

Intelligent current transformers



- Saving in assembly time and assembly space
- Higher accuracy than separate CT and transducer
- Direct measurement of high currents
- Less cabling, so less chance of breakdown
- Special model for power measurement

ELEQ, the concentration of the strengths of KWK and FAGET

ELEQ is the name of the combination of FAGET and KWK. As of 2003, we make up an international co-operation so as to be of better service to the European market. Our programme comprises a wide range of transformers, transducers, meters and connection techniques. Quality products that find their way to electricity companies, the industry sector and technical wholesalers, among others.



New name for a familiar company

The name ELEQ stands for a new zest, but certainly for familiar values as well. Our well-known brand names FAGET and KWK will continue to exist and will remain linked to our broad programme of products and services. We will also maintain our method of working: efficient, customer-oriented and reliable. Check out our website and see how ELEQ can work to your advantage!

We serve the market from 3 product-market combinations



Metering

Measuring equipment and energy management for electricity companies, marine & the industrial sector.



Lighting

Connection boxes and management software for public lighting.



Protection

Current/voltage transformer systems for manufacturers of power transformers-, switchgears-, and generators.

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FAGET IT-line

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Metering product range

The needs of our customer groups are paramount to the development of our product range. In this way, product lines are being created which are perfectly geared to the needs of our specific customers. Our line of metering products consists of:

Energy

- Fiscal Metering
- Low voltage isolated measuring transformers class 0,2S, 0,5S en 0,2
 - Low voltage isolated measuring transformers class 0,2S, 0,5S en 0,2
 - Load resistors for current- and voltage transformers
- Power distribution
- Measuring transformers for indoor- and outdoor use
 - Measuring transformers medium voltage isolated for indoor- and outdoor use
 - Digital- and analogue measuring instruments
 - Measuring transducers with analogue and bus outputs



Marine & Industry

- Energymanagement
- Measuring transformers for voltage and current
 - Compact split core current transformers
 - Universal measuring units with bus communication
 - Universal measuring instruments with bus communication
 - Software for energy control
- Proces industry
- Measuring transformers
 - Intelligent current transformers
 - Universal compact measuring transducers for measuring- and control processes
- Shipping industry
- Current transformers
 - Measuring instruments with Lloyd's approval and scale illumination
 - Measuring transducers with to Lloyd's approval



FAGET intelligent current transformers



ELEQ has a lot of experience in the development, production and sale of current transformers and measuring transducers. ELEQ supplies the FAGET intelligent current transformers since 1985. This reliable, proven technology has been used in many countries for years. Intelligent current transformers are commonly used for measuring and monitoring electric motors in the processing industry and water management (pumping plants, etc.). These products offer various specific advantages:

Saving assembly time and assembly space

Intelligent current transformers can be directly mounted to the electrical conductor. There is no need to install a separate transducer in the panel which saves assembly time and assembly space.

More accurate than a separate transformer/transducer combination

For connecting a current transformer to a measuring transducer the accuracy classes should be added up. In addition, the current transformer can be "under loaded" resulting in an extra measuring error. The total error rate may then increase to 3-5%.

Because intelligent current transformers are calibrated as one unit, they are much more accurate than a current transformer with a separate measuring transducer. FAGET intelligent transformers always comply with class |0,5|.

Less cabling means less risk of breakdown

Because there is no need for separate cabling between the current transformer and the measuring transducer, there is no risk of connection defects and less risk of breakdown.

Model for power measurement

We have included a special model for power measurement in our product range, suitable for 2-wire, 3-wire and 4-wire balanced load systems. This is a unique concept which is ideal for power measurements in MCC's.

Different mounting possibilities

The delivery includes accessories to mount the transducer on top-hat rail, construction panels and primary conductors.



FAGET intelligent currenttransformer, Model EM238

The FAGET EM238 is a two-wire transmitter for converting alternating current to a 4-20mA signal. The auxiliary supply of 10-40Vac is included in the output circuit. This makes the transmitter ideal for monitoring motor currents in production processes in combination with Programmable Logic Controllers.



