

K series

Signal Converters Compact galvanic isolators

The SENECA **K Series** converter modules are characterised by 1.5 kVac 3-way isolation in digital technology, precision class 0.1%, supply range from 19.2 to 30 Vdc, compact dimensions (102.5 x 93.1 x 6.2 mm), reduced consumption, Mtbf of over 500,000 hours. Signal configuration is immediate with DIP switches or software. The supply technique is standard (on the spring clamp) or with a distributed system, based on an expandable connector (K-BUS) that can be snapped onto the 35 mm DIN guides according to the EN 60715 standard.

ROBUST INDUSTRIAL DESIGN

HIGH RELIABILITY



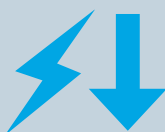
>500.000 h

WIDE OPERATING TEMPERATURE RANGE



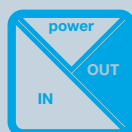
-20..+65°C

REDUCED CONSUMPTION



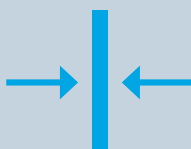
<25mA

MULTI-WAY INSULATION



1,5 kV

COMPACT DIMENSIONS



6.2 mm

HIGH PRECISION



0.1%

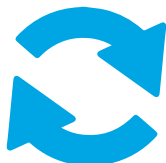


SPECIAL FUNCTIONS

Filter for stabilisation of reading



Scale inversion for input / output



Linearisation for horizontal cylinder tanks



Root extraction



SETTINGS

FLEXIBLE CONFIGURATION VIA DIP-SWITCH



PROGRAMMING VIA PC



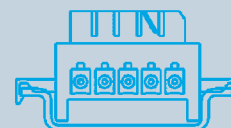
POWER SUPPLY

POWER SUPPLY DISTRIBUTED / DIRECT ON TERMINAL



19.2..30 Vdc

EXPANDABLE POWER SUPPLY CONNECTOR



CERTIFICATIONS

STANDARD INTERNATIONAL







CE, UL, CSA

ATEX CONFORMITY (K121)



II 3G Ex nA IIC T4 Gc X (gas)
II 3D Ex tc IIIC T135°C Dc X (dust)
EN 60079-0:2012
EN 60079-15:2010









