

Ammeters and voltmeters

Series 8402/6, Series 8403/6, Series 8404/6, Series 8405/6, Series 8406/6, Series 8407/6

STAHL

- > Fast comparison of measured values with specified measured variables



19848E00

E4

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Series 840./6 voltmeters and ammeters (moving iron and moving coil measuring instrument with an accuracy of 2.5) are explosion-protected electrical components. Fitted into an enclosure in type of protection "Ex e", they are used to measure and display current and voltage values.

A red marker in the device that is adjustable from the outside allows a quick comparison of the measured values.

The scale plate that can be pushed in at the side on versions with a CT connection (1 A and 5 A) makes assigning a measurement range on-site a quick and easy task.

	ATEX / IECEx					
Zone	0	1	2	20	21	22
For use in		x	x			






WebCode

8402B,
8403B,
8404B,
8405B
8406B,
8407B

Ammeters and voltmeters

Series 8402/6, Series 8403/6, Series 8404/6, Series 8405/6, Series 8406/6, Series 8407/6

Selection Table



Version	Description	Overload	Scale	Measuring range	Order number	Art. no.		
 <p>02414E00 Ammeter Series 8402, 72 x 72 mm</p>	Ex i	without	0 to 20 mA	0 to 20 mA	8402C6-020	262236		
			0 to 100 %	0 to 20 mA	8402C6-020	267133		
			4 to 20 mA	4 to 20 mA	8402C6-420	262237		
			0 to 100 %	4 to 20 mA	8402C6-420	267110		
 <p>01841E00 Ammeter Series 8403, 72 x 72 mm</p>	direct measuring	2-times	0 to 1	0 to 1 / 2 A	8403C6-1-2	262731		
			0 to 2.5	0 to 2.5 / 5 A	8403C6-2,5-2	262734		
			0 to 4	0 to 4 / 8 A	8403C6-4-2	262707		
			0 to 10	0 to 10 / 20 A	8403C6-10-2	262735		
			0 to 15	0 to 15 / 30 A	8403C6-15-2	262738		
	for a CT connection	2-times	without*		sec. 1 A	8403C6-1T-2	262732	
					sec. 5 A	8403C6-5T-2	262736	
			0 to 100 %	sec. 1 A	8403C6-1T-2	267134		
			5-times	without*		sec. 1 A	8403C6-1T-5	262733
						sec. 5 A	8403C6-5T-5	262737
 <p>01843E00 Voltmeter Series 8404, 72 x 72 mm</p>	direct measuring	without	0 to 10 V	0 to 10 V	8404C6-10	263517		
			0 to 100 V	0 to 100 V	8404C6-100	263518		
			0 to 150 V	0 to 150 V	8404C6-150	263519		
			0 to 250 V	0 to 250 V	8404C6-250	263520		
			0 to 500 V	0 to 500 V	8404C6-500	263521		
 <p>01842E00 Ammeter Series 8405, 48 x 48 mm</p>	direct measuring	2-times	0 to 1	0 to 1 / 2 A	8405C6-1-2	262952		
			0 to 4	0 to 4 / 8 A	8405C6-4-2	262955		
			0 to 10	0 to 10 / 20 A	8405C6-10-2	262958		
			0 to 15	0 to 15 / 30 A	8405C6-15-2	262959		
	for a CT connection	2-times	without*		sec. 1 A	8405C6-1T-2	262953	
					sec. 5 A	8405C6-5T-2	262956	
		5-times	without*		sec. 1 A	8405C6-1T-5	262954	
					sec. 5 A	8405C6-5T-5	262957	
 <p>01842E00 Ammeter Series 8406, 48 x 48 mm</p>	direct measuring	without	without*	0 to 20 mA	8406C6-020-2	263571		

Ammeters and voltmeters

Series 8402/6, Series 8403/6, Series 8404/6, Series 8405/6, Series 8406/6, Series 8407/6



Selection Table

Version	Description	Overload	Scale	Measuring range	Order number	Art. no.
 <p>01842E00 Ammeter Series 8407, 72 x 72 mm</p>	direct measuring	without	without*	0 to 20 mA	8407C6-020-2	263655
		2-times	0 to 100 %	0 to 20 mA	8407C6-020-2	263656
				4 to 20 mA	8407C6-420-2	263657
 <p>01845E00 Calotte</p>	Calotte □ 64 mm (for Series 8405)				8603A0740-11-0	155939
	Calotte □ 72 mm (for Series 8403)				8603A0145-21-0	155941

Note * Please order scales separately.