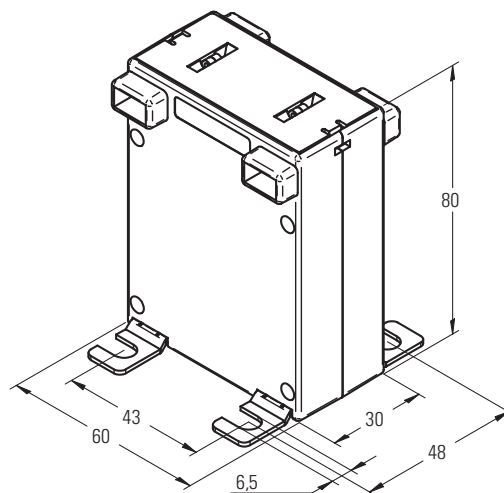
Technical specifications

Primary current:	max. 600A
Output:	4-20mA
Weight:	0,12kg
Class (0,2-1,2In):	[0,5]
Range:	0 - 1,2In
Overload capacity:	60*In (1sec)
Continually:	1,2*In
Frequency range:	45-65Hz
Power consumption:	<0,5VA
Auxiliary supply:	10-40Vdc*
*Rload=	$\frac{\text{Aux. sup.} - 10}{0,02}$ (Ohm)

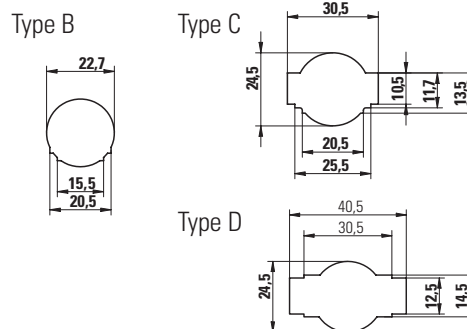
Measuring ranges

Order number	Measuring current	Housing
6M2701	10A	B
6M2702	12A	B
6M2703	12,5A	B
6M2704	15A	B
6M2705	16A	B
6M2706	20A	B
6M2707	25A	B
6M2708	30A	B
6M2709	40A	B
6M2710	50A	B
6M2711	60A	B
6M2712	75A	B
6M2713	80A	B
6M2714	100A	C
6M2715	120A	C
6M2716	125A	C
6M2717	150A	C
6M2718	160A	C
6M2719	200A	C
6M2720	250A	C
6M2721	300A	C
6M2722	400A	C
6M2723	500A	D
6M2724	600A	D

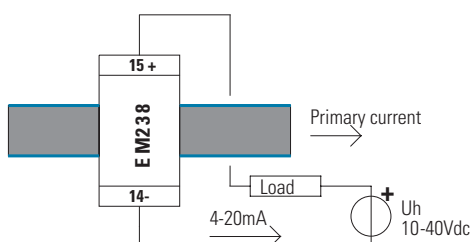
Dimensions



Dimensions opening



Wiring Diagram



FAGET intelligent current transformer, Model EM223

The FAGET EM223 is a current transducer for converting an alternating current of up to 400A to a 0-20mA signal. This current transducer does not require an auxiliary supply. This makes the EM223 ideal for applications requiring a simple and reliable method of measuring currents.



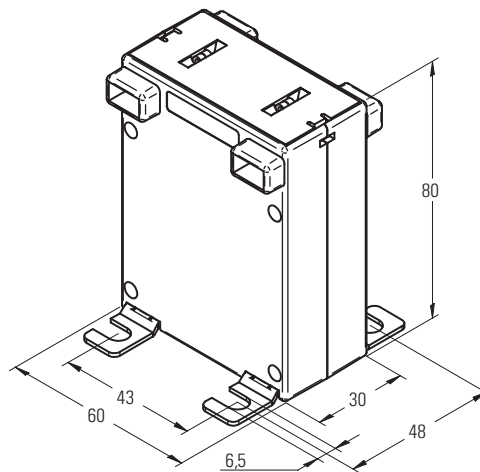
Technical specifications

Primary current:	max. 600A
Output:	0-20mA
Weight:	± 0,25kg
Class (0,2-1,2In):	[0,5]
Range:	0 - 1,2In
Overload capacity:	60*In (1sec)
Continually:	1,2*In
Frequency range:	45-65Hz
Power consumption:	< 0,5VA
Max. load (up to 75A):	600 Ohm
Max. load (from 75A):	750 Ohm
Setting time:	< 1sec
Umax with open terminals	< 24Vdc
Imax with 0 Ohm load:	< 40mA
Imax with 750 Ohm load:	< 30mA
Impulstest:	5kV 1,2/50µs
Isolation:	4kV/60s. (50Hz)

