

# T201 SERIES

AC/DC CURRENT  
TRANSDUCERS



# T201 Series

## AC/DC Current Transducers



**T201 Series** includes AC/DC current transducers designed to convert measured current value (up to 300 A) into a 4..20 mA or 0..10 V industrial normalized signal. Most of **T201 Series** is UL certified and it is characterized by low power consumption, measuring range freely settable via DIP-switches and high accuracy class avoiding thermal drift. **T201 Series** is available in 15 models with different measuring principles: average rectified, magnetic balance (patented technology), Hall Effect or TRMS with bipolar input range. Six models include an RS485/USB port supporting Modbus RTU protocol.

**AC/DC CURRENT TRANSDUCERS WITH 4-20 mA OUTPUT**

**AC/DC HALL EFFECT CURRENT TRANSDUCERS WITH 0-10 V OUTPUT**

**AC/DC CURRENT TRANSDUCERS WITH ANALOG OR ALARM OUTPUT, MODBUS AND USB INTERFACE**

**AC/DC HALL EFFECT CURRENT TRANSDUCERS WITH 4-20 mA OUTPUT**

**AC/DC HALL EFFECT CURRENT TRANSDUCERS WITH 0-10 V OUTPUT / MODBUS INTERFACE**

### HIGHLIGHTS



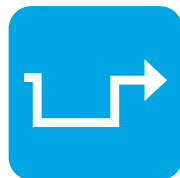
#### INPUT

Wide range selectable current input up to 300 A, mono or bi-polar scales



#### SETTINGS

- DIP switch (address, baud rate, measurement type, measurement scales)
- Software (**EASY SETUP**) - Communication and measurement parameters, filters, tests, data logs - Data storage and export



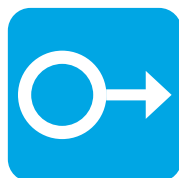
#### MEASUREMENT

- Magnetic induction (patented technology)
- Hall effect
- AC/DC TRMS
- Bipolar



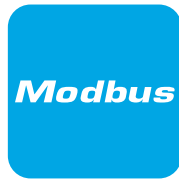
#### POWER EFFICIENCY

- Loop power supply /auxiliary power supply
- Low consumption < 21 mA



#### OUTPUT

- Nr.1 Analog output 4-20 mA (2-wire) / (0-10 V)
- Nr.1 PNP active alarm digital output, max 40 mA max (alternative to analog channel)



#### COMMUNICATION INTERFACES

RS485 / USB / MODBUS RTU



#### ACCURACY CLASS

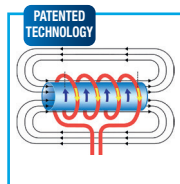
High accuracy standard from 0.2% up to 0,5%



#### APPROVALS

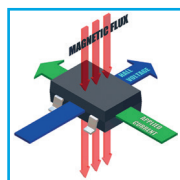
- C-UL US classification Mark
- International Patented technology

### MEASUREMENT PRINCIPLES



#### MAGNETIC INDUCTION




The Transducers that use the measurement based on magnetic induction technology are long life devices thanks to the principle of measurement that avoids thermal drifts and which exploits the generation of an induced current on the transducer output, through the variation of a magnetic field. A direct use will be possible without any external shunts, even for pulsed currents.



#### HALL EFFECT

When a magnetic field is applied perpendicularly to a conductor, a voltage is generated transversally to the direction of the current flow. The Hall Effect Current Transducers are used as alternative to shunt when dealing with high voltages and high galvanic isolation.

## AC/DC CURRENT TRANSDUCERS WITH 4-20 mA OUTPUT


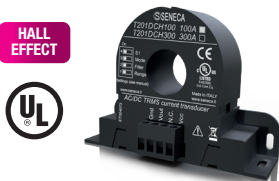
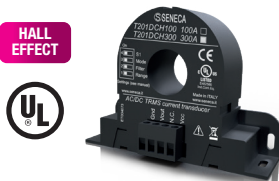
	T201	T201DC	T201DC100
	 <p><b>AC current transducer to DC current (4..20 mA - loop powered)</b></p>	 <p><b>DC current transducer to DC current (4..20 mA - loop powered)</b></p>	 <p><b>Passive current transducer 100 Adc for 4..20 mA current loop</b></p>

