## **SIEMENS**

Data sheet 3RS7002-2DE00



Separation amplifier 24 V AC/DC, 3-way separation input: 0-20 mA output: 4-20 mA Spring-type terminal (push-in)

product category   Signal converter   product designation   Single-range converters   design of the product   active   product type designation   3RS70	product brand name	SIRIUS
design of the product product type designation 3RS70  General technical data  display version LED yes number of channels 1 consumed active power insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value surge voltage resistance rated value 2 500 V protection class IP shock resistance according to IEC 60068-2-7 sinusoidal half-wave 15g / 11 ms vibration resistance according to IEC 60068-2-8 ference code according to IEC 60068-2-8 reference code according to IEC 60068-2-2 T Substance Prohibitance (Date) 03/25/2015  Supply voltage  supply voltage at AC • at 50 Hz rated value 24 V supply voltage at DC rated value 24 V supply voltage at DC rated value 24 V supply voltage frequency rated value 00 50 Hz operating range factor supply voltage rated value • at AC at 50 Hz • at AC at 50 Hz • at AC at 50 Hz • at AC at 60 Hz • at AC at	product category	Signal converter
Description		Single-range converters
Description	design of the product	active
display version LED		3RS70
number of channels	General technical data	
Consumed active power   0.29 W	display version LED	Yes
insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value 2 500 V  protection class IP IP20  shock resistance according to IEC 60068-2-27 sinusoidal half-wave 15g / 11 ms  vibration resistance according to IEC 60068-2-6 6 150 Hz; 2 g  reference code according to IEC 60068-2-8 T	number of channels	1
surge voltage resistance rated value  surge voltage resistance according to IEC 60068-2-27  shock resistance according to IEC 60068-2-6  shock resistance according to IEC 60068-2-6  shock resistance according to IEC 60068-2-6  feferonce code according to IEC 80346-2  reference code according to IEC 81346-2  TSubstance Prohibitance (Date)  Supply voltage  supply voltage  supply voltage at AC  at 50 Hz rated value 24 V  supply voltage at DC rated value 24 V  supply voltage frequency rated value  operating range factor supply voltage rated value  at 60 Hz at 60 Hz  at AC at 60 Hz  at AC at 60 Hz  at AC at 60 Hz  at DC  Precision  relative metering precision  relative metering precision  output deviation  temperature drift per "C  voltage ripple maximum  limit frequency settling time for 1 % deviation  rise time  Main circuit  type of voltage  Inputs/Outputs  input voltage  AC/IDC  Inputs/Outputs  input voltage  150 V  sinusoidal half-wave 15g / 11 ms  sinuscidal half-wave 15g / 11 ms sinuscidal half-wave 15g / 11 ms  sinuscid h	consumed active power	0.29 W
protection class IP		50 V
Shock resistance according to IEC 60068-2-27   Sinusoidal half-wave 15g / 11 ms	surge voltage resistance rated value	2 500 V
vibration resistance according to IEC 60068-2-6         6 150 Hz: 2 g           reference code according to IEC 81346-2         T           Substance Prohibitance (Date)         03/25/2015           Supply voltage         Supply voltage at AC           • at 50 Hz rated value         24 V           • at 60 Hz rated value         24 V           supply voltage at DC rated value         60 50 Hz           operating range factor supply voltage rated value         60 50 Hz           operating range factor supply voltage rated value         0.8 1.1           • at AC at 50 Hz         0.8 1.1           • at AC at 60 Hz         0.8 1.1           • at DC         0.8 1.1           Precision         0.1 %           relative metering precision         0.1 %           relative linearity deviation         0.05 %           temperature drift per °C         0.015 %/°C           voltage ripple maximum         20 mV           limit frequency         30 Hz           settling time for 1 % deviation         17 ms           rise time         6 ms           Main circuit         Type of voltage           Inputs/ Outputs         input voltage	protection class IP	IP20
reference code according to IEC 81346-2 T Substance Prohibitance (Date) 03/25/2015  Supply voltage  supply voltage at AC	shock resistance according to IEC 60068-2-27	sinusoidal half-wave 15g / 11 ms
Substance Prohibitance (Date)  Supply voltage  supply voltage at AC  • at 50 Hz rated value  supply voltage at DC rated value  supply voltage at DC rated value  supply voltage frequency rated value  • at AC at 50 Hz  • at AC at 50 Hz  • at AC at 60 Hz  • at DC  Precision  relative metering precision  relative inearity deviation  to under a companied of the property of the propert	vibration resistance according to IEC 60068-2-6	6 150 Hz: 2 g
Supply voltage at AC  • at 50 Hz rated value  • at 60 Hz rated value  24 V  supply voltage at DC rated value  24 V  supply voltage frequency rated value  60 50 Hz  operating range factor supply voltage rated value  • at AC at 50 Hz  • at AC at 60 Hz  • at DC  Precision  relative metering precision  relative linearity deviation  temperature drift per °C  voltage ripple maximum  20 mV  limit frequency  settling time for 1 % deviation  rise time  Main circuit  type of voltage  have a to C be voltage  AC/DC  Inputs/ Outputs  input voltage  30 V	reference code according to IEC 81346-2	Т
supply voltage at AC         ● at 50 Hz rated value         24 V           ● at 60 Hz rated value         24 V           supply voltage at DC rated value         24 V           supply voltage frequency rated value         60 50 Hz           operating range factor supply voltage rated value         • at AC at 50 Hz           • at AC at 60 Hz         0.8 1.1           • at DC         0.8 1.1           Precision         vol. 1 %           relative metering precision         0.1 %           relative linearity deviation         0.05 %           temperature drift per °C         0.015 %/°C           voltage ripple maximum         20 mV           limit frequency         30 Hz           settling time for 1 % deviation         17 ms           rise time         6 ms           Main circuit         type of voltage           Inputs/ Outputs         input voltage		03/25/2015