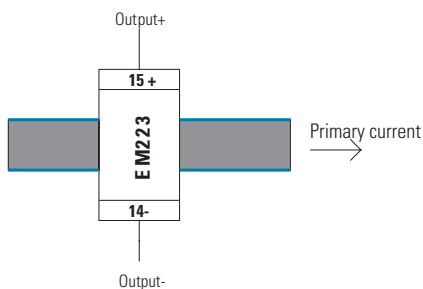
Measuring ranges

Order number	Measuring current	Housing
6M2301	1A	IA60D
6M2302	5A	IA60D
6M2303	10A	IA60D
6M2309	25A	IA60D
6M2310	30A	IA60D
6M2350	40A	IA60A21
6M2351	50A	IA60A21
6M2352	60A	IA60A21
6M2353	75A	IA60A21
6M2354	80A	IA60A21
6M2355	100A	IA60A31
6M2358	150A	IA60A31
6M2359	160A	IA60A31
6M2360	200A	IA60A31
6M2361	250A	IA60A31
6M2362	300A	IA60A31
6M2363	400A	IA60A31

Dimensions

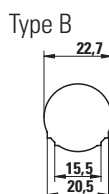


Wiring Diagram

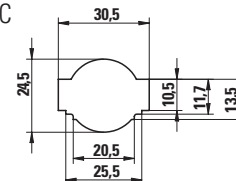


Dimensions opening

Type A: no opening



Type C



FAGET intelligent current transformer, Model EM228

The FAGET EM228 is an active current transducer for converting an alternating current of up to 1250A to an 4-20mA (standard), 0-20mA or 0-10V signal. The transducer is provided with an auxiliary supply of 230Vac. Other alternating current auxiliary supplies are available on request. The auxiliary supply is galvanically separated from the output circuit.



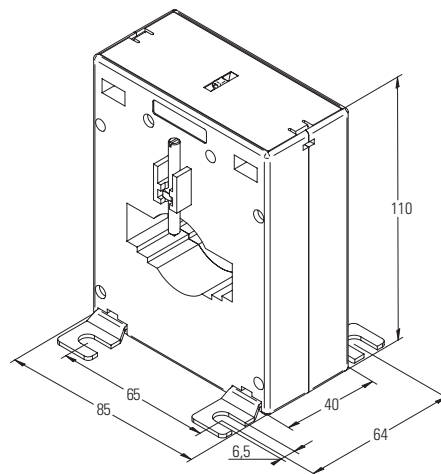
Technical specifications

Primary current:	max. 1250A
Aux. Supply:	230V (standard)
Output:	4-20mA (standard) 0-20mA 0-10V
Weight:	± 0,3 kg
Class (0,2-1,2In):	[0,5]
Range:	0 - 1,2In
Overload capacity:	60*In (1sec)
Continually:	1,2*In
Frequency range:	45-65Hz
Power consumption:	< 2VA
Max. load:	500 Ohm
Setting time:	< 1sec
Umax with open terminals:	< 24Vdc
Imax with 0 Ohm load:	< 40mA
Imax with 500 Ohm load:	< 30mA
Impulstest:	5kV 1,2/50µs
Insulation:	4kV/60s. (50Hz)

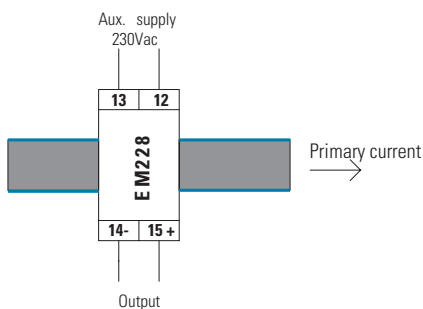
Measuring ranges

Order number	Measuring Current
6M2601	100A
6M2602	120A
6M2603	125A
6M2604	150A
6M2616	160A
6M2605	200A
6M2606	250A
6M2607	300A
6M2608	400A
6M2609	500A
6M2610	600A
6M2611	750A
6M2612	800A
6M2613	1000A
6M2614	1200A
6M2615	1250A

