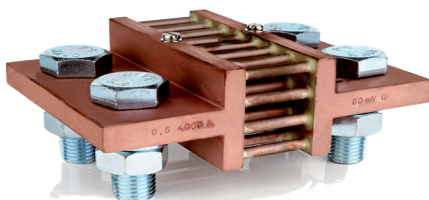
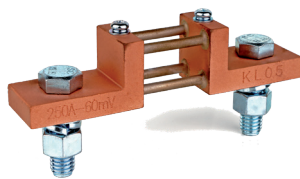




Shunts

CATALOGUE



GMW - We make your values visible

We provide our customers with our products the entire spectrum to solve everything EMAS tasks and thus tools for sustainable use of electrical energy. As a complete provider we also realize the whole project from A to Z, from project consulting to commissioning training and maintenance.

Construction typ A

Construction typ B

Construction typ C

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SHUNTS



SAFETY APPLIANCE TESTERS



ENERGY MANAGEMENT



ANALOGUE PANEL METERS



DIGITAL PANEL METERS



MEASURING TRANSDUCERS



THERMAL PRINTERS



LOW- AND MEDIUM- VOLTAGE CURRENT TRANSFORMERS



SWITCHBOARD COMPONENTS



VOLTAGE DIVIDER



LOW VOLTAGE SWITCHGEAR

Shunts

The long-lasting shunts of GMW are used to expand the current measuring range of moving-coil measuring devices for the reliable display and further processing of direct currents, especially for high currents up to 30000A.

The direct current flowing through the shunt generates a proportional voltage drop, which can be displayed with a moving-coil meter, connected in parallel or can be electronically processed as an example.

The shunts are manufactured according to DIN 43703 and DIN EN 60051.

The accuracy is 0.5% relative to the nominal value. On request the shunts can also be realized with a higher accuracy of 0.2%.

The rated currents are in the range of 1A to 30000A, which are produced in three different construction types, depending on the rated current.

Up to 25A the shunts are always mounted on an isolating base, which can either be mounted on a 35 mm DIN-rail or by means of screws.

As a voltage drop 50mV to 300mV are available. On customer request we are also able to realize other values.

Operating conditions:

- ▶ Working temperature range: $-10 \leq \vartheta \leq +55 \text{ }^\circ\text{C}$
- ▶ Storage temperature range: $-25 \leq \vartheta \leq +65 \text{ }^\circ\text{C}$
- ▶ Relative air humidity: $\leq 75 \%$ (no dewing)
- ▶ Climatic adaptability: Climatic class 3 acc. VDE/VDI 3540

Accuracy:

- ▶ Accuracy class: Class 0.5 (Class 0.2 upon request)

Material:

- ▶ Resistance bars: Manganin
- ▶ Connection units type A: Brass
- ▶ Connection units type B: Brass/Copper
- ▶ Connection units type C: Copper

Connections:

- ▶ Current phase: Refer to drawings
- ▶ Voltage phase: M5 x 8

Safety:

- ▶ Protection class: IP00

Material profile of the connection units:

- ▶ Construction type A: Plane profile with isolating base (1 ... 25A)
Plane profile without isolating base (30 ... 150A)
- ▶ Construction type B: L-profile
- ▶ Construction type C: T-profile

Production regulations:

- ▶ DIN 43703 Shunts
- ▶ DIN EN 60051 Direct active, signalling measuring units and accessories

Standard configurations:

- ▶ Nominal voltage drop: 60mV; 100mV; 150mV; 300mV
- ▶ Overload capability: 1.2-times, continuously
5-times, max. 5 sec. ($\leq 2000\text{A}$)
2-times, max. 5 sec. ($> 2000\text{A}$... 10000A)
- ▶ Nominal current: 1 ... 15000A
- ▶ Accuracy: Class 0.5
- ▶ Isolation base: 1... 25A as standard
30...200A as accessories
- ▶ Cover cap as accessory available: 1...200A (60mV); Art.-no.: 59050

Special configurations:

Due to the flexible structure of the production the realization of individual customer requests is possible.