Explosion Protection

Global (IECEX)

Gas and mining

Series	8402/6:	IECEX SIQ 18.0003X
Series	8403/6, 8405/6:	IECEX SIQ 17.0003U
Series	8404/6:	IECEX SIQ 18.0001U
Series	8406/6, 8407/6:	IECEX SIQ 18.0002U
Series	8402/6-...:	Ex ib IIC T4 ... T6 Gb
Series	8403/6-..., 8405/6-...:	Ex eb IIC Gb
Series	8403/6-10-2, 8403/6-15-2, 8404/6-..., 8405/6-10-2, 8405/6-15-2:	Ex eb mb IIC Gb
Series	8406/6-020-2, 8407/6-...-2:	Ex eb ib mb IIC Gb
Series	8403/6-..., 8405/6-...:	Ex eb I Mb
Series	8403/6-10-2, 8403/6-15-2, 8404/6-..., 8405/6-10-2, 8405/6-15-2:	Ex eb mb I Mb
Series	8406/6-020-2, 8407/6-...-2:	Ex eb ib mb I Mb

Europe (ATEX)

Gas and mining

Series	8402/6:	SIQ 18 ATEX 018 X
Series	8403/6, 8405/6:	SIQ 17 ATEX 192 U
Series	8404/6:	SIQ 18 ATEX 016 U
Series	8406/6, 8407/6:	SIQ 18 ATEX 017 U
Series	8402/6-...:	⊕ II 2 G Ex ib IIC T4 ... T6 Gb
Series	8403/6-..., 8405/6-...:	⊕ II 2 G Ex eb IIC Gb
Series	8403/6-10-2, 8403/6-15-2, 8404/6-..., 8405/6-10-2, 8405/6-15-2:	⊕ II 2 G Ex eb mb IIC Gb
Series	8406/6-020-2, 8407/6-...-2:	⊕ II 2 G Ex eb ib mb IIC Gb
Series	8403/6-..., 8405/6-...:	⊕ I M 2 Ex eb I Mb
Series	8403/6-10-2, 8403/6-15-2, 8404/6-..., 8405/6-10-2, 8405/6-15-2:	⊕ I M 2 Ex eb mb I Mb
Series	8406/6-020-2, 8407/6-...-2:	⊕ I M 2 Ex eb ib mb I Mb

Certifications and certificates

Certificates

IECEX, ATEX

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Ammeters and voltmeters

Series 8402/6, Series 8403/6, Series 8404/6, Series 8405/6, Series 8406/6, Series 8407/6

Technical Data						
Versions	8402/6	8403/6	8404/6	8405/6	8406/6	8407/6
Electrical data						
Rated insulation voltage U_i	300 V	690 V	690 V	690 V	690 V	690 V
Rated current I_e	20 mA	1 A, 2.5 A, 4 A, 5 A, 10 A, 15 A, 25 A	–	1 A, 4 A, 5 A, 10 A, 15 A	20 mA	20 mA
Current during temporary overload I_{sc}	–	1 A variant: 50 A (50xI _N 1 s) 2.5 A variant: 125 A (50xI _N 1 s) 4 A variant: 200 A (50xI _N 1 s) 5 A variant: 250 A (50xI _N 1 s) 10 A variant: 500 A (50xI _N 1 s) 15 A variant: 750 A (50xI _N 1 s) 25 A variant: 750 A (30xI _N 1 s)	–	1 A variant: 50 A (50xI _N 1 s) 4 A variant: 200 A (50xI _N 1 s) 5 A variant: 250 A (50xI _N 1 s) 10 A variant: 500 A (50xI _N 1 s) 15 A variant: 450 A (30xI _N 1 s)	20 mA variant: 200 mA (10xI _N 5 s)	20 mA variant: 200 mA (10xI _N 5 s)
Voltage during temporary overload I_{sc}	–	–	2xU _N 60 s	–	–	–
Rated frequency	–	50/60 Hz	50/60 Hz	50/60 Hz	–	–
Frequency range	–	16 to 100 Hz	16 to 100 Hz	16 to 100 Hz	–	–
Power dissipation	–	0.67 VA	10 V variant: 1.9 VA; 100 V variant: 1.9 VA; 150 V variant: 1.8 VA; 250 V variant: 2.1 VA; 500 V variant: 2.2 VA	0.67 VA	–	–
Internal resistance R_i	3 Ω	–	–	–	–	–
Internal inductance L_i	90 μH	–	–	–	–	–
Max. short circuit current I_i	160 mA	–	–	–	–	–
Degree of pollution	3	–	–	–	–	–
Use at the height of	2000 m	–	–	–	–	–

Ammeters and voltmeters

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Technical Data

Ambient conditions

Ambient temperature

Temperature class

T6

T5

T4

Temperature class depending on the starting current (overload – time)

