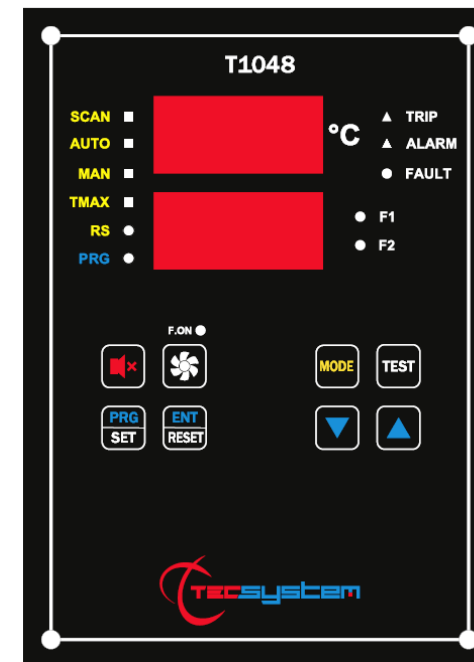
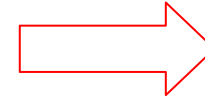
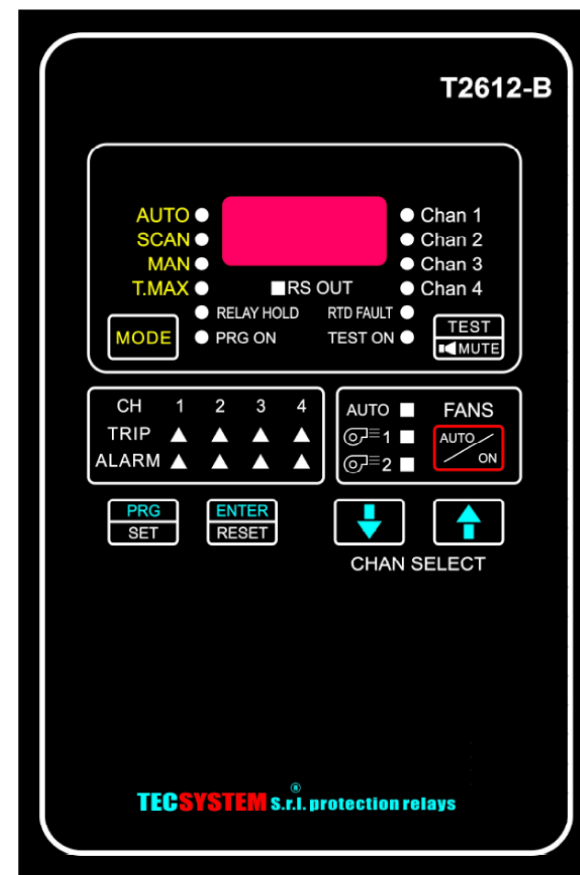


