

Technical data

Housing

Color	RAL 7035 (light-gray)
Dimensions	See Dimensions
Weight	
Automation station	ca. 310 g
Terminal cover	ca. 60 g
Packaging	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)	14 Bit
D/A Resolution (analog out)	12 Bit

Power data

Power supply	
Operating voltage	AC 230 V
Frequency	50/60 Hz
Power consumption including connected field devices	Max. 18 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.M09..	6	8	4	18
DXR2.M09T..				
DXR2.M10..				

Inputs

The inputs are protected against incorrect wiring AC 24 V.

Inputs: Overview	
Type	Inputs
DXR2.M09..	1 DI, 2 UI
DXR2.M09T..	1 DI, 2 UI
DXR2.M10..	1 DI, 2 UI

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

Outputs

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

Outputs: Overview	
Type	Outputs
DXR2.M09..	3 relays, 3 AO
DXR2.M09T..	4 Triacs, 1 AO, 1 relay
DXR2.M10..	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	
MS/TP	Interface type: RS485 Galvanic isolation: Yes Baud rates: 9600, 19200, 38400, 57600, 115200 Protocol: BACnet over MS/TP Short-circuit proof Protection against faulty wiring at max. AC 24 V
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 \varnothing to 2.5 mm ² (22 to 14 AWG) or 2 x 0.6 mm \varnothing to 1 mm ² (22 to 18 AWG) Copper stranded wire without connector sleeves 1 x 0.6 mm \varnothing to 2.5 mm ² (22 to 14 AWG) or 2 x 0.6 mm \varnothing to 1.5 mm ² (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 MS/TP 1,000 m (3,290 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 <ul style="list-style-type: none"> Transport (packaged for transport) as per IEC EN 60721-3-2 Operation as per IEC/EN 60721-3-3 	<ul style="list-style-type: none"> 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	UL as per UL916, http://ul.com/database
Federal Communications Commission	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)