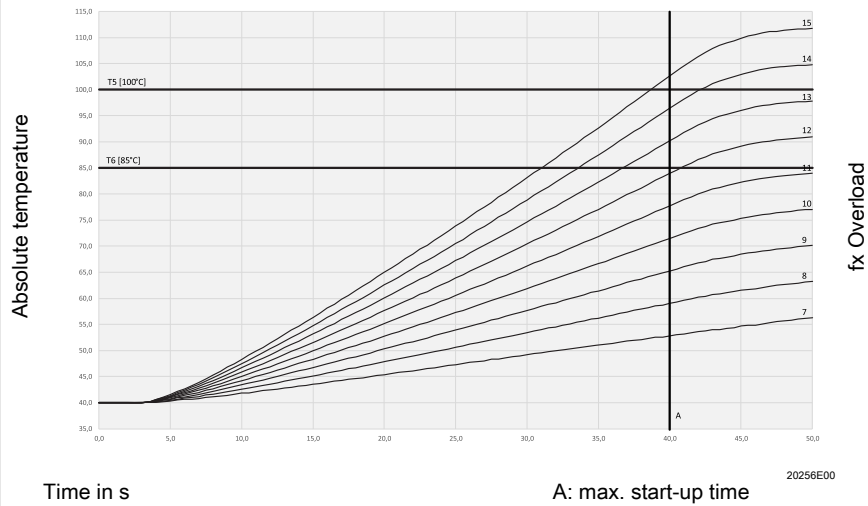
-40 to +70 °C

$-40\text{ °C} \leq T_{\text{amb}} \leq +40\text{ °C}$

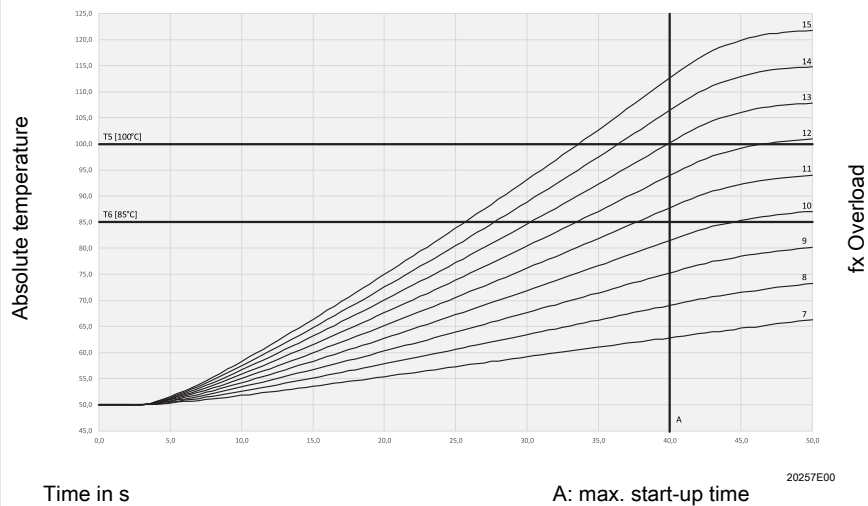
$-40\text{ °C} \leq T_{\text{amb}} \leq +55\text{ °C}$

$-40\text{ °C} \leq T_{\text{amb}} \leq +70\text{ °C}$

8405/6-1T-5 - Ta = 40°C



8405/6-1T-5 - Ta = 50°C



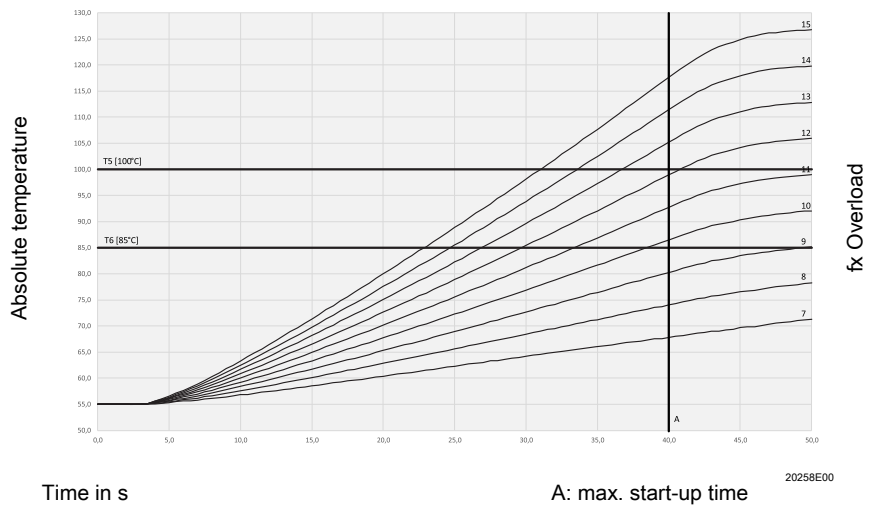
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Ammeters and voltmeters

Series 8402/6, Series 8403/6, Series 8404/6, Series 8405/6, Series 8406/6, Series 8407/6

Technical Data

8405/6-1T-5 - Ta = 55°C

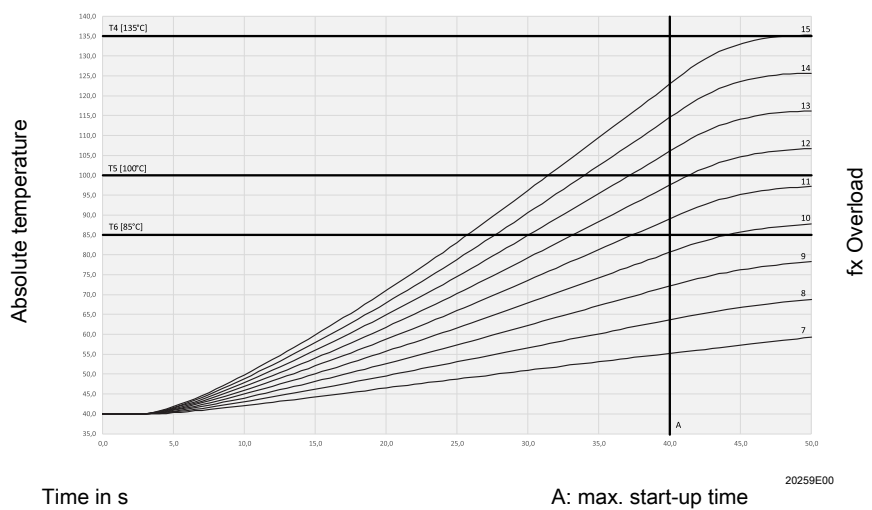


Time in s

A: max. start-up time

20258E00

8405/6-5T-5 - Ta = 40°C



Time in s

A: max. start-up time

20259E00

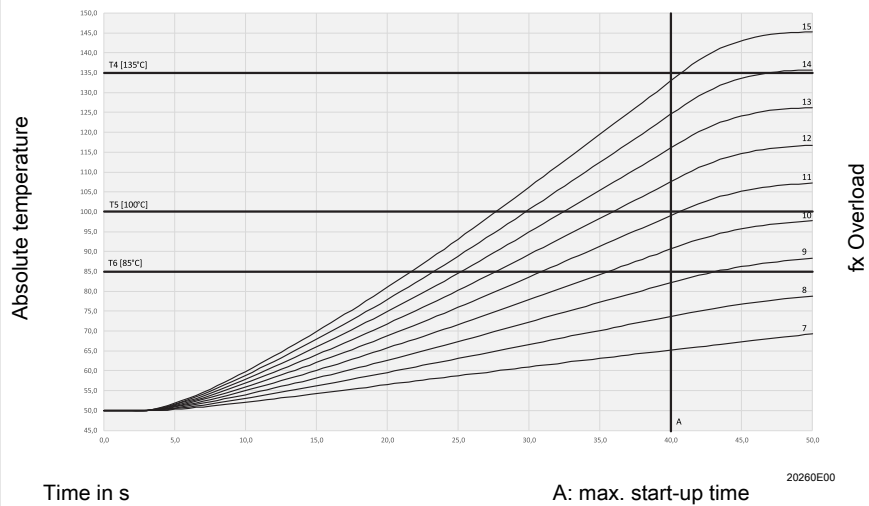
Ammeters and voltmeters

Series 8402/6, Series 8403/6, Series 8404/6, Series 8405/6, Series 8406/6, Series 8407/6



Technical Data

8405/6-ST-5 - Ta = 50°C

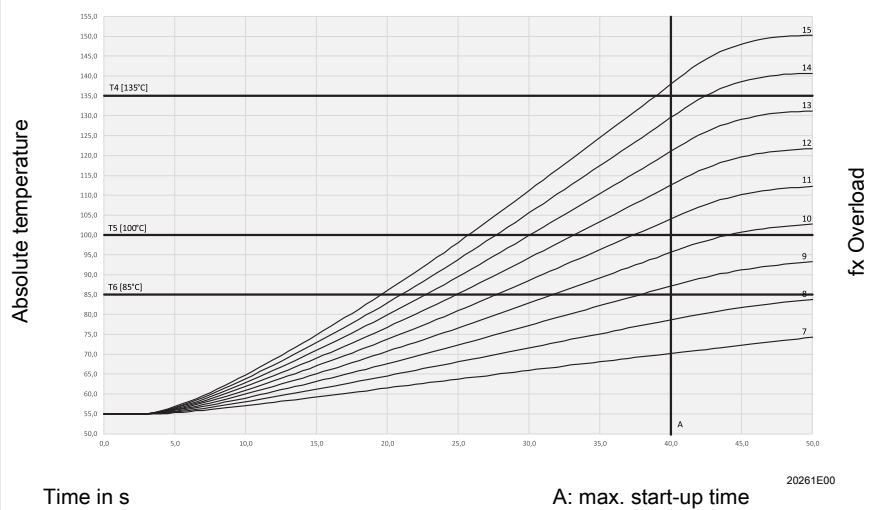


Time in s

A: max. start-up time

20260E00

8405/6-ST-5 - Ta = 55°C



Absolute temperature

Time in s

A: max. start-up time

20261E00

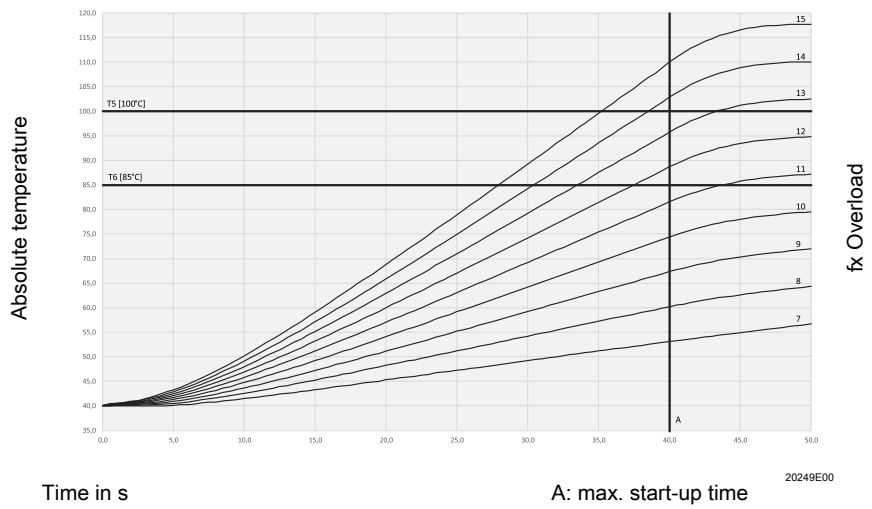
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Ammeters and voltmeters

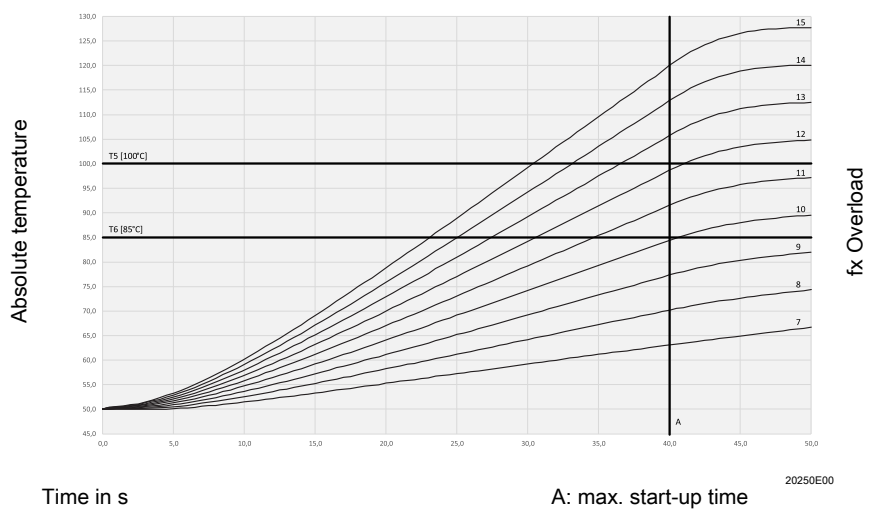
Series 8402/6, Series 8403/6, Series 8404/6, Series 8405/6, Series 8406/6, Series 8407/6

Technical Data

8403/6-1T-5 - Ta = 40°C



8403/6-1T-5 - Ta = 50°C



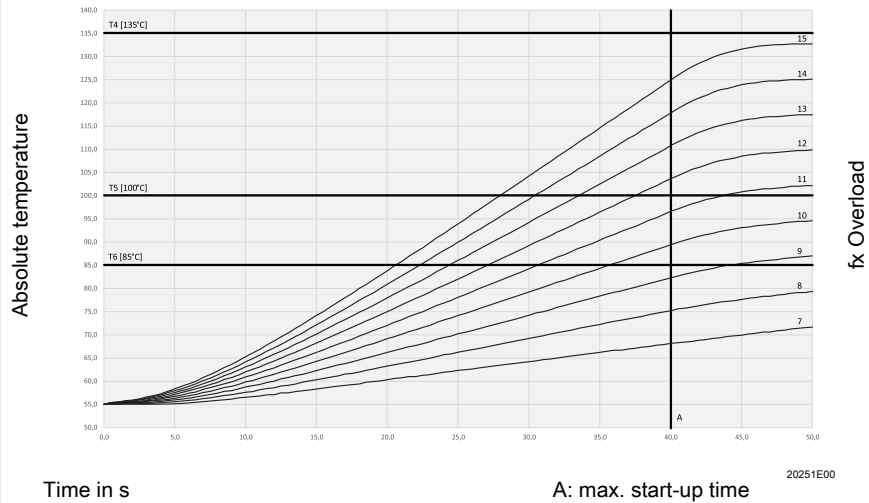
Ammeters and voltmeters

Series 8402/6, Series 8403/6, Series 8404/6, Series 8405/6, Series 8406/6, Series 8407/6