■ at 50 Hz rated value     ■ at 60 Hz rated value     24 V  supply voltage at DC rated value 24 V  supply voltage frequency rated value 60 50 Hz  operating range factor supply voltage rated value      ■ at AC at 50 Hz     ■ at AC at 60 Hz     ■ at AC at 60 Hz     ■ at DC     1.1     ■ at DC     1.1     □ at DC  Precision  relative metering precision relative linearity deviation temperature drift per °C voltage ripple maximum 20 mV limit frequency settling time for 1 % deviation 17 ms rise time 6 ms  Main circuit type of voltage Inputs/ Outputs input voltage 30 V	Supply voltage	
■ at 60 Hz rated value     supply voltage at DC rated value     supply voltage frequency rated value     ● 0 50 Hz  operating range factor supply voltage rated value     ● at AC at 50 Hz     ● at AC at 60 Hz     ● at DC     ● at DC     ○ 8 1.1     ● at DC     ○ 8 1.1  Precision  relative metering precision     relative linearity deviation     10.05 %  temperature drift per °C     voltage ripple maximum     20 mV  limit frequency     30 Hz  settling time for 1 % deviation     17 ms  rise time     6 ms  Main circuit  type of voltage  Inputs/ Outputs  input voltage  30 V	supply voltage at AC	
supply voltage at DC rated value  supply voltage frequency rated value  operating range factor supply voltage rated value  • at AC at 50 Hz  • at AC at 60 Hz  • at DC  os 1.1  • at DC  Precision  relative metering precision  relative linearity deviation  temperature drift per °C  voltage ripple maximum  limit frequency  settling time for 1 % deviation  rise time  6 ms  Main circuit  type of voltage  input voltage  input voltage  30 V	at 50 Hz rated value	24 V
supply voltage frequency rated value  operating range factor supply voltage rated value  o at AC at 50 Hz  ot AC at 60 Hz  ot AC at 60 Hz  ot AC at 50 Hz  ot AC at 50 Hz  ot AC at 60 Hz  ot AC at 50 Hz  ot AC at 60 Hz  ot AC at 50 Hz  ot AC at 60 Hz  ot AC at 50 Hz  ot AC at 60 Hz  ot AC at 50 Hz  ot AC at 60 Hz  ot AC at 50 Hz  ot AC at 50 Hz  ot AC at 60 Hz  ot AC at 50 Hz  ot AC at 60 Hz  ot AC at 50 Hz  ot AC at 60 Hz  ot AC at 50 Hz  ot AC at 60 Hz  ot	at 60 Hz rated value	24 V
operating range factor supply voltage rated value  • at AC at 50 Hz • at AC at 60 Hz • at DC  0.8 1.1  • at DC  Precision  relative metering precision  relative linearity deviation  temperature drift per °C  voltage ripple maximum  20 mV  limit frequency  30 Hz  settling time for 1 % deviation  17 ms  rise time  6 ms  Main circuit  type of voltage  Inputs/ Outputs  input voltage  30 V	supply voltage at DC rated value	24 V
• at AC at 50 Hz • at AC at 60 Hz • at DC  7 relative metering precision relative linearity deviation temperature drift per °C voltage ripple maximum limit frequency settling time for 1 % deviation rise time  Main circuit type of voltage Inputs/ Outputs input voltage  30 V	supply voltage frequency rated value	60 50 Hz
■ at AC at 60 Hz     ■ at DC     □ 0.8 1.1  Precision  relative metering precision     □ 0.1 %  relative linearity deviation     □ 0.05 %  temperature drift per °C     □ 0.015 %/°C  voltage ripple maximum     □ 20 mV  limit frequency     □ 30 Hz  settling time for 1 % deviation     □ 17 ms  rise time     □ 6 ms  Main circuit  type of voltage     □ AC/DC  Inputs/ Outputs     □ input voltage     □ 30 V	operating range factor supply voltage rated value	
● at DC  Precision  relative metering precision relative linearity deviation temperature drift per °C voltage ripple maximum limit frequency settling time for 1 % deviation rise time  Main circuit type of voltage Inputs/ Outputs input voltage  30 V	• at AC at 50 Hz	0.8 1.1
relative metering precision relative linearity deviation temperature drift per °C 0.015 %/°C voltage ripple maximum 20 mV limit frequency settling time for 1 % deviation 17 ms rise time 6 ms  Main circuit type of voltage AC/DC Inputs/ Outputs input voltage 30 V	• at AC at 60 Hz	0.8 1.1
relative metering precision  relative linearity deviation  temperature drift per °C  voltage ripple maximum  20 mV  limit frequency  settling time for 1 % deviation  rise time  6 ms  Main circuit  type of voltage  input voltage  30 V	• at DC	0.8 1.1
relative linearity deviation  temperature drift per °C  voltage ripple maximum  20 mV  limit frequency  settling time for 1 % deviation  rise time  6 ms  Main circuit  type of voltage  AC/DC  Inputs/ Outputs  input voltage  30 V	Precision	
temperature drift per °C  voltage ripple maximum  20 mV  limit frequency  30 Hz  settling time for 1 % deviation  rise time  6 ms  Main circuit  type of voltage  AC/DC  Inputs/ Outputs  input voltage  30 V	relative metering precision	0.1 %
voltage ripple maximum  limit frequency  settling time for 1 % deviation  rise time  6 ms  Main circuit  type of voltage  AC/DC  Inputs/ Outputs  input voltage  30 V	relative linearity deviation	0.05 %
limit frequency 30 Hz settling time for 1 % deviation 17 ms rise time 6 ms  Main circuit type of voltage AC/DC Inputs/ Outputs input voltage 30 V	temperature drift per °C	0.015 %/°C
settling time for 1 % deviation  rise time  6 ms  Main circuit  type of voltage  AC/DC  Inputs/ Outputs  input voltage  30 V	voltage ripple maximum	20 mV
rise time 6 ms  Main circuit  type of voltage AC/DC  Inputs/ Outputs  input voltage 30 V	limit frequency	30 Hz
Main circuit type of voltage AC/DC Inputs/ Outputs input voltage 30 V	settling time for 1 % deviation	17 ms
type of voltage AC/DC Inputs/ Outputs input voltage 30 V	rise time	6 ms
Inputs/ Outputs input voltage 30 V	Main circuit	
input voltage 30 V	type of voltage	AC/DC
· · ·	Inputs/ Outputs	
property of the output short-circuit proof  Yes	input voltage	30 V
	property of the output short-circuit proof	Yes