COMPACT ISOLATOR CONVERTERS - K SERIES

	UNIVERSAL	ANALOG		
	K121	K109UI	K109S	K109LV
	 <p>Universal converter (mA, V, Ohm, RTD, TC) isolated loop powered</p>	 <p>V-I / V-I opto-isolated converter</p>	 <p>opto-isolated converter V-I / V-I with active input (transducer power supply)</p>	 <p>opto-isolated converter shunt / V-I</p>
GENERAL DATA				
Power supply	7..30 Vdc (with loop 4..20 mA)	19.2.. 30 Vdc	19.2.. 30 Vdc	19.2.. 30 Vdc
Power supply on side terminals		Yes	Yes	Yes
Max current absorbed	24 mA	22 mA (24 Vdc)	23 mA (24 Vdc); 45 mA (with aux. power supply)	22 mA (24 Vdc)
Max power dissipated	<660 mW	500 mW	500 mW	500 mW
A/D conversion	16 bit	14 bit	14 bit	14 bit
Rejection	50 or 60 Hz (programmable)	50 or 60 Hz (programmable)	50 or 60 Hz (programmable)	50 or 60 Hz (programmable)
Configurability	Software (EASY SETUP)	DIP Switch	DIP Switch	DIP Switch
Filtro	Additional for reading stabilisation	Additional for reading stabilisation	Additional for reading stabilisation	Additional for reading stabilisation
Dimensions	6.2 x 93.1 x 102.5 mm	6.2 x 93.1 x 102.5 mm	6.2 x 93.1 x 102.5 mm	6.2 x 93.1 x 102.5 mm
Insulation	1.5 kVac (2 ways)	1.5 kVac (3-ways)	1.5 kVac (3-ways)	1.5 kVac (3-ways)
Isolation technology	Digital / optocoupler	Digital / optocoupler	Digital / optocoupler	Digital / optocoupler
Processing	Calculation of floating point 32 bit	Calculation of floating point 32 bit	Calculation of floating point 32 bit	Calculation of floating point 32 bit
Colour	Black	Black	Black	Black
Casing material	PBT	PBT	PBT	PBT
Weight	45 g	45 g	45 g	45 g
Operating temperature	-20...+65°C	-20...+65°C	-20...+65°C	-20...+65°C
Connection	8 spring terminals	Spring and/or BUS	Spring and/or BUS	Spring and/or BUS
Degree of protection	IP 20	IP 20	IP 20	IP 20
Precision class	0.1%	0.1%	0.1%	0.1%
Thermal drift	< 120 ppm/K	< 120 ppm/K	< 120 ppm/K	< 120 ppm/K
LED	Anomaly, alarm	Anomaly, alarm	Anomaly, alarm	Anomaly, alarm
Special functions	Cold coupling offset Filter that can be inserted Output inversion	Root extraction Signal inversion Configurable scales Tank linearisation Programmable cut-off	Root extraction Signal inversion Tank linearisation Programmable cut-off Auxiliary power supply 17..20 V, max current 25 mA	Fault and programmable cut-off Filter that can be inserted
Approvals	CE, II 3G Ex nA IIC T4 Gc X, II 3D Ex tc IIIC T135°C Dc X	CE, UL-UR CSA	CE, UL-UR CSA	EC
Regulations	EN 61010-1, EN 61000-6-2, EN 61000-6-4, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-11, EN 60079-0, EN 60079-15	EN 61000-6-4, EN 61010-6-2, EN 61010-1	EN 61000-6-4, EN 61010-6-2, EN 61010-1	EN 61000-6-4, EN 61010-6-2, EN 61010-1
INPUT DATA				
Channels	1	1	1	1
Type	Thermocouple J,KR,S,T,B,E,N (EN 60584) RTD (Pt100, Pt500, Pt1000, Ni100) 2,3,4 wire connection Voltage (V): ± 30 V, impedance 200 kΩ Voltage (mV): ±150 mV, impedance 10 MΩ Current: ± 24V, impedance 40 kΩ Potentiometer: 500 Ω..10 kΩ Resistance up to 1.760 Ω	VOLTAGE Range: 0..10 / 10..0 / 0..5 / 1..5 / 0..15 / 0..30V (can be reversed) Impedance: 110 kΩ - 325 kΩ CURRENT Range: 4..20 / 20..4 / 0..20 / 20..0 mA Impedance: 35 Ω	VOLTAGE Range: 0..10 / 10..0 / 0..5 / 1..5 V Impedance: 110 kΩ CURRENT Range: 4..20 / 20..4 / 0..20 / 20..0 mA Impedance: 35 Ω	SHUNT Range: ±25, 50, 60, 75, 80, 100, 120, 150, 200, 250, 300, 400, 500, 1000, 2000 mV (da Dip switch)
OUTPUT DATA				
Channels	1	1	1	1
Type	Current 4-20 mA	VOLTAGE Range: 0..10 / 10..0 / 0..5 / 1..5 V Minimum load resistance: 2 kΩ CURRENT Range: 4..20 / 20..4 / 0..20 / 20..0 mA Max load resistance: 500Ω Protection: 25 mA	VOLTAGE Range: 0..10 / 10..0 / 0..5 / 1..5 V Minimum load resistance: 2 kΩ CURRENT Range: 4..20 / 20..4 / 0..20 / 20..0 mA Max load resistance: 500Ω Protection: 25 mA	VOLTAGE Range: 0..10 / 10..0 / 0..5 / 1..5 V Minimum load resistance: 2 kΩ CURRENT Range: 4..20 / 20..4 / 0..20 / 20..0 mA Max load resistance: 500Ω Protection: 25 mA
Auxiliary static relay				
Response time (10-90%)	140..620ms	< 40 ms (without filter) < 88 ms (with filter)	< 40 ms (without filter) < 88 ms (with filter)	< 25 ms (without filter) < 55 ms (with filter)
Conversion D/A resolution				
ORDER CODE				
Code	K121	K109UI	K109S	K109LV
Software and Accessories	Pg.182	Pg.182	Pg.182	Pg.182

The technical data and the diagrams in this document are indicative and not binding.