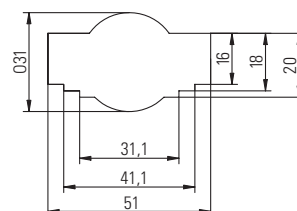
Dimensions



Wiring Diagram



Dimensions opening



FAGET intelligent current transformer, Model EM229

The FAGET EM229 is an active current transducer for converting an alternating current of up to 250A to a 4-20mA, 0-20mA or 0-10V signal. All outputs are included in the transducer as a standard. The transducer uses a 230Vac auxiliary supply. Other alternating current auxiliary supplies are available on request. This transducer is characterized by its compact dimensions.



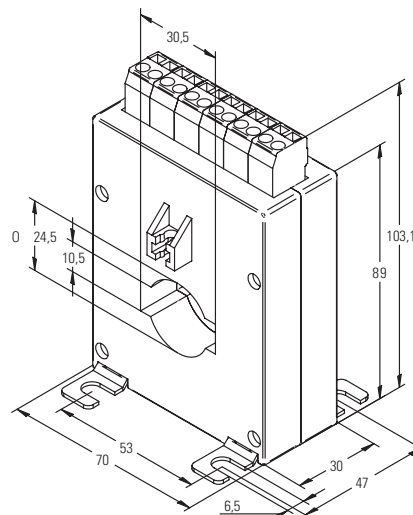
Technical specifications

Primary current:	max. 250A
Aux. supply:	230Vac
Output:	4-20mA & 0-20mA & 0-10V
Weight:	± 0,3 kg
Class (0,2-1,2In):	0,5
Range:	0 - 1,2In
Overload capacity	60*In (1sec)
Continually:	1,2*In
Frequency range	45-65Hz
Power consumption:	< 2VA
Max. load	500 Ohm
Setting time:	< 1sec
Umax with open terminals:	< 24Vdc
I _{max} with 0 Ohm load:	< 40mA
I _{max} with 500 Ohm load	< 30mA
Impulstest:	5kV 1,2/50µs
Insulation:	4kV/60s. (50Hz)

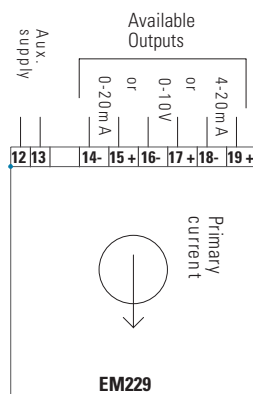
Measuring ranges

Order number	Measuring current
6M2501	10A
6M2502	12A
6M2503	12,5A
6M2504	15A
6M2505	16A
6M2506	20A
6M2507	25A
6M2508	30A
6M2509	40A
6M2510	50A
6M2511	60A
6M2512	75A
6M2513	80A
6M2514	100A
6M2515	120A
6M2516	125A
6M2517	150A
6M2518	160A
6M2519	200A
6M2520	250A

Dimensions



Wiring Diagram



FAGET intelligent Current transformer, Type EMP4420

The FAGET EMP4420 is a power transmitter for converting power to a 4-20mA signal. It is the only power transmitter capable of measuring power and the perfect choice for applications requiring power monitoring of motors. The two-wire transmitter system makes the EMP4420 ideal for applications in combination with PLCs.



