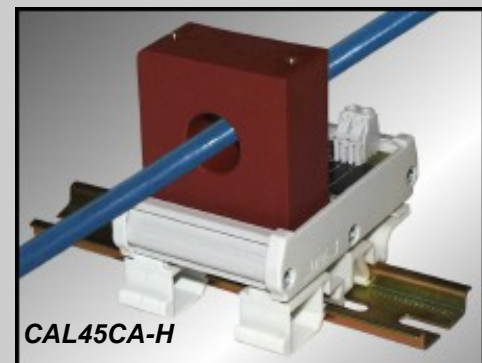


**HIGH CURRENT ANALOG CONVERTER
LOOP POWERED (supplied by 4/20mA loop)**



- **Measure of sinusoidal alternative signals**
(voltage or current)
- **Direct input up to 200A and 1000V**
- **Galvanic insulation** (up to 5000V)
- **Accuracy:** +/- 0.5 %
- **CAL45CA:** fixed connector
(measure capacity 5Aac/dc ; 500Vac/dc)
- **CAL45CA-D:** Removable terminals
(measure capacity 50Aac ; 1000Vac)
(low congestion : 18 mm)
- **CAL45CA-H:** high current version
(measure capacity 250Aac)
(Cable crossing diameter : 18 mm)
- **CAL45CAH-iwatch:** version allowing the supervise of
high speed phenomenon about 10mS settling time.



The CAL45CA measurement converters allow to transform alternative voltages or current into a 4 ... 20 mA current proportional to the input value. The use of load powered (supply of converter by 4..20mA loop) allow to reduce the wiring.

FUNCTIONALITY:

Measures: (according to model)

- Alternative voltage from 250 mV to 1000V
- Alternative current from 100uA to 5A on terminal
- Alternative current from 5A to 250A on crossing toroidal transformer (any range is possible)
crossing diameter : 6 mm on CAL45CA-D (50A)
crossing diameter :18 mm on CAL45CA-D (250A)
(frequency range, 20 to 1000 Hz according to model)

Outputs:

- current 4...20 mA
(loop powered)

General characteristics:

- DIN rail mounting (IP20 box),
- Connecting on screw terminals 2,5 mm².
- Galvanic insulation (input/output)
- Personalized measure scale at the end of manufacturing,
- Start and end scale readjustment is possible by multi-turn potentiometer,
- Protection against overvoltages or overcurrents,
- Protection against reverse polarity,
- Loop current control by "test terminals" without loop opening (green LED is off),
- Green Led power on indicator.

Version and order code :

CAL45CA :

- Version to measure sinusoidal alternative or continuous signals.
- maximum measure capacity 5Aac/dc; 500Vac/dc
(all calibers from 100uA to 5 A dc or from 20 to 1000 Hz)
insulation: 2000Vac

- fixed connectors

CAL45CA-D :

- Version to measure sinusoidal alternative signals.
- Removable terminals
- strengthen insulation > 5 Kv
- input > 5A on crossing toroidal transformer
(crossing diameter 6 mm)
- maximum ratings 50Aac; 1000Vac
(all ranges from 100uA to 50 A, from 40 to 500 Hz)

CAL45CA-H:

- Version for sinusoidal alternative current measures.
- strengthen insulation > 5 Kv
- input on crossing toroidal transformer
(crossing diameter 18 mm)
- maximum ratings 250Aac.
(all ranges from 10A, 20A, 40A, 60A, 80A, 100A, 120A, 140A, 160A, 180A and 200A from 40 Hz to 500 Hz)

CAL45CAH-iwatch:

- intended to the supervise of high speed phenomenon:
short circuit current, blocking, ...
go up time 10 mS, go down time 300mS

INPUT (standard)	
TYPE:	VALUE
Voltage (ac)	500 V
Impedance	> 1 MOhms
Continuous overload	2 VN
Absorbed power	0.25 W
Current (ac)	5 A
Impedance	0.05 Ohms
Continuous overload	1.5 IN
Peak overload	6 IN during 3 s
Absorbed power	1.25 W
Current (ac)	1 A
Input impedance	0.25 Ohms
Continuous overload	3 IN
Peak overload	6 IN during 5 s
Absorbed power	0.25 W
Current (ac)	50 A on crossing CT
Continuous overload	6 IN
Peak overload	10 IN during 5 s
Absorbed power (CAL45CA-D)	0.25 W
Current (ac)	250 A on crossing CT on 11 calbers switchctly
Continuous overload	6 IN
Peak overload	10 IN during 5 s
Absorbed power (CAL45CA-H)	0.25 W
Using frequency range	dc or 20...1000 Hz(cal45ca) 40...500 Hz (cal45ca-D and -H)
all specific inputs (measure scale) on request	

OUTPUT / POWER SUPPLY	
Loop power supply	10 to 40 Vdc (CAL45CA-D, CAL45CA-H) 14 to 40 Vdc (CAL45CA)
Current output	4 ... 20 mA loop powered
Load to 24V	750 Ohms (CAL45CA-D, CAL45CA-H) 500 Ohms (CAL45CA)
Power supply influence:	20 ppm / V
Load influence:	40 ppm / 100 Ohms
Linearity error	0.25 %
Accuracy	+/- 0.5 %
Response time	< 200 ms (for 63% of step)
Residual ripple (noise)	< 20 mV

RECOMMENDED OPERATING CONDITIONS

Operating temperature	-10 to 60 °C
Storage temperature	-20 to +85 °C
Influence (% of the full scale)	0.05 % / °C
Relative humidity	85 % not condensed
Weight	200 g
Performance against vibrations	2 g p.t.p. at 100 Hz
Tightness	IP20
Recommended assembly direction	Vertical / horizontal
Dielectric strength	2000 Vac (cal45ca) 5000 Vac (Cal45CA-D)

Electromagnetic compatibility

Generic standards: NFEN50081-2 / NFEN50082-2



EN55011	meet	group 1 / class A		
EN61000-4-2	no influence	B	ENV50140	< +/- 5 % A
EN61000-4-4	< +/- 5 %	B	ENV50141	< +/- 10 % A
EN61000-4-5	< +/- 5 %	B	ENV50204	no influence A
EN61000-4-8	no influence	A		
EN61000-4-11	< +/- 5 %	B	DBT	73/23/CEE

WIRING AND OUTLINE DIMENSIONS:

