



01846E00

Ammeter / Voltmeter Series 8402, 8403, 8405, 8404

- Explosion protection to
 - CENELEC
 - IEC
- For use in Zone 1 and Zone 2
- Fast comparison of measured with set values
- Versions available
 - Ammeter Series 8405, Series 8403 and Series 8402
 - Voltmeter Series 8404






STAHL

The ammeters and voltmeters from R. STAHL are explosion protected, electrical components with a moving iron instrument of the accuracy class 2.5. Integrated in enclosures with the type of protection "Ex e", they are used to measure and indicate current and voltage values.

The externally adjustable red pointer of the device allows a rapid measurement comparison. The current transformer (CT) versions (1 A and 5 A) allow a rapid and easy measurement range assignment on site due to the scale plate which can be slid in from the side.


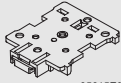
Zones 1 & 2



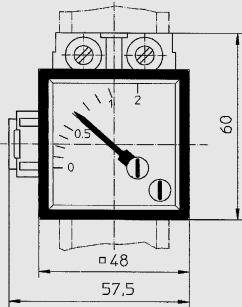
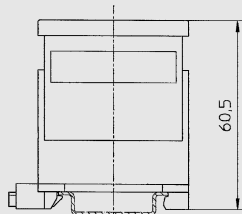
Selection Table					
Version	Description	Overload scale	Measuring range	Order number	Weight kg
 Ammeter for Ex i circuits Series 8402, 72 mm x 72 mm 02414E00	direct measuring without scale*	without	1 ... 20 mA resp. 4 ... 20 mA; for connection to certified intrinsically circuits only	8402/5	0.222
	 Ammeter Series 8403, 72 x 72 mm 01841E00	direct measuring without scale*	2 times	0 ... 20 / 40 mA	8403/2-0,02/0,04
		4 ... 20 / 40 mA		8403/2-0,02/0,04	0.220
direct measuring with scale		2 or 5 times	4 ... 20 / 40 mA	8403/2-100%/200%	0.218
			0 ... 1 / 2 A	8403/2-1/2	0.216
			0 ... 4 / 8 A	8403/2-4/8	0.222
			0 ... 10 / 20 A	8403/2-10/20	0.222
			0 ... 15 / 30 A	8403/2-15/30	0.222
			0 ... 25 / 50 A	8403/2-25/50	0.264
for CT without scale*			sek. 1 A	8403/2-1	0.216
			sek. 5 A	8403/2-5	0.216
 Ammeter Series 8405, 64 x 64 mm 01842E00	direct measuring without scale*	2 times	0 ... 20 / 40 mA	8405/2-0,02/0,04	0.122
			4 ... 20 / 40 mA	8405/2-0,02/0,04	0.122
		2 or 5 times	0 ... 1 / 2 A	8405/2-1/2	0.124
			0 ... 4 / 8 A	8405/2-4/8	0.118
			0 ... 10 / 20 A	8405/2-10/20	0.120
			0 ... 15 / 30 A	8405/2-15/30	0.120
	for CT without scale*		1 A	8405/2-1	0.125
			5 A	8405/2-5	0.125
 Voltmeter Series 8404, 72 x 72 mm 01843E00	direct measuring with scale	without	0 ... 10 V	8404/2-10	0.216
			0 ... 100 V	8404/2-100	0.216
			0 ... 150 V	8404/2-150	0.216
			0 ... 250 V	8404/2-250	0.274
			0 ... 500 V	8404/2-500	0.216
 Bezel 01845E00	Bezel □ 64 mm (for ammeter Series 8405)			155940	0.500
	Bezel □ 72 mm (for ammeter Series 8403 and voltmeter Series 8404)			155942	0.025
Note	* Please order scales separately. Further measuring ranges or scales on request.				

Technical Data				
Version	Ammeter Ex i Series 8402	Ammeter Series 8403	Ammeter Series 8405	Voltmeter Series 8404
Explosion protection	⊕ II 2 G Ex ib IIC T6	⊕ II 2 G Ex e II	⊕ II 2 G Ex e II	⊕ II 2 G Ex e II
Certificates	PTB 98 ATEX 2101	PTB 01 ATEX 2158 U	PTB 01 ATEX 2158 U	PTB 01 ATEX 2158 U
Other certificates	IECEX, Russia (CTB), Belarus (Promatomnadzor), Canada (CSA)	IECEX, Belarus (Promatomnadzor)	IECEX, USA (UL, FM), Belarus (Promatomnadzor), Canada (UL, CSA)	IECEX, Belarus (Promatomnadzor)
Enclosure material	Polyamide - polyester	Polyamide - polyester	Polyamide - polyester	Polyamide - polyester
Isolating voltage	--	690 V	690 V	690 V
Type of current	--	AC 15 Hz ... 100 Hz, DC calibration possible	AC 15 Hz ... 100 Hz, DC calibration possible	AC 15 Hz ... 100 Hz, DC calibration possible
Movement	Moving coil instrument	Moving iron	Moving iron	Moving iron
Accuracy	Class 1.5	Class 2.5	Class 2.5	Class 2.5
Scale	0 - 100 linear, Quadrant scale, Length 63 mm	Quadrant scale Length 63 mm	Quadrant scale Length 40 mm	Quadrant scale Length 63 mm
Overload capacity		2 x I _N 25 sec 50 x I _N 1 sec Related to the measuring range end value	2 x I _N 25 sec 50 x I _N 1 sec Related to the measuring range end value	1,2 times continuous 2 times 60 sec
Mounting	on TS35 rail	on TS35 rail	on TS35 rail	on TS35 rail
Power input	--	max. 0.43 W	max. 0.43 W	max. 2,1 VA
Max. short circuit current	max. 150 mA	--	--	--
Internal resistance	~ 2.93 Ω	--	--	--
Internal inductance	68.5 μH	--	--	--
Internal capacitance	~ 0	--	--	--
Ambient temperature	- 20 ... + 40 °C	- 20 ... + 40 °C	- 20 ... + 40 °C	- 20 ... + 40 °C
Connection cross-section				
finely-stranded		2.5 mm ²	2.5 mm ²	2.5 mm ²
solid	--	4.0 mm ²	4.0 mm ²	4.0 mm ²
Bezel				
Material	Glass - polyester	Glass - polyester	Glass - polyester	Glass - polyester
Degree of protection	IP66	IP66	IP66	IP66
Gaskets	Neoprene	Neoprene	Neoprene	Neoprene
Impact strenght	≥ 7 J	≥ 7 J	≥ 7 J	≥ 7 J
Sizes	□ 72 mm	□ 72 mm	□ 64 mm	□ 72 mm

