

Loop powered isolator

3185

- 1 or 2 channel input loop powered isolator
- Signal 1:1 functional range 0...23 mA
- Low input voltage drop and fast response time
- Excellent accuracy and high load stability
- Slimline 6 mm housing























Application

- 1:1 input loop powered isolator of current signals in the range 0(4)...20 mA.
- · 3185 is an easy mounting DIN rail unit.
- · A very competitive choice in terms of both price and technology for galvanic isolation of current signals.
- Provides surge suppression and protects control systems from transients and noise.
- · 3185 eliminates ground loops and can be used for measuring floating signals.
- The device can be mounted in Safe area or in Zone 2 and Cl. 1 Div 2. area.

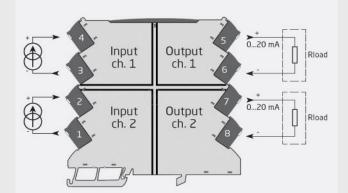
Technical characteristics

- 3185 is powered by the analog input current signal loop.
- Low input voltage drop, typ 1.35 V + Vout.
- · Excellent conversion accuracy, better than 0.1% in the range 0...20.5 mA.
- Functional range is 0...23 mA which means that 3185 is NAMUR NE43 compliant.
- · Inputs and outputs are floating and galvanically separated.
- · The output is voltage limited to 17.5 VDC.
- · High galvanic isolation of 2.5 kVAC.
- · Fast response time < 5 ms.
- Excellent signal/noise ratio > 60 dB.

Mounting / installation / programming

- DIN rail mounting with up to 330 channels per meter.
- Temperature operation range is from -25...+70°C.

Applications



Safe Area or Zone 2 & Cl. 1, Div. 2, gr. A-D

Order

Туре	Unit cha	nnels
3185A	Single	:1
	Double	:2

Environmental Conditions

Operating temperature	-25°C to +70°C
Storage temperature	-40°C to +85°C
Calibration temperature	2028°C
Relative humidity	< 95% RH (non-cond.)
Protection degree	IP20
Installation in	Pollution degree 2 & meas. /
	overvoltage cat. II

Mechanical specifications

Dimensions (HxWxD)	113 x 6.1 x 115 mm
Weight approx	70 g
DIN rail type	0.132.5 mm ² / AWG 2612
	stranded wire
Screw terminal torque	0.5 Nm
Vibration	IEC 60068-2-6
225 Hz	±1.6 mm
25100 Hz	±4 q

Common specifications

SupplyPower dissipation, per channel...... 30 mW

Isolation voltage

isolation voltage, test /	
working	2.5 kVAC / 300 VAC
3	(reinforced)
Zone 2 / Div 2	250 VAC

Response time (090%, 10010%)	< 5 ms
Signal / noise ratio	> 60 dB
Signal dynamics, input	Analog signal chair
Signal dynamics, output	Analog signal chair
Accuracy	Better than 0.1%
Cut-off frequency (3 dB)	100 Hz
EMC immunity influence	< ±0.5% of span
Extended EMC immunity: NAMUR NE21, A criterion, burst	< ±1% of span

Input specifications

O	
Current	Inniii

Measurement range Input voltage drop	
Signal conversion	10 uA
tvn	1.35 V + (0.015 x Vout.)

Output specifications

Current output

Signal range	023 mA
Load (@ current output)	≤ 600 Ω
Load stability	< 0.01% of span / 100 Ω
Voltage limit	
of span	= U2U MA

I.S. / Ex marking

ATEX	II 3 G Ex nA IIC T4 Gc
IECEx	Ex nA IIC T4 Gc
FM, US	Cl. I, Div. 2, Gp. A, B, C, D T4
,	or Cl. I, Zone 2, AEx nA IIC T4
FM, CA	
	or Cl. I, Zone 2, Ex nA IIC T4
EAC Ex	2Ex nA IIC T4 Gc X

Observed authority requirements

EMC	2014/30/EU
LVD	
RoHS	2011/65/EU
EAC	TR-CU 020/2011
EAC Ex	TR-CU 012/2011

Approvals

ATEX	KEMA 10ATEX0147 X
IECEx	KEM 10.0068X
c FM us	FM17US0004X /
	FM17CA0003X
UL	UL 61010-1
DNV-GL Marine	TAA00001RW
EAC Ex	RU C-DK.HA65.B.00355/19