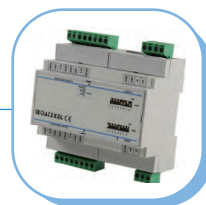


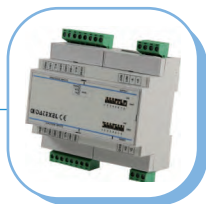
02

DAT 10014



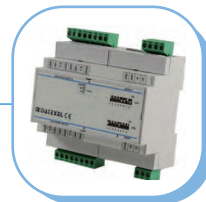
03

DAT 10015



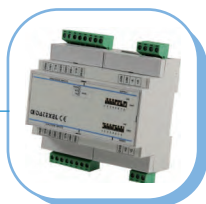
04

DAT 10016



05

DAT 10017-I



06

DAT 10017-V



07

DAT 10018



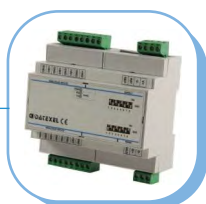
08

DAT 10019



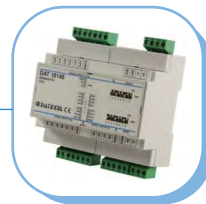
09

DAT 10130



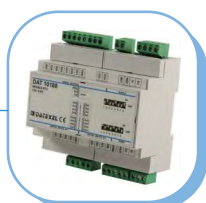
10

DAT 10148



11

DAT 10188



12

DAT 3580 GW



DAT 10014



GENERAL DESCRIPTION

The device DAT10014 converts up to 4 analogue input signals into engineering units in digital format. The data are transmitted with MODBUS RTU / MODBUS ASCII protocol over the RS-485 network. It is possible to connect on input RTD, Potentiometer or Resistance sensors. The device guarantees high accuracy and stable measure versus time and temperature. To ensure the plant safety, a Watch-Dog timer alarm is provided. The isolation between the parts of circuit removes eventual ground-loop effects, allowing the use of the device even in the heavy environmental conditions. The device is housed in a 6 module DIN rough self-extinguishing plastic box for mounting on EN-50022 standard DIN rail.

FEATURES

- Modbus Slave device on RS-485
- Modbus RTU/ Modbus ASCII protocol
- 4 input channels
- Input configurable for RTD, Resistance and Potentiometer
- Communication parameters configurable by dip-switches
- Watch-Dog Alarm
- Watch-Dog Configurable
- 1500 Vac 3-ways Galvanic Isolation
- LEDs of signalling on front side for power supply and communication
- Connection by removable screw terminals
- High Accuracy
- CE mark
- DIN rail mounting in compliance with EN-50022



Employments sectors



POWER SUPPLY

Power supply voltage	10 .. 30 Vdc
Reverse polarity protection	60 Vdc max
Current consumption (operative)	35 mA max@ 24 Vdc 45 mA max@ 10 Vdc

ISOLATION

Between all the ways	1500 Vac, 50 Hz, 1 min
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CERTIFICATIONS EMC (for industrial environments)

Immunity	EN 61000-6-2
Emission	EN 61000-6-4

ENVIRONMENTAL CONDITIONS

Operative Temperature	-10°C .. +60°C
Storage Temperature	-40°C.. +85°C
Humidity (not condensed)	0 .. 90 %
Maximum Altitude	2000 m
Installation	Indoor
Category of installation	II
Pollution Degree	2

MECHANICAL SPECIFICATIONS

Material	Self-extinguish plastic
IP Code	IP20
Wirings	wires with diameter 0.8÷2.1 mm ² AWG 14-18
Tightening Torque	0.5 N m
Mounting	in compliance to DIN rail standard EN-50022
Weight	about 200 gr.

INPUT

Input type	Min	Max
RTD 2 or 3 wires		
Pt100	-200 °C	850 °C
Pt1000	-200 °C	200 °C
Ni100	-60 °C	180 °C
Ni1000	-60 °C	150 °C
RES. 2 or 3 wires		
Low	0 Ω	500 Ω
High	0 Ω	2000 Ω
POT (Nominal Res)		
Low	20 Ω	500 Ω
High	20 Ω	2000 Ω

INPUT

Input Accuracy (1)	
RTD	± 0.05 % f.s.
Resistance	± 0.05 % f.s.
Potentiometer	± 0.05 % f.s.
Linearity (1)	
RTD	± 0.1 % f.s.
Lead wire resistance influence	
RTD/res.3 wires (50 Ω max balanced)	0.05 % / Ω
RTD excitation current	
Typical	0.350 mA
Thermal drift (1)	
Full scale	±0.01 % /°C
Sample time	0.5 ÷ 1 sec.
Data Transmission (RS-485 asynchronous serial)	
Baud Rate	115.2 Kbps
Max. distance	1.2 Km
Warm-up time	3 min

(1) referred to the input Span (difference between max. and min.)

DAT 10015

GENERAL DESCRIPTION

The device DAT10015 converts up to 8 analogue input signals into engineering units in digital format. The data are transmitted with MODBUS RTU / MODBUS ASCII protocol over the RS-485 network. It is possible to connect on input 4 voltage signals up to ± 10 V and 4 current signals up to ± 20 mA. By programming, it is possible to execute the scaling of the measure of input up to ± 32768 points obtaining in the dedicated registers the measure of the channel in the desired format (ref. User Guide). The device guarantees high accuracy and stable measure versus time and temperature. To ensure the plant safety, a Watch-Dog timer alarm is provided. The isolation between the parts of circuit removes eventual ground-loop effects, allowing the use of the device even in the heavy environmental conditions. The device is housed in a 6 module DIN rough self-extinguishing plastic box for mounting on EN-50022 standard DIN rail.

FEATURES

- Modbus Slave device on RS-485
- Modbus RTU / Modbus ASCII protocol
- 4 input channels dedicated to ± 10 Volt
- 4 input channels dedicated to ± 20 mA
- Communication parameters configurable by dip-switches
- Watch-Dog Alarm
- Remotely Configurable
- 1500 Vac 3-ways Galvanic Isolation
- LEDs of signalling on front side for power supply and communication
- Connection by removable screw terminals
- High Accuracy
- CE mark
- DIN rail mounting in compliance with EN-50022



Employments sectors


POWER SUPPLY

Power supply voltage	10 .. 30 Vdc
Reverse polarity protection	60 Vdc max
Current consumption (operative)	35 mA max@ 24 Vdc 45 mA max@ 10 Vdc

INPUT

Input type	Min	Max
Current		
mA	-20 mA	+20 mA
Voltage		
Volt	-10 V	+10 V

ISOLATION

Between all the ways	1500 Vac, 50 Hz, 1 min
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CERTIFICATIONS EMC (for industrial environments)

Immunity	EN 61000-6-2
Emission	EN 61000-6-4

ENVIRONMENTAL CONDITIONS

Operative Temperature	-10°C .. +60°C
Storage Temperature	-40°C.. +85°C
Humidity (not condensed)	0 .. 90 %
Maximum Altitude	2000 m
Installation	Indoor
Category of installation	II
Pollution Degree	2

MECHANICAL SPECIFICATIONS

Material	Self-extinguish plastic
IP Code	IP20
Wirings	wires with diameter 0.8÷2.1 mm ² AWG 14-18
Tightening Torque	0.5 N m
Mounting	in compliance to DIN rail standard EN-50022
Weight	about 200 gr.

INPUT

Input Accuracy (1)	
Current	± 20 μ A
Voltage	± 10 mV
Linearity (1)	
± 0.1 % f.s.	
Input impedance	
Current	≤ 50 Ω
Voltage	≥ 1 M Ω
Thermal drift (1)	
Full scale	$\pm 0,005$ % /°C
Sample time	
0.5 ÷ 1 sec.	
Data Transmission (RS-485 asynchronous serial)	
Baud Rate	115.2 Kbps
Max. distance	1.2 Km

(1) referred to the input Span (difference between max. and min.)

DAT 10016



GENERAL DESCRIPTION

The device DAT10016 converts up to 4 analogue input signals into engineering units in digital format. The data are transmitted with MODBUS RTU / MODBUS ASCII protocol over the RS-485 network. It is possible to connect on input 4 voltage signals up to ± 250 mV or thermocouples sensor type B, E, K, J, N, R, S, T. By programming, it is possible to execute the scaling of the measure of input up to ± 32768 points obtaining in the dedicated registers the measure of the channel in the desired format (ref. User Guide). The device guarantees high accuracy and stable measure versus time and temperature. To ensure the plant safety, a Watch-Dog timer alarm is provided. The isolation between the parts of circuit removes eventual ground-loop effects, allowing the use of the device even in the heavy environmental conditions. The device is housed in a 6 module DIN rough self-extinguishing plastic box for mounting on EN-50022 standard DIN rail.

