## **SIEMENS**

Data sheet 3RN2000-1AW30



Thermistor motor protection relay Compact evaluation unit, 17.5 mm enclosure, screw terminals, 1 changeover contact, US = 24 V-240 V AC/DC, Auto RESET, suitable for bimetallic switch, supply =output voltage, 1 LED (tripped)

product brand name	SIRIUS
product category	SIRIUS 3RN2 thermistor motor protection
product designation	Thermistor motor protection relay
design of the product	Compact evaluation unit, suitable for bimetallic switch (terminal A1 jumpered with root of changeover contact)
product type designation	3RN2
General technical data	
product function	thermistor motor protection
display version LED	Yes
insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value	300 V
degree of pollution	3
surge voltage resistance rated value	4 kV
protection class IP	IP20
shock resistance according to IEC 60068-2-27	11g / 15 ms
vibration resistance according to IEC 60068-2-6	10 55 Hz: 0.35 mm
mechanical service life (switching cycles) typical	10 000 000
electrical endurance (switching cycles) at AC-15 at 230 V typical	100 000
thermal current of the switching element with contacts maximum	5 A
reference code according to IEC 81346-2	K
Substance Prohibitance (Date)	05/28/2009
Product Function	
product function	
<ul><li>error memory</li></ul>	No
<ul> <li>dynamic open-circuit detection</li> </ul>	No
<ul> <li>external reset</li> </ul>	No
<ul><li>auto-RESET</li></ul>	Yes
manual RESET	No
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
<ul> <li>at 50 Hz rated value</li> </ul>	24 240 V
at 60 Hz rated value	24 240 V
control supply voltage at DC	
rated value	24 240 V
operating range factor control supply voltage rated value at DC	
• initial value	0.85