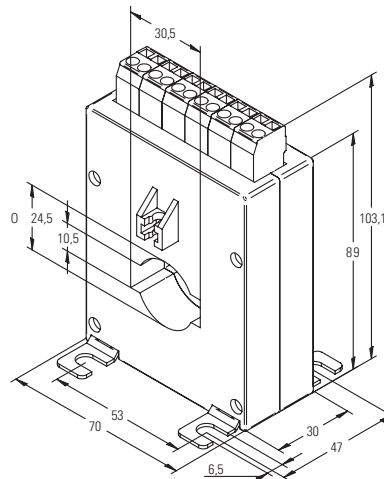
Technical specifications

Primary voltage:	230V
Voltage range:	46-265V
Abs. max. input voltage:	265V
Power consumption:	< 2VA
Primary current:	max. 250A
Current range:	0 - 1,2In
Overload capacity:	60*In (1sec)
Continually:	1,2*In
Freq. range 2-wire:	15-200Hz
Freq. range 3-wire:	45-55Hz
Freq. range 4-wire:	15-200Hz
Class:	0,5
Impulstest:	5kV 1,2/50µs
Insulation:	4kV 60s
Weight:	± 0,2 kg
Transmitteroutput:	
Supply voltage:	10 - 40Vdc
Load at 10Vdc:	0 Ohm
Load at 40Vdc:	1500 Ohm
Output current:	4-20mA
Setting time:	< 1sec

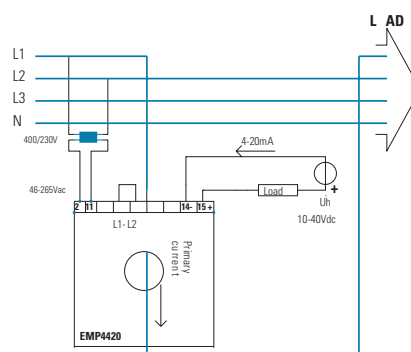
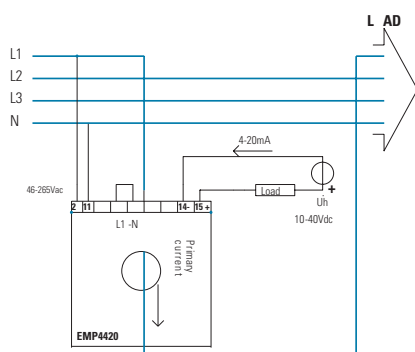
Measuring ranges

Order number	Measuring current
6M2801	10A
6M2802	12A
6M2803	12,5A
6M2804	15A
6M2806	20A
6M2807	25A
6M2808	30A
6M2809	40A
6M2810	50A
6M2811	60A
6M2812	75A
6M2813	80A
6M2814	100A
6M2815	120A
6M2816	125A
6M2817	150A
6M2819	200A
6M2820	250A

Dimensions



Wiring Diagram



FAGET Currentrelay, Model EM303

The FAGET current relay EM303 is suitable for an alternating current of up to 100A and has a fixed switching point of 0.5A. Other switching points are available on customer specification. The relay comes standard with an auxiliary supply of 24Vdc. 110Vdc is available as an option. The current relay is ideal for monitoring production processes of pumps, etc.



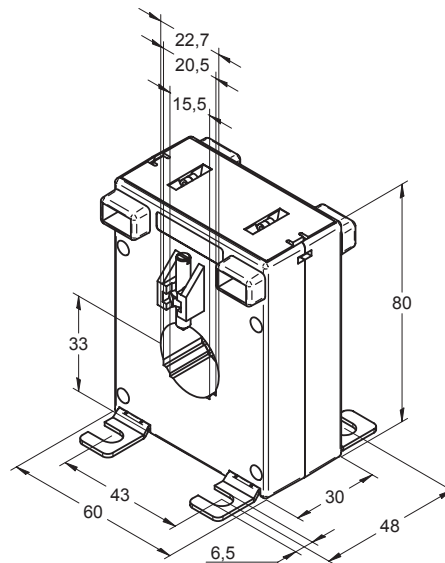
Technical specifications

Power consumption:	17 .. 31V
I-stand-by:	ca. 3mA
I-tripped:	ca. 20mA
Trip point:	0,5A
Make time:	<1,5s if In = 0,5A <40ms if In = 100A
Break time:	<2s if In = 0,5 → 0A <4s if In = 100 → 0A
Hysteresis:	0,1A
Overload capacity:	3000A/1s
Maximum current:	100A
Contactmaterial relay:	AgPd
Contact-resistance:	<50mOhm
Optical signal:	red LED