FEATURES

- Modbus Slave device on RS-485
- Modbus RTU/ Modbus ASCII protocol
- 4 input channels for voltage up to ± 250 mV and thermocouples sensor type B, E, K, J, N, R, S, T
- Communication parameters configurable by dip-switches
- Watch-Dog Alarm
- Remotely Configurable
- 1500 Vac 3-ways Galvanic Isolation
- LEDs of signalling on front side for power supply and communication
- Connection by removable screw terminals
- High Accuracy
- CE mark
- DIN rail mounting in compliance with EN-50022



POWER SUPPLY

Power supply voltage	10 .. 30 Vdc
Reverse polarity protection	60 Vdc max
Current consumption (operative)	35 mA max@ 24 Vdc 45 mA max@ 10 Vdc

ISOLATION

Between all the ways	1500 Vac, 50 Hz, 1 min
----------------------	------------------------

CERTIFICATIONS EMC (for industrial environments)

Immunity	EN 61000-6-2
Emission	EN 61000-6-4

ENVIRONMENTAL CONDITIONS

Operative Temperature	-10°C .. +60°C
Storage Temperature	-40°C.. +85°C
Humidity (not condensed)	0 .. 90 %
Maximum Altitude	2000 m
Installation	Indoor
Category of installation	II
Pollution Degree	2

MECHANICAL SPECIFICATIONS

Material	Self-extinguish plastic
IP Code	IP20
Wirings	wires with diameter 0.8÷2.1 mm ² AWG 14-18
Tightening Torque	0.5 N m
Mounting	in compliance to DIN rail standard EN-50022
Weight	about 200 gr.

INPUT

Input type	Min	Max
Voltage		
mV	-50 mV	+50 mV
mV	-100 mV	+100 mV
mV	-250 mV	+250 mV
Thermocouple		
J	-210 °C	+1200 °C
K	-210 °C	+1372 °C
R	-50 °C	+1767 °C
S	-50 °C	+1767 °C
B	+400 °C	+1825 °C
E	-210 °C	+1000 °C
T	-210 °C	+400 °C
N	-210 °C	+1300 °C

INPUT

Input Accuracy (1)	
mV, Tc	> of $\pm 0.05\%$ f.s. or 5 uV
Linearity (1)	
mV	$\pm 0.1\%$ f.s.
Tc	$\pm 0.2\%$ f.s.
CJC Compensation	
$\pm 1^\circ\text{C}$	
Input impedance	
mV, Tc	$\geq 1\text{ M}\Omega$
Thermal drift (1)	
Full scale	$\pm 0.005\%$ /°C
Thermal drift CJC	
Full scale	$\pm 0.02\%$ /°C
Line resistance influence (1)	
mV, Tc	< 0.8 uV/Ohm
Sample time	
0.5 ÷ 1 sec.	
Warm-up time	
3 min	
Data Transmission (RS-485 asynchronous serial)	
Baud Rate	115.2 Kbps
Max. distance	1.2 Km

(1) referred to the input Span (difference between max. and min.)

DAT 10017-I



GENERAL DESCRIPTION

The device DAT10017-I converts up to 8 analogue input signals into engineering units in digital format. The data are transmitted with MODBUS RTU / MODBUS ASCII protocol over the RS-485 network. It is possible to connect on input 8 current signals up to ± 20 mA. By programming, it is possible to execute the scaling of the measure of input up to ± 32768 points obtaining in the dedicated registers the measure of the channel in the desired format (ref. User Guide). The device guarantees high accuracy and stable measure versus time and temperature. To ensure the plant safety, a Watch-Dog timer alarm is provided. The isolation between the parts of circuit removes eventual ground-loop effects, allowing the use of the device even in the heavy environmental conditions. The device is housed in a 6 module DIN rough self-extinguishing plastic box for mounting on EN-50022 standard DIN rail.

CARATTERISTICHE

- Modbus Slave device on RS-485
- Modbus RTU / Modbus ASCII protocol
- 8 input channels dedicated to ± 20 mA
- Communication parameters configurable by dip-switches
- Watch-Dog Alarm
- Remotely Configurable
- 1500 Vac 3-ways Galvanic Isolation
- LEDs of signalling on front side for power supply and communication
- Connection by removable screw terminals
- High Accuracy
- CE mark
- DIN rail mounting in compliance with EN-50022



Employments sectors



POWER SUPPLY

Power supply voltage	10 .. 30 Vdc
Reverse polarity protection	60 Vdc max
Current consumption (operative)	35 mA max@ 24 Vdc 45 mA max@ 10 Vdc

INPUT

Input type	Min	Max
Current		
mA	-20 mA	+20 mA

ISOLATION

Between all the ways	1500 Vac, 50 Hz, 1 min
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CERTIFICATIONS EMC (for industrial environments)

Immunity	EN 61000-6-2
Emission	EN 61000-6-4

ENVIRONMENTAL CONDITIONS

Operative Temperature	-10°C .. +60°C
Storage Temperature	-40°C.. +85°C
Humidity (not condensed)	0 .. 90 %
Maximum Altitude	2000 m slm
Installation	Indoor
Category of installation	II
Pollution Degree	2

MECHANICAL SPECIFICATIONS

Material	Self-extinguish plastic
IP Code	IP20
Wirings	wires with diameter 0.8÷2.1 mm ² AWG 14-18
Tightening Torque	0.5 N m
Mounting	in compliance to DIN rail standard EN-50022
Weight	about 200 gr.