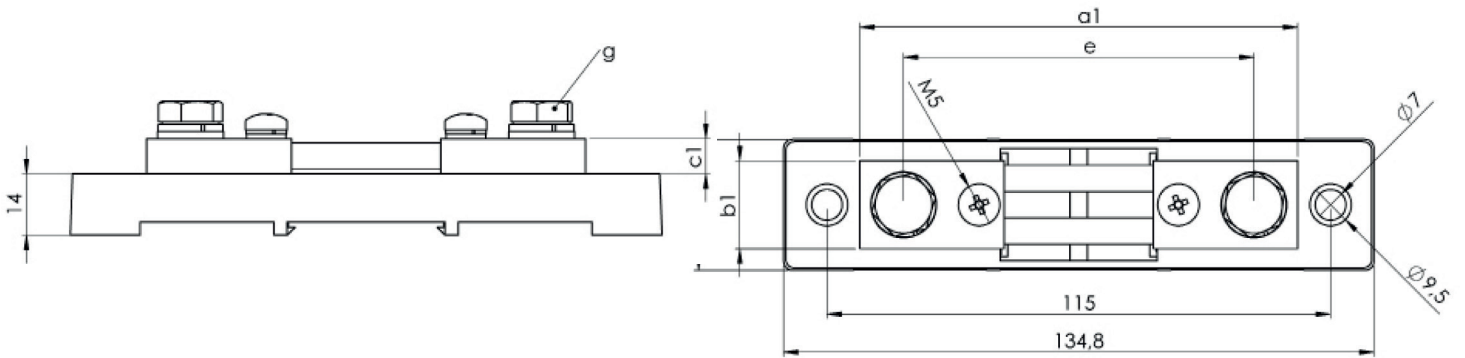
- ▶ Different voltage drop
- ▶ Different nominal current
- ▶ Accuracy class 0.2
- ▶ Construction types acc. drawing for your specific situation

Order example:

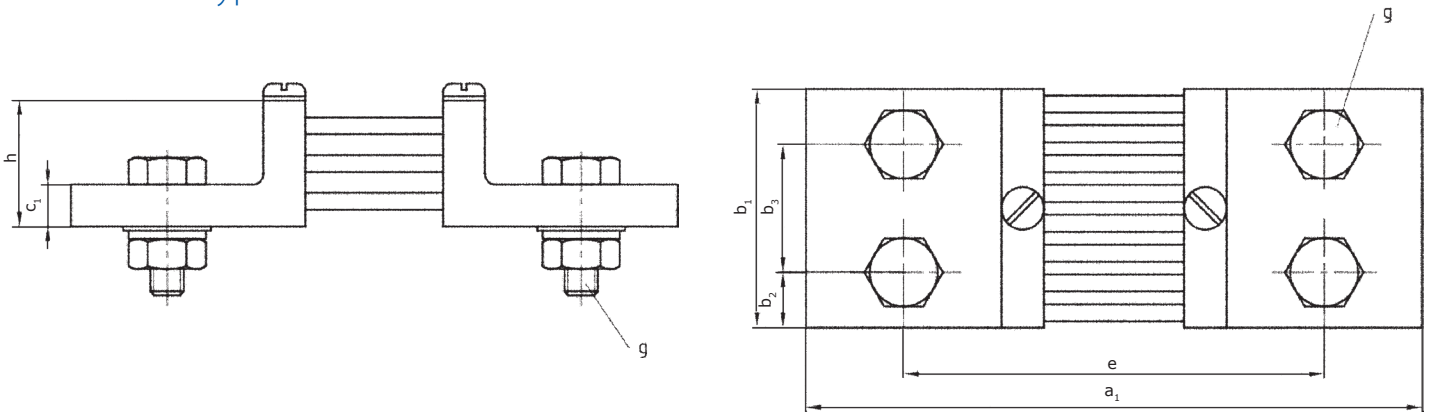
- ▶ Nominal voltage drop: 60mV
- ▶ Nominal current: 1000A
- ▶ Accuracy class: 0.5