GENERAL DATA			
Power Supply	Loop powered (5..28 Vdc)	Loop powered (6..100 V)	Loop powered (6..100 V)
Power Consumption	< 21 mA	< 21 mA	< 21 mA
Isolation / Protection	3 kVdc (on bare conductors)	3 kVdc (on bare conductors)	3 kVdc (on bare conductors)
LED Status Indicators	-	-	-
Overvoltage category	300 V CAT III (bare conductor) 600 V CAT III (isolated conductor)	300 V CAT III (bare conductor) 600 V CAT III (isolated conductor)	300 V CAT III (bare conductor) 600 V CAT III (isolated conductor)
Measurement polarity	Positive (incoming current on label side)	Positive (incoming current on label side)	Positive (incoming current on label side)
Protection degree	IP20	IP20	IP20
Accuracy class	AC: 0,2% f.s.	DC: 0,2% f.s.	DC: 0,2% f.s.
Settings	DIP switch	DIP switch	DIP switch
Log Data	-	-	-
Operating temperature	-20..+70°C	-20..+70°C	-20..+70°C
Storage temperature	-40..+85°C	-40..+85°C	-40..+85°C
Humidity	10rH..90% non condensing	10rH..90% non condensing	10rH..90% non condensing
Altitude	Up to 2.000 m.a.s.l.	Up to 2.000 m.a.s.l.	Up to 2.000 m.a.s.l.
Connections	Removable terminals (5 poles), pitch 5 mm for cable up to 2,5 mm <sup>2</sup>	Removable terminals (5 poles), pitch 5 mm for cable up to 2,5 mm <sup>2</sup>	Removable terminals (5 poles), pitch 5 mm for cable up to 2,5 mm <sup>2</sup>
Max diameter conductor	12,3 mm	12,3 mm	20,8 mm
Dimension (wxhxd)	41x44x26 mm	41x44x26 mm	95x68x26 mm
Mounting	Free or on DIN rail IEC EN 60715 (35 mm) with accessories	Free or on DIN rail IEC EN 60715 (35 mm) with accessories	Free or on DIN rail IEC EN 60715 (35 mm) with accessories
Case	PA6, black	PA6, black	PA6, black
Weight	47 g	47 g	120 g
COMMUNICATION			
Communication port	-	-	-
Protocol	-	-	-
Speed	-	-	-
INPUT DATA			
Channels	1	1	1
Range	5, 10, 15, 20, 25, 30, 35, 40 A	"Monopolar: 0.5, 0.10, 0.20, 0.40 A Bipolar: -5..5, -10..10, -5..20, -10..40 A"	Monopolar: 0.10, 0.25, 0.50, 0.100 A Bipolar: -10..10, -25..25, -10..50, -25..100 A
Measurement type	Average adjusted	Magnetic balance	Magnetic balance
Bipolar measurement	No	Yes	Yes
Hysteresis			
Max instantaneous overcurrent	800 A	800 A	2000 A (impulsive)
Bandwidth / frequency	20..1.000 Hz	n.a.	n.a.
Crest factor	2	1,2	1,2
OUTPUT DATA			
Channels	1	1	1
Range	4..20 mA (2 fili)	4..20 mA (2 fili)	4..20 mA (2 fili)
Resolution	Unlimited	12 bit	12 bit
Max load	< 5000 Ohm @ 100 Vdc		
EMI Error	< 40µA	< 50µA	< 50µA
Thermal drift	< 150 ppm/K	< 150 ppm/K	< 150 ppm/K
Response time	100 ms (without filter) 2,5 s (with filter)	100 ms (without filter) 600 ms (with filter)	100 ms (without filter) 600 ms (with filter)
STANDARD			
Approvals	CE, UL-UR	CE, UL-UR, european patent	CE, UL-UR, european patent
Norms	EN60688 EN61000-6-4 EN61000-6-2 EN61010-1	EN61000-6-4 EN61000-6-2 EN61010-1	EN61000-6-4 EN61000-6-2 EN61010-1

Technical data, diagrams and drawings in this catalog are indicative only and not binding