INPUT

Input Accuracy (1)	
Current	± 20 uA
Linearity (1)	
	± 0.1 % f.s.
Input impedance	
Current	≤ 50 Ω
Thermal drift (1)	
Full scale	± 0.005 % /°C
Sample time	
	0.5 ÷ 1 sec.
Data Transmission (RS-485 asynchronous serial)	
Baud Rate	115.2 Kbps
Max. distance	1.2 Km

(1) referred to the input Span (difference between max. and min.)

DAT 10017-V



GENERAL DESCRIPTION

The device DAT10017-V converts up to 8 analogue input signals into engineering units in digital format. The data are transmitted with MODBUS RTU / MODBUS ASCII protocol over the RS-485 network. It is possible to connect on input 8 voltage signals up to ± 10 V. By programming, it is possible to execute the scaling of the measure of input up to ± 32768 points obtaining in the dedicated registers the measure of the channel in the desired format (ref. User Guide). The device guarantees high accuracy and stable measure versus time and temperature. To ensure the plant safety, a Watch-Dog timer alarm is provided. The isolation between the parts of circuit removes eventual ground-loop effects, allowing the use of the device even in the heavy environmental conditions. The device is housed in a 6 module DIN rough self-extinguishing plastic box for mounting on EN-50022 standard DIN rail.

FEATURES

- Modbus Slave device on RS-485
- Modbus RTU/ Modbus ASCII protocol
- 8 input channels dedicated to ± 10 Volt
- Communication parameters configurable by dip-switches
- Watch-Dog Alarm
- Remotely Configurable
- 1500 Vac 3-ways Galvanic Isolation
- LEDs of signalling on front side for power supply and communication
- Connection by removable screw terminals
- High Accuracy
- CE mark
- DIN rail mounting in compliance with EN-50022



Employments sectors



POWER SUPPLY

Power supply voltage	10 .. 30 Vdc
Reverse polarity protection	60 Vdc max
Current consumption (operative)	35 mA max@ 24 Vdc 45 mA max@ 10 Vdc

MECHANICAL SPECIFICATIONS

Material	Self-extinguish plastic
IP Code	IP20
Wirings	wires with diameter 0.8÷2.1 mm ² AWG 14-18
Tightening Torque	0.5 N m
Mounting	in compliance to DIN rail standard EN-5002
Weight	about 200 gr.

ISOLATION

Between all the ways	1500 Vac, 50 Hz, 1 min
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CERTIFICATIONS EMC (for industrial environments)

Immunity	EN 61000-6-2
Emission	EN 61000-6-4

ENVIRONMENTAL CONDITIONS

Operative Temperature	-10°C .. +60°C
Storage Temperature	-40°C.. +85°C
Humidity (not condensed)	0 .. 90 %
Maximum Altitude	2000 m
Installation	Indoor
Category of installation	II
Pollution Degree	2

INPUT

Input type	Min	Max
Voltage		
Volt	-10 V	+10 V

INPUT

Input Accuracy (1)	
Voltage	± 10 mV
Linearity (1)	
	± 0.1 % f.s.
Input impedance	
Voltage	≥ 1 M Ω
Thermal drift (1)	
Full scale	$\pm 0,005$ % /°C
Sample time	0.5 ÷ 1 sec.
Data Transmission (RS-485 asynchronous serial)	
Baud Rate	115.2 Kbps
Max. distance	1.2 Km

(1) referred to the input Span (difference between max. and min.)

DAT 10018



GENERAL DESCRIPTION

The device DAT10018 converts up to 8 analogue input signals into engineering units in digital format. The data are transmitted with MODBUS RTU / MODBUS ASCII protocol over the RS-485 network. It is possible to connect on input 8 voltage signals up to ± 250 mV or thermocouples sensor type B, E, K, J, N, R, S, T. By programming, it is possible to execute the scaling of the measure of input up to ± 32768 points obtaining in the dedicated registers the measure of the channel in the desired format (ref. User Guide). The device guarantees high accuracy and stable measure versus time and temperature. To ensure the plant safety, a Watch-Dog timer alarm is provided. The isolation between the parts of circuit removes eventual ground-loop effects, allowing the use of the device even in the heavy environmental conditions. The device is housed in a 6 module DIN rough self-extinguishing plastic box for mounting on EN-50022 standard DIN rail.