Drawings

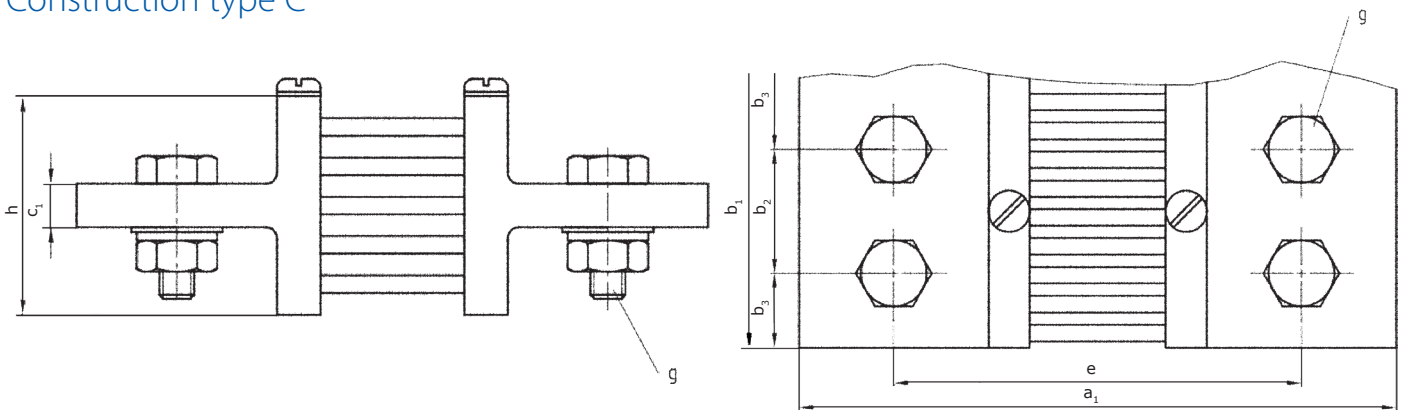
Construction type A



Construction type B



Construction type C



Dimensions

Voltage drop [mV]	Measure [mm]	for nominal current [A]													
		1 6	1,5 10	2,5 15	4 25	40 100	60 150	250	400	600	1000	1500	2500	4000	6000
60		Construction type A				Construction type B						Construction type C			
	a ₁	90		100		145			165			165	175	185	
	b ₁	20			30	40	60	90	120	120	154	206	310		
	b ₂	-			15	20	30	21	30	30	25				
	b ₃	-			-			48	60	60	52				
	c ₁	8			10						15	25	30		
	e	78		80		105		115		115	125	135			
h	-			30						60	130	170			
100		Construction type A				Construction type B				Construction type C					
	a ₁	90		145		190		210		210	220		-	-	
	b ₁	20		25	30	40	60	120	120		154	-	-		
	b ₂	-			15	20	30		30		25	-	-		
	b ₃	-			-			60	60		52	-	-		
	c ₁	8			10				15	25		-	-		
	e	78		125		150		160		160	170	-	-		
h	-			30				60	130		-	-			
150		Construction type A				Construction type B				Construction type C					
	a ₁	90		225		270		290	290		300	310	-		
	b ₁	20		25	30	40	70	90	120		154	206	-		
	b ₂	-			15	20	35	21	30		25		-		
	b ₃	-			-			48	60		52		-		
	c ₁	8			10				15		25	30		-	
	e	78		205		230		240	240		250	260	-		
h	-			50		60	60		130		170	-			
300		Construction type A				Construction type B				Construction type C					
	a ₁	90		384		429		449	449		459		-	-	
	b ₁	20		25	30	40	70	90	120		154	-	-		
	b ₂	-			15	20	35	21	30		25	-	-		
	b ₃	-			-			48	60		52	-	-		
	c ₁	8			10				15		25	-		-	
	e	78		364		389		399	399		409	-	-		
h	-			50		60	60		130		-	-			

