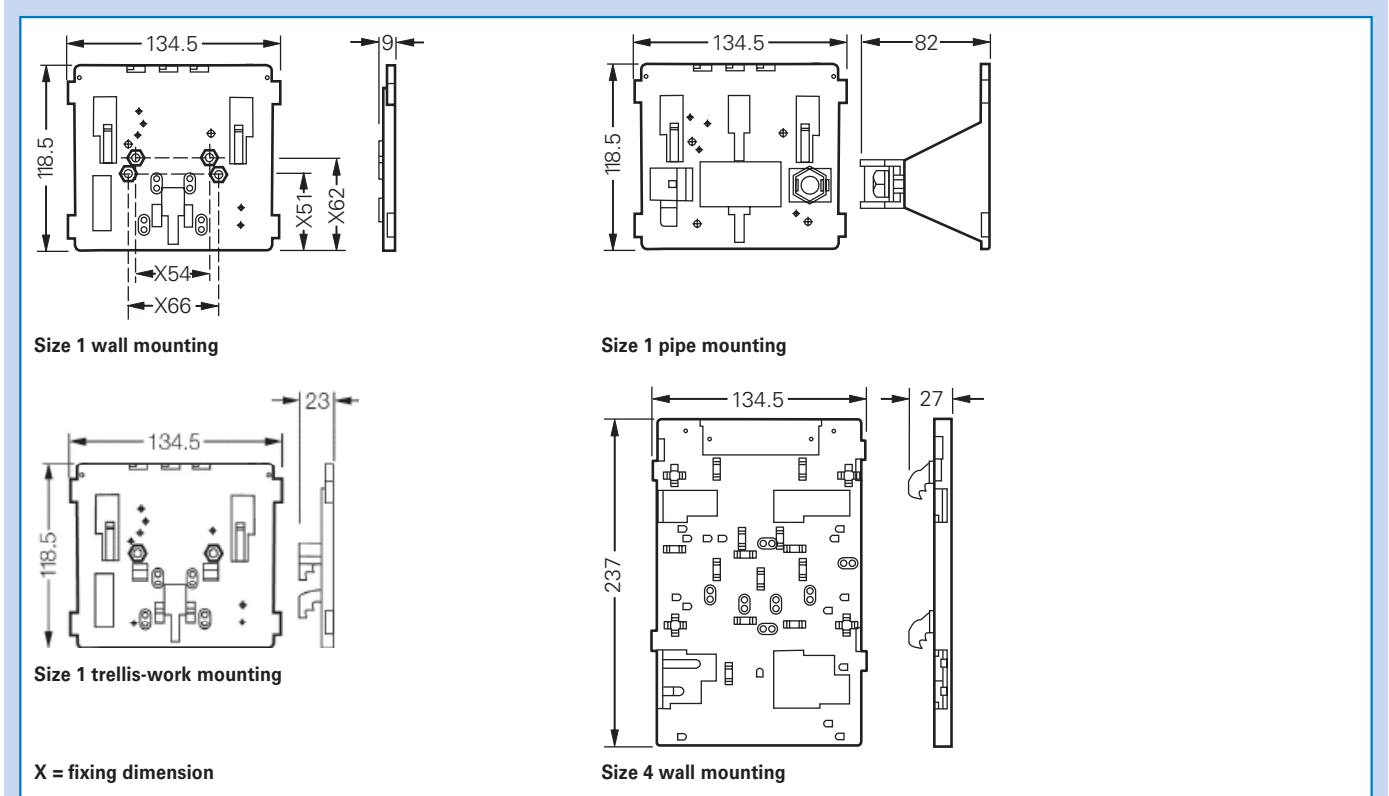
Type	Application	Fixing method	OU	Order No.
Size 1	Wall mounting	screwless mounting	1	GHG 610 1953 R0101
Size 1	Pipe clamp	screwless mounting	1	GHG 610 1953 R0102
Size 1	Trellis-work mounting	screwless mounting	1	GHG 610 1953 R0103
Size 4	Wall mounting	snap-on <sup>1)</sup>	1	GHG 610 1953 R0126
Size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



Dimensions in mm