FEATURES

- Modbus Slave device on RS-485
- Modbus RTU/ Modbus ASCII protocol
- 8 input channels for voltage up to ± 250 mV and thermocouples sensor type B, E, K, J, N, R, S, T
- Communication parameters configurable by dip-switches
- Watch-Dog Alarm
- Remotely Configurable
- 1500 Vac 3-ways Galvanic Isolation
- LEDs of signalling on front side for power supply and communication
- Connection by removable screw terminals
- High Accuracy
- CE mark
- DIN rail mounting in compliance with EN-50022



POWER SUPPLY

Power supply voltage	10 .. 30 Vdc
Reverse polarity protection	60 Vdc max
Current consumption (operative)	35 mA max@ 24 Vdc 45 mA max@ 10 Vdc

ISOLATION

Between all the ways	1500 Vac, 50 Hz, 1 min
----------------------	------------------------

CERTIFICATIONS EMC (for industrial environments)

Immunity	EN 61000-6-2
Emission	EN 61000-6-4

ENVIRONMENTAL CONDITIONS

Operative Temperature	-10°C .. +60°C
Storage Temperature	-40°C.. +85°C
Humidity (not condensed)	0 .. 90 %
Maximum Altitude	2000 m
Installation	Indoor
Category of installation	II
Pollution Degree	2

MECHANICAL SPECIFICATIONS

Material	Self-extinguish plastic
IP Code	IP20
Wirings	wires with diameter 0.8+2.1 mm ² AWG 14-18
Tightening Torque	0.5 N m
Mounting	in compliance to DIN rail standard EN-50022
Weight	about 200 gr.

INPUT

Input type	Min	Max
Voltage		
mV	-50 mV	+50 mV
mV	-100 mV	+100 mV
mV	-250 mV	+250 mV
Thermocouple		
J	-210 °C	+1200 °C
K	-210 °C	+1372 °C
R	-50 °C	+1767 °C
S	-50 °C	+1767 °C
B	+400 °C	+1825 °C
E	-210 °C	+1000 °C
T	-210 °C	+400 °C
N	-210 °C	+1300 °C

INPUT

Input Accuracy (1)	
mV, Tc	> of $\pm 0.05\%$ f.s. or 5 μ V
Linearity (1)	
mV	$\pm 0.1\%$ f.s.
Tc	$\pm 0.2\%$ f.s.
CJC Compensation	
$\pm 1^\circ$ C	
Input impedance	
mV, Tc	≥ 1 M Ω
Thermal drift (1)	
Full scale	$\pm 0.005\%$ / $^\circ$ C
Thermal drift CJC	
Full scale	$\pm 0.02\%$ / $^\circ$ C
Line resistance influence (1)	
mV, Tc	< 0.8 μ V/Ohm
Sample time	
0.5 + 1 sec.	
Warm-up time	
3 min	
Data Transmission (RS-485 asynchronous serial)	
Baud Rate	115.2 Kbps
Max. distance	1.2 Km

(1) referred to the input Span (difference between max. and min.)

8 INPUT CHANNELS FOR RTD 2 WIRES COMMUNICATING OVER RS-485

DAT 10019



GENERAL DESCRIPTION

The device DAT10019 converts up to 8 analogue input signals into engineering units in digital format. The data are transmitted with MODBUS RTU / MODBUS ASCII protocol over the RS-485 network. It is possible to connect on input 8 RTD or Resistance 2 wires sensors. The device guarantees high accuracy and stable measure versus time and temperature. To ensure the plant safety, a Watch-Dog timer alarm is provided. The isolation between the parts of circuit removes eventual ground-loop effects, allowing the use of the device even in the heavy environmental conditions. The device is housed in a 6 module DIN rough self-extinguishing plastic box for mounting on EN-50022 standard DIN rail.

FEATURES

- Modbus Slave device on RS-485
- Modbus RTU/ Modbus ASCII protocol
- 8 input channels for RTD or Resistance 2 wires
- Communication parameters configurable by dip-switches
- Watch-Dog Alarm
- Remotely Configurable
- 1500 Vac 3-ways Galvanic Isolation
- LEDs of signalling on front side for power supply and communication
- Connection by removable screw terminals
- High Accuracy
- CE mark
- DIN rail mounting in compliance with EN-50022



Employments sectors



POWER SUPPLY

Power supply voltage	10 .. 30 Vdc
Reverse polarity protection	60 Vdc max
Current consumption (operative)	35 mA max@ 24 Vdc 45 mA max@ 10 Vdc