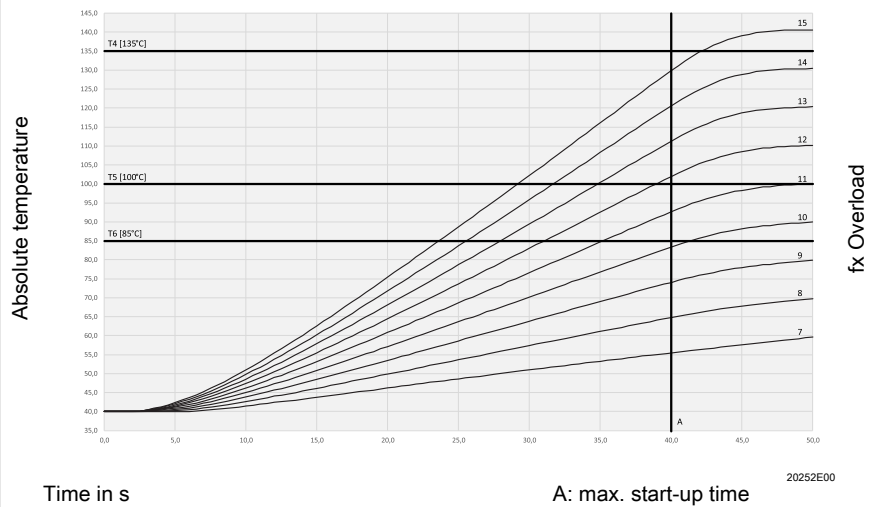


Technical Data

8403/6-1T-5 - Ta = 55°C



8403/6-5T-5 - Ta = 40°C



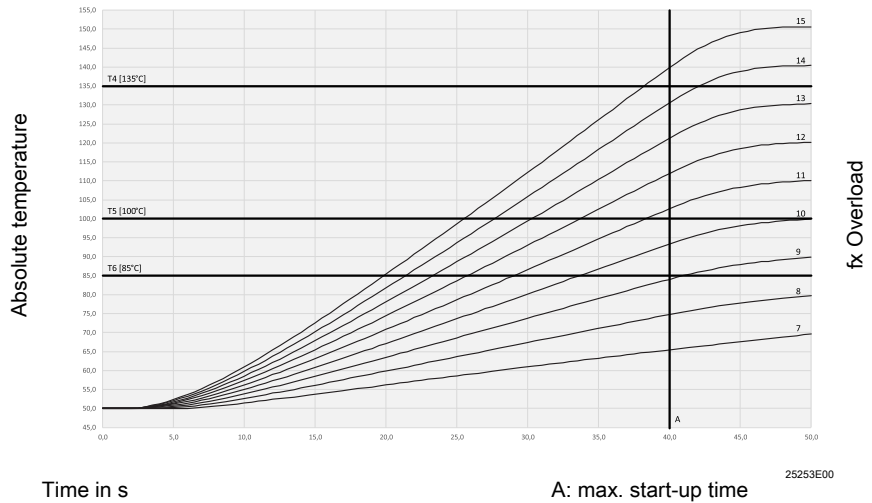
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Ammeters and voltmeters

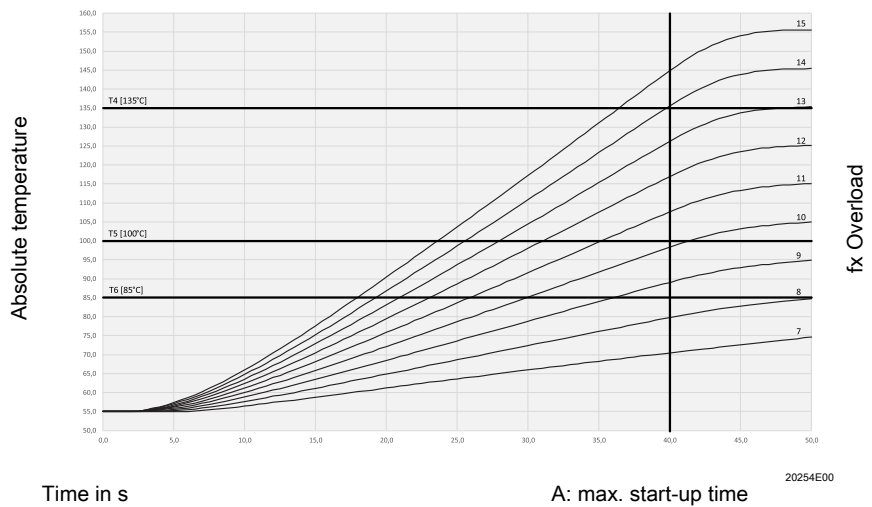
Series 8402/6, Series 8403/6, Series 8404/6, Series 8405/6, Series 8406/6, Series 8407/6

Technical Data

8403/6-ST-5 - Ta = 50°C



8403/6-ST-5 - Ta = 55°C



Ammeters and voltmeters

Series 8402/6, Series 8403/6, Series 8404/6, Series 8405/6, Series 8406/6, Series 8407/6