COMPACT ISOLATOR CONVERTERS - K SERIES

TEMPERATURE

K109PT	K109PT-HPC	K109PT1000	K120RTD	K109TC
 			 	 
opto-isolated converter Pt100 / V-I	opto-isolated converter Pt100 / V-I ad alta precisione	opto-isolated converter Pt1000 / V-I	Converter not isolated Pt100, Ni100 loop powered	TC opto-isolated converter / V-I with adjustable threshold
19,2..30 Vdc	19,2..30 Vdc	19,2..30 Vdc	Loop powered (5..30 Vdc)	19,2..30 Vdc
Yes	Yes	Yes	-	Yes
21..25 mA (24 Vdc)	21..25 mA (24 Vdc)	21..25 mA (24 Vdc)	21..25 mA (24 Vdc)	21..25 mA (24 Vdc)
500 mW	500 mW	500 mW	500 mW	500 mW
14 bit	14 bit	14 bit	14 bit	14 bit
50 or 60 Hz (programmable)	50 or 60 Hz (programmable)	50 or 60 Hz (programmable)	50 or 60 Hz (programmable)	50 or 60 Hz (programmable)
DIP Switch	DIP Switch	DIP Switch	DIP Switch, Software (EASY SETUP)	DIP Switch
Additional for reading stabilisation	Additional for reading stabilisation	Additional for reading stabilisation	Additional for reading stabilisation	Additional for reading stabilisation
6.2 x 93.1 x 102.5 mm	6.2 x 93.1 x 102.5 mm	6.2 x 93.1 x 102.5 mm	6.2 x 93.1 x 102.5 mm	6.2 x 93.1 x 102.5 mm
1.5 kVac 3 ways (50 Hz, 1 min)	1.5 kVac 3 ways (50 Hz, 1 min)	1.5 kVac 3 ways (50 Hz, 1 min)	-	1.5 kVac 3 ways (50 Hz, 1 min)
Digital (optocoupler)	Digital (optocoupler)	Digital (optocoupler)	-	Digital (optocoupler)
Calculation of floating point 32 bit	Calculation of floating point 32 bit	Calculation of floating point 32 bit	Calculation of floating point 32 bit	Calculation of floating point 32 bit
Black	Black	Black	Black	Black
PBT	PBT	PBT	PBT	PBT
45 g	45 g	45 g	45 g	45 g
-20..+65°C	-20..+65°C	-20..+65°C	-20..+65°C	-20..+65°C
Spring and/or BUS	Spring and/or BUS	Spring and/or BUS	Spring	Spring and/or BUS
IP 20	IP 20	IP 20	IP 20	IP 20
0,1% (max range)	0,1% (max range)	0.1%	0.1%	0.1%
< 100 ppm/K	< 100 ppm/K	< 100 ppm/K	< 100 ppm/K	< 100 ppm/K
Anomaly, alarm	Anomaly, alarm	Anomaly, alarm	Anomaly, alarm	Anomaly, alarm Auxiliary output status
Fault and programmable cut-off Filter that can be inserted	Fault and programmable cut-off Filter that can be inserted	Fault and programmable cut-off Filter that can be inserted	Type / RTD connection / filter measurement range, error, inversion output and over-range	Fault and programmable cut-off Filter that can be inserted
CE, UL-UR CSA	EC	EC	EC	CE, UL-UR CSA
EN 61000-6-4, EN 61000-6-2, EN 61010-1	EN 61000-6-4, EN 61000-6-2, EN 61010-1	EN 61000-6-4, EN 61000-6-2, EN 61010-1	EN 61000-6-4, EN 61000-6-2, EN 61010-1	EN 61000-6-4, EN 61000-6-2, EN 61010-1
1	1	1	1	1
PT100 Standard IEC 751 / EN 60751 – ITS90 Range: -150..+650 °C Minimum span: 50 °C Current on transmitter 900 µA 2, 3, 4 wire connection Max cable resistance: 20 Ω	PT100 Standard IEC 751 / EN 60751 – ITS90 Range: -200..+160 °C Minimum span: 20 °C Current on transmitter 900 µA 2, 3, 4 wire connection Max cable resistance: 20 Ω	PT1000 Standard EN 60751/A2 – ITS90 Range: -200..+210 °C Minimum span: 30 °C Corrente sul trasmettitore < 350µA 2, 3, 4 wire connection Max cable resistance: 50 Ω	Pt100 (EN 60751/A2-ITS90) Range: -200..+650 °C Minimum span: 20 °C 2, 3, 4 wire connection Ni100 Range: -60..+250 °C Minimum span: 20 °C 2, 3, 4 wire connection	THERMOCOUPLE Type J,K,E,N,S,R,B,T (ITS90) Range: -200..+650 °C Minimum span 100°C Impedance 10 MΩ Cold semiconductor coupling, ADC 13 bit, precision 0.15°C, update 10 s Max voltage ± 32V
1	1	1	1	1
VOLTAGE Range: 0..10 / 10..0 / 0..5 / 1..5 V Minimum load resistance: 2 kΩ CURRENT Range: 4..20 / 20..4 / 0..20 / 20..0 mA Max load resistance: 500 Ω Protection: 25 mA	VOLTAGE Range: 0..10 / 10..0 / 0..5 / 1..5 V Minimum load resistance: 2 kΩ CURRENT Range: 4..20 / 20..4 / 0..20 / 20..0 mA Max load resistance: 500 Ω Protection: 25 mA	VOLTAGE Range: 0..10 / 10..0 / 0..5 / 1..5 V Minimum load resistance: 2 kΩ CURRENT Range: 4..20 / 20..4 / 0..20 / 20..0 mA Max load resistance: 500 Ω Protection: 25 mA	CURRENT Range: 4..20 / 20..4 (2 wires) Load resistance: 1 kΩ Resolution: 0.5 µA (15 bit+sign) Protection: 30 mA	VOLTAGE Range: 0..10 / 10..0 / 0..5 / 1..5 V Minimum load resistance: 2 kΩ CURRENT Range: 4..20 / 20..4 / 0..20 / 20..0 mA Max load resistance: 500 Ω
< 50 ms (without filter) < 200 ms (with filter) 1 mV, 2 µA	< 50 ms (without filter) < 200 ms (with filter) 1 mV, 2 µA	< 50 ms (without filter) < 200 ms (with filter) 1 mV, 2 µA	< 220 ms (without filter) < 620 ms (with filter) 1 mV, 2 µA	Nominal voltage: 24 Vac/dc Current: 60 mA Overvoltage protections: 50 V Settable hysteresis / alarm threshold < 40 ms (without filter) < 88 ms (with filter) 1 mV, 2 µA
K109PT	K109PT-HPC	K109PT1000	K120RTD	K109TC
Pg.182	Pg.182	Pg.182	Pg.182	Pg.182

