INTRINSIC SAFETY SETPOINT DETECTORS

DS(C)v-SI P / DAS(C)v-SI Plus
DS(C)v-SI O / DAS(C)v-SI 100

ARDETEM **SFERE**



Features

- **Universal power supply:**
  20 to 250 Vac and 20 to 250 Vdc
- **2 INPUT VERSIONS:**
  DS(C)v-SI P / DAS(C)v-SI Plus:
  ±100mV, ±1V, ±10V, ±150V, ±270V, ±20mA
  DS(C)v-SI O / DAS(C)v-SI 100:
  Pt100, ΔPt100
- **Response time**
  average 150ms, fast version 40ms
- **Supply for 2-wire sensor on the types DS(C)v-SI P / DAS(C)v-SI Plus**

Relay outputs (R): 2 change-over relays on resistive load).

Sensor break detection and self-diagnosis.

Isolation between input/outputs/supply.

Mode simulation: allows validating the configuration or the installation.

Programming with the micro-console or with the PC software SlimSET via a standard USB / µUSB cable.



This series has intrinsically safe inputs: they are associated equipment, to be placed in safe area or ATEX/IECEx area 2. They have input circuits for connection to a sensor placed in hazardous area and output circuits for connection only in safe area or ATEX/IECEx area 2.

These appliances have obtained a UE examination certificate of the type according to the prescriptions of the standards EN 60079-0, EN 60079-7, EN 60079-11 and EN 60079-15 in accordance with the directive ATEX 2014/34/UE.

Marking: II 3 (1) G Ex ec nC [ia Ga] IIC T4 Gc

Configuration

Easy programming with a micro-console or by PC software SlimSET (via a standard USB / µUSB cable).

Programming with the Micro-console

The graphical rear-lit LCD with tactile keyboard allows the visualisation of the following information:

- the value of the measure with its unit,
- the product tag name,
- the status of the relay outputs.

- Scrolling message for programming help in various languages
- Passcode protected programming

Programming by PC: SlimSET

Programming software (Windows environment) allowing:
The storage of the configurations as files which can be consulted, modified, duplicated or loaded into the converters.
The edition and printing of files with or without having a setpoint detector connected.

Features

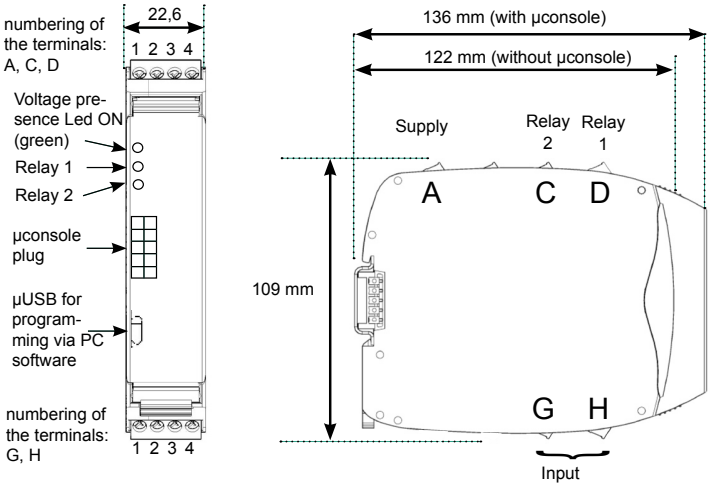
Supply: *20 to 250 Vac and 20 to 250Vdc*
Power draw: 2.5 W max. 6 VA max.
Operating temperature: -20 to +60°C
Storage temperature: -20 to +70°C
Installation: Pollution degree 2 / voltage surge II

Protection: housing/terminals: IP 20
Removable terminal blocks for screwed connections (2.5 mm², flexible or rigid)
Weight: 290g (with packaging)
Self- extinguishing case of black UL 94VO PA66.
Mounting in switchbox: latching on symmetrical DIN rail.

Compliance with standards:

Directive LV 2014/35/UE .....EN 61010-1
Standard for UL electrical safety .....UL 61010-1
.....CSA C22.2 NO.61010-1-12
Directive ATEX 2014/34/UE .....EN 60079-0, EN 60079-7
.....EN 60079-11, EN 60079-15
IECEx.....IEC 60079-0, IEC 60079-7
.....IEC 60079-11, IEC 60079-15
Directive EMC 2014/30/UE .....EN 61326-1