# T201 Series

## AC/DC HALL EFFECT CURRENT TRANSDUCERS WITH 0-10 V OUTPUT

	T201DCH	T201DCH100	T201DCH300
	 <p><b>HALL EFFECT</b></p> <p><b>UL</b></p> <p>AC/DC contactless TRMS direct and alternate current transducer</p>	 <p><b>HALL EFFECT</b></p> <p><b>UL</b></p> <p>AC/DC contactless TRMS direct and alternate current (<math>\pm 100</math> A) transducer, Hall Effect</p>	 <p><b>HALL EFFECT</b></p> <p><b>UL</b></p> <p>AC/DC contactless TRMS direct and alternate current (<math>\pm 300</math> A) transducer, Hall Effect</p>
<b>GENERAL DATA</b>			
Power Supply	10..28 Vdc	12..28 Vdc	12..28 Vdc
Power Consumption	< 25 mA	< 25 mA	< 25 mA
Isolation / Protection	3 kVdc (on bare conductors)	3 kVdc (on bare conductors)	3 kVdc (on bare conductors)
LED Status Indicators	-	-	-
Overvoltage category	300 V CAT III (bare conductor) 600 V CAT III (isolated conductor)	300 V CAT III (bare conductor) 600 V CAT III (isolated conductor)	300 V CAT III (bare conductor) 600 V CAT III (isolated conductor)
Measurement polarity	Positive (incoming current on label side)	Positive (incoming current on label side)	Positive (incoming current on label side)
Protection degree	IP20	IP20	IP20
Accuracy class	0,5% f.s. (DC bipolar, AC TRMS)	0,5% f.s. AC TRMS; 1% f.s. DC bipolar	0,5% f.s. AC TRMS; 1% f.s. DC bipolar
Settings	DIP switch	DIP switch	DIP switch
Log Data	-	-	-
Operating temperature	-10..+70°C	-20..+70°C	-20..+70°C
Storage temperature	-40..+85°C	-40..+85°C	-40..+85°C
Humidity	10RH..90% non condensing	10RH..90% non condensing	10RH..90% non condensing
Altitude	Up to 2.000 m.a.s.l.	Up to 2.000 m.a.s.l.	Up to 2.000 m.a.s.l.
Connections	Removable terminals (5 poles), pitch 5 mm for cable up to 2,5 mm <sup>2</sup>	Removable terminals (5 poles), pitch 5 mm for cable up to 2,5 mm <sup>2</sup>	Removable terminals (5 poles), pitch 5 mm for cable up to 2,5 mm <sup>2</sup>
Max diameter conductor	12,3 mm	20,8 mm	20,8 mm
Dimension (wxhxd)	54 x 41 x 30 mm	95x68x26 mm	95x68x26 mm
Mounting	Free or on DIN rail IEC EN 60715 (35 mm) with accessories	Free or on DIN rail IEC EN 60715 (35 mm) with accessories	Free or on DIN rail IEC EN 60715 (35 mm) with accessories
Case	PA6, black	PA6, black	PA6, black
Weight	47 g	120 g	120 g
<b>COMMUNICATION</b>			
Communication port	-	-	-
Protocol	-	-	-
Speed	-	-	-
<b>INPUT DATA</b>			
Channels	1	1	1
Range	0..25, 0..50 Aac/dc TRMS	"0-50 A, 0-100 Aac/dc TRMS $\pm 50$ A, $\pm 100$ A bipolar"	"0-150 A, 0-300 Aac/dc TRMS $\pm 150$ A, $\pm 300$ A bipolar"
Measurement type	AC/DC TRMS	AC/DC TRMS or DC Bipolar	AC/DC TRMS or DC Bipolar
Bipolar measurement	No	Yes	Yes
Hysteresis	0,1 % f.s.	0,1 % f.s.	0,1 % f.s.
Max instantaneous overcurrent	2000 A (impulsive)	2000 A (impulsive)	2000 A (impulsive)
Bandwidth / frequency	1 kHz	1 kHz	1 kHz
Crest factor	1,2	2	2
<b>OUTPUT DATA</b>			
Channels	1	1	1
Range	0..10 V	0..10 V	0..10 V
Resolution	12 bit	12 bit	12 bit
Max load	> 2 kOhm	> 2 kOhm	> 2 kOhm
EMI Error			
Thermal drift	< 200 ppm/K	< 200 ppm/K	< 200 ppm/K
Response time	Fast filter: 800 ms Slow filter: 2 s	Fast filter: 800 ms Slow filter: 2 s	Fast filter: 800 ms Slow filter: 2 s
<b>STANDARD</b>			
Approvals	CE, UL-UR	CE, UL-UR	CE, UL-UR
Norms	EN61000-6-4 EN61000-6-2 EN61010-1	EN61000-6-4 EN61000-6-2 EN61010-1	EN61000-6-4 EN61000-6-2 EN61010-1

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## AC/DC HALL EFFECT CURRENT TRANSDUCERS WITH 4-20 mA OUTPUT

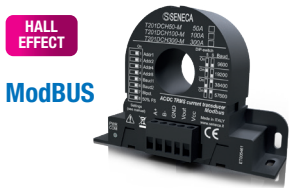
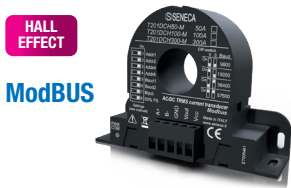
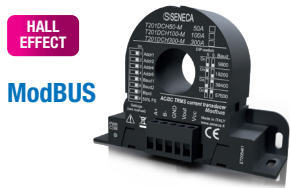
	T201DCH50-LP	T201DCH100-LP	T201DCH300-LP
	  <p><b>HALL EFFECT</b></p> <p>AC/DC current transducer (<math>\pm 50</math> A), Hall Effect, Loop Powered, 4-20 mA output</p>	  <p><b>HALL EFFECT</b></p> <p>AC/DC current transducer (<math>\pm 100</math> A), Hall Effect, Loop Powered, 4-20 mA output</p>	  <p><b>HALL EFFECT</b></p> <p>AC/DC current transducer (<math>\pm 300</math> A), Hall Effect, Loop Powered, 4-20 mA output</p>