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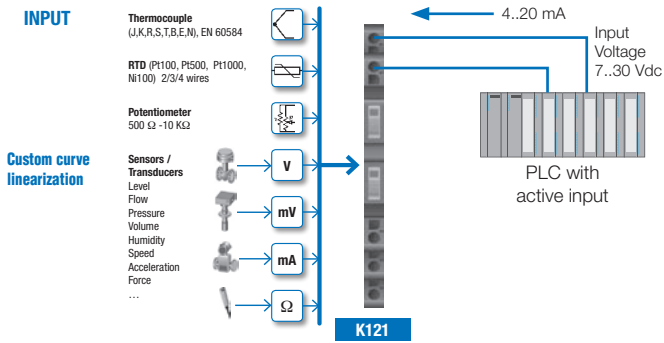
COMPACT ISOLATOR CONVERTERS - K SERIES

	FREQUENCY			SERIALS		
	K111	K111D	K112	K107A	K107B	K107USB
						
	Frequency threshold with two isolated outputs	Frequency divider and repeater with two isolated outputs	Isolated output double channel digital coupler	Opto-isolated serial repeater converter RS485 / RS485	Optoisolated serial converter RS232 / RS485	Serial converter optoisolato RS485 / USB
GENERAL DATA						
Power supply	19.2.. 30 Vdc	19.2..30 Vdc	19.2.. 30 Vdc	19,2..30 Vdc	19,2..30 Vdc	Via USB port
Power supply on side terminals	Yes	Yes	Yes	Yes	Yes	-
Hot swapping	Yes	Yes	Yes	Yes	Yes	Yes
Max current absorbed	< 25 mA	< 25 mA	< 25 mA	22 mA (24 Vdc)	22 mA (24 Vdc)	60 mA
Max power dissipated	500 mW	500 mW	500 mW	500 mW	500 mW	-
A/D conversion	14 bit	14 bit	14 bit	-	-	-
Rejection	50 or 60 Hz (programmable)	50 or 60 Hz (programmable)	50 or 60 Hz (programmable)	50 or 60 Hz (programmable)	50 or 60 Hz (programmable)	50 or 60 Hz (programmable)
Configurability	DIP Switch, Software (EASY SETUP)	DIP switch, Software (EASY SETUP)	DIP Switch	DIP Switch	DIP Switch	DIP Switch
Filtro	Programmable	Programmable				
Dimensions	6.2 x 93.1 x 102.5 mm	6,2x93,1x102,5 mm	6.2 x 93.1 x 102.5 mm	6.2 x 93.1 x 102.5 mm	6.2 x 93.1 x 102.5 mm	6.2 x 93.1 x 102.5 mm
Insulation	1.5 kVac (3-ways)	1.5 kVac (3 ways)	1.5 kVac (3-ways)	1.5 kVac 3 ways (50 Hz, 1 min)	1.5 kVac 3 ways (50 Hz, 1 min)	1,5 kVac (USB / RS485)
Isolation technology	Digital / Optocoupler	Digital / Optocoupler	Digital / Optocoupler	Digital (optocoupler)	Digital (optocoupler)	Digital (optocoupler)
Processing	Calculation of floating point 32 bit	Calculation of floating point 32 bit	Calculation of floating point 32 bit	-	-	-
Colour	Black	Black	Black	Black	Black	Black
Casing material	PBT	PBT	PBT	PBT	PBT	PBT
Weight	45 g	45 g	45 g	45 g	45 g	45 g
Operating temperature	-20...+65°C	-20...+65°C	-20...+65°C	-20...+65°C	-20...+65°C	-20...+65°C
Connection	Spring and/or BUS	Spring and/or BUS	Spring and/or BUS	Spring and/or BUS	Spring and/or BUS	Spring and/or BUS
Degree of protection	IP 20	IP20	IP 20	IP20	IP20	IP20