INPUT

Input type	Min	Max
RTD 2 wires		
Pt100	-200 °C	850 °C
Pt1000	-200 °C	200 °C
Ni100	-60 °C	180 °C
Ni1000	-60 °C	150 °C
RES. 2 wires		
Low	0 Ω	500 Ω
High	0 Ω	2000 Ω

ISOLATION

Between all the ways	1500 Vac, 50 Hz, 1 min
----------------------	------------------------

CERTIFICATIONS EMC (for industrial environments)

Immunity	EN 61000-6-2
Emission	EN 61000-6-4

ENVIRONMENTAL CONDITIONS

Operative Temperature	-10°C .. +60°C
Storage Temperature	-40°C.. +85°C
Humidity (not condensed)	0 .. 90 %
Maximum Altitude	2000 m
Installation	Indoor
Category of installation	II
Pollution Degree	2

MECHANICAL SPECIFICATIONS

Material	Self-extinguish plastic
IP Code	IP20
Wirings	wires with diameter 0.8÷2.1 mm ² AWG 14-18
Tightening Torque	0.5 N m
Mounting	in compliance to DIN rail standard EN-50022
Weight	about 200 gr.

INPUT

Input Accuracy (1)	
RTD	± 0.05 % f.s.
Resistance	± 0.05 % f.s.
Linearity (1)	
RTD	± 0.1 % f.s.
Sensor excitation current	
Typical	0.350 mA
Thermal drift (1)	
Full scale	±0.01 % /°C
Sample time	0.5 ÷ 1 sec.
Data Transmission (RS-485 asynchronous serial)	
Baud Rate	115.2 Kbps
Max. distance	1.2 Km
Warm-up time	3 min

(1) referred to the input Span (difference between max. and min.)

DAT 10130



GENERAL DESCRIPTION

The device DAT10130 is able to acquire up to 8 digital inputs with connection NPN or PNP and to drive up to 4 relay outputs of which 2 format SPDT and 2 in format SPST. The data are transmitted with MODBUS RTU / MODBUS ASCII protocol over the RS-485 network. To ensure the plant safety, a Watch-Dog timer alarm is provided. The isolation between the parts of circuit removes eventual ground-loop effects, allowing the use of the device even in the heavy environmental conditions. The device is housed in a 6 module DIN rough self-extinguishing plastic box for mounting on EN-50022 standard DIN rail.

FEATURES

- Modbus Slave device on RS-485
- Modbus RTU/ Modbus ASCII protocol
- 8 digital inputs
- 4 relay outputs (2 format SPDT + 2 format SPST)
- Communication parameters configurable by dip-switches
- Watch-Dog Alarm
- Remotely Configurable
- 1500 Vac 3-ways Galvanic Isolation
- LEDs of signalling on front side for power supply and communication
- LEDs of signalling on front side for digital inputs and outputs state
- Connection by removable screw terminals
- High Accuracy
- CE mark
- DIN rail mounting in compliance with EN-50022



Employments sectors



POWER SUPPLY

Power supply voltage	10 .. 30 Vdc
Reverse polarity protection	60 Vdc max
Current consumption (stand-by)	35 mA max@ 24 Vdc
Current consumption (relays operative)	80 mA max@ 24 Vdc 180 mA max@ 10 Vdc

DIGITAL INPUTS

Channels	8
Voltage input (bipolar)	
OFF State	0 ÷ 3 V
ON State	10 ÷ 30 V
Impedance	4.7 K Ω
Sample time	5 ms

ISOLATION

Between all the ways	1500 Vac, 50 Hz, 1 min
----------------------	------------------------

CERTIFICATIONS EMC (for industrial environments)

Immunity	EN 61000-6-2
Emission	EN 61000-6-4

ENVIRONMENTAL CONDITIONS

Operative Temperature	-10°C .. +60°C
Storage Temperature	-40°C.. +85°C
Humidity (not condensed)	0 .. 90 %
Maximum Altitude	2000 m
Installation	Indoor
Category of installation	II
Pollution Degree	2

MECHANICAL SPECIFICATIONS

Material	Self-extinguish plastic
IP Code	IP20
Wirings	wires with diameter 0.8±2.1 mm ² AWG 14-18
Tightening Torque	0.5 N m
Mounting	in compliance to DIN rail standard EN-50022
Weight	about 200 gr.