tune of cianal at input	0 20 mA
type of signal at autout	0 20 mA 4 20 mA
type of signal at output	
input impedance of current input maximum	100 Ω
output load	
at the current output maximum	500 Ω
Electromagnetic compatibility	
EMC emitted interference according to IEC 60947-1	Environment B
EMC immunity according to IEC 60947-1	corresponds to degree of severity 3
conducted interference	
<ul> <li>due to burst according to IEC 61000-4-4</li> </ul>	1 kV 5/50 ns
<ul> <li>due to conductor-conductor surge according to IEC 61000-4-5</li> </ul>	1 kV
field-based interference according to IEC 61000-4-3	10 V/m
electrostatic discharge according to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
Galvanic isolation	
design of the electrical isolation	3 paths
galvanic isolation	
between input and output	Yes
between the outputs	No
between the inputs	No
between the voltage supply and other circuits	Yes
Connections/ Terminals	
type of electrical connection	enring loaded terminals
type of electrical conflection type of connectable conductor cross-sections	spring-loaded terminals
solid	1x (0.25 2.5 mm²)
finely stranded with core end processing     finely stranded without core and processing	1x (0.25 1.5 mm²)
<ul> <li>finely stranded without core end processing</li> <li>for AWG cables solid</li> </ul>	1x (0.25 2.5 mm²)
	1 x (20 14)
• for AWG cables stranded	1x (20 14)
connectable conductor cross-section	0.05 0.5
• solid	0.25 2.5 mm <sup>2</sup>
finely stranded with core end processing	0.25 1.5 mm <sup>2</sup>
finely stranded without core end processing	0.25 2.5 mm²
AWG number as coded connectable conductor cross section	
• solid	20 14
• stranded	20 14
Installation/ mounting/ dimensions	
mounting position	any
fastening method	snap-on mounting
height	93 mm
width	6.2 mm
depth	72.5 mm
required spacing	
with side-by-side mounting	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— upwards — downwards	0 mm
— downwards — at the side	0 mm
	Othin
for grounded parts     forwards	0 mm
	0 mm
— backwards	
— upwards	0 mm
— at the side	0 mm
— downwards	0 mm
• for live parts	0
— forwards	0 mm
	•
— backwards	0 mm
<ul><li>backwards</li><li>upwards</li><li>downwards</li></ul>	0 mm 0 mm 0 mm

