

LOOP PARTITOR INTRINSIC SAFETY

ATIS-SI

The ATIS-SI has an intrinsic safety output:

This is an associated equipment, placed in safe area. It allows insulating an input signal from a safe area from an output signal connected to the hazardous area.

This instrument has obtained a **UE** examination certificate of the type according to the prescriptions of the standards EN 60079-0 (2006), EN 60079-11 (2007), EN 60079-26 (2007), EN 61241-0 (2006) and EN 61241-11 (2006) in accordance with the directive ATEX 2014/34/UE: marking Ex II(1)GD, [Exia]IIC and [Ex iaD]

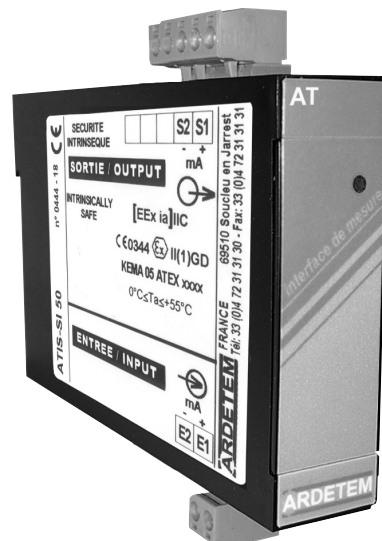
• Type:

The **ATIS-SI** is a **loop partitor, self-powered by the input signal**, which can insulate a 4-20 mA DC current into an INTRINSIC SAFETY signal.

The ATIS-SI solves the common point problems which can appear on the measure loops and also reduces the rejection of the disturbances induced in the cables.

• Accessibilities:

- Reduced casing
- Plug-off connectors for screwed connectings



ATIS-SI

• Functions:

- Galvanic partition:
Input / Output: 3.8 kV
- Self-powered by the input signal
- Low response time: 3ms max.

Applications

- ♦ IS barrier for analog signals
- ♦ Display, regulation, recording, watching of signals.

Coding

ATIS-SI 50

ATIS-SI 100

ATIS-SI 150

Environment

- ♦ Operating temperature : 0°C to +55°C.
- ♦ Storage temperature : -30°C to +80°C.

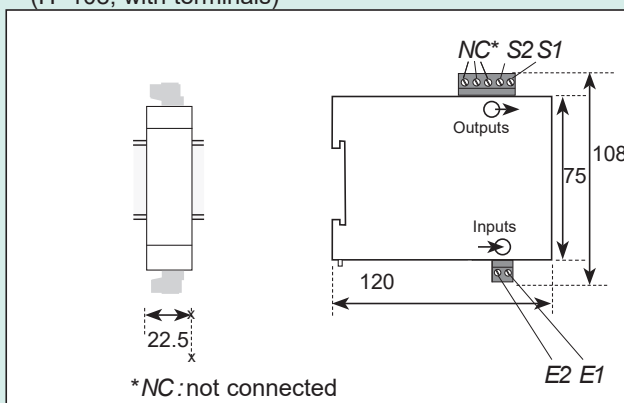
EMC standards 2014/30/UE

♦ CE according to IEC 61000-6-4, IEC 61000-6-2 (industrial environment).

♦ Directive ATEX 2014/34/UE standards EN 60079-0 (2006), EN 60079-11 (2007), EN 60079-26 (2007), EN 61241-0 (2006) and EN 61241-11 (2006)

Description

- ♦ **Housing:** (H x L x D) 75 x 22.5 x 120 mm (H=108, with terminals)



- ♦ **Protection:** Case / terminals: IP 20
- ♦ **Housing:** Self-extinguishing case of black UL 94VO ABS, for latching on symmetrical DIN rail. Plug-off connectors for screwed connectings (2.5mm², flexible or rigid).
- ♦ **Weight:** 170g (with packaging).

Technical features at 23°C

	TYPES	ATIS-SI 50	ATIS-SI 100	ATIS-SI 150
INPUT	Current (mA)	0...4...20	0...4...20	0...4...20
	Internal voltage drop at 20 mA	10 V	6.5 V	5.4 V
	Load loss (V)	$I \times L_r + 10$	$I \times L_r + 6.5$	$I \times L_r + 5.4$
	Impedance in Ω at 20 mA	$L_r + 500 \Omega$	$L_r + 325 \Omega$	$L_r + 270 \Omega$
	Max. voltage appearing on the input terminals, for the =20 mA and on endless load on the output	19 V	19 V	19 V
OUTPUT	INTRINSIC SAFETY Ex			
	Current (mA)	0...4...20	0...4...20	0...4...20
	Max. load at 20 mA	330 Ω	510 Ω	560 Ω
SUPPLY	Supply	Self-powered by the input loop	Self-powered by the input loop	Self-powered by the input loop
GENERALS	Nominal response time (0 to 90%)			
	For load $L_r=50\Omega$	3 ms	2 ms	1 ms
	Influence of the L_r	± 0.7 ms / 100 Ω	± 0.7 ms / 100 Ω	± 0.7 ms / 100 Ω
	Accuracy ratings:			
	Grade for $L_r = 50\Omega$	0.2	0.2	0.2
	Influence of the temperature	$\pm 0.013\%/^{\circ}\text{C}$	$\pm 0.006\%/^{\circ}\text{C}$	$\pm 0.003\%/^{\circ}\text{C}$
	Influence of the load resistance:	0.15% / 50 Ω	0.15%/50 Ω $L_r > 200\Omega$	0.15%/50 Ω $L_r > 250\Omega$
	Temperatures			
	Use	0°C to 55°C	0°C to 55°C	0°C to 55°C
	Storage	-30°C to 80°C	-30°C to 80°C	-30°C to 80°C
	Others			
	Conversion ratio	1/1	1/1	1/1
	Galvanic insulation input/output	3.8kV50Hz 1min	3.8kV50Hz 1min	3.8kV50Hz 1min
	Condense free dampness	85%	85%	85%

Connectings

Inputs

lower connector



INTRINSIC SAFETY OUTPUT current

upper connector (blue)



ELECTRICAL PARAMETERS RELATED TO THE SAFETY

Of the current output (mA) S1 S2:

	ATIS-SI 50	ATIS-SI 100	ATIS-SI 150
U _o	15.8V	15.8V	15.8V
I _o	50mA	100mA	150mA
P _o	198mW	395 mW	593 mW
L _o	15 mH	4 mH	1 mH
C _o	478 nF	478 nF	478 nF
Um < 350 Vdc and Um < 265 Vac			

This appliance is dedicated to industrial applications. It has to be installed in an electrical switchbox, or equivalent.



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