

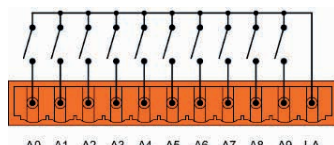
## RTU7M – Digital Inputs

### General Description

Digital input cards for RTU7M are produced in two variants:

#### Active DI – Dry Contact

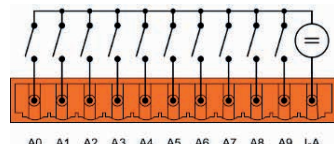
Card is equipped with its own galvanically isolated voltage source. Input is excited after connection of input pin with external shared pin via external contact.



Active inputs connection

#### Passive DI – Wet Contact

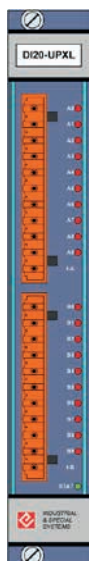
These inputs do not have the voltage source fitted. They are activated after connection of external voltage.



Passive inputs connection



Digital input card



Front panel of DI card

### Basic Features

- ❑ 20 × digital input,
- ❑ isolation 3.75 kV AC,
- ❑ indication of excitation of input,
- ❑ time filter can be set up by SW for both logical levels,
- ❑ optional double-bit signaling (ex. defining of interposition of power element),
- ❑ configurable maximal allowed number of changes on input per time interval,
- ❑ input sampling with period 1 ms,
- ❑ impulse counter and period measuring with data storage into memory with backup.

### Processing of Input Digital Signals

The digital input card has its own processor, which processes the input signals and communicates with other cards in RTU chassis through the internal bus. Digital inputs are sampled with the period of 1 ms. The following step is filtration of the signal changes. The time filter can be set for both logical levels. If the change on the digital input lasts the stated time, the stated logical level is declared valid and sent to the master system, if required. With each change, it is monitored the exceeding of the maximal set number of changes per minute. If the maximal number of changes is exceeded, the value is transferred with a telemetric error. This prevents the useless transfer of oscillating values. The card can be parameterized also for usage with AC signaling voltage.

These cards can be used as simple digital inputs with one or double-bit signaling and can also be used for reading of impulses and measuring of the period with the storage of the status into the memory with backup. This can be used in applications for measuring of energy and media consumption (the function depends on the firmware used).

### Technical Specification of DI Cards

Card	DI20-UAM	DI20-UPS	DI20-UPM	DI20-UPL	DI20-UPX	DI20-UPXL	DI10-UPXL
Inputs number	20						10
Inputs type	Active (switching by dry contact)	Passive (switching by external voltage, both polarities)					
Level H	Closed	9 ÷ 25 V	20 ÷ 60 V	35 ÷ 60 V	75 ÷ 150 V	150 ÷ 300 V	150 ÷ 300 V
Level L	Open	0 ÷ 4 V	0 ÷ 10 V	0 ÷ 17 V	0 ÷ 20 V	0 ÷ 60 V	0 ÷ 60 V
Current in inputs	2.4 mA	2.5 ÷ 7 mA	1.9 ÷ 6 mA	1.7 ÷ 3 mA	1.3 ÷ 2.7 mA	1 ÷ 2 mA	1 ÷ 2 mA
SW filter for level H and L	0 ÷ 16777.215 seconds, step 1 ms						
Allowed number of changes per minute	0 ÷ 255						
Isolation voltage	3.75 kV AC for 1 minute						
Overvoltage category						CATIII/300V	CATIII/600V CATIV/300V
Consumption	2.3 W	1.1 W					
Connectors	2 × WAGO 231-311/026-000, part of delivery						
Wire cross-section	0.08 ÷ 2.5 mm <sup>2</sup>						
Position in bus	Any						