Technical data

Housing

Color	RAL 7035 (light-gray)
Dimensions	See Dimensions
Weight Automation station Terminal cover Packaging	 ca. 310 g ca. 60 g ca. 30 g

Function data

Processor	Texas Instruments AM3352, 300 MHz
RAM	128 MByte SDRAM (DDR3) 512 MByte NAND Flash
Communication A/D Resolution (analog in) D/A Resolution (analog out)	 14 Bit 12 Bit

Power data

Power supply	
Operating voltage	AC 230 V
Frequency	50/60 Hz
Power consumption including connected field devices	Max. 20 VA
Internal fuse	0.5 A irreversible
Transit power	Max. 6 A

Apparent power at 230 V (VA)				
	Basic load including I/O without Triacs and field supply	**Max. load to supply Triacs and field supply at 167 mA**	**Max. load KNX PL-Link**	**Power consumption including connected field devices**
DXR2.E09..	8	8	4	20
DXR2.E09T..				
DXR2.E10..				

Inputs

The inputs are protected against incorrect wiring AC 24 V.

Inputs: Overview	
Type	**Inputs**
DXR2.E09..	1 DI, 2 UI
DXR2.E09T..	1 DI, 2 UI
DXR2.E10..	1 DI, 2 UI

Resistance sensor, analog (inputs X...)		
Type	**Range (over range)**	**Resolution**
AI 1000 Ohm *)	1 kΩ (0...1.05 kΩ)	1 Ω
AI 2500 Ohm *)	2.5 kΩ (0...2625 kΩ)	2.5 Ω
AI 10 kOhm *)	10 kΩ (0...10.5 kΩ)	10 Ω
AI 100 kOhm *)	100 kΩ (0...105 kΩ)	100 Ω

Temperature measurement, analog (inputs X...)		
Type	**Range (over range)**	**Resolution**
AI PT1K 375 (NA) *)	-40...70 °C (-45...75 °C) -40...158 °F (-49...167 °F)	25 mK 0.045 °F
AI PT1K 385 (EU) *)	-40...70 °C (-45...75 °C) -40...158 °F (-49...167 °F)	25 mK 0.045 °F
AI (LG-)Ni1000 *)	-40...70 °C (-45...75 °C) -40...158 °F (-49...167 °F)	25 mK 0.045 °F
AI Ni1000 DIN *)	-40...70 °C (-45...75 °C) -40...158 °F (-49...167 °F)	25 mK 0.045 °F
AI T1 (PTC) *)	-40...70 °C (-45...75 °C) -40...158 °F (-49...167 °F)	100 mK 0.18 °F
AI NTC10K	-40...70 °C (-45...75 °C) -40...158 °F (-49...167 °F)	25 mK (25 °C) 0.045 °F (77 °F)
AI NTC100K	-10...70 °C (-15...75 °C) 14...158 °F (5...167 °F)	25 mK (25 °C) 0.045 °F (77 °F)

*) A fixed value of 1 Ω is calibrated to correct line resistance.

Voltage measurement, analog (inputs X...)		
Type	**Range (over range)**	**Resolution**
AI 0...10 V	0...10 V (-1...11 V)	2 mV
AI 0...10 V standard	0...100% (-10...110%)	2 mV
Open connection: Negative voltage -1.5 V, 8 µA (line failure detection)		

Digital input (inputs X... or D...)	
Contact query voltage	Universal input: 18 V Digital input: 21 V
Contact query current	Universal input: 1.2 mA, 7.4 mA initial current Digital input: 1.6 mA, 9.4 mA initial current
Contact resistance for closed contacts	Max. 100 Ω
Contact resistance for open contacts	Min. 50 kΩ

Outputs

The outputs are protected against short circuiting and incorrect wiring AC 24 V.

Outputs: Overview	
Type	**Outputs**
DXR2.E09..	3 relays, 3 AO
DXR2.E09T..	4 Triacs, 1 AO, 1 relay
DXR2.E10..	4 Triacs, 3 relays

Analog (outputs Y10...Y40)			
Type	**Range (over range)**	**Resolution**	**Output current**
AO 0-10 V	0...10 V (0…10.5 V)	2 mV	Max. 1 mA
AO 0-10 V standard	0...100% 0% = 0 V, 100% = 10 V (0...10.5 V)	2 mV	Max. 1 mA

Relay outputs (outputs Q...)	
External supply line fusing Non-renewable fuse Circuit breakers	 max. 10 A, slow max. 13 A, characteristic B, C, D per EN 60898
Switching voltage AC/DC	max. AC 250 V / DC 30 V min. AC/DC 12 V
Current load AC	max. 4 A resistive, 3 A inductive (cos phi 0.6) min. 1 mA at AC 250 V min. 10 mA at AC 12 V
Current load DC	max. 3 A resistive at DC 30 V min. 10 mA resistive at DC 12 V
Switch-on current	Max. 10 A (1 s)
Response/release time	7 ms/3 ms typical
Contact life at AC 250 V (reference values) at 0.1 A resistive at 0.5 A resistive at 4 A resistive Reduction factor at ind. load (cos phi = 0.6)	 5 x 10^6 switching cycles 1 x 10^6 switching cycles 1 x 10^5 switching cycles 0.6
Insulating strength between relay contacts and system electronics (reinforced insulation).	AC 3750 V, as per EN 60730-1

