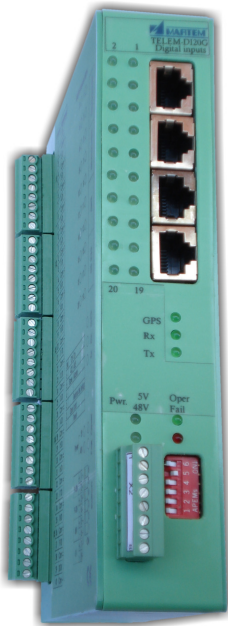


## TELEM-DI20G digital input RTU module



The TELEM family RTU module TELEM-DI20 with 20 digital inputs is used for acquisition digital signals or counter pulses. Module bases on 16-bit DSP. It can be used as an independent RTU or in connection with other devices. Interfaces to other equipment are RS-232, RS-422 or RS-485. Data exchange protocol IEC 60870-5-1-101. Time synchronization with GPS receiver.

### Features

- GPS time synchronization with 1 ms accuracy
- 2 level input filters Buffer depth for each time tagged input is 20
- Logical operations with inputs
- Leased line or dial-up mode operation, data GSM communication request by event in substation or by remote control centre
- Configuration / parameterization with IEC protocol at the same line with data communication
- Daisy- chain master – slave connection for up to 30 modules using RS- 422 interface
- Self diagnostics and supervision simultaneously with data acquisition

### Technical data

Number of digital inputs	20
Indication	1 for every output, 2 for power indication, 1 for operation indication, 1 for fail indication
Built in clock with backup battery	Yes

### Power requirements

Supply voltage	9-30 V DC, 4 VA
Isolated input circuit voltage	48V DC, 20 VA

### Installation, terminals and environment

Weight	0,4 kg
Mounting	DIN 35
Terminals for signal	MC1,5/8-ST-3,5
Terminal for power	MCVW1,5/8-ST-3,5
Terminal for communication	RJ45
Over voltage protection	IEC-60255-4, 5 kV pulse protecti IEC-60255-5, 2 kV DC on
Disturbance	IEC-61000-3-2, 61000-6-2, 6100-6-4
Ambient temperature in operation	-20...+50 °C

### Configuration

Configuration of TELEM-DI24 is configured using **TELEM 2000** software. All 20 digital inputs are configured independently.

### Communication port's configurable parameters and general settings

Communication speed	200 - 38400 bps
Link Address	1 - 255
ASDU address	1 - 255
Object's base address	0 - 65534
Communication mode	Online, Online with RTS/CTS, Offline with RTS
GPS enabled	Yes/No
Buffer depth for each time tagged digital input	20

### Configuration parameters for digital inputs

#### General

In use	Yes/No
Single- or double signal or counter input	Single/Double/Counter
Time tagged	Yes/No

#### Debouncing filter

Tolerant phase (A period of time during which changes of state are permitted and ignored on a digital input signal)	1 - 255 ms
Intolerant phase (A period of time during which the state of a digital input must remain constant)	1 - 255 ms

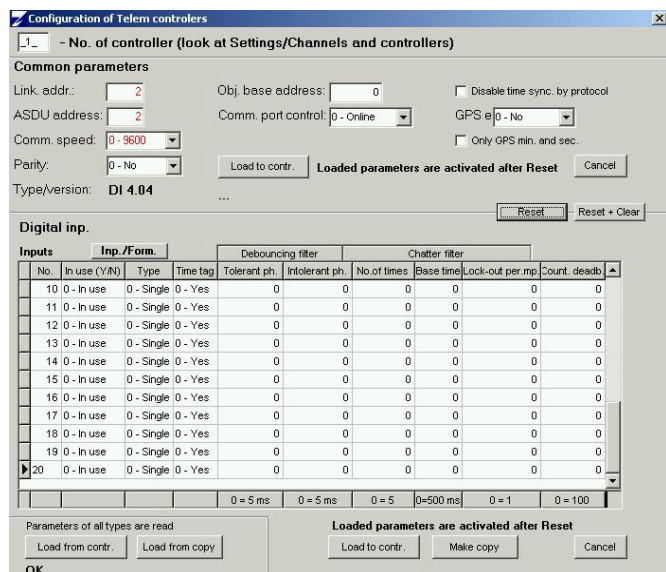
#### Chatter filter

A facility that is used to disable a digital input point if the number of state changes of that point during a defined time interval is excessively high.

Chatter times (changes)	1 - 255 times
Filter base period (time interval)	0 - 32000 ms
Lock-out period multiplier (number of filter base periods while the chatter filter will remain On )	1 - 255 periods

#### Counter

Number of pulses for creating an event	1 - 255 pulses
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**Configuration of Telem controllers**

1\_ - No. of controller (look at Settings/Channels and controllers)

**Common parameters**

Link addr: 2      Obj. base address: 0       Disable time sync. by protocol  
ASDU address: 2      Comm. port control: 0 - Online      GPS e: 0 - No  
Comm. speed: 9600       Only GPS min. and sec.  
Parity: 0 - No                 

Type/version: DI 4.04           

**Digital inp.**

No.	In use (Y/N)	Type	Time tag	Debouncing filter		Chatter filter			
				Tolerant ph.	Intolerant ph.	No. of times	Base time	Lock-out per mp	Count. dead
10	0 - In use	0 - Single	0 - Yes	0	0	0	0	0	0
11	0 - In use	0 - Single	0 - Yes	0	0	0	0	0	0
12	0 - In use	0 - Single	0 - Yes	0	0	0	0	0	0
13	0 - In use	0 - Single	0 - Yes	0	0	0	0	0	0
14	0 - In use	0 - Single	0 - Yes	0	0	0	0	0	0
15	0 - In use	0 - Single	0 - Yes	0	0	0	0	0	0
16	0 - In use	0 - Single	0 - Yes	0	0	0	0	0	0
17	0 - In use	0 - Single	0 - Yes	0	0	0	0	0	0
18	0 - In use	0 - Single	0 - Yes	0	0	0	0	0	0
19	0 - In use	0 - Single	0 - Yes	0	0	0	0	0	0
20	0 - In use	0 - Single	0 - Yes	0	0	0	0	0	0

Parameters of all types are read                             

OK