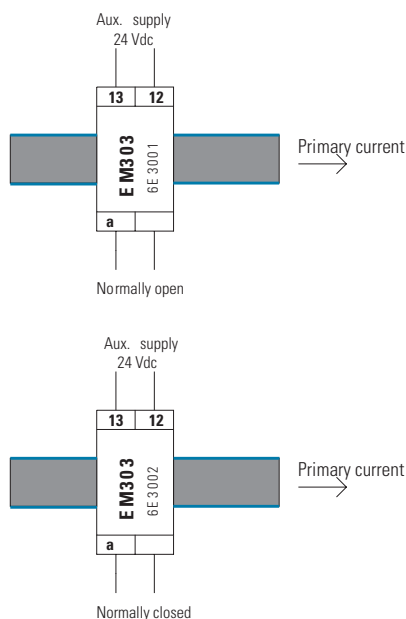
Measuring ranges

Output	Order-number
normally open contact	6E3001
normally closed contact	6E3099

Dimensions



Wiring Diagram



FAGET Currentrelay, Model EM305

The FAGET current relay EM305 is suitable for an alternating current of up to 100A. The switching point and speed of response are adjustable. The relay comes standard with an auxiliary supply of 24Vdc. 110Vdc is available as an option. This model is characterized by its speedy switching performance. The current relay is the perfect choice for monitoring production processes of pumps, etc.



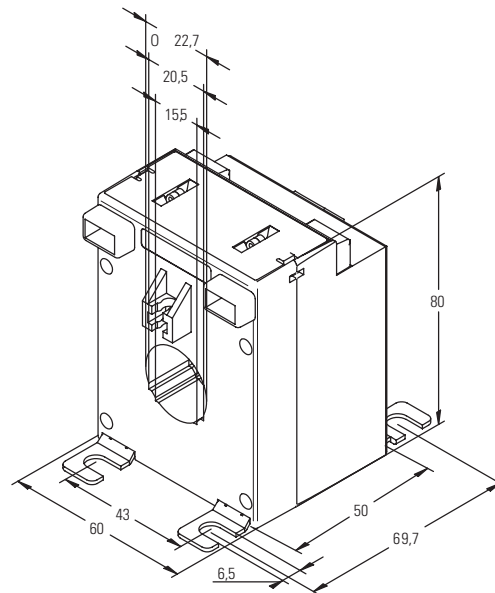
Technical specifications

Power consumption:	19 .. 29Vdc
I-stand-by:	ca. 17mA
I-tripped:	ca. 20mA
Tripping current adjustment:	0,1 .. 1*Is
Frequency range:	15-1000Hz
Make time:	20 .. 500ms
Break time:	>200ms
Hysteresis:	ca. 10%
Overload capacity:	3000A/1s
Maximum current:	100A
Contactmaterial relay:	AgPd
Contact-resistance:	<50mOhm
Optical signal:	red LED

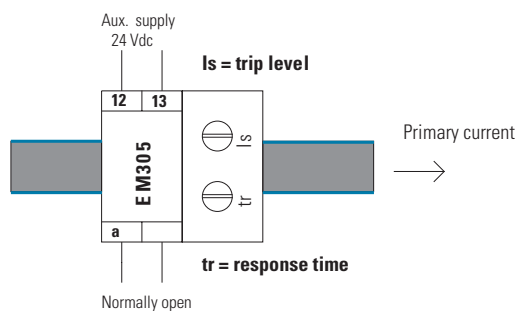
Measuring ranges

Is	Tripping-current range	Order number
2,5A	0,25 .. 2,5A	6E3003
10A	1 .. 10A	6E3004
25A	2,5 .. 25A	6E3005

Dimensions



Wiring Diagram



Your Agent / Distributor:

ELEQ b.v.

P.O. Box 12
8330 AA Steenwijk
The Netherlands
Tukseweg 130
8331 LH Steenwijk
T: +31 (0) 521 533 333
F: +31 (0) 521 533 398

Siemensstraße 1
50170
Kerpen-Sindorf
Germany
T: +49 (0) 2273 98 870
F: +49 (0) 2273 51 951

E: info@eleq.com
I: www.eleq.com

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