Accessories and Spare Parts

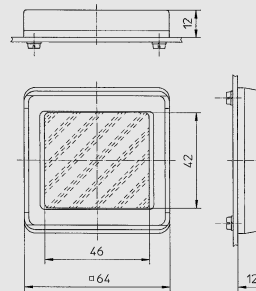
Designation	Illustration	Description	Order number	Weight kg
Push-in scales for the 8405 series and the 8403 series	 05062E00	For the 8405 series and the 8403 series Measuring range - double overload 0 A ... 1 A 5 A 10 A 15 A 20 A 25 A 30 A 40 A 50 A 60 A 75 A 100 A 150 A 200 A 300 A 500 A	Specify measuring range	--
		For the 8405 series and the 8403 series Measuring range - quintuple overload 0 A ... 1 A 5 A 10 A 15 A 20 A 25 A 30 A 40 A 50 A 60 A 75 A 100 A 150 A 200 A 250 A 300 A 500 A	Specify measuring range	--
Assembly accessories	 05615E00	For 8405 series To engage on TS 35 mounting rail	130954	0.022

Dimensional Drawings (All Dimensions in mm) - Subject to Alterations



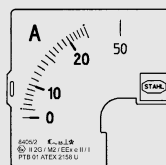
Ammeter Series 8405

04071E00



Bezel assembly code 740 for ammeter Series 8405

04087E00

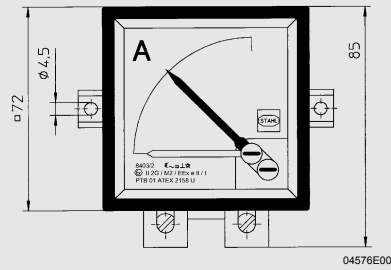
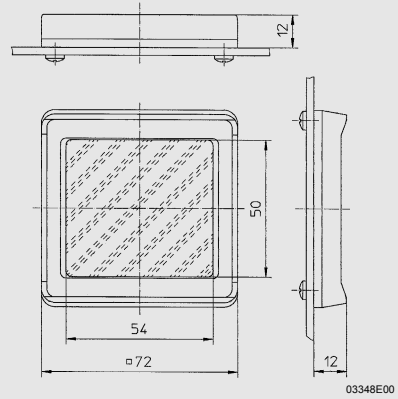
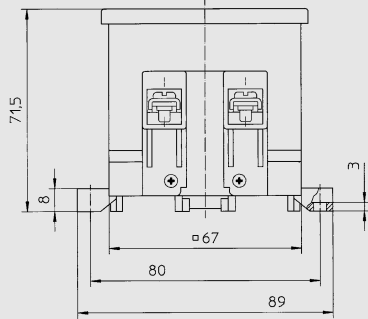


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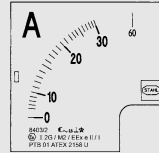
Slide-in scale for ammeter Series 8405 with CT



Dimensional Drawings (All Dimensions in mm) - Subject to Alterations

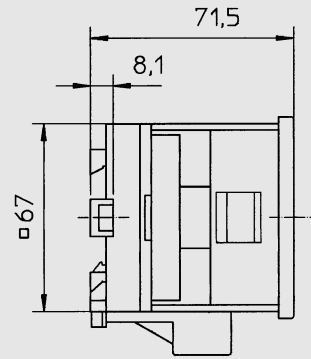
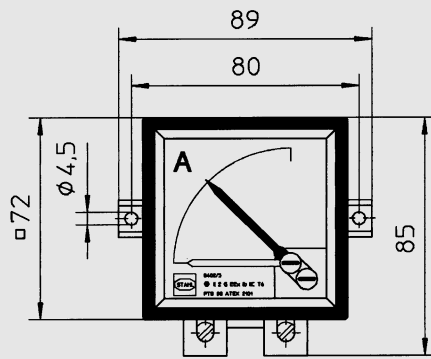


Bezel assembly code 145
for ammeter Series 8403 and
voltmeter Series 8404



Ammeter Series 8403

Slide-in scale for ammeter Series 8403 with CT



Ammeter Series 8402

04593E00

We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.