GENERAL DATA			
Power Supply	Loop powered (9..28 Vdc)	Loop powered (9..28 Vdc)	Loop powered (9..28 Vdc)
Power Consumption	< 22 mA	< 22 mA	< 22 mA
Isolation / Protection	3 kVdc (on bare conductors)	3 kVdc (on bare conductors)	3 kVdc (on bare conductors)
LED Status Indicators	-	-	-
Overvoltage category	300 V CAT III (bare conductor) 600 V CAT III (isolated conductor)	300 V CAT III (bare conductor) 600 V CAT III (isolated conductor)	300 V CAT III (bare conductor) 600 V CAT III (isolated conductor)
Measurement polarity	Positive (incoming current on label side)	Positive (incoming current on label side)	Positive (incoming current on label side)
Protection degree	IP20	IP20	IP20
Accuracy class	0,5% f.s. AC TRMS; 1% f.s. DC bipolar	0,5% f.s. AC TRMS; 1% f.s. DC bipolar	0,5% f.s. AC TRMS; 1% f.s. DC bipolar
Settings	DIP switch	DIP switch	DIP switch
Log Data	-	-	-
Operating temperature	-20..+70°C	-20..+70°C	-20..+70°C
Storage temperature	-40..+85°C	-40..+85°C	-40..+85°C
Humidity	10rH..90% non condensing	10rH..90% non condensing	10rH..90% non condensing
Altitude	Up to 2.000 m.a.s.l.	Up to 2.000 m.a.s.l.	Up to 2.000 m.a.s.l.
Connections	Removable terminals (5 poles), pitch 5 mm for cable up to 2,5 mm <sup>2</sup>	Removable terminals (5 poles), pitch 5 mm for cable up to 2,5 mm <sup>2</sup>	Removable terminals (5 poles), pitch 5 mm for cable up to 2,5 mm <sup>2</sup>
Max diameter conductor	12,3 mm	20,8 mm	20,8 mm
Dimension (wxhxd)	41x44x26 mm	95x68x26 mm	95x68x26 mm
Mounting	Free or on DIN rail IEC EN 60715 (35 mm) with accessories	Free or on DIN rail IEC EN 60715 (35 mm) with accessories	Free or on DIN rail IEC EN 60715 (35 mm) with accessories
Case	PA6, black	PA6, colore nero	PA6, black
Weight	47 g	120 g	120 g
COMMUNICATION			
Communication port	-	-	-
Protocol	-	-	-
Speed	-	-	-
INPUT DATA			
Channels	1	1	1
Range	0..50 Aac/dc TRMS $\pm 50$ Adc bipolar	0-50 A, 0-100 Aac/dc TRMS $\pm 50$ A, $\pm 100$ A bipolar	0-150 A, 0-300 Aac/dc TRMS $\pm 150$ A, $\pm 300$ A bipolar
Measurement type	AC/DC TRMS or DC Bipolar	AC/DC TRMS or DC Bipolar	AC/DC TRMS or DC Bipolar
Bipolar measurement	Yes	Yes	Yes
Hysteresis	0,3% f.s.	0,3% f.s.	0,3% f.s.
Max instantaneous overcurrent	300 A direct 2.000 A (impulsive)	500 A direct 2.000 A (impulsive)	500 A direct 2.000 A (impulsive)
Bandwidth / frequency	1 kHz	1 kHz	1 kHz
Crest factor	1,3	1,3	1,3
OUTPUT DATA			
Channels	1	1	1
Range	4..20 mA rated value 3,6 mA fault 22 mA max	4..20 mA rated value 3,6 mA fault 22 mA max	4..20 mA rated value 3,6 mA fault 22 mA max
Resolution	12 bit	12 bit	12 bit
Max load	< 1.000 Ohm @ 28 Vdc	< 1.000 Ohm @ 28 Vdc	< 1.000 Ohm @ 28 Vdc
EMI Error	< 1%	< 1%	< 1%
Thermal drift	< 200 ppm/K	< 200 ppm/K	< 200 ppm/K
Response time	Fast filter: 500 ms Slow filter: 1 s	Fast filter: 500 ms Slow filter: 1 s	Fast filter: 500 ms Slow filter: 1 s
STANDARD			
Approvals	CE, UL-UR	CE, UL-UR	CE, UL-UR
Norms	EN 61326, EN 61010-1	EN 61326, EN 61010-1	EN 61326, EN 61010-1