# full-scale value operating range factor control supply voltage rated value at AC at 50 Hz   # final value		
value at AC at 50 Hz  • Infill scale value • Infill	full-scale value	1.1
e full scale value Operating range factor control supply voltage rated value at AC at 60 ftz  initial value initia		
operating range factor control supply voltage rated value at Act 60 bz  initial value  initial value  initial value  1.1   Inrush current peak  2 at 24 V  3 A  duration of inrush current peak  2 at 24 V  3 A  4 at 240 V  4 at 240 V  4 at 240 V  5 A  Continuous current peak  4 at 24 V  4 at 240 V  4 at 240 V  4 at 240 V  4 at 240 V  5 A  Conscious  Co	initial value	0.85
vilue à Cd i 60 Hz initial value initial val	full-scale value	1.1
value at AC at 60 Hz  initial value  full-scale value  furush current peak  at 24 V  at 24 V  at 24 V  at 24 V  ot 24 V  ot 24 V  ot 24 V  ot 25 V  ot 26 V  Massuring circuit  buffering time in the event of power failure minimum  Procision  relative metering precision  Auxiliary circuit  material of switching contacts  number of NC contacts for auxiliary contacts  number of NC contacts for auxiliary contacts  number of CO contacts for auxiliary contacts  on the control of contacts for auxiliary contacts  on the control of CO contacts for auxiliary contacts  on the control of CO contacts for auxiliary contacts  on the control of CO contacts for auxiliary contacts  on the control of CO contacts for auxiliary contacts  on the control of CO contacts for auxiliary contacts  on the control of CO contacts for auxiliary contacts  on the control of CO contacts for auxiliary contacts  on the control of CO contacts for auxiliary contacts  on the control of CO contacts for auxiliary contacts  on the control of CO contacts for auxiliary contacts  on the control of CO contacts for auxiliary contacts  on the control of CO contacts for auxiliary contacts  on the control of CO contacts for auxiliary contacts  on the control of CO contacts for auxiliary contacts  on the control of CO contacts for auxiliary contacts  ampacity of the output relay at CO-13 at 250 V at 50/60 Hz  ampacity of the output relay at CO-15 at 250 V at 50/60 Hz  ampacity of the output relay at CO-15 at 250 V at 50/60 Hz  and the control of CO contacts for auxiliary contacts  at 250 V  at 125 V  at 125 V  at 126 V  at 126 V  at 126 V  at 126 V  at 127 V  at 127 V  at 128 V  at 128 V  at 129 V  at 129 V  at 129 V  at 129 V  at 120 V  a	operating range factor control supply voltage rated	
inush current peak	value at AC at 60 Hz	
Inrush current peak  at 24 V  buffering time in the event of power failure minimum  Procision  relative metering precision  Auxiliary circuit  material of switching contacts  number of NC contacts for auxiliary contacts  number of NC contacts for auxiliary contacts  onumber of NC contacts for auxiliary  onumber of NC contacts for auxiliary  onumber of NC contacts for auxiliary  and control cream surple according to IEC 61000-4-2  clectromagnetic compatibility  conducted interference  due to burst according to IEC 61000-4-2  clevanic isolation  solution  solution fine electrical isolation  galvanic isolation  dosign of the electrical isolation  galvanic isolation  dosign of the electrical isolation  galvanic isolation  for auxiliary and control circuit  ves  ves  between the voltage supply and other circuits  for auxiliary and control circuit  product component removable terminal for auxiliary  and control circuit  five of or auxiliary and control circuit  for auxiliary and control circuit  for auxiliary and control circuit  for auxiliary and control circ	initial value	
* at 240 V duration of Inrush current peak     * at 240 V     * at 240 V  Measuring circuit  buffering time in the event of power failure minimum  Procision  relative metering precision  Auxiliary circuit  material of switching contacts  number of NC contacts for auxiliary contacts  number of NC contacts for auxiliary contacts  number of CC contacts for auxiliary contacts  operational current of auxiliary contacts  **at 125 V     * at 125 V     * at 125 V     * at 125 V     * at 250 V  Main circuit  operating frequency rated value  ampacity of the output relay at AC-15 at 250 V at 50/60 Hz  ampacity of the output relay at AC-15 at 250 V  continuous current of the DIAZED fuse link of the output relay  **at 125 V     * at 125 V     *		1.1
# at 24 V # at 25 V # suffering time in the event of power failure minimum ## Precision ## relative metering precision  ## Auxiliary circuit ## material of switching contacts ## number of NC contacts for auxiliary contacts ## number of NC contacts for auxiliary contacts ## operational current of auxiliary contacts at DC-13 ## at 25 V ## at 25 V ## operating frequency rated value ## operating frequency r	·	
duration of inrush current peak  at 24 V  at 24 V  0.15 ms  0.15 ms  buffering time in the event of power failure minimum  Procision relative metering precision Auxiliary circuit material of switching contacts number of NC contacts for auxiliary contacts 0 number of NC contacts for auxiliary contacts 0 number of NC contacts for auxiliary contacts 0 number of CO contacts for auxiliary contacts 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
* at 24 V 0,15 ms  * at 240 V 0,15 ms  * Measuring circuit  buffering time in the event of power failure minimum  Precision relative metering precision 9 %  Auxiliary circuit  material of switching contacts number of NC contacts for auxiliary contacts 0 number of NC contacts for auxiliary contacts 1 operational current of auxiliary contacts 1 operational current of auxiliary contacts at DC-13  * at 24 V 1 A 2  * at 125 V 0,2 A 0,1 A 4  * and 125 V 0,2 A 0,1 A 4  * and 125 V 0,2 A 0,1 A 4  * and 125 V 0,2 A 0,2 A 0,2 A 0,3 A 0,4		8 A