Dimensions



ARDETEM SFERE
69510 SOUCIEU EN JARREST - Tél. : 33(0)4 72 31 31 30 Fax. : 33(0)4 72 31 31 31

Features

Inputs

DSv SI P DSCv SI P DASv SI Plus DASCv SI Plus	DSv SI O DSCv SI O DASv SI 100 DASCv SI 100	Types of **INPUTS**	Measure range adjustable from:		Permanent overload	Intrinsic error	Input impedance
●		mA(1)	-2 to +22mA (U)		±100mA	< ±0.1% of the MR for inputs of the type (U) < ±0.05% of the MR for inputs of the type (B)	Max. drop 0.9V
			22 to +22mA(B)				
●		mV(1)	-10 to +110mV (U)		±1V		≥ 1MΩ
			-110 to +110mV (B)				
●		V	-0.1 to +1.1V (U)		±50V		
			-1.1 to +1.1V (B)				
			-1 to +11V (U)				
			-11 to +11V (B)				
			-15 to +165V (U)		±300V		
			-165 to +165V (B)				
			-30 to +300V (U)				
			-300 to +300V (B)				
	●	Pt100Ω sensor (1)(2) Standard IEC 751 (DIN 43760)	°C	°F	-	<±0.1% of the MR	Current 250µA
			-200/850	-328/1562	-		
	●	Differential measu-res from 2 sensors Pt100Ω 2-wire Standard IEC 751 (1)	-200/270	-328/518	-		
●		Supply for 2-wire sensor	27...17 Vdc / 0...20mA with protection from short-circuits: 25 mA.				
●		Special linearisation programming up to 20 points	On inputs: mV, V, mA.				
●		Extraction of the square root	On inputs mV, V or mA				

(1) Sensor break detection:
mA input (if down scale ≥ 3,5mA)
Other inputs: a 12µA pulsed current allows the detection of line or sensor break

(2) Wiring possible in 2, 3 and 4 wire
Influence of the line resistance (0<Rl<<25Ω) included in the announced intrinsic error.

MR Measure range

Thermal drift <150ppm /°C

Outputs

Types of **OUTPUTS**	Features
2 change-over relays	2 setpoints per relay configurable over the whole MR. Hysteresis programmable from 0 to 100%. Time delay program-mable from 0 to 999.9 sec. (5A/ 250 VAC on resistive load)

Response time of the outputs:
(for a variation from 10 to 90% of the input signal)
Average response time 150 ms (40 ms version F)

Galvanic isolation:
3.8kV-50Hz-1min. between input and [supply/outputs]
3.0kV-50Hz-1min. between relay outputs and supply
3.0kV-50Hz-1min. between relay output 1 and relay output 2

Marking:

CE

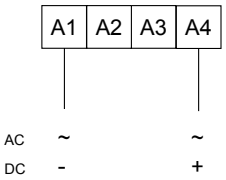
Ex II 3(1)G Ex ec nC [ia Ga] IIC T4 Gc
SIRA 17ATEX4222 X
IECEx CSA 17.0025 X

ATEX ZONE 2

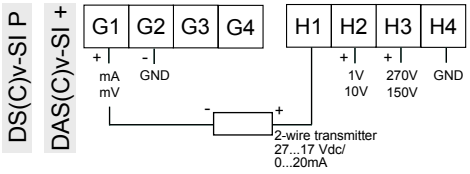
c UL us LISTED
Process Control Equipment
E482453

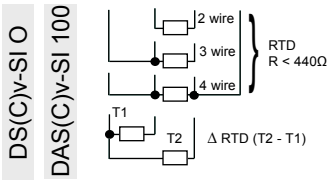
Connectings

Supply



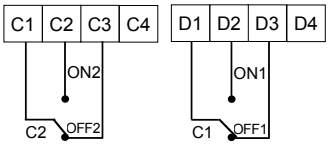
Inputs





Outputs

Relay outputs



Relay 2 Relay 1

PARAMETRES ELECTRIQUES RELATIFS A LA SECURITE SAFETY ELECTRICAL PARAMETERS						
Type de mesure Measure type	Câblage Wiring	Uo (V)	Io mA	Po (mW)	Co (µF)	Lo (mH)
Alimentation capteur 2-wire sensor supply	G1-H1	28.4	90.5	643	0.077	4
mV, V, mA, Tc, RTD Résistance, potentiomètre Resistance, potentiometer	G1-G2-G3 G4-H2 H3-H4	8.0	2.0	2.0	8.4	>1000
Um < 250 Vdc and Um < 250 Vac						

Coding

ARDETEM references:

version	**with display**		**without display**	
response time	standard	fast	standard	fast
process input	DSCv-SI P	DSCv-SI PF	DSv-SI P	DSv-SI PF
Pt100 input	DSCv-SI O	DSCv-SI OF	DSv-SI O	DSv-SI OF

SFERE references:

version	**with display**		**without display**	
response time	standard	fast	standard	fast
process input	DASCv-SI +	DASCv-SI +F	DASv-SI +	DASv-SI +F
Pt100 input	DASCv-SI 100	DASCv-SI 100F	DASv-SI 100	DASv-SI 100F

CA SE2016/04 - B 02/18- Any data in this documentation may be modified without prior notice.

ARDETEM SFERE ®

e-mail : info@ardetem.com
http : //www.ardetem-sfere.com

Route de Brindas
Parc d'activité d'Arbora N°2
69510 SOUCIEU EN JARREST
- FRANCE -

Tél. : 33 (0)4 72 31 31 30
Fax. : 33 (0)4 72 31 31 31

your representative