DIGITAL OUTPUTS

Channels	4
Type	N° 2 relay SPDT N° 2 relay SPST
Maximum Switching Power	
2 A @ 250 Vac Resistive load - per contact	
2 A @ 30 Vdc Resistive load - per contact	
Minimum load	
5 Vdc , 10 mA	
Max. voltage	
250 Vac (50 / 60 Hz) , 30 Vdc	
Dielectric strength between contacts	
1000 Vac, 50 Hz, 1 min.	
Dielectric strength between coil and contacts	
4000 Vac, 50 Hz, 1 min.	
Data Transmission (RS-485 asynchronous serial)	
Baud Rate	115.2 Kbps
Max. distance	1.2 Km

DAT 10148



GENERAL DESCRIPTION

The device DAT10148 is able to acquire up to 16 digital inputs with connection NPN or PNP. The data are transmitted with MODBUS RTU / MODBUS ASCII protocol over the RS-485 network.
To ensure the plant safety, a Watch-Dog timer alarm is provided.
The isolation between the parts of circuit removes eventual ground-loop effects, allowing the use of the device even in the heavy environmental conditions.
The device is housed in a 6 module DIN rough self-extinguishing plastic box for mounting on EN-50022 standard DIN rail.

FEATURES

- Modbus Slave device on RS-485
- Modbus RTU/ Modbus ASCII protocol
- 16 digital inputs
- 8 digital 16 bit counters up to 100 Hz
- Communication parameters configurable by dip-switches
- Watch-Dog Alarm
- Remotely Configurable
- 1500 Vac 3-ways Galvanic Isolation
- LEDs of signalling on front side for power supply and communication
- LEDs of signalling on front side for digital inputs state
- Connection by removable screw terminals
- High Accuracy
- CE mark
- DIN rail mounting in compliance with EN-50022



Employments sectors



POWER SUPPLY

Power supply voltage	10 .. 30 Vdc
Reverse polarity protection	60 Vdc max
Current consumption (operative)	40 mA max@ 24 Vdc 85 mA max@ 10 Vdc

MECHANICAL SPECIFICATIONS

Material	Self-extinguish plastic
IP Code	IP20
Wirings	wires with diameter 0.8÷2.1 mm ² AWG 14-18
Tightening Torque	0.5 N m
Mounting	in compliance to DIN rail standard EN-50022
Weight	about 200 gr.

ISOLATION

Between all the ways	1500 Vac, 50 Hz, 1 min
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CERTIFICATIONS EMC (for industrial environments)

Immunity	EN 61000-6-2
Emission	EN 61000-6-4

ENVIRONMENTAL CONDITIONS

Operative Temperature	-10°C .. +60°C
Storage Temperature	-40°C.. +85°C
Humidity (not condensed)	0 .. 90 %
Maximum Altitude	2000 m
Installation	Indoor
Category of Installation	II
Pollution Degree	2

DIGITAL INPUTS

Channels	8
Voltage input (bipolar)	
OFF State	0 ÷ 3 V
ON State	10 ÷ 30 V
Impedance	4.7 K Ω
Sample time	5 ms
Number of counters	8
Counter register size	16 bit
Counter frequency	up to 100 Hz
Minimum pulse width	1 ms
Data Transmission (RS-485 asynchronous serial)	
Baud Rate	115.2 Kbps
Max. distance	1.2 Km

DAT 10188



GENERAL DESCRIPTION

The device DAT10188 is able to acquire up to 8 digital inputs with connection NPN or PNP and to drive up to 8 digital outputs type PNP transistor. The data are transmitted with MODBUS RTU / MODBUS ASCII protocol over the RS-485 network. To ensure the plant safety, a Watch-Dog timer alarm is provided. The isolation between the parts of circuit removes eventual ground-loop effects, allowing the use of the device even in the heavy environmental conditions. The device is housed in a 6 module DIN rough self-extinguishing plastic box for mounting on EN-50022 standard DIN rail.

FEATURES

- Modbus Slave device on RS-485
- Modbus RTU/ Modbus ASCII protocol
- 8 digital inputs
- 8 digital outputs type PNP transistor
- Communication parameters configurable by dip-switches
- Watch-Dog Alarm
- Remotely Configurable
- 1500 Vac 3-ways Galvanic Isolation
- LEDs of signalling on front side for power supply and communication
- LEDs of signalling on front side for digital inputs and outputs state
- Connection by removable screw terminals
- High Accuracy
- CE mark
- DIN rail mounting in compliance with EN-50022



Employments sectors



POWER SUPPLY

Power supply voltage	10 .. 30 Vdc
Reverse polarity protection	60 Vdc max
Current consumption (operative)	50 mA max@ 24 Vdc 110 mA max@ 10 Vdc

DIGITAL INPUTS

Channels	8
Voltage input (bipolar)	
OFF State	0 ÷ 3 V
ON State	10 ÷ 30 V
Impedance	4.7 KΩ
Sample time	5 ms