### at 240 V ### at 250 V ### at 250 V at 50/60 Hz ampacity of the output relay at DC-13 ## at 25V ## at 125 V ### at 125	·	
Measuring circuit buffering time in the event of power failure minimum Procision relative metering precision Auxiliary circuit material of switching contacts number of NC contacts for auxiliary contacts number of NC contacts for auxiliary contacts 10 number of NC contacts for auxiliary contacts 11 operational current of auxiliary contacts 11 operational current of auxiliary contacts 12 operational current of auxiliary contacts at DC-13 object of the current of auxiliary contacts at DC-13 object of the current of auxiliary contacts at DC-13 object of the current of auxiliary contacts at DC-13 object of the current of auxiliary contacts at DC-13 object of the current of auxiliary contacts at DC-13 object of the current of auxiliary contacts at DC-13 object of the current of auxiliary contacts at DC-13 object of the current of the DIAZED fuse link of the autyliar relay at DC-13 object of the current of the DIAZED fuse link of the output relay object of the current of the DIAZED fuse link of the output relay object of the current of the DIAZED fuse link of the output relay object of the current of the DIAZED fuse link of the output relay object of the current of the DIAZED fuse link of the output relay object of the current of the DIAZED fuse link of the output relay object of the current of the DIAZED fuse link of the output relay object of the output object of the output object of the output relay object of the output object of		
buffering time in the event of power failure minimum  Precision relative metering precision  Auxiliary circuit material of switching contacts number of NC contacts for auxiliary contacts 0 number of NC contacts for auxiliary contacts 1 operational current of auxiliary contacts at DC-13  • at 24 V • at 125 V • at 250 V • at 250 V • at 250 V • at 250 V • at 125 V		0.15 ms
Precision relative metering precision palative metering precision  AgSnO2 number of NC contacts for auxiliary contacts number of CO contacts for auxiliary contacts 1 operational current of auxiliary contacts at DC-13 at 24 V at 125 V 0.2 A at 250 V 0.1 A  Main circuit operating frequency rated value ampacity of the output relay at AC-15 at 250 V at 50/60 Hz ampacity of the output relay at DC-13 at 125 V 1 A at 125 V 2 A continuous current of the DIAZED fuse link of the output relay conducted interference due to burst according to IEC 61000-4-4 eute to conductor-conductor surge according to IEC 61000-4-5 eluctromagnetic compatibility conducted interference due to conductor-conductor surge according to IEC 61000-4-5 eluctrostatic discharge according to IEC 61000-4-2 Galvanic isolation design of the electrical isolation galvanic isolation galvanic isolation splanalic isolation apalvanic isolation galvanic isolation splanalic solation apalvanic isolation for auxiliary and control circuit spe of electrical connection of or auxiliary and control circuit stype of connectable conductor cross-sections e solid in finely stranded with core end processing at AWG cables solid  1 x (0.5 4.0 mm²), 2x (0.5 1.5 mm²) 1 x (0.5 4.0 mm²), 2x (0.5 1.5 mm²) 1 x (0.5 4.0 mm²), 2x (0.5 1.5 mm²) 1 x (0.5 4.0 mm²), 2x (0.5 1.5 mm²) 1 x (0.5 4.0 mm²), 2x (0.5 1.5 mm²)		
relative metering precision  Auxiliary circuit material of switching contacts number of NC contacts for auxiliary contacts operational current of auxiliary contacts  **at 24V		40 ms
material of switching contacts number of NC contacts for auxiliary contacts number of NC contacts for auxiliary contacts number of NC contacts for auxiliary contacts 1 number of NC contacts for auxiliary contacts 1 operational current of auxiliary contacts 1 operational current of auxiliary contacts at DC-13 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A		
material of switching contacts number of NC contacts for auxillary contacts number of NC contacts for auxillary contacts number of CO contacts for auxillary contacts number of CO contacts for auxillary contacts 1 operational current of auxiliary contacts at DC-13 • at 24 V • at 125 V • at 250 V  Main circuit operating frequency rated value ampacity of the output relay at AC-15 at 250 V at 50/60 Hz at AV (line to line)  1 kV (line to line)  4 kV (line to line)  4 kV (line to line)  5 kV (line to line)  5 kV (line to line)  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  7 kV (lin		9 %
number of NC contacts for auxillary contacts number of NO contacts for auxillary contacts number of CO contacts for auxillary contacts operational current of auxillary contacts at DC-13  • at 24 V 1 A  • at 125 V 0.2 A  • at 250 V 0.1 A  Main circuit  operating frequency rated value ampacity of the output relay at AC-15 at 250 V at 50/60 Hz ampacity of the output relay at AC-15 at 250 V at 50/60 Hz ampacity of the output relay at DC-13  • at 24 V 1 A  • at 125 V 0.2 A  continuous current of the DIAZED fuse link of the output relay edue to burst according to IEC 61000-4-4  • due to burst according to IEC 61000-4-4  • due to conductor-conductor surge according to IEC 61000-4-5  • due to conductor-conductor surge according to IEC 61000-4-5  • electrostatic discharge according to IEC 61000-4-2  • Electrostatic consection • between input and output (Yes) • between the voltage supply and other circuits  Ves  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection • for auxiliary and control circuit  type of connectable conductor cross-sections • solid • finely stranded with core end processing • at AWG cables solid	Auxiliary circuit	
number of NO contacts for auxiliary contacts number of CO contacts for auxiliary contacts operational current of auxiliary contacts at DC-13		-
number of CO contacts for auxiliary contacts operational current of auxiliary contacts at DC-13  • at 24 V • at 25 V • at 250 V  Do 1.1 A  Main circuit operating frequency rated value ampacity of the output relay at AC-15 at 250 V at 50/60 Hz ampacity of the output relay at DC-13 • at 24 V • at 125 V • at 25 V  Do 2. A  • at 24 V • at 125 V  continuous current of the DIAZED fuse link of the output relay  Conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-centh surge according to IEC 61000-4-5 • due to conductor-centh surge according to IEC 61000-4-2  Geltonu-4-5 • due to conductor-cenductor surge according to IEC 61000-4-2  Geltonu-4-5 • due to conductor-cenductor surge according to IEC 61000-4-2  Gelvanic isolation  design of the electrical isolation galvanic isolation  design of the electrical isolation galvanic isolation • between input and output • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection • for auxiliary and control circuit  type of connectable conductor cross-sections • solid  in finely stranded with core end processing • at AWG cables solid		0
operational current of auxiliary contacts at DC-13		