LED	Presence of power supply, active thresholds, error	Outputs state	Presence of power supply, output state	Power supply Data presence Reversed connection Automatic handshake Baud rate: 1.200..115.200 bps	Power supply Data presence Reversed connection Automatic handshake Baud rate: 1.200..115.200 bps	Power supply Data presence Reversed connection Settable termination of the RS485 line Baudrate: 1.200..115.200 bps RS485 serial communication via ModBUS RTU, max 32 nodes
Communication		-				Supported operating systems: Windows 98, 2000, XP, Vista, 7, 10, Linux 2.24.0 and later CE, UL-UR CSA
Special functions	Frequency divider Average measurement in a window of N pulses (N <= 256) Direct operation	Frequency divider Average measurement in a window of N pulses (N <= 256) Direct operation				
Approvals	EC	EC	EC	CE, UL-UR CSA	CE, UL-UR CSA	CE, UL-UR CSA
Regulations	EN 61000-6-4, EN 61010-6-2, EN 61010-1	EN 61000-6-4, EN 61010-6-2, EN 61010-1	EN 61000-6-4, EN 61010-6-2, EN 61010-1	EN 61000-6-4, EN 61000-6-2, EN 61010-1	EN 61000-6-4, EN 61000-6-2, EN 61010-1	EN 61000-6-4, EN 61000-6-2, EN 61010-1
INPUT DATA						
Channels	1	1	1	1	1	1
Type	Contact IEC 1131.2 (type 1) Namur (DIN 19234, EN 60947-5-6) NPN / PNP (12 or 22 V) with 2/3 wires Reed Photocell Max voltage: ±28 Vdc Frequency: Max 20 kHz, min 1 pulse every 116 minutes	Contact IEC 1131.2 (type 1) Namur (DIN 19234, EN 60947-5-6) NPN / PNP (12 or 22 V) with 2/3 wires Reed Photocell Max voltage: ±28 Vdc Frequency: Max 20 kHz, min 1 pulse every 116 minutes	Contact IEC 1131.2 (type 1) Namur (DIN 19234, EN 60947-5-6) NPN / PNP (12 or 22 V) with 2/3 wires Reed Photocell Max. frequency: 400 Hz	SERIAL RS485 half duplex, 31 nodes, terminator, protection up to 30 Vdc	SERIAL RS232B, protection up to 30 Vdc	SERIAL USB standard 1.0 e 2.0, connectors USB A and MINI USB B
OUTPUT DATA						
Channels	2	2	2	1	1	1
Type	PNP independent channels up to 200 mA, protected against short circuit	PNP independent channels up to 200 mA, protected against short circuit	Independent PNP and NPN channels	SERIAL RS485 half duplex, 31 nodes, terminator, protection up to 30 Vdc	SERIAL RS485 half duplex, 31 nodes, terminator, protection up to 30 Vdc	SERIAL RS485, 31 nodes, spring clamp, ModBUS protocol RTU Slave half duplex, max 1.200 m and 31 nodes
ORDER CODE						
Code	K111	K111D	K112	K107A	K107B	K107USB (complete with programming cable and CD ROM)
Software and Accessories	Pg.182	Pg.182	Pg.182	Pg.182	Pg.182	Pg.182