Construction type A



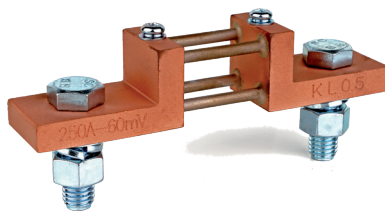
SHUNT 60 - Voltage drop 60 mV - Class 0,5				
Nominal current [A]	Isolating base	Weigth (approx.)	Current connection (Meas. g)	Number of connections
1	Yes	0,10 kg	M5x12	2x 1
1,5	Yes	0,10 kg	M5x12	2x 1
2,5	Yes	0,10 kg	M5x12	2x 1
4	Yes	0,10 kg	M5x12	2x 1
6	Yes	0,10 kg	M5x12	2x 1
10	Yes	0,10 kg	M5x12	2x 1
15	Yes	0,11 kg	M5x12	2x 1
25	Yes	0,11 kg	M5x12	2x 1
40	No	0,12 kg	M8x16	2x 1
40	Yes	0,12 kg	M8x16	2x 1
60	No	0,13 kg	M8x16	2x 1
60	Yes	0,13 kg	M8x16	2x 1
100	No	0,13 kg	M8x16	2x 1
100	Yes	0,13 kg	M8x16	2x 1
150	No	0,13 kg	M8x16	2x 1
150	Yes	0,13 kg	M8x16	2x 1

SHUNT 100 - Voltage drop 100 mV - Class 0,5				
Nominal current [A]	Isolating base	Weigth (approx.)	Current connection (Meas. g)	Number of connections
1	Yes	0,10 kg	M5x12	2x 1
1,5	Yes	0,10 kg	M5x12	2x 1
2,5	Yes	0,10 kg	M5x12	2x 1
4	Yes	0,10 kg	M5x12	2x 1
6	Yes	0,10 kg	M5x12	2x 1
10	Yes	0,11 kg	M5x12	2x 1
15	Yes	0,11 kg	M5x12	2x 1
25	Yes	0,11 kg	M5x12	2x 1
40	No	0,16 kg	M8x16	2x 1
40	Yes	0,16 kg	M8x16	2x 1
60	No	0,16 kg	M8x16	2x 1
60	Yes	0,16 kg	M8x16	2x 1
100	No	0,17 kg	M8x16	2x 1
100	Yes	0,17 kg	M8x16	2x 1
150	No	0,18 kg	M8x16	2x 1
150	Yes	0,18 kg	M8x16	2x 1

SHUNT 150 - Voltage drop 150 mV - Class 0,5				
Nominal current [A]	Isolating base	Weigth (approx.)	Current connection (Meas. g)	Number of connections
1	Yes	0,10 kg	M5x12	2x 1
1,5	Yes	0,10 kg	M5x12	2x 1
2,5	Yes	0,11 kg	M5x12	2x 1
4	Yes	0,11 kg	M5x12	2x 1
6	Yes	0,11 kg	M5x12	2x 1
10	Yes	0,11 kg	M5x12	2x 1
15	Yes	0,11 kg	M5x12	2x 1
25	Yes	0,12 kg	M5x12	2x 1
40	No	0,17 kg	M8x16	2x 1
40	Yes	0,17 kg	M8x16	2x 1
60	No	0,18 kg	M8x16	2x 1
60	Yes	0,18 kg	M8x16	2x 1
100	No	0,21 kg	M8x16	2x 1
100	Yes	0,21 kg	M8x16	2x 1
150	No	0,24 kg	M8x16	2x 1
150	Yes	0,24 kg	M8x16	2x 1

SHUNT 300 - Voltage drop 300 mV - Class 0,5				
Nominal current [A]	Isolating base	Weigth (approx.)	Current connection (Meas. g)	Number of connections
1	Yes	0,11 kg	M5x12	2x 1
1,5	Yes	0,11 kg	M5x12	2x 1
2,5	Yes	0,11 kg	M5x12	2x 1
4	Yes	0,11 kg	M5x12	2x 1
6	Yes	0,11 kg	M5x12	2x 1
10	Yes	0,11 kg	M5x12	2x 1
15	Yes	0,12 kg	M5x12	2x 1
25	Yes	0,13 kg	M5x12	2x 1
40	No	0,19 kg	M8x16	2x 1
40	Yes	0,19 kg	M8x16	2x 1
60	No	0,22 kg	M8x16	2x 1
60	Yes	0,22 kg	M8x16	2x 1
100	No	0,27 kg	M8x16	2x 1
100	Yes	0,27 kg	M8x16	2x 1
150	No	0,33 kg	M8x16	2x 1
150	Yes	0,33 kg	M8x16	2x 1