at 24 V at 125 V cat 250 V 0.1 A  Main circuit  Operating frequency rated value ampacity of the output relay at AC-15 at 250 V at 50/60 Hz ampacity of the output relay at DC-13 at 24 V at 125 V continuous current of the DIAZED fuse link of the output relay  Electromagnetic compatibility  conducted interference due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 61000-4-2 Galvanic isolation  electrostatic discharge according to IEC 61000-4-2 design of the electrical isolation galvanic isolation  e between input and output between input and output between the voltage supply and other circuits  product component removable terminal for auxiliary and control circuit  type of electrical connection  for auxiliary and control circuit  type of connectable conductor cross-sections solid e finely stranded with core end processing 1x (0.5 4, 0 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14)		1
any activity operating frequency rated value ampacity of the output relay at AC-15 at 250 V at 50/60 Hz ampacity of the output relay at AC-15 at 250 V at 50/60 Hz ampacity of the output relay at DC-13  at 24 V at 125 V 0.2 A  continuous current of the DIAZED fuse link of the output relay  Electromagnetic compatibility  conducted interference  due to burst according to IEC 61000-4-4 due to conductor-carth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 61000-4-5 electrostatic discharge according to IEC 61000-4-2  Electrostatic discharge according to	-	
at 250 V  Main circuit  operating frequency rated value ampacity of the output relay at AC-15 at 250 V at 50/60 Hz ampacity of the output relay at DC-13  at 24 V  at 125 V  continuous current of the DIAZED fuse link of the output relay  Electromagnetic compatibility  conducted interference  due to burst according to IEC 61000-4-4  due to conductor-earth surge according to IEC 61000-4-5  due to conductor-conductor surge according to IEC 61000-4-2  electrostatic discharge according to IEC 61000-4-2  electrostatic discharge according to IEC 61000-4-2  folloud-4-5  folloud-4-5  folloud-4-5  folloud-4-5  folloud-4-5  folloud-4-7  folloud-		
main circuit  operating frequency rated value ampacity of the output relay at AC-15 at 250 V at 50/60 Hz ampacity of the output relay at DC-13  • at 24 V • at 125 V  continuous current of the DIAZED fuse link of the output relay  Electromagnetic compatibility  conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-2  felectrostatic discharge according to IEC 61000-4-2  felectrostatic discharge according to IEC 61000-4-2  felectrostatic discharge according to IEC 61000-4-2  felectrostatic solation  design of the electrical isolation  galvanic isolation  • between input and output • between the voltage supply and other circuits  No  connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection • for auxiliary and control circuit  type of connectable conductor cross-sections • solid • finely stranded with core end processing • at AWG cables solid  5060 Hz  1 kV (line to ground) 6 kV (contact discharge / 8 kV air discharge  2 kV (line to line) 6 kV contact discharge / 8 kV air discharge  2 kV (line to line)  1 kV (signal ports)  2 kV (lower ports) / 1 kV (signal ports)  2 kV (line to ground)  1 kV (signal ports)  2 kV (lower ports) / 1 kV (signal ports)  2 kV (lower ports) / 1 kV (signal ports)  2 kV (line to ground)  1 kV (signal ports)  2 kV (lower ports) / 1 kV (signal ports)  2 kV (line to ground)  1 kV (signal ports)  2 kV (lower ports) / 1 kV (signal ports)  2 kV (line to ground)  1 kV (signal ports)  2 kV (lower ports) / 1 kV (signal ports)  2 kV (lower ports) / 1 kV (signal ports)  2 kV (line to ground)  1 kV (line to gro		
operating frequency rated value ampacity of the output relay at AC-15 at 250 V at 50/60 Hz ampacity of the output relay at DC-13  • at 24 V • at 125 V  continuous current of the DIAZED fuse link of the output relay  Electromagnetic compatibility  conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-2  Galvanic isolation  design of the electrical isolation galvanic isolation • between the voltage supply and other circuits  Product component removable terminal for auxillary and control circuit  type of electrical connection • for auxiliary and control circuit  type of electrical connection • solid • finely stranded with core end processing • at AWG cables solid   1 A  1 A  1 A  1 A  1 A  2 EV (power ports) / 1 kV (signal ports)  2 kV (line to ground)  6 kV (line to line)  6 kV contact discharge / 8 kV air discharge  2 kV (power ports) / 1 kV (signal ports)  2 kV (line to line)  6 kV contact discharge / 8 kV air discharge  7 kV (line to line)  8 kV (line to line)  9 kV (line to line)  1 kV (line to line)  1 kV (line to line)  1 kV (line to line)  9 kV contact discharge / 8 kV air discharge  8 kV air discharge  9 kV contact discharge / 8 kV air discharge  1 kV (line to line)  1 kV (line to	3,1237	0.1 A
ampacity of the output relay at AC-15 at 250 V at 50/60 Hz  ampacity of the output relay at DC-13  • at 24 V  • at 125 V  continuous current of the DIAZED fuse link of the output relay  Electromagnetic compatibility  conducted interference  • due to burst according to IEC 61000-4-4  • due to conductor-earth surge according to IEC 61000-4-5  • due to conductor-conductor surge according to IEC 61000-4-5  • due to conductor-conductor surge according to IEC 61000-4-5  • due to conductor-conductor surge according to IEC 61000-4-2  Galvanic Isolation  design of the electrical isolation  galvanic isolation  • between input and output  • between input and output  • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for auxiliary and control circuit  type of connectable conductor cross-sections  • solid  • finely stranded with core end processing  • at AWG cables solid  1 A  1 A  1 A  1 A  0.2 A  2 KV (power ports) / 1 kV (signal ports)  2 kV (line to line)  2 kV (line to line)  6 kV contact discharge / 8 kV air discharge  2 kV (signal ports)  2 kV (line to line)  3 kV (line to line)  5 kV (line to line)  6 kV contact discharge / 8 kV air discharge  7 kV (line to line)  8 kV (line to line)  9 kV (line to line)  1 kV (line to line)  1 kV (line to line)  1 kV (line to line)  5 kV contact discharge / 8 kV air discharge  8 kV air discharge  8 kV air discharge  8 kV air discharge  9 kV contact discharge  1 kV (line to line)  1 kV (line to line)  5 kV contact discharge / 8 kV air discharge  1 kV (line to line)  5 kV (line to line)  1 kV (line to line)  5 kV (line to line)  6 kV contact discharge / 8 kV air discharge  8 kV air discharge  1 kV (line to line)		