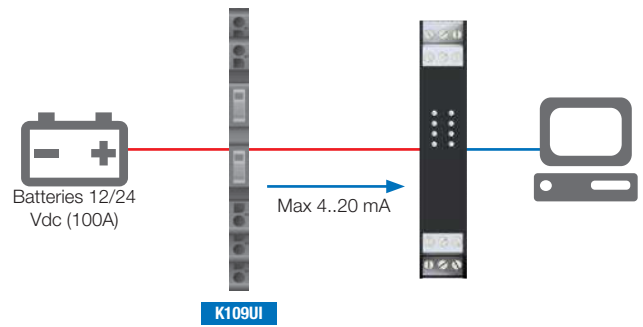
The technical data and the diagrams in this document are indicative and not binding.

APPLICATION EXAMPLES

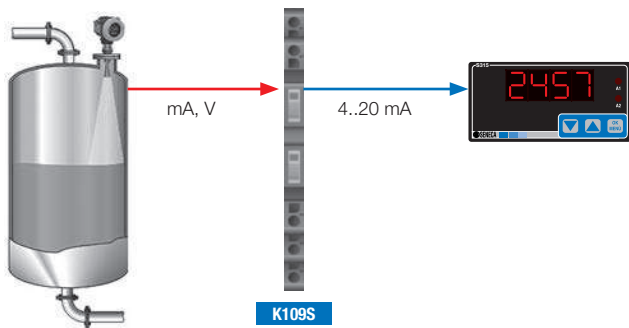
CONVERSION AND TRANSMISSION TO THE PLC OF A UNIVERSAL ANALOGUE SIGNAL



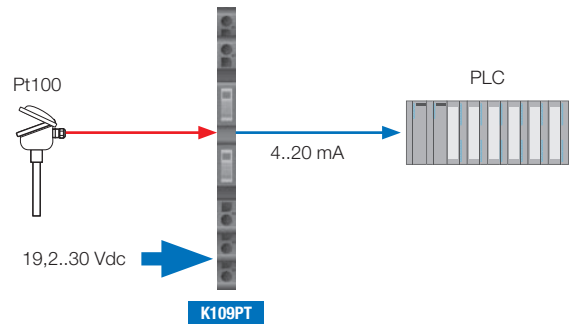
MONITORING OF THE BATTERY CHARGE VOLTAGE



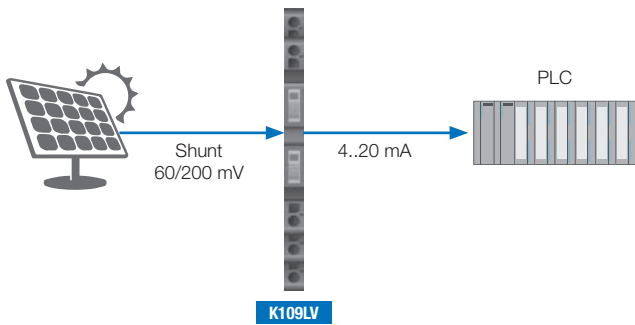
CONVERSION, ISOLATION AND SIGNAL RETRANSMISSION ANALOGUE FROM 2 WIRE IN TECNICA SENSOR