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# T201 Series

## AC/DC HALL EFFECT CURRENT TRANSDUCERS WITH 0-10 V / MODBUS INTERFACE

	T201DCH50-M	T201DCH100-M	T201DCH300-M
	 <p><b>HALL EFFECT</b> <b>ModBUS</b></p> <p>AC/DC contactless TRMS direct and alternate current (<math>\pm 50</math> A) transducer, Hall Effect, ModBUS interface</p>	 <p><b>HALL EFFECT</b> <b>ModBUS</b></p> <p>AC/DC contactless TRMS direct and alternate current (<math>\pm 100</math> A) transducer, Hall Effect, ModBUS interface</p>	 <p><b>HALL EFFECT</b> <b>ModBUS</b></p> <p>AC/DC contactless TRMS direct and alternate current (<math>\pm 300</math> A) transducer, Hall Effect, ModBUS interface</p>
<b>GENERAL DATA</b>			
Power Supply	12..28 Vdc	12..28 Vdc	12..28 Vdc
Power Consumption	< 25 mA	< 25 mA	< 25 mA
Isolation / Protection	3 kVdc (on bare conductors)	3 kVdc (on bare conductors)	3 kVdc (on bare conductors)
LED Status Indicators	Power Supply / RS485 communication	Power Supply / RS485 communication	Power Supply / RS485 communication
Overvoltage category	300 V CAT III (bare conductor) 600 V CAT III (isolated conductor)	300 V CAT III (bare conductor) 600 V CAT III (isolated conductor)	300 V CAT III (bare conductor) 600 V CAT III (isolated conductor)
Measurement polarity	Positive (incoming current on label side)	Positive (incoming current on label side)	Positive (incoming current on label side)
Protection degree	IP20	IP20	IP20
Accuracy class	0,5% f.s. AC TRMS / DC bipolar	0,5% f.s. AC TRMS / DC bipolar	0,5% f.s. AC TRMS / DC bipolar
Settings	DIP switch, Software (EASY SETUP)	DIP switch, Software (EASY SETUP)	DIP switch, Software (EASY SETUP)
Log Data	Yes	Yes	Yes
Operating temperature	-20..+70°C	-20..+70°C	-20..+70°C
Storage temperature	-40..+85°C	-40..+85°C	-40..+85°C
Humidity	10RH..90% non condensing	10RH..90% non condensing	10RH..90% non condensing
Altitude	Up to 2.000 m.a.s.l.	Up to 2.000 m.a.s.l.	Up to 2.000 m.a.s.l.
Connections	Removable terminals (5 poles), pitch 5 mm for cable up to 2,5 mm <sup>2</sup>	Removable terminals (5 poles), pitch 5 mm for cable up to 2,5 mm <sup>2</sup>	Removable terminals (5 poles), pitch 5 mm for cable up to 2,5 mm <sup>2</sup>
Max diameter conductor	20,8 mm	20,8 mm	20,8 mm
Dimension (wxhxd)	95x68x26 mm	95x68x26 mm	95x68x26 mm
Mounting	Free or on DIN rail IEC EN 60715 (35 mm) with accessories	Free or on DIN rail IEC EN 60715 (35 mm) with accessories	Free or on DIN rail IEC EN 60715 (35 mm) with accessories
Case	PA6, black	PA6, black	PA6, black
Weight	120 g	120 g	120 g
<b>COMMUNICATION</b>			
Communication port	RS485	RS485	RS485
Protocol	ModBUS RTU slave	ModBUS RTU slave	ModBUS RTU slave
Speed	1.200..115200 bps	1.200..115200 bps	1.200..115200 bps
<b>INPUT DATA</b>			
Channels	1	1	1
Range	0..25, 0..50 Aac/dc TRMS $\pm 25$ A, $\pm 50$ A dc bipolar	0-50 A, 0-100 Aac/dc TRMS $\pm 50$ A, $\pm 100$ A dc bipolar	0-150 A, 0-300 Aac/dc TRMS $\pm 150$ A, $\pm 300$ A dc bipolar
Measurement type	AC/DC TRMS or DC Bipolar	AC/DC TRMS or DC Bipolar	AC/DC TRMS or DC Bipolar
Bipolar measurement	Yes	Yes	Yes
Hysteresis	0,3% f.s.	0,3% f.s.	0,3% f.s.
Max instantaneous overcurrent	300 A (direct) 2.000 A (impulsive)	300 A (direct) 2.000 A (impulsive)	300 A (direct) 2.000 A (impulsive)
Bandwidth / frequency	1 kHz	1 kHz	1 kHz
Crest factor	2	2	2
<b>OUTPUT DATA</b>			
Channels	1	1	1
Range	0..10 V	0..10 V	0..10 V
Resolution	13 bit (10.000 points)	13 bit (10.000 points)	13 bit (10.000 points)
Max load	> 2 kOhm	> 2 kOhm	> 2 kOhm
EMI Error	<0,5%	<0,5%	<0,5%
Thermal drift	< 200 ppm/K	< 200 ppm/K	< 200 ppm/K
Response time	Fast filter: 800 ms Slow filter: 2 s	Fast filter: 800 ms Slow filter: 2 s	Fast filter: 800 ms Slow filter: 2 s
<b>STANDARD</b>			
Approvals	CE	CE	CE
Norms	EN61000-6-4 EN61000-6-2 EN61010-1	EN61000-6-4 EN61000-6-2 EN61010-1	EN61000-6-4 EN61000-6-2 EN61010-1