ampacity of the output relay at DC-13  • at 24 V • at 125 V  continuous current of the DIAZED fuse link of the output relay  Electromagnetic compatibility  conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-2  Galvanic Isolation  design of the electrical isolation galvanic isolation • between input and output • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection • for auxiliary and control circuit  type of connectable conductor cross-sections • solid • finely stranded with core end processing • at AWG cables solid  1		
at 24 V at 125 V continuous current of the DIAZED fuse link of the output relay  Electromagnetic compatibility  conducted interference a due to burst according to IEC 61000-4-4 b due to conductor-earth surge according to IEC 61000-4-5 a due to conductor-conductor surge according to IEC 61000-4-5 electrostatic discharge according to IEC 61000-4-2  Electrostatic discharge / 8 kV air discharge  Electrostatic discharge /		3 A
continuous current of the DIAZED fuse link of the output relay  Electromagnetic compatibility  conducted interference  • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5  • due to conductor-conductor surge according to IEC 61000-4-5  • deet conductor-conductor surge according to IEC 61000-4-2  Galvanic isolation  design of the electrical isolation  galvanic isolation  • between input and output Yes • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection • for auxiliary and control circuit  type of connectable conductor cross-sections • solid • finely stranded with core end processing • at AWG cables solid    2 kV (power ports) / 1 kV (signal ports)  2 kV (line to line)  6 kV contact discharge / 8 kV air discharge  2 kV (power ports) / 1 kV (signal ports)  2 kV (line to line)  6 kV contact discharge / 8 kV air discharge  8 kV air discharge  9 kV vair discharge		
continuous current of the DIAZED fuse link of the output relay  Electromagnetic compatibility  conducted interference  • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 electrostatic discharge according to IEC 61000-4-2  Galvanic isolation  design of the electrical isolation galvanic isolation • between input and output • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection • for auxiliary and control circuit  type of connectable conductor cross-sections • solid • finely stranded with core end processing • at AWG cables solid   2 kV (power ports) / 1 kV (signal ports)  2 kV (line to line) 6 kV contact discharge / 8 kV air discharge  2 kV (line to line) 6 kV (line to line) 6 kV contact discharge / 8 kV air discharge  2 kV (line to line) 6 kV contact discharge / 8 kV air discharge  2 kV (line to line) 6 kV contact discharge / 8 kV air discharge  8 kV air discharge  9 kV air discharge  7 kes  6 kV contact discharge / 8 kV air discharge  8 kV air discharge  9 kV (line to line) 6 kV contact discharge / 8 kV air discharge  9 kV air discharge  9 kV air discharge  9 kV air discharge  9 kV (line to line) 6 kV contact discharge / 8 kV air discharge  9 kV air discharge  1 kV (line to line) 6 kV contact discharge / 8 kV air discharge  9 kV air discharge  1 kV (line to line) 6 kV contact discharge / 8 kV air discharge  1 kV (line to line) 6 kV contact discharge / 8 kV air discharge  1 kV (line to line) 6 kV contact discharge / 8 kV air discharge  1 kV (line to line) 6 kV contact discharge / 8 kV air discharge  1 kV (line to line) 6 kV contact discharge  1 kV (line to line) 6 kV contact discharge  1 kV (line to line) 6 kV contact discharge  1 kV (line to line) 6 kV contact discharge  1 kV (line to line) 6 kV contact discharge  1 kV (lin		
Electromagnetic compatibility  conducted interference  • due to burst according to IEC 61000-4-4  • due to conductor-earth surge according to IEC 61000-4-5  • due to conductor-conductor surge according to IEC 61000-4-5  • due to conductor-conductor surge according to IEC 61000-4-5  • deet to conductor-conductor surge according to IEC 61000-4-5  • deetcrostatic discharge according to IEC 61000-4-2  Galvanic isolation  design of the electrical isolation  galvanic isolation  • between input and output Yes  • between the voltage supply and other circuits No  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for auxiliary and control circuit  type of connectable conductor cross-sections  • solid  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)  1x (0.5 4.0 mm²), 2x (0.5 1.5 mm²)  1x (0.5 4.0 mm²), 2x (0.5 1.5 mm²)  1x (0.5 4.0 mm²), 2x (0.5 1.5 mm²)	- 4.1.20 1	
conducted interference  • due to burst according to IEC 61000-4-4  • due to conductor-earth surge according to IEC 61000-4-5  • due to conductor-conductor surge according to IEC 61000-4-5  • due to conductor-conductor surge according to IEC 61000-4-5  electrostatic discharge according to IEC 61000-4-2  Galvanic isolation  design of the electrical isolation  galvanic isolation  • between input and output Yes  • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  • for auxiliary and control circuit  type of connectable conductor cross-sections  • solid  • finely stranded with core end processing  • at AWG cables solid  2 kV (power ports) / 1 kV (signal ports)  2 kV (line to ground)  1 kV (line to line)  6 kV contact discharge / 8 kV air discharge  8 kV air discharge  No  Yes  • kV (power ports) / 1 kV (signal ports)  2 kV (line to ground)  1 kV (line to line)  6 kV contact discharge / 8 kV air discharge  8 kV air discharge  9 kV (aire to ground)  1 kV (line to line)  6 kV contact discharge / 8 kV air discharge  8 kV air discharge  9 kV air discharge  1 kV (line to line)  6 kV contact discharge / 8 kV air discharge  9 kV air discharge  1 kV (line to line)  6 kV contact discharge / 8 kV air discharge  9 kV air discharge  1 kV (line to line)  6 kV contact discharge / 8 kV air discharge  9 kV air discharge  1 kV (line to line)  6 kV contact discharge / 8 kV air discharge  9 kV air discharge  1 kV (line to line)  6 kV contact discharge / 8 kV air discharge  9 kV air discharge  1 kV (line to line)  6 kV contact discharge / 8 kV air discharge  1 kV (line to line)  1 kV (line to	output relay	6 A