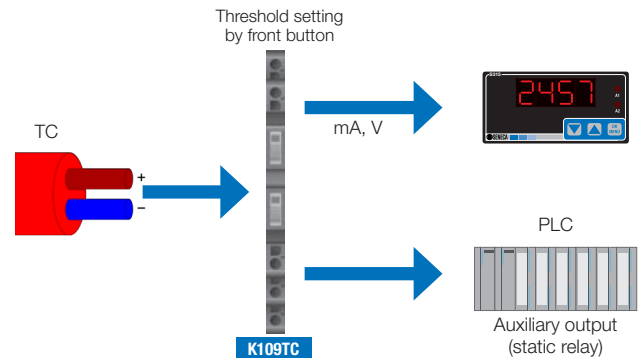
TEMPERATURE CONVERSION FROM PT100 INTO A STANDARD ANALOGUE SIGNAL



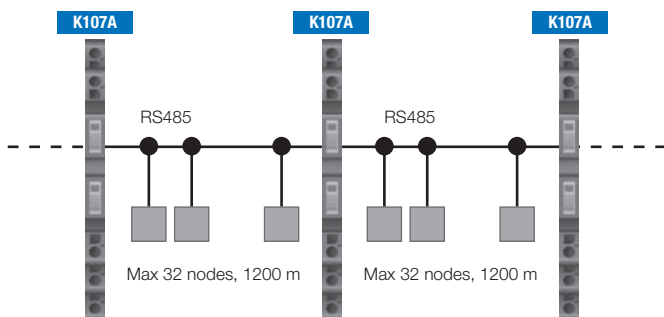
CONVERSION AND MEASUREMENT OF STRING CURRENT IN PHOTOVOLTAIC SYSTEMS



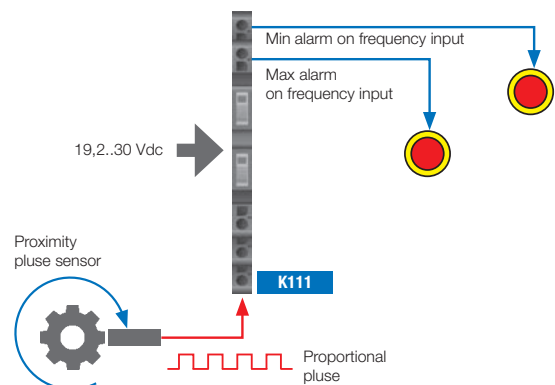
CONVERSION AND RETRANSMISSION OF THERMOCOUPLE TEMPERATURE VALUE



RS485 SERIAL REPETITION WITH GALVANIC ISOLATION



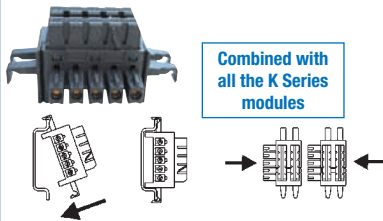
PULSE CONVERSION WITH ALARM THRESHOLD



ACCESSORIES & SOFTWARE

K-BUS

Expandable connector for rapid power supply (EN 60175)



ORDER CODE

K-BUS Expandable 2-way connector for fast power supply

K-SUPPLY

Redundant power supply with overvoltage protection

Combined with all the K Series modules



ORDER CODE

K-SUPPLY Power supply module with electronic line protections

EASY SETUP / EASY LP

Complete collection of SENECA programmable instruments plug&play configurators



K111
K121
K120RTD

EASY USB USB - UART TTL CONVERTER



Power supply Of PC 5V @ 100 mA
Degree of protection IP20
Serial UART TTL RJ11 connector, baud rate from 300 bps to 250 Kbps
Serial USB USB type A compatible standard 1.0, 1.1 and 2.0
Dimensions 84 x 21 x 17 mm
Operating systems supported Windows, Mac OS-X, Linux

ORDER CODE

EASY-USB USB - UART TTL CONVERTER

S117P1

Serial Converter RS232-USB, TTL-USB, RS485-USB



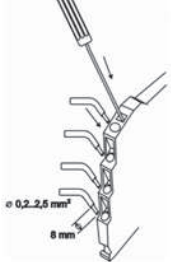
- Asynchronous serial conversion RS232, RS485, TTL
- Multiple connection possibility of multiple S117P1 units on the same PC
- USB 1.0, 1.1, 2.0 standard compatibility
- RS485 communication, max 32 nodes
- External modules power supply (100 mA, 12 Vdc)
- Supplied accessories: USB cable, TTL cable, driver CD + EASYLP (K120RTD, K121, T120 and T121 configuration software)