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**HALL EFFECT CURRENT TRANSDUCERS WITH CON 0-10 V - ALARM OUTPUT / MODBUS - USB**

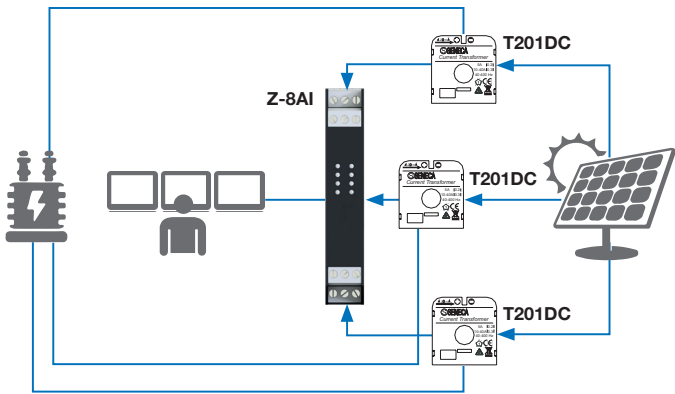
	<b>T201DCH50-MU</b>	<b>T201DCH100-MU</b>	<b>T201DCH300-MU</b>	<b>T201DCH600-MU</b>
	 <p><b>EFFETTO HALL</b></p> <p><b>ModBUS</b> </p> <p><b>AC/DC TRMS / DC bipolar transducer (±50 Aac/dc) with analog or alarm output, ModBUS and USB interface</b></p>	 <p><b>EFFETTO HALL</b></p> <p><b>ModBUS</b> </p> <p><b>AC/DC TRMS / DC bipolar transducer (±100 Aac/dc) with analog or alarm output, ModBUS and USB interface</b></p>	 <p><b>EFFETTO HALL</b></p> <p><b>ModBUS</b> </p> <p><b>AC/DC TRMS / DC bipolar transducer (±300 Aac/dc) with analog or alarm output, ModBUS and USB interface</b></p>	 <p><b>EFFETTO HALL</b></p> <p><b>ModBUS</b> </p> <p><b>AC/DC TRMS / DC bipolar transducer (±600 Aac/dc) with analog or alarm output, ModBUS and USB interface</b></p>
<b>GENERAL DATA</b>				
Power supply	11,5..28 Vdc	11,5..28 Vdc	11,5..28 Vdc	11,5..28 Vdc
Power consumption	21 mA excluding load	21 mA excluding load	21 mA excluding load	21 mA excluding load
Isolation and protection	3 kVdc (on bare conductors)	3 kVdc (on bare conductors)	3 kVdc (on bare conductors)	3 kVdc (on bare conductors)
LED status indicators	Power supply / USB communication / Digital output	Power supply / USB communication / Digital output	Power supply / USB communication / Digital output	Power supply / USB communication / Digital output
Overvoltage category	300 V CAT III (bare conductor) 600 V CAT III (isolated conductor)	300 V CAT III (bare conductor) 600 V CAT III (isolated conductor)	300 V CAT III (bare conductor) 600 V CAT III (isolated conductor)	300 V CAT III (bare conductor) 600 V CAT III (isolated conductor)
Measurement polarity	Positive (incoming current on label side)	Positive (incoming current on label side)	Positive (incoming current on label side)	Positive (incoming current on label side)
Data configuration and export	DIP Switch, Software (EASY SETUP)	DIP Switch, Software (EASY SETUP)	DIP Switch, Software (EASY SETUP)	DIP Switch, Software (EASY SETUP)
Protection degree	IP20	IP20	IP20	IP20
Accuracy class	0,5% f.s. (DC bipolar, AC TRMS)	0,5% f.s. (DC bipolar, AC TRMS)	0,5% f.s. (DC bipolar, AC TRMS)	0,5% f.s. (DC bipolar, AC TRMS)
Operating temperature	-20..+70°C	-20..+70°C	-20..+70°C	-25..+70°C
Storage Temperature	-40..+85°C	-40..+85°C	-40..+85°C	-40..+85°C
Humidity	10% – 90% non condensing	10% – 90% non condensing	10% – 90% non condensing	10% – 90% non condensing
Altitude	Up to 2.000 m.a.s.l.	Up to 2.000 m.a.s.l.	Up to 2.000 m.a.s.l.	Up to 2.000 m.a.s.l.
