DAUITOR
DEVELOPMENT ENGINEERING

Advanced Controller | PLC

Datasheet

DTX-Lx

BACnet/IP controller with javascript engine and built in development environment.

Art. Nr.
DTX-L1-4R8DI-LC,DTX-L1-4R8DI-HC

Advanced Controller | PLC
DTX LION 4R8DI

Overview

- ARM 1GHz CPU (RpiZ/RpiZ2)
- 32Gbyte MicroSD
- 4 Relay Outputs, 10/16A @ 240VAC
- BACnet/IP
- NORM enclosure compatible
- High Current version (-HC)
- Web interface via HTTP
- 512Mbyte RAM
- LinuxOS (Comes pre-installed with Raspberry PI OS)
- 8 Digital Inputs, pulse counting capability
- DIN-mount
- Programmable Logic (DTXr)
- RTC with battery backup

Specification, Characteristics

Type	
Article Number	DTX-L1-4R8DI-LC, DTX-L1-4R8DI-HC

Digital Inputs, Positive Logic	
Active Level on 24V version	14.72 - 33.12VDC
Inactiv Level on 24V version	-0.7 - 14.71VDC
Active Level on 12V version	7.8 - 17.64VDC
Inactiv Level on 12V version	-0.7 - 7.7VDC
Input Voltage range on 24V Version	-0.7 - 33.12VDC
Input Voltage range on 12V Version	-0.7 - 17.64VDC
Input Current	0.2mA/input @ 24V, 0.15mA/input @ 12V
Marking Terminals	DI0 - DI7
Peak Current Consumption	1A @ startup
Repetitive Peak Voltage less than 1s	70V peak

Relay Outputs -HC Version (RTS3T012)	
Output Type	Switching Relay (NO), 1-Pol, 16 A (Max) RT1 inrush
Marking Terminals	RELAY0 - RELAY3
Switch Voltage Range	0VAC - 250VAC, 0VDC - 176VDC
Load Current	16A continious, 20ms 165Apk, 200µs 800Apk
Insulation Voltage	5000VAC

Relay Outputs -LC Version (507HN-1CH-F-C E 12V)	
Output Type	Switching Relay (NO), 1-Pol, 16 A (Max) RT1 inrush

Relay Outputs -LC Version (507HN-1CH-F-C E 12V)	
Marking Terminals	RELAY0 - RELAY3
Switch Voltage Range	0VAC - 277VAC, 0VDC - 195VDC
Load Current	16A @ 240VAC, 17A max switching current
insulation test voltage	open AC 1000V, contact-coil 5000ACV, 1 min.

Ethernet Interface	
Type	IEEE 802.3 10Base-T max 10Mbps
Marking Terminals	Ethernet
IP assignment	DHCP as default

Power Supply	
Typical for 24V version	24V AC or DC
Typical for 12V version	12V AC or DC
Voltage Range on 24V version	34.52 - 16.2V AC or DC
Voltage Range on 12V version	19.04 - 9.2V AC or DC
DC Output	Supply Voltage-1.4V rectified, max 100mA
Marking Terminals	DC OUT, AC/DC1, AC/DC2, GND

Insulation Data	
Impulse Voltage Category	II
Pollution Degree	2
Rated Insulation Voltage	250VAC
Insulation Test Voltage Housing	3000VAC

Environmental Conditions	
Storing and Transportation Temperature	-20°C - +75°C
Operational Ambient Temperature	0°C - +50°C
Rel. Humidity, None Condensing	15% - 90%

General Data	
Dimensions (l x w x h)	122mm x 105mm x 62mm
Weight (net)	400g
Mounting	DIN Rail mounting integration in class II devices
Rated max Case Temperature	50°C
Expected life time @ max Case Temperature	50 000 h
Protection Class	II when used as intended
Protection Degree Housing	IP40
Protection Degree Terminals	IP20

General Data	
Real Time Clock (accuracy)	Quarz Based (~20ppm), in RTC-version

Terminals	
Connection Type	Pluggable Terminal Blocks (supplied)
Wire size solid core	0,5 - 2,5 mm2 (AWG20 - AWG14)
Wire size fine wired	0,5 - 2,5 mm2 (AWG20 - AWG14)
Wire size using wire end ferrule	0,25 - 1,5 mm2
Stripping Length	7 mm / 0,27 inch
Locking Torque	0,5Nm