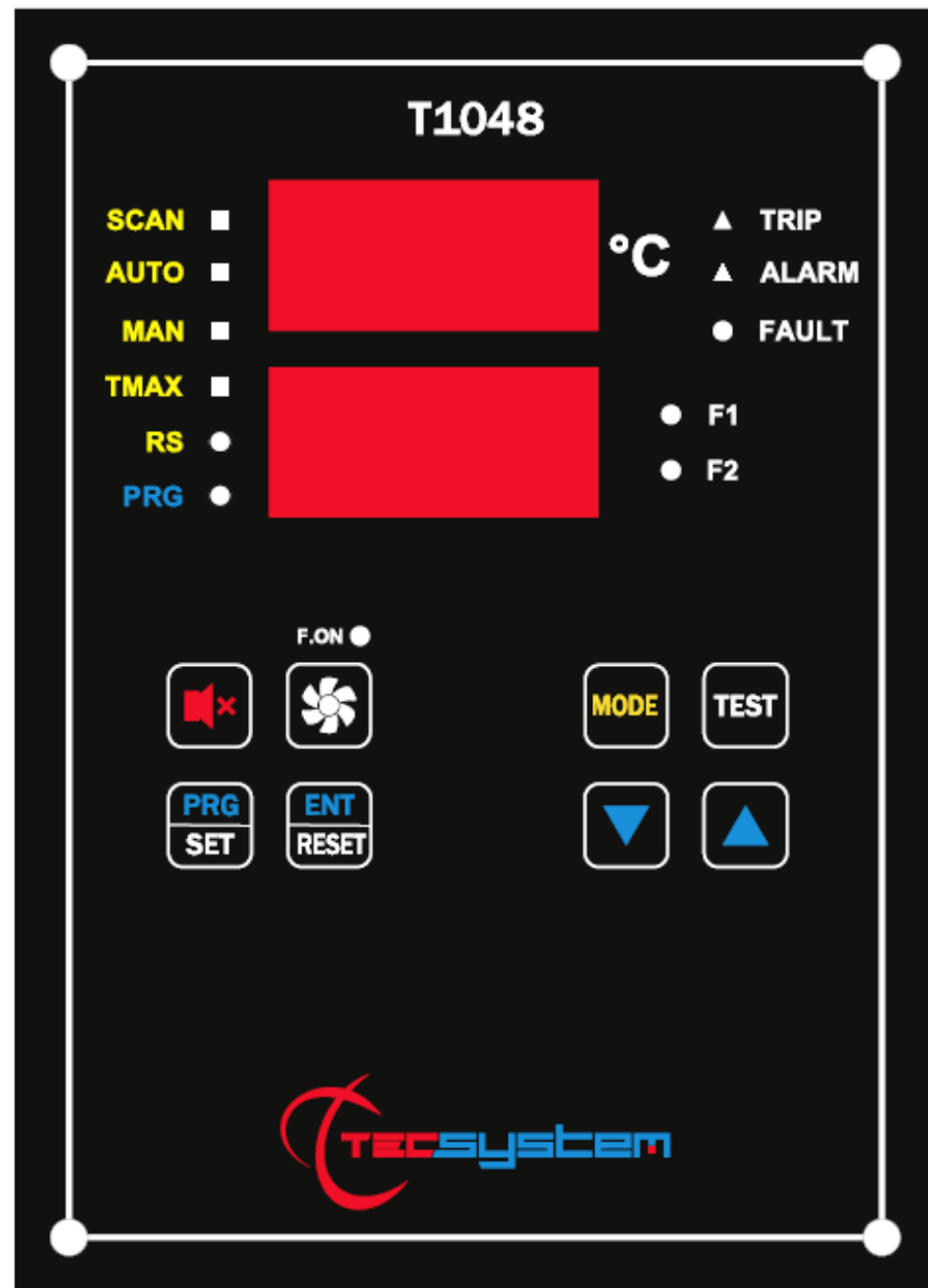
Evolution



NEW T1048 SERIES

As part of a continuous improvement of its products, Tecsystem introduces the new temperature monitoring unit for cast resin and dry-types transformers: T1048.

The new unit T1048 is a technical evolution of the T2612, INTRODUCING FOR THE FIRST TIME ETHERNET OUTPUT.



Microcontroller up-to-date

New microcontroller much more performing in respect of operation and data management.

Double display

With the introduction of the double display we give, to the user, fast messaging visualization much more clear for easy operation in case of need.

Pt100 inputs most rejection and TCK inputs option

New components for suppressing surge to the Pt100 inputs, improve the behavior of the unit in harsh environments where the noise level is beyond the EMC. Available on request, as an alternative to the PT100, 4 inputs TCK probes.

Increased relays switching capacity

Improve the technical specifications of the relays used for alarms: ALARM-TRIP-FAULT, free voltage contacts 10A-250Vac-res.

Power supply 85-260 Vca-cc 50/60Hz

Extension power range 85-260Vca-cc 50/60Hz.

Intellifan function

NEW

Intellifan allows you to reduce the thermal shock on the transformer anticipating partially (one bar at a time) the activation of the ventilation system. The decrease of thermal shock on the transformer will allow you to optimize the life of the transformer and for the cooling system too.

Enabling FAN INT. "YES" the unit will alternate the activation of contacts FAN1 and FAN2 anticipating the activation of the ventilation system to the intermediate value between FAN1 ON AND FAN1 OFF.

ES. FAN1 ON = 70°C and FAN1 OFF = 60°C ACTIVATION FAN INT. = 65°C .

Voting function

NEW

The function Voting comes from the concept of redundancy that consists in duplication of components of a system with the intention of increasing reliability.

How does VOTING work?