0 mm		
Ambient conditions		
2 000 m		
-25 +60 °C		
-40 +80 °C		
-40 +80 °C		
10 95 %		

Certificates/ approvals

General Product Approval

**Declaration of Conformity** 



Confirmation









**Test Certificates** 

Marine / Shipping

other

Type Test Certificates/Test Report



Confirmation

## Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RS7002-2DE00

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RS7002-2DE00

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

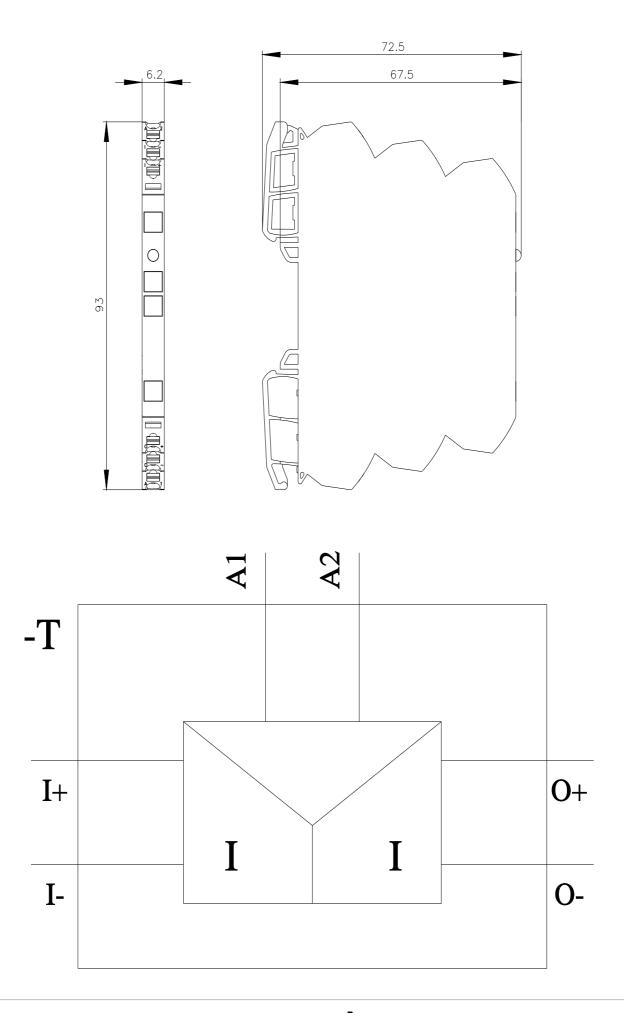
https://support.industry.siemens.com/cs/ww/en/ps/3RS7002-2DE00

 $Image\ database\ (product\ images,\ 2D\ dimension\ drawings,\ 3D\ models,\ device\ circuit\ diagrams,\ EPLAN\ macros,\ ...)$ 

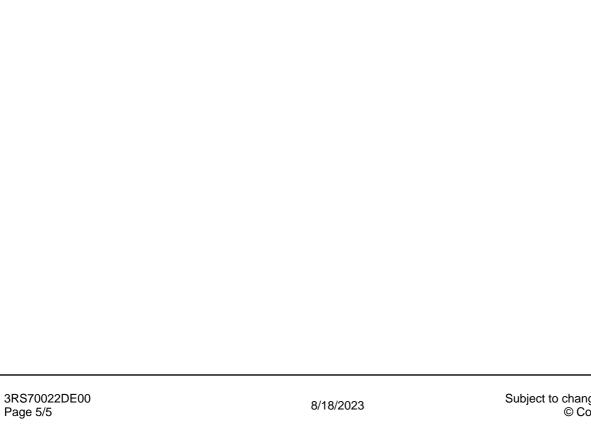
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax}}\underline{\text{de.aspx?mlfb=3RS7002-2DE00\&lang=en}}$ 

Characteristic: Derating

https://support.industry.siemens.com/cs/ww/en/ps/3RS7002-2DE00/manual



last modified: 12/23/2020 🖸



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