Standards	
EMC immunity to interference	EN 61000-6-2:2005
EMC emission of interference	EN 55022:2011 Class B
Automation Protocol	BACnet 135-2020
Markings	CE

Installation

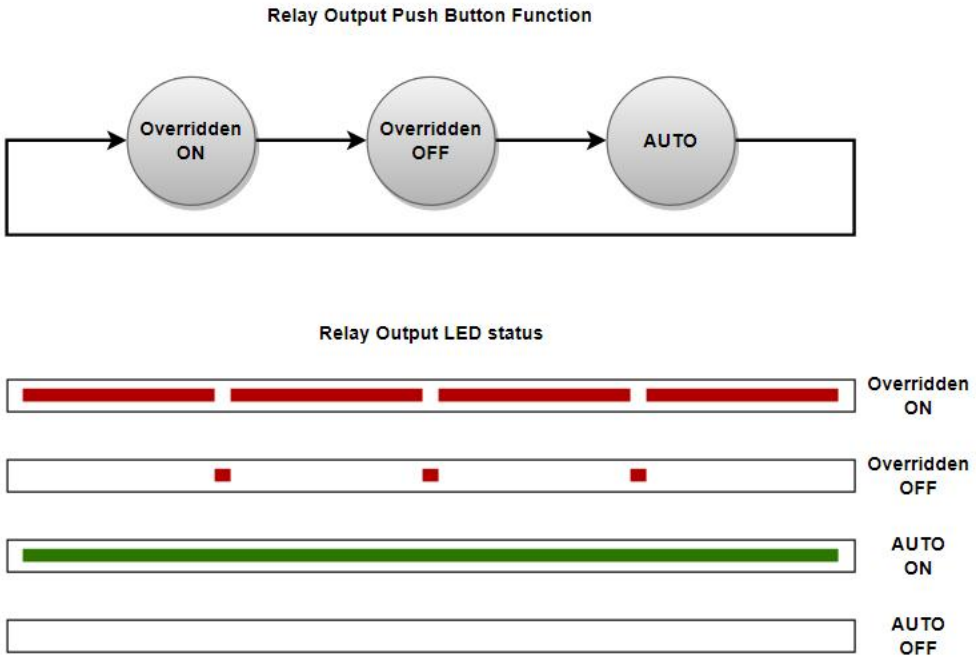
- Wiring as fixed installation in a dry and clean environment
- Attend regulations regarding electrical installations of national authorities
- Use the QR tag on front panel to access more information
- Installation only by qualified person when no voltage is applied
- Connect only one wire on each terminal, if twin ferrules are used take care to the maximum wire size

Relay Output Push Button and Status LED.