<ul> <li>due to burst according to IEC 61000-4-4</li> <li>due to conductor-earth surge according to IEC 61000-4-5</li> <li>due to conductor-conductor surge according to IEC 61000-4-5</li> <li>due to conductor-conductor surge according to IEC 61000-4-2</li> <li>electrostatic discharge according to IEC 61000-4-2</li> <li>6 kV contact discharge / 8 kV air discharge</li> <li>Galvanic isolation</li> <li>galvanic isolation</li> <li>between input and output</li> <li>between input and output</li> <li>between the voltage supply and other circuits</li> <li>Product component removable terminal for auxiliary and control circuit</li> <li>type of electrical connection</li> <li>for auxiliary and control circuit</li> <li>type of connectable conductor cross-sections</li> <li>solid</li> <li>finely stranded with core end processing</li> <li>at AWG cables solid</li> <li>2 kV (power ports) / 1 kV (signal ports)</li> <li>2 kV (line to ground)</li> <li>1 kV (line to line)</li> <li>6 kV contact discharge / 8 kV air discharge</li> <li>8 kV air discharge</li> <li>9 kV contact discharge</li> <li>9 kV contact discharge</li> <li>9 kV contact discharge</li> <li>9 kV contact discharge</li> <li>1 kV (1 in to line)</li> <li>1 kV (1 in to line)</li> <li>1 kV (1 in to line)<td></td><td></td></li></ul>		
<ul> <li>due to conductor-earth surge according to IEC 61000-4-5</li> <li>due to conductor-conductor surge according to IEC 61000-4-5</li> <li>electrostatic discharge according to IEC 61000-4-2</li> <li>6 kV contact discharge / 8 kV air discharge</li> <li>Galvanic isolation</li> <li>design of the electrical isolation</li> <li>galvanic isolation</li> <li>between input and output</li> <li>between the voltage supply and other circuits</li> <li>Product component removable terminal for auxiliary and control circuit</li> <li>type of electrical connection</li> <li>for auxiliary and control circuit</li> <li>type of connectable conductor cross-sections</li> <li>solid</li> <li>finely stranded with core end processing</li> <li>at AWG cables solid</li> <li>1 kV (line to ground)</li> <li>1 kV (line to line)</li> <li>6 kV contact discharge / 8 kV air discharge</li> <li>9 kV contact discharge / 8 kV air discharge</li> <li>1 kV (line to ground)</li> <li>1 kV (line to line)</li> <li>6 kV contact discharge / 8 kV air discharge</li> <li>8 kV air discharge</li> <li>8 kV air discharge</li> <li>9 kV contact discharge / 8 kV air discharge</li> <li>1 kV (line to ground)</li> <li>1 kV (line to ground</li> <li>1 kV (line t</li></ul>		
due to conductor-conductor surge according to IEC 61000-4-5  electrostatic discharge according to IEC 61000-4-2  Galvanic isolation  design of the electrical isolation  e between input and output  between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  o for auxiliary and control circuit  type of connectable conductor cross-sections  o solid  finely stranded with core end processing  o at AWG cables solid  1 kV (line to line)  1 kV (or tarched with circuit scharge / 8 kV air discharge  8 kV air discharge  8 kV air discharge  9 kV contact discharge / 8 kV air discharge  9 kV contact discharge / 8 kV air discharge  9 kV contact discharge  9 kV contact discharge  9 kV contact discharge  9 kV air discharge  1 kV (line to line)  1 kV (line to line)  1 kV (of incharge)  1 kV	_	
electrostatic discharge according to IEC 61000-4-2  Galvanic isolation  design of the electrical isolation  pleasure input and output  between input and output  between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection  for auxiliary and control circuit  screw-type terminals  type of connectable conductor cross-sections  solid  finely stranded with core end processing  at AWG cables solid  for auxiliary and control  at AWG cables solid  be kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  6 kV contact discharge / 8 kV air discharge  9 kV air discharge  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxiliary  1 kV as Auxiliary / 10 kV as Auxil	61000-4-5	2 kV (line to ground)
Galvanic isolation       galvanic isolation         galvanic isolation       yes         • between input and output       Yes         • between the voltage supply and other circuits       No         Connections/ Terminals       Yes         product component removable terminal for auxiliary and control circuit       Yes         type of electrical connection       screw-type terminals         • for auxiliary and control circuit       screw-type terminals         type of connectable conductor cross-sections       1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)         • solid       1x (0.5 4 mm²), 2x (0.5 1.5 mm²)         • finely stranded with core end processing       1x (0.5 4 mm²), 2x (0.5 1.5 mm²)         • at AWG cables solid       1x (20 12), 2x (20 14)		
design of the electrical isolation       galvanic isolation         galvanic isolation       Yes         • between input and output       Yes         • between the voltage supply and other circuits       No         Connections/ Terminals       Yes         product component removable terminal for auxiliary and control circuit       Yes         type of electrical connection       screw-type terminals         • for auxiliary and control circuit       screw-type terminals         type of connectable conductor cross-sections       1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)         • solid       1x (0.5 4 mm²), 2x (0.5 2.5 mm²)         • finely stranded with core end processing       1x (0.5 4 mm²), 2x (0.5 1.5 mm²)         • at AWG cables solid       1x (20 12), 2x (20 14)		
galvanic isolation		
<ul> <li>between input and output</li> <li>between the voltage supply and other circuits</li> <li>Connections/ Terminals</li> <li>product component removable terminal for auxiliary and control circuit</li> <li>type of electrical connection</li> <li>for auxiliary and control circuit</li> <li>screw-type terminals</li> <li>type of connectable conductor cross-sections</li> <li>solid</li> <li>finely stranded with core end processing</li> <li>at AWG cables solid</li> <li>Yes</li> <li>Yes</li> <li>screw-type terminals</li> <li>1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)</li> <li>1x (0.5 4 mm²), 2x (0.5 1.5 mm²)</li> <li>1x (0.5 4 mm²), 2x (0.5 1.5 mm²)</li> <li>1x (0.5 12), 2x (20 14)</li> </ul>	Galvanic isolation	
<ul> <li>◆ between the voltage supply and other circuits</li> <li>Connections/ Terminals</li> <li>product component removable terminal for auxiliary and control circuit</li> <li>type of electrical connection</li> <li>◆ for auxiliary and control circuit</li> <li>type of connectable conductor cross-sections</li> <li>◆ solid</li> <li>↑ solid</li> <li>↑ finely stranded with core end processing</li> <li>↑ at AWG cables solid</li> <li>No</li> <li>Yes</li> <li>screw-type terminals</li> <li>1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)</li> <li>1x (0.5 4 mm²), 2x (0.5 1.5 mm²)</li> <li>1x (0.5 4 mm²), 2x (0.5 1.5 mm²)</li> <li>1x (20 12), 2x (20 14)</li> </ul>	Galvanic isolation design of the electrical isolation	6 kV contact discharge / 8 kV air discharge