Technical Data

Mechanical data

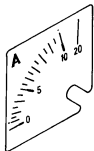
Degree of protection	IP20, IP54		
Material	Polyamide or polycarbonate		
Enclosure	Glass		
Lens			
Terminals			
Connection cross-section			For measuring ranges
	Series 8402, 8404, 8406, 8407		
	- solid	1 to 6 mm ² (AWG 17 to 9)	
	- flexible	1 to 4 mm ² (AWG 17 to 11)	
	Series 8403, 8405		
	- solid	2.5 to 10 mm ² (AWG 13 to 7)	1 to 10 A
	- flexible	2.5 to 6 mm ² (AWG 13 to 9)	1 to 10 A
	- solid	4 to 10 mm ² (AWG 11 to 7)	15 A
	- flexible	4 to 6 mm ² (AWG 11 to 9)	15 A
	- solid	6 to 10 mm ² (AWG 9 to 7)	25 A
	- flexible	6 mm ² (AWG 9)	25 A
Tightening torque	1.2 Nm		
Stripping length	10 mm		
Types of terminals	Screw connector (strain-relief clamp)		
Accuracy	2.5		
Fastening			
Variant 1	Engage the device on the TS35 DIN rail		
Variant 2	Mounting on mounting plate using 2 screws (assembly accessories Art. No. 130954, included in delivery with Series 8405/6 and 8406/6)		

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Ammeters and voltmeters

Series 8402/6, Series 8403/6, Series 8404/6, Series 8405/6, Series 8406/6, Series 8407/6

Accessories and Spare Parts

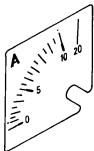
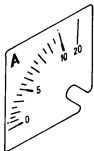
Designation	Figure	Overload	Scale	Art. no.	Weight kg
Push-in scales for Series 8403/6	 05062E00	2-times	0 to 1 A	265717	0.004
			0 to 5 A	265719	0.004
			0 to 10 A	265721	0.004
			0 to 15 A	265723	0.004
			0 to 20 A	265725	0.004
			0 to 25 A	265727	0.004
			0 to 30 A	265729	0.004
			0 to 40 A	265731	0.004
			0 to 50 A	265733	0.004
			0 to 60 A	265735	0.004
			0 to 75 A	265737	0.004
			0 to 80 A	265739	0.004
			0 to 100 A	265741	0.004
			0 to 150 A	265743	0.004
			0 to 200 A	265745	0.004
			0 to 250 A	265747	0.004
			0 to 300 A	265750	0.004
		0 to 400 A	265752	0.004	
		0 to 500 A	265754	0.004	
		5-times	0 to 1 A	265718	0.004
			0 to 5 A	265720	0.004
			0 to 10 A	265722	0.004
			0 to 15 A	265724	0.004
			0 to 20 A	265726	0.004
			0 to 25 A	265728	0.004
			0 to 30 A	265730	0.004
			0 to 40 A	265732	0.004
			0 to 50 A	265734	0.004
			0 to 60 A	265736	0.004
			0 to 75 A	265738	0.004
			0 to 80 A	265740	0.004
			0 to 100 A	265742	0.004
			0 to 150 A	265744	0.004
			0 to 200 A	265746	0.004
			0 to 250 A	265748	0.004
0 to 300 A	265751		0.004		
0 to 400 A	265753		0.004		
0 to 500 A	265755	0.004			

Ammeters and voltmeters

Series 8402/6, Series 8403/6, Series 8404/6, Series 8405/6, Series 8406/6, Series 8407/6



Accessories and Spare Parts

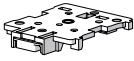
Designation	Figure	Overload	Scale	Art. no.	Weight kg
Push-in scales for Series 8405/6	 05062E00	2-times	0 to 1 A	265871	0.001
			0 to 2 A	265825	0.001
			0 to 5 A	265827	0.001
			0 to 10 A	265829	0.001
			0 to 15 A	265832	0.001
			0 to 20 A	265833	0.001
			0 to 25 A	265835	0.001
			0 to 30 A	265837	0.001
			0 to 40 A	265839	0.001
			0 to 50 A	265851	0.001
			0 to 60 A	265853	0.001
			0 to 75 A	265855	0.001
			0 to 100 A	265857	0.001
			0 to 150 A	265859	0.001
			0 to 200 A	265861	0.001
			0 to 250 A	265863	0.001
			0 to 300 A	265865	0.001
			0 to 400 A	265867	0.001
		0 to 500 A	265869	0.001	
		5-times	0 to 1 A	265824	0.001
			0 to 2 A	265826	0.001
			0 to 5 A	265828	0.001
			0 to 10 A	265830	0.001
			0 to 15 A	265831	0.001
			0 to 20 A	265834	0.001
			0 to 25 A	265836	0.001
			0 to 30 A	265838	0.001
			0 to 40 A	265840	0.001
			0 to 50 A	265852	0.001
			0 to 60 A	265854	0.001
			0 to 75 A	265856	0.001
			0 to 100 A	265858	0.001
			0 to 150 A	265860	0.001
			0 to 200 A	265862	0.001
0 to 250 A	265864		0.001		
0 to 300 A	265866	0.001			
0 to 400 A	265868	0.001			
0 to 500 A	265870	0.001			
Push-in scales for Series 8407/6	 05062E00	2-times	0 to 20 mA	266265	0.004
			4 to 20 mA	266266	0.004
Note	Other scales on request				