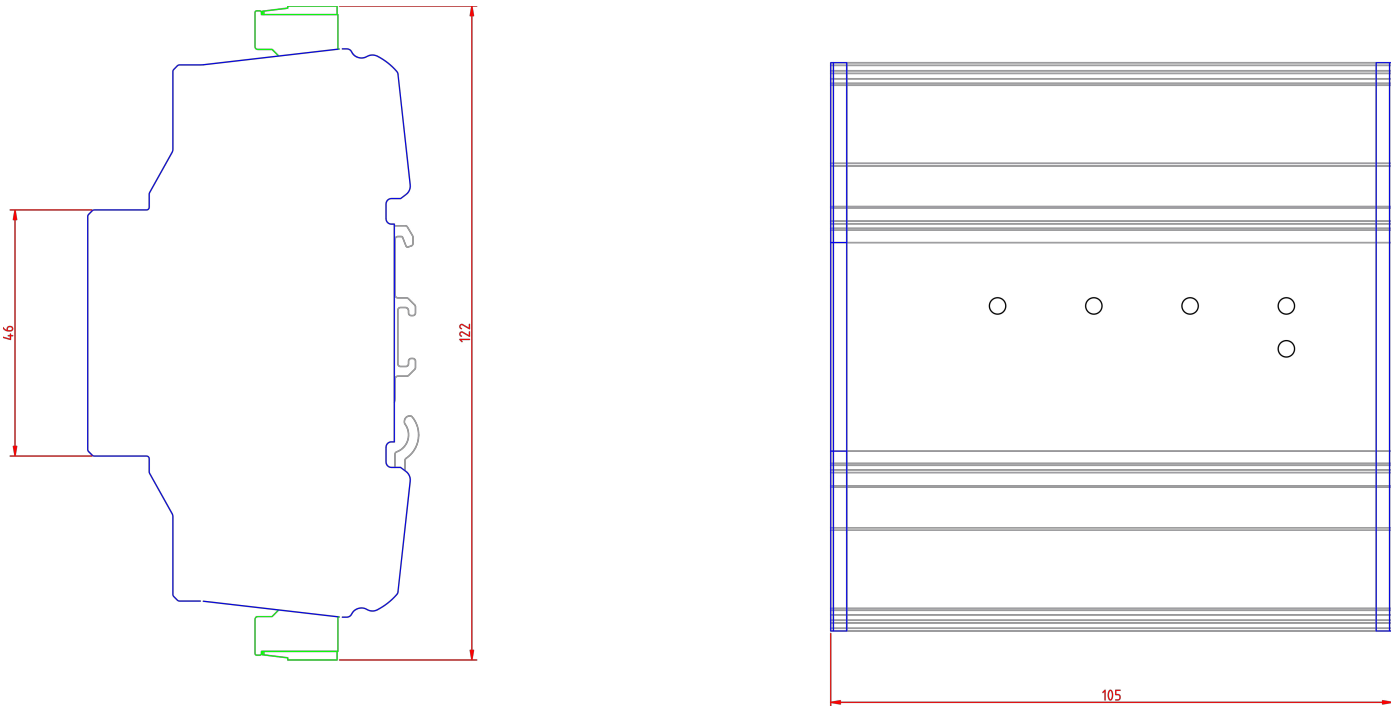
- The buttons control the relay output mode. The mode change for each button press in a circular fashion and can have any of the following modes below.
- The colors of the output status LED is RED for overriden modes or GREEN/BLUE for automatic mode dependet on the manufactured serie.
- The mode is persistent even when restarting the device. Only a manual button switch can get the state back to AUTO again!