Construction type B



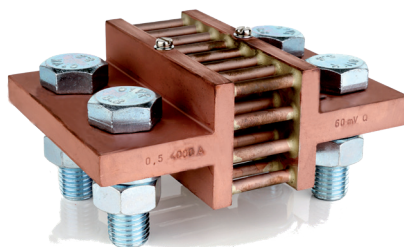
SHUNT 60 - Voltage drop 60 mV - Class 0,5				
Nominal current [A]	Isolating base	Weigth (approx.)	Current connection (Meas. g)	Number of connections
250	No	0,5 kg	M12x40	2x 1
400	No	0,8 kg	M16x45	2x 1
600	No	0,8 kg	M16x45	2x 1
1000	No	1,4 kg	M20x50	2x 1
1500	No	2,0 kg	M16x45	2x 2
2500	No	2,9 kg	M20x50	2x 2

SHUNT 100 - Voltage drop 100 mV - Class 0,5				
Nominal current [A]	Isolating base	Weigth (approx.)	Current connection (Meas. g)	Number of connections
250	No	0,6 kg	M12x40	2x 1
400	No	0,9 kg	M16x45	2x 1
600	No	0,9 kg	M16x45	2x 1
1000	No	1,6 kg	M20x50	2x 1
1500	No	3,1 kg	M16x45	2x 2

SHUNT 150 - Voltage drop 150 mV - Class 0,5				
Nominal current [A]	Isolating base	Weigth (approx.)	Current connection (Meas. g)	Number of connections
250	No	0,8 kg	M12x40	2x 1
400	No	1,2 kg	M16x45	2x 1
600	No	1,3 kg	M16x45	2x 1
1000	No	2,5 kg	M20x50	2x 1

SHUNT 300 - Voltage drop 300 mV - Class 0,5				
Nominal current [A]	Isolating base	Weigth (approx.)	Current connection (Meas. g)	Number of connections
250	No	0,9 kg	M12x40	2x 1
400	No	1,4 kg	M16x45	2x 1
600	No	1,7 kg	M16x45	2x 1
1000	No	3,1 kg	M20x50	2x 1

Construction type C



SHUNT 60 - Voltage drop 60 mV - Class 0,5				
Nominal current [A]	Isolating base	Weigth (approx.)	Current connection (Meas. g)	Number of connections
4000	No	4,3 kg	M20x60	2x 2
6000	No	10,9 kg	M20x75	2x 3
10000	No	21,1 kg	M20x80	2x 4
15000	No	31,7 kg	M20x80	2x 6

SHUNT 100 - Voltage drop 100 mV - Class 0,5				
Nominal current [A]	Isolating base	Weigth (approx.)	Current connection (Meas. g)	Number of connections
2500	No	4,6 kg	M20x60	2x 2
4000	No	8,9 kg	M20x75	2x 2
6000	No	11,9 kg	M20x75	2x 3

SHUNT 150 - Voltage drop 150 mV - Class 0,5				
Nominal current [A]	Isolating base	Weigth (approx.)	Strom-anschluss (Maß g)	Number of connections
1500	No	3,8 kg	M16x60	2x 2
2500	No	5,5 kg	M20x60	2x 2
4000	No	10,0 kg	M20x75	2x 2
6000	No	14,2 kg	M20x75	2x 3
10000	No	26,5 kg	M20x80	2x 4

SHUNT 300 - Voltage drop 300 mV - Class 0,5				
Nominal current [A]	Isolating base	Weigth (approx.)	Strom-anschluss (Maß g)	Number of connections
1500	No	4,7 kg	M16x60	2x 2
2500	No	7,1 kg	M20x60	2x 2
4000	No	13,0 kg	M20x75	2x 2
6000	No	17,6 kg	M20x75	2x 3



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