Taking advantage of the principle of redundancy, we use the probes installed on the three phases U-V-W to monitor the operation of the transformer but at the same time ensure the proper functioning of the probes themselves, discriminating any false alarms (generated by installation errors).

Activating VOTING "YES" the unit performs a comparison of the temperature values recorded on the monitored channels (CH1-CH2-CH3) and it enables the switching of the tripping contact (TRIP), only if the TRIP threshold is exceeding the value on at least two channels in the same period of time T.

HYSteresi ALARM and TRIP function (HYS)

NEW

Activating the function HYS ALARM "YES", the control unit switches the relay ALARM when the temperature is higher than 1°C, compared to set value as alarm limit and keeps the relay energized until the temperature has dropped to 5°C under the threshold alarm.

Activating the function HYS TRIP "YES" the controller switches the relay TRIP when the temperature is higher than 1°C, compared to set value as trip limit, keeps the relay energized until the temperature has dropped to 5°C under threshold trip.

Selecting HYS "NO" the activation of ALARM relay or TRIP will behave as described in paragraph TEMPERATURE SENSOR DIAGNOSTICS in the instruction manual.

Failsafe function

NEW

The T1048 has n.o selection (normally open contact) / n.c (normally closed contact) for alarm and trip relays, programming steps 32 to 35 page 14 of Instruction Manual. The selection of the setting no / nc introduces functions Fail Safe and No Fail Safe.

Setting n.o (No Fail safe) normally open contacts are in positions 5-7 Alarm and 8-10 Trip, they switch only when the set temperature limits are reached.

By setting n.c (Fail Safe) normally closed contacts are in positions 5-7 Alarm and 8-10 Trip, they switch only when the set temperature limits are reached.

Programming table introduction

NEW

The tables programming SET-1-2-3-4-5 allow a fast and optimal programming, basic, of the device.

They are a simplification and a useful support to human machine interaction.

The table in SET shows the default parameters for-set. By accessing to the SET programming the value can be changed manually, the other tables (1-2-3-4-5) are not editable.

New Ethernet option output

NEW

The T1048 Ethernet connectivity allows you to directly implement the functionality of Tecsystem's control units in your monitoring system.

The integrated module offers all the features of essential networks, including an Ethernet 10BaseT / 100Base-TX, full TCP / IP stack, suited to work as a Modbus TCP slave.

Web functionality can be used for remote configuration of the limits of protection, the real-time monitoring or troubleshooting.

OPTIONS	T1048 BASIC	T2612 B	T1048 ADVANTAGE	T1048 RS485	T2612 T2612 AD	T1048 ADVANTAGE	T1048 ETH	T2612 C	T1048 ADVANTAGE
POWER SUPPLY									
Supply rated values	85-260 Vca-Vcc 50/60HZ	120 o 240Vac 50/60HZ	✓	85-260 Vca-Vcc 50/60HZ	120 o 240Vac 50/60HZ	✓	85-260 Vca-Vcc 50/60HZ	120 o 240Vac 50/60HZ	✓
Vdc with reversible polarities (protection fuse 2,5 A 5x20)	•	•		•	•		•	•	
INPUTS (no. 4 inputs)									
4 inputs for Pt100 sensors (max section cable 1,5mm ²)	•	•		•	•		•	•	
Cable compensation for thermistors	Pt100 500m (1 mm ²)	Pt100 500m (1 mm ²)		Pt100 500m (1 mm ²)	Pt100 500m (1 mm ²)		Pt100 500m (1 mm ²)	Pt100 500m (1 mm ²)	
4 inputs for Tck sensors (max section cable 1,5mm ²)	•		✓	•		✓	•		✓
Cable compensation for Tck	TCK 100m (1 mm ²)		✓	TCK 100m (1 mm ²)		✓	TCK 100m (1 mm ²)		✓
Connections on removable terminal strips	•	•		•	•		•	•	
Input channels protected against electromagnetic interference	•	•		•	•		•	•	
OUTPUTS									
2 alarm relays (ALARM AND TRIP) SPDT	•	•		•	•		•	•	
1 sensor or operating failure (FAULT) relay	•	•		•	•		•	•	
Output relays (ALARM-TRIP-FAULT) with contacts	SPST 10A-250Vac-res COSφ=1.	SPDT 5A-250Vac-res COSφ=1.	✓	SPST 10A-250Vac-res COSφ=1.	SPDT 5A-250Vac-res COSφ=1.	✓	SPST 10A-250Vac-res COSφ=1.	SPDT 5A-250Vac-res COSφ=1.	✓
2 ventilation management relays FAN 1 AND FAN 2	16 A-250Vac-res COSφ=1 (fuse 10 A 6.3x32)	16 A-250Vac-res COSφ=1 fuse 10 A		16 A-250Vac-res COSφ=1 (fuse 10 A 6.3x32)	16 A-250Vac-res COSφ=1 fuse 10 A		16 A-250Vac-res COSφ=1 (fuse 10 A 6.3x32)	16 A-250Vac-res COSφ=1 fuse 10 A	
Type contacts	Free voltage contacts	Contacts powered at power supply		Free voltage contacts	Contacts powered at power supply		Free voltage contacts	Contacts powered at power supply	
RS485 output Modbus RTU				•	•				
4.20mA output					• (ONLY AD)			•	
Ethernet output 10Base T / 100Base-TX Modbus TCP slave							•		✓
DIMENSIONS									
Unit dimensions	232x166X60 mm Hole 140 x 205 mm	320x210X90mm Hole 155 x 280 mm	✓	232x166X60 mm Hole 140 x 205 mm	320x210X90mm Hole 155 x 280 mm	✓	232x166X60 mm Hole 140 x 205 mm	320x210X90mm Hole 155 x 280 mm	✓
Weight	0,65 Kg	2,24 Kg	✓	0,65 Kg	2,24 Kg	✓	0,65 Kg	2,24 Kg	✓
TESTS AND PERFORMANCE									
Construction in compliance with CE regulations	•	•		•	•		•	•	