Connections	Removable terminals (5 poles), pitch 5 mm for cable up to 2,5 mm <sup>2</sup> Micro USB (programming)	Removable terminals (5 poles), pitch 5 mm for cable up to 2,5 mm <sup>2</sup> Micro USB (programming)	Removable terminals (5 poles), pitch 5 mm for cable up to 2,5 mm <sup>2</sup> Micro USB (programming)	Removable terminals (5 poles), pitch 5 mm for cable up to 2,5 mm <sup>2</sup> Micro USB (programming)
Through hole diameter	20,8 mm	20,8 mm	20,8 mm	35 mm
Dimension (wxhxd)	95 x 68 x 26 mm	95 x 68 x 26 mm	95 x 68 x 26 mm	95 x 75 x 35 mm
Mounting	Free or on DIN rail IEC EN 60715 (35 mm) with accessories	Free or on DIN rail IEC EN 60715 (35 mm) with accessories	Free or on DIN rail IEC EN 60715 (35 mm) with accessories	Free or on DIN rail IEC EN 60715 (35 mm) with accessories
Case	PA6, black color	PA6, black color	PA6, black color	PA6, black color
Weight	120 g	120 g	120 g	150 g
<b>COMMUNICATION</b>				
Communication Port	RS485 / Micro USB	RS485 / Micro USB	RS485 / Micro USB	RS485 / Micro USB
Protocol	ModBUS RTU slave	ModBUS RTU slave	ModBUS RTU slave	ModBUS RTU slave
Data rate	1.200..115.200 bps	1.200..115.200 bps	1.200..115.200 bps	1.200..115.200 bps
<b>INPUT DATA</b>				
Channels	1	1	1	1
Range	0-25 / 50 Aac/dc TRMS; ±25 / ±50 Adc Bipolar	0-50 / 100 Aac/dc TRMS; ±50 / ±100 Adc Bipolar	0-150 / 300 Aac/dc TRMS; ±150 / ±300 Adc Bipolar	0-300 / -600 Aac/dc TRMS; ±300 / ±600 Adc Bipolar
Measurement type	AC/DC TRMS or DC Bipolar	AC/DC TRMS or DC Bipolar	AC/DC TRMS or DC Bipolar	AC/DC TRMS or DC Bipolar
Bipolar measurement	Yes	Yes	Yes	Yes
Overload	3xI <sub>n</sub> direct; 2.000 A (impulsive)	3xI <sub>n</sub> direct; 2.000 A (impulsive)	3xI <sub>n</sub> direct; 2.000 A (impulsive)	3xI <sub>n</sub> direct; 2.000 A (impulsive)
Bandwidth	1 kHz	1 kHz	1 kHz	1 kHz
Crest factor	2	2	2	2
<b>OUTPUT DATA</b>				
Analog channels	1	1	1	1
Range	0..10 V	0..10 V	0..10 V	0..10 V
Resolution	13 bits (10.000 points)	13 bits (10.000 points)	13 bits (10.000 points)	13 bits (10.000 points)
Min Load	2 kOhm	2 kOhm	2 kOhm	2 kOhm
EMI error	<0,5%	<0,5%	<0,5%	<0,5%
Thermal drift	< 200 ppm/K	< 200 ppm/K	< 200 ppm/K	< 200 ppm/K
Hysteresis measurement	0,2% f.s.	0,2% f.s.	0,2% f.s.	0,2% f.s.
Response time	Fast filter: 800 ms Slow filter: 2 s	Fast filter: 800 ms Slow filter: 2 s	Fast filter: 800 ms Slow filter: 2 s	Fast filter: 800 ms Slow filter: 2 s
Digital channels	1	1	1	2
Function	Alarm (alternative to analog channel)	Alarm (alternative to analog channel)	Alarm (alternative to analog channel)	Alarm (alternative to analog channel)
Type	PNP active output, max. load 50 mA	PNP active output, max. load 50 mA	PNP active output, max. load 50 mA	PNP active output, max. load 50 mA
<b>STANDARD</b>				
Approvals	CE	CE	CE	CE
Norms	EN61000-6-4 EN61000-6-2 EN61010-1	EN61000-6-4 EN61000-6-2 EN61010-1	EN61000-6-4 EN61000-6-2 EN61010-1	EN61000-6-4 EN61000-6-2 EN61010-1