product component removable terminal for auxiliary and control circuit  type of electrical connection  • for auxiliary and control circuit  screw-type terminals  type of connectable conductor cross-sections  • solid  • solid  • finely stranded with core end processing  • at AWG cables solid  Pyes  Screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)  1x (0.5 4 mm²), 2x (0.5 1.5 mm²)  1x (20 12), 2x (20 14)	Galvanic isolation design of the electrical isolation galvanic isolation	6 kV contact discharge / 8 kV air discharge galvanic isolation
product component removable terminal for auxiliary and control circuit  type of electrical connection  • for auxiliary and control circuit  type of connectable conductor cross-sections  • solid  • solid  • finely stranded with core end processing  • at AWG cables solid  Yes  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)  1x (0.5 4 mm²), 2x (0.5 1.5 mm²)  1x (20 12), 2x (20 14)	Galvanic isolation  design of the electrical isolation galvanic isolation  • between input and output	6 kV contact discharge / 8 kV air discharge galvanic isolation Yes
and control circuit  type of electrical connection  • for auxiliary and control circuit  type of connectable conductor cross-sections  • solid  • finely stranded with core end processing  • at AWG cables solid  screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)  1x (0.5 4 mm²), 2x (0.5 1.5 mm²)  1x (20 12), 2x (20 14)	Galvanic isolation  design of the electrical isolation  galvanic isolation  • between input and output  • between the voltage supply and other circuits	6 kV contact discharge / 8 kV air discharge galvanic isolation Yes
<ul> <li>◆ for auxiliary and control circuit</li> <li>type of connectable conductor cross-sections</li> <li>◆ solid</li> <li>◆ finely stranded with core end processing</li> <li>◆ at AWG cables solid</li> <li>screw-type terminals</li> <li>1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)</li> <li>1x (0.5 4 mm²), 2x (0.5 1.5 mm²)</li> <li>1x (20 12), 2x (20 14)</li> </ul>	Galvanic isolation  design of the electrical isolation  galvanic isolation  • between input and output  • between the voltage supply and other circuits  Connections/ Terminals	6 kV contact discharge / 8 kV air discharge galvanic isolation Yes
type of connectable conductor cross-sections         ● solid       1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)         ● finely stranded with core end processing       1x (0.5 4 mm²), 2x (0.5 1.5 mm²)         ● at AWG cables solid       1x (20 12), 2x (20 14)	Galvanic isolation  design of the electrical isolation  galvanic isolation  • between input and output  • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary	6 kV contact discharge / 8 kV air discharge galvanic isolation Yes No
<ul> <li>solid</li> <li>finely stranded with core end processing</li> <li>at AWG cables solid</li> <li>1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)</li> <li>1x (0.5 4 mm²), 2x (0.5 1.5 mm²)</li> <li>1x (20 12), 2x (20 14)</li> </ul>	design of the electrical isolation galvanic isolation  • between input and output • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit	6 kV contact discharge / 8 kV air discharge  galvanic isolation  Yes No  Yes
<ul> <li>finely stranded with core end processing</li> <li>1x (0.5 4 mm²), 2x (0.5 1.5 mm²)</li> <li>at AWG cables solid</li> <li>1x (20 12), 2x (20 14)</li> </ul>	design of the electrical isolation galvanic isolation  • between input and output • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection	6 kV contact discharge / 8 kV air discharge  galvanic isolation  Yes No  Yes screw-type terminals
• at AWG cables solid 1x (20 12), 2x (20 14)	design of the electrical isolation galvanic isolation  • between input and output • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection • for auxiliary and control circuit	6 kV contact discharge / 8 kV air discharge  galvanic isolation  Yes No  Yes screw-type terminals
	design of the electrical isolation galvanic isolation  • between input and output • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection • for auxiliary and control circuit  type of connectable conductor cross-sections	6 kV contact discharge / 8 kV air discharge  galvanic isolation  Yes No  Yes screw-type terminals screw-type terminals
connectable conductor cross-section	design of the electrical isolation galvanic isolation  • between input and output • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection • for auxiliary and control circuit  type of connectable conductor cross-sections • solid	galvanic isolation  Yes No  Yes screw-type terminals screw-type terminals 1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
Commission of the control of the con	design of the electrical isolation galvanic isolation  • between input and output • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection • for auxiliary and control circuit  type of connectable conductor cross-sections • solid • finely stranded with core end processing	6 kV contact discharge / 8 kV air discharge  galvanic isolation  Yes No  Yes screw-type terminals screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²)
• solid 0.5 4 mm <sup>2</sup>	design of the electrical isolation galvanic isolation  • between input and output • between the voltage supply and other circuits  Connections/ Terminals  product component removable terminal for auxiliary and control circuit  type of electrical connection • for auxiliary and control circuit  type of connectable conductor cross-sections • solid • finely stranded with core end processing	6 kV contact discharge / 8 kV air discharge  galvanic isolation  Yes No  Yes screw-type terminals screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²)
<ul> <li>finely stranded with core end processing</li> <li>0.5 4 mm²</li> </ul>	design of the electrical isolation galvanic isolation	galvanic isolation  Yes No  Yes screw-type terminals screw-type terminals  1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²) 1x (0.5 4 mm²), 2x (0.5 1.5 mm²) 1x (20 12), 2x (20 14)  0.5 4 mm²