ISOLATION

Between all the ways	1500 Vac, 50 Hz, 1 min
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CERTIFICATIONS EMC (for industrial environments)

Immunity	EN 61000-6-2
Emission	EN 61000-6-4

ENVIRONMENTAL CONDITIONS

Operative Temperature	-10°C .. +60°C
Storage Temperature	-40°C.. +85°C
Humidity (not condensed)	0 .. 90 %
Maximum Altitude	2000 m
Installation	Indoor
Category of installation	II
Pollution Degree	2

DIGITAL OUTPUTS

Channels	8
Type	PNP
Voltage	10.5÷30 Vdc
Maximum load(*)	
500 mA per channel	
1 A per module	
Inductive load	
48 Ω – 2 H max	
Data Transmission (RS-485 asynchronous serial)	
Baud Rate	115.2 Kbps
Max. distance	1.2 Km

(*) Protection against over-current and temperature
Short-circuit current 1.7 A

MECHANICAL SPECIFICATIONS

Material	Self-extinguish plastic
IP Code	IP20
Wirings	wires with diameter 0.8÷2.1 mm ² AWG 14-18
Tightening Torque	0.5 N m
Mounting	in compliance to DIN rail standard EN-50022
Weight	about 200 gr.

ISOLATED ETHERNET GATEWAY MODBUS TCP / MODBUS RTU

DAT 3580 GW



GENERAL DESCRIPTION

The device DAT3580 GW allows to connect all the devices with Modbus RTU of a RS-485 serial line to the Ethernet with Modbus TCP protocol. By the integrated web server it is possible to configure the option of Modbus TCP (IP address, subnet mask, etc..) and Modbus RTU (baud rate, etc...)
 The device realizes a full electrical isolation between the lines, introducing a valid protection against the effects of all ground loops eventually existing in industrial applications.
 The LEDs of signalling of Ethernet and the serial line communication activity and power supply allow a direct monitoring of the system functionality.
 The connection is made by removable screw-terminals (inputs and power supply) and RJ45 plug (Ethernet).
 The device is housed in a 2 module DIN rough self-extinguishing plastic box for mounting on EN-50022 standard DIN rail.

FEATURES

- Interface Ethernet 10/100 Base-T Modbus TCP
- RJ45 Connector
- Configuration via integrated web server
- Serial interface RS-485
- Modbus RTU Master
- Baud rate up to 115.2 Kbps
- Distance up to 1200 m, up to 32 modules connected in multipoint
- Connection by removable screw-terminals
- LED signalling for Link/Act Ethernet, power supply
- Galvanic isolation on all the ways
- EMC compliant – CE mark
- In compliance to EN-50022 DIN rail mounting



Employments sectors



POWER SUPPLY

DC Power Supply	18 ÷ 30 Vdc
AC Power Supply	12 ÷ 30 Vac
Current consumption	55 mA max.

MECHANICAL SPECIFICATIONS

Material	Self-extinguish plastic
IP Code	IP20
Wirings	wires with diameter 0.8+2.1 mm ² AWG 14-18
Tightening Torque	0.5 N m
Mounting	in compliance to DIN rail standard EN-50022
Weight	about 80 gr.

ISOLATION

Ethernet / RS485	1500 Vac, 50 Hz, 1 min
Power Supply / RS485	1500 Vac, 50 Hz, 1 min

CERTIFICATIONS EMC (for industrial environments)

Immunity	EN 61000-6-2
Emission	EN 61000-6-4

ENVIRONMENTAL CONDITIONS

Operative Temperature	-20°C .. +60°C
Storage Temperature	-40°C.. +85°C
Humidity (not condensed)	0 .. 90 %
Maximum Altitude	2000 m
Installation	Indoor
Category of installation	II
Pollution Degree	2

CONNECTIONS

Ethernet	RJ-45
RS-485	removable screw terminals pitch 3.81 mm
Power supply	removable screw terminals pitch 5.08 mm

Ethernet interface

Ethernet	10/100 Base-T
Protocol	Modbus TCP

RS485 Interface

Baud rate	configurable up to 115.2 Kbps
Parity	configurable as even / odd / space
Stop Bit	configurable as 1 or 2
Max. Distance / Baud Rate Ratio (recommended) (1)	1.2 Km @ 38400 bps 2 Km @ 19200 bps 3 Km @ 9600 bps 4 Km @ 4800 bps 5 Km @ 2400 bps 7 Km @ 1200 bps
Number of modules in multipoint	32 max.
Switching time TX/RX (RS485)	150 us.
Termination resistance	120 Ohm

(1) – The maximum distance depends of: number of devices connected, type of cabling, noises, etc...