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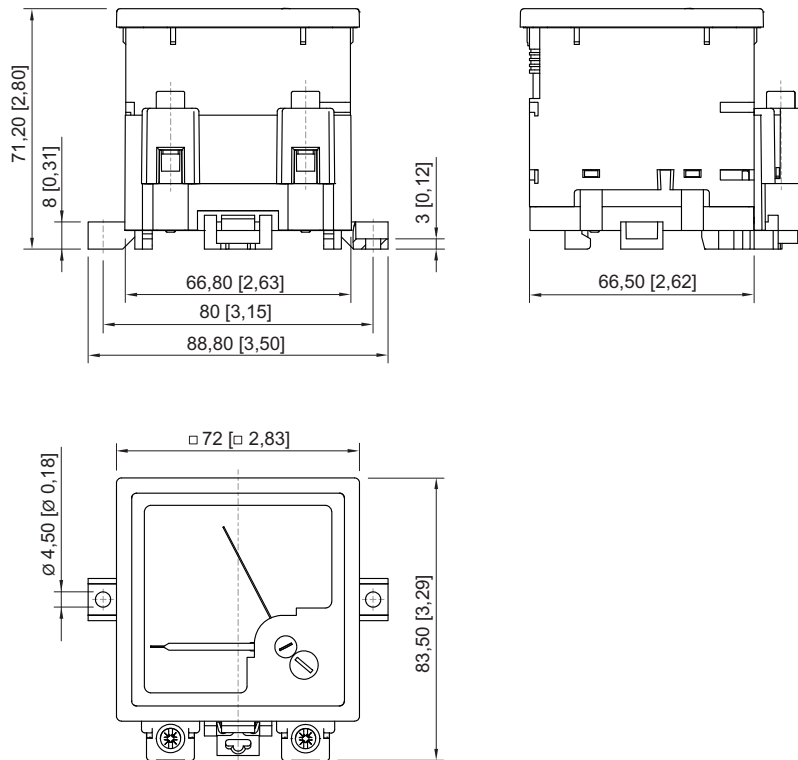
Ammeters and voltmeters

Series 8402/6, Series 8403/6, Series 8404/6, Series 8405/6, Series 8406/6, Series 8407/6

Accessories and Spare Parts

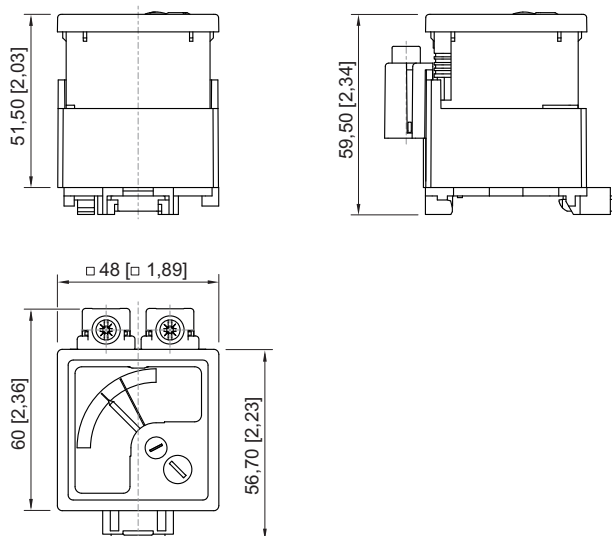
Designation	Figure	Description	Art. no.	Weight kg
Assembly accessories	 05615E00	for Series 8405 to engage on the TS 35 mounting rail	130954	0.022

Dimensional drawings (all dimensions in mm [inches]) – Subject to modification



19960E00

8402/6, 8403/6, 8404/6, 8407/6



19961E00

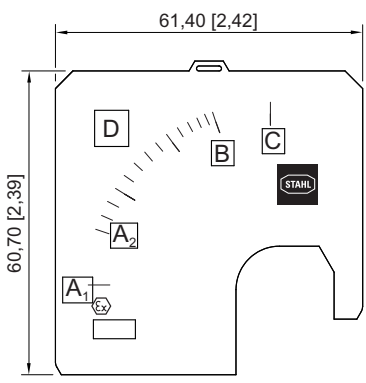
8405/6, 8406/6

Ammeters and voltmeters

Series 8402/6, Series 8403/6, Series 8404/6, Series 8405/6, Series 8406/6, Series 8407/6



Ordering scales

Version	Description	Specification*					Art. no.
		A1	A2	B	C	D	
 <p>Scale plate according to specification <small>20153E00</small></p>	for Series 8402/6						265188
	for Series 8403/6						265189
	for Series 8404/6						265190
	for Series 8405/6						265261
	for Series 8406/6						265262
	for Series 8407/6						265263
	<p>* Please enter details</p> <p>A1 = Zero point</p> <p>A2 = Measuring range start value (only necessary for 8402, 8406 and 8407)</p> <p>B = Measuring range end value</p> <p>C = Overload</p> <p>D = Unit</p>						

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.

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