# T201 Series

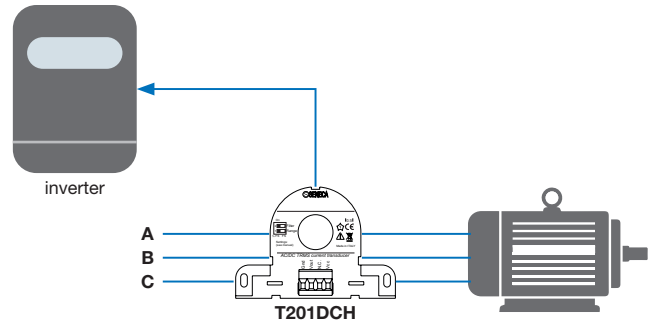
## APPLICATION EXAMPLES

### LOOP POWERED DC CURRENT TRANSDUCERS WITH 4..20 MA DIRECT OUTPUT

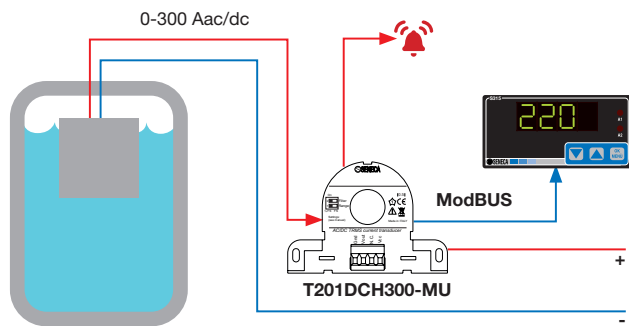
PATENTED TECHNOLOGY



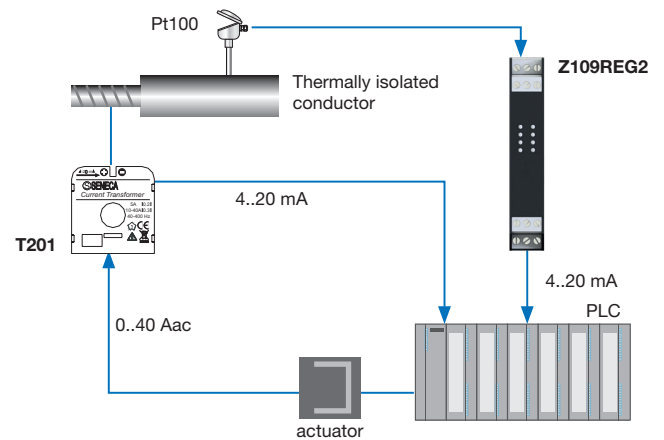
### ELECTRICAL MOTOR OUTPUT CURRENT TRANSDUCTION IN 0-10 V SIGNAL



### GALVANIC TREATMENT OF METAL SURFACES



### INDUCED CURRENT MEASUREMENT



## ORDER CODES

T201	AC current transformer 0..40 Aac, 8 input scales, 4..20 mA output, loop powered
T201DC	DC current transducer, measuring limit -10..40 Adc, 4..20 mA output, loop powered, patented measuring technology
T201DC100	DC current transducer, measuring limit -25..100 Adc, 4..20 mA output, loop powered, patented measuring technology
T201DCH	Direct or alternating current transducer (0..50 A) Hall effect TRMS, 0..10 V output
T201DCH100	Direct or alternating current transducer ( $\pm 100$ A) Hall effect, bipolar/TRMS, 0..10 V output
T201DCH300	Direct or alternating current transducer ( $\pm 300$ A) Hall effect, bipolar/TRMS, 0..10 V output
T201DCH50-LP	Direct or alternating current transducer ( $\pm 50$ A) Hall effect, bipolar/TRMS, 4..20mA outout, loop powered
T201DCH100-LP	Direct or alternating current transducer ( $\pm 100$ A) Hall effect, bipolar/TRMS, 4..20mA output, loop powered
T201DCH300-LP	Direct or alternating current transducer ( $\pm 300$ A) Hall effect, bipolar/TRMS, 4..20mA output, loop powered
T201DCH50-M	Direct or alternating current transducer ( $\pm 50$ A) Hall effect, bipolar/TRMS, 0..10 V output, ModBUS
T201DCH100-M	Direct or alternating current transducer ( $\pm 100$ A) Hall effect, bipolar/TRMS, 0..10 V output, ModBUS
T201DCH300-M	Direct or alternating current transducer ( $\pm 300$ A) Hall effect, bipolar/TRMS, 0..10 V output, ModBUS
T201DCH50-MU	Direct or alternating current transducer ( $\pm 50$ A) Hall effect, bipolar/TRMS 0..10 V or alarm output, ModBUS / USB
T201DCH100-MU	Direct or alternating current transducer ( $\pm 100$ A) Hall effect, bipolar/TRMS 0..10 V or alarm output, ModBUS / USB
T201DCH300-MU	Direct or alternating current transducer ( $\pm 300$ A) Hall effect bipolar/TRMS 0..10 V or alarm output, ModBUS / USB
T201DCH600-MU	Direct or alternating current transducer ( $\pm 300$ A) Hall effect bipolar/TRMS 0..10 V or alarm output, ModBUS / USB

## ACCESSORIES

A-DIN-T201	DIN rail plastic clip for T201 Series
S107USB	RS485/USB serial converter, portable version
S117P1	RS232/USB, TTL/USB, RS485/USB asynchronous serial converter

## SOFTWARE

EASY SETUP	Plug&Play software suite for SENECA programmable instruments (ModBUS versions)
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