AWG number as coded connectable conductor cross section	
• solid	20 12
• stranded	20 12
tightening torque with screw-type terminals	0.6 0.8 N·m
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail
height	100 mm
width	17.5 mm
depth	90 mm
required spacing	
<ul><li>with side-by-side mounting</li></ul>	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
<ul> <li>for grounded parts</li> </ul>	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— at the side	0 mm
— downwards	0 mm
for live parts	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul> <li>during operation</li> </ul>	-25 +60 °C
during storage	-40 +85 °C
during transport	-40 +85 °C
relative humidity during operation	70 %
Certificates/ approvals	

**General Product Approval** 







Confirmation







**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping





Type Test Certificates/Test Report







other

Confirmation

## **Further information**

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=3RN2000-1AW30

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RN2000-1AW30

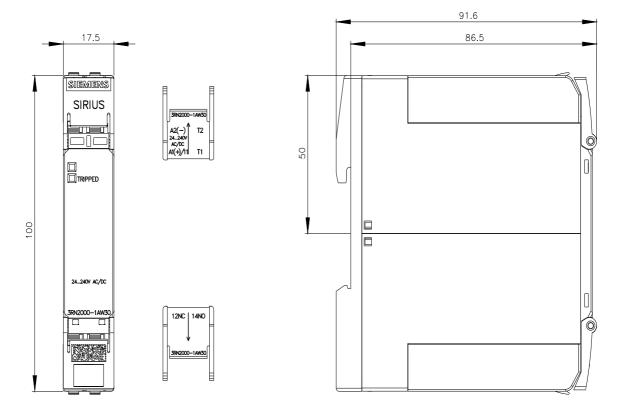
 $Service \& Support\ (Manuals,\ Certificates,\ Characteristics,\ FAQs,...)$ 

https://support.industry.siemens.com/cs/ww/en/ps/3RN2000-1AW30

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RN2000-1AW30&lang=en">http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RN2000-1AW30&lang=en</a>

**Characteristic: Derating** 

https://support.industry.siemens.com/cs/ww/en/ps/3RN2000-1AW30/manual



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