Switching outputs Triac *) (outputs Y1...Y4)	
Type	Low side The Triac closes the contact to system neutral
Switching voltage	AC 24 V
Permissible load (continuous)	167 mA / 4 VA overall and per output
Permissible load (<300 s)	250 mA / 6 VA overall and per output
Protection against overload	Power limitation internal, max. 250 mA, resetting

Supply for field devices *) (outputs V~)	
Output voltage	AC 24 V
Permissible load (continuous)	Max. 4 VA
Permissible load (<300 s)	Max. 6 VA
Protection against overload	Power limitation internal, max. 250 mA, resetting Switch-on current max. 1 A, resetting

*) The maximum common load of the Triacs and field supply is 4 VA (continuous).

Connections

Interfaces	
Ethernet	Plugs: 2 x RJ45, screened Interface type: 10Base-T/100BASE-TX, IEEE 802.3 compatible Bitrates: 10/100 Mbps, autosensing Protocol: BACnet over UDP/IP
USB (2.0)	Plug: Type B Data rate: 12 Mbps
KNX	Type: KNX TP1 PL-Link, galvanic isolation Baud rate: 9.6 kbps Bus power: 50 mA Short-circuit proof Protection against faulty wiring at max. AC 24 V

Wiring connections	
Pluggable screw terminals	Copper wire or copper stranded wire with connector sleeves 1 x 0.6 mm ø to 2.5 mm² (22 to 14 AWG) or 2 x 0.6 mm ø to 1 mm² (22 to 18 AWG) Copper stranded wire without connector sleeves 1 x 0.6 mm ø to 2.5 mm² (22 to 14 AWG) or 2 x 0.6 mm ø to 1.5 mm² (22 to 16 AWG)
Stripping length	6...7.5 mm (0.24...0.29 in)
Slotted screws	Size 1, tightening torque 0.6 Nm (0.44 lb-ft)
Wiring lengths for signals	KNX PL-Link 80 m (260 ft) with internal bus power or 300 m (990 ft) with external power supply Ethernet 100 m (330 ft) Signal lines 80 m (260 ft) For inputs AI 100 kOhm, AI NTC10K, AI NTC100K: 30 m (100 ft) or 80 m (260 ft), if shielded.

Conformity

Ambient conditions and protection classification	
Classification per IEC/EN 60730 Function of automatic control devices Pollution degree Overvoltage category	 Type 1 2 III
Design type	Device suited for use with equipment of safety classes I and II
Degree of protection of housing to IEC EN 60529 Room automation station With terminal cover	 IP20 IP30
Climatic ambient conditions • Transport (packaged for transport) as per IEC EN 60721-3-2 • Operation as per IEC/EN 60721-3-3	 • Class 2K3 Temperature -25...70 °C (-13... 158 °F) Air humidity 5...95% (non-condensing) • Class 3K5 Temperature -5...45 °C (23... 113 °F)/ -5...50 °C (23... 122 °F) See Mounting Air humidity 5...95% (non-condensing)
Mechanical ambient conditions Transport as per IEC/EN 60721-3-2 Operation as per IEC/EN 60721-3-3	 Class 2M2 Class 3M2

Standards, directives and approvals	
Product standard	IEC/EN 60730-1 Automatic electronic controls for household and similar use
Product family standard	EN 50491-2, EN 50491-3, EN 50491-5 General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS)
Electromagnetic compatibility	For residential, commercial, and industrial environments
EU conformity (CE)	EU declaration of conformance DXR2.. AC 230 V, see CM1T9204xx_1 EU declaration of conformance DXR2.. AC 24 V, see CM1T9204xx_2
RCM conformity	RCM declaration of conformance DXR2.. see CM1T9204xx_C1
EAC compliance	Eurasien compliance for all DXR2.xxx-xxxA variants
UL Approbation Federal Communications Commission	UL as per UL916, http://ul.com/database cUL as per CSA – C22.2 No. 205 FCC CFR 47 Part 15 Class B
BACnet	BTL listed, BACnet Application Specific Controller (B-ASC) BACnet Protocol Revision 13
Environmental compatibility	The product environmental declaration () contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal). See Section **Product documentation**.
Quality	ISO 9001 (Quality)

eu.bac certification			
Type	**License**	**Application**	**Control accuracy (K)**
DXR2.E09	215517	Chilled ceiling systems	Heating 0.3 Cooling 0.5
DXR2.E09T	215536	Fan coil (2-pipe)	Heating 0.1 Cooling 0.1
DXR2.E09T	215536	Fan coil (4-pipe)	Heating 0.1 Cooling 0.1
DXR2.E09T	215536	Fan coil (2-pipe / 2 wires)	Heating 0.2 Cooling 0.1
DXR2.E10	215537	Fan coil (2-pipe)	Heating 0.1 Cooling 0.1
DXR2.E10	215537	Fan coil (4-pipe)	Heating 0.1 Cooling 0.1
DXR2.E10	215537	Fan coil (2-pipe / 2 wires)	Heating 0.2 Cooling 0.1

See product list at: http://www.eubaccert.org/licences-by-criteria.asp