ORDER CODE

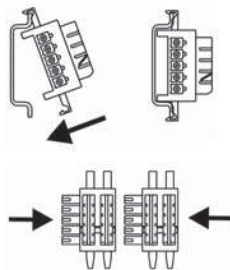
S117P1 Asynchronous serial converter RS232-USB, TTL-USB, RS485-USB complete with USB cable, TTL cable, Cd driver + EASYLP (K120RTD, K121, T120 and T121 configuration software)

CONNECTIONS AND INSTALLATION

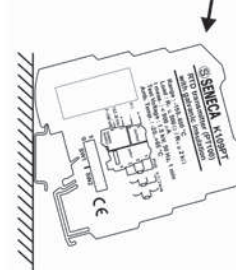
CONNECTION BASED ON SPRING TERMINALS



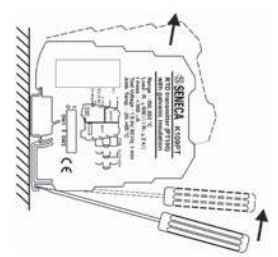
K-BUS CONNECTOR



INSERTION OF THE MODULE IN THE GUIDE



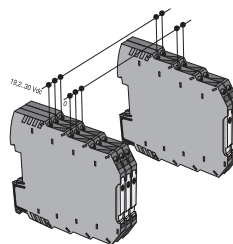
EXTRACTION OF THE MODULE FROM THE GUIDE



POWER SUPPLY TECHNOLOGIES

With the exception of the "loop powered" ones that do not have a bus power supply, the K Series signal conditioners offer 3 power options, one in traditional technology and two with the SMART SUPPLY distributed system. The direct power supply of the modules involves connecting of the source (24 Vdc) to the terminals of each instrument. The SMART SUPPLY system is based on the use of the K-BUS connector. Up to approximately 16 modules, the bus power distribution takes place by supplying a single module, provided that the total absorption is less than 400 mA. K-SUPPLY, an accessory with overvoltage protection and differential mode filter, supplies batteries with up to 75 modules, with maximum current absorption equal to 1.6 A (approximately 21 mA per module). It is also equipped with 2 independent inputs that allow it to be used as a redundant power supply system, guaranteeing the presence of power even if the source of one of the inputs fails.

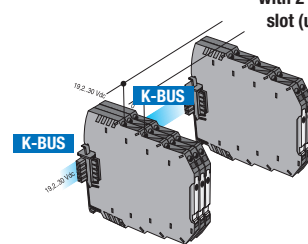
DIRECT POWER ON THE SPRING CLAMP



1

SMART SUPPLY SYSTEM

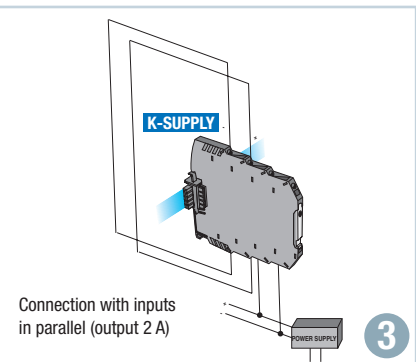
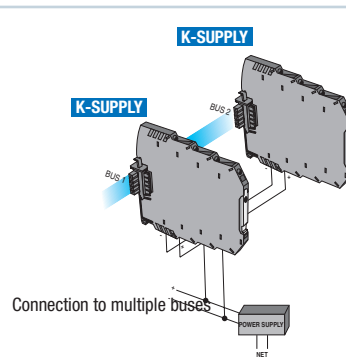
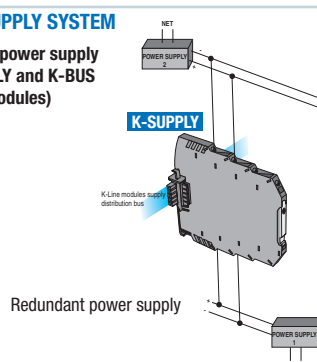
Distributed power supply with 2-K-BUS connector slot (up to 16 modules)



2

SMART SUPPLY SYSTEM

Distributed power supply via K-SUPPLY and K-BUS (up to 75 modules)



3



The information contained in this document may be modified or supplemented without notice for technical and commercial requirements; discrepancies and inaccuracies cannot be ruled out, in spite of the continuous commitment to perfection. In any case the contents of this document are subject to periodic review.