Relay Output Modes

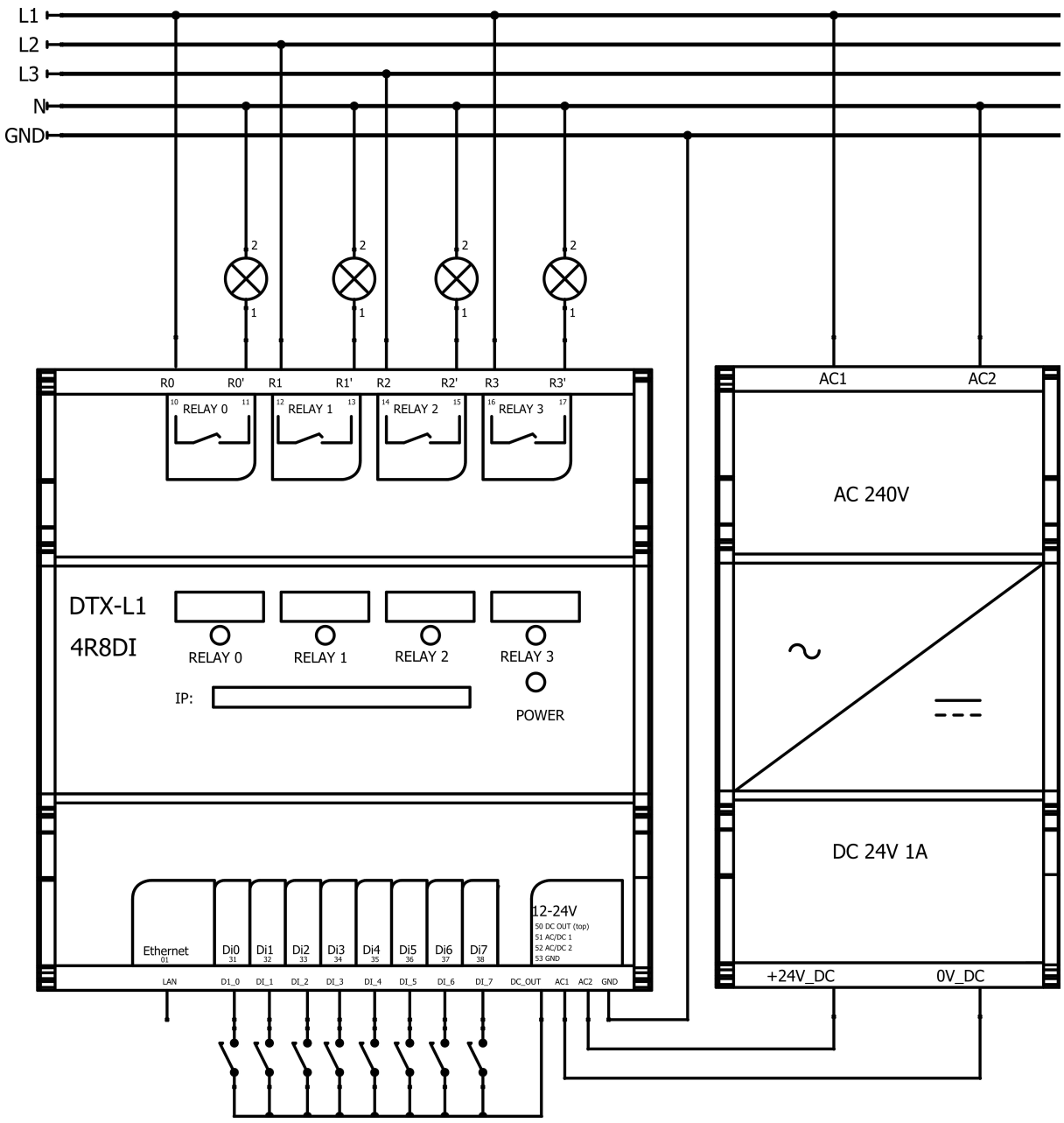
- Overridden ON - In this mode the output is locked in ON (relay closed) state and cannot be updated from the PLC program.
- AUTO - In this mode the output controls from the PLC program.
- Overridden OFF - In this mode the output is locked in OFF (relay open) state and cannot be updated from the PLC program.



Relay Output Status



Dimensions



Typical application

Purchase information

Art. Nr	
DTX-L1-4R8DI-LC	Advanced Controller | PLC 4 Relay 8 Digital Input – Low Current
DTX-L1-4R8DI-HC	Advanced Controller | PLC 4 Relay 8 Digital Input – High Current
DTX-L1-8R16DI-LC*	Advanced Controller | PLC 8 Relay 16 Digital Input – Low Current
DTX-L1-8R16DI-HC*	Advanced Controller | PLC 8 Relay 16 Digital

Art. Nr

	Input – High Current
DTX-L1-12R24DI-LC*	Advanced Controller | PLC 12 Relay 24 Digital Input – Low Current
DTX-L1-12R24DI-HC*	Advanced Controller | PLC 12 Relay 24 Digital Input – High Current
Need custom IO?	Other configurations can be manufactured on demand. Please contact DAVITOR.

* Avalible as standard but the content in the datasheet is for 4R8DI so dimensions and other data will be different.

DTX product guides, datasheets and manuals

https://collab.davitor.com/redmine/projects/dtx-products

DTX Runtime (DTXr) documentation

https://collab.davitor.com/redmine/projects/dtxr/wiki/

DTX Runtime (DTXr) Training and Test environment

https://big-se-hub.davitor.com
Contact DAVITOR at info@davitor.com for user account and instructions

Contact

Technical Support: info@davitor.com
Requests: info@davitor.com
www.davitor.com

Disclaimer

Subject to change. Information provided without guarantee.
The datasheet refers to the current delivery.
The compatibility with other devices must be tested in advance to the installation.