OPTIONS	T1048 BASIC	T2612 B	T1048 ADVANTAGE	T1048 RS485	T2612 T2612 AD	T1048 ADVANTAGE	T1048 ETH	T2612 C	T1048 ADVANTAGE
Protection from electrical interference EN 61000-4-4	•	•		•	•		•	•	
Dielectric strenght 1500 Vac for a min. between output relays and sensors, relays and power supply, power supply and sensors	•	•		•	•		•	•	
Accuracy ±1% full scale value, ±1 digit	•	•		•	•		•	•	
Ambient operating temperature from -20°C to +60°C	•	•		•	•		•	•	
Humidity 90% non-condensing	•	•		•	•		•	•	
Housing	Polycarbonate	Sheet metal	✓	Polycarbonate	Sheet metal	✓	Polycarbonate	Sheet metal	✓
Polycarbonate frontal panel IP65	•	•		•	•		•	•	
Absorption	8VA	7VA		8VA	7VA		8VA	7VA	
Data memory 10 years minimum	•	•		•	•		•	•	
Digital linearity of sensor signal	•	•		•	•		•	•	
Self-diagnostic circuit	•	•		•	•		•	•	
Protection treatment of the electronic part	Optional	Optional		Optional	Optional		Optional	Optional	
DISPLAY AND DATA MANAGEMENT									
2x20,5 mm displays with 3 digits to display temperatures, messages and channels	•		✓	•		✓	•		✓
3 LEDs to display the state of the alarms of the selected channel (ALARM-TRIP-FAULT)	•	•		•	•		•	•	
1 display 20,5 mm with 3 digits for display temperatures		•			•			•	
4 leds for displaying reference channel CH1-CH2-CH3-CH4		•			•			•	
1 led Test ON (test relè)		•			•			•	
1 led relay hold		•			•			•	
2 led for displaying FAN1 and FAN2 state	•	•		•	•		•	•	
1 led to indicate PRG / VIS access	•	•		•	•		•	•	
Temperature range: Reading and Alarm settings	-20°C to 220°C PRG 0°C to 220°C	0°C to 240°C PRG 0°C to 240°C	✓	-20°C to 220°C PRG 0°C to 220°C	0°C to 240°C PRG 0°C to 240°C	✓	-20°C to 220°C PRG 0°C to 220°C	0°C to 240°C PRG 0°C to 240°C	✓
Temperature range optional: Reading and Alarm settings		-40°C to 200°C PRG 0°C to 200°C			-40°C to 200°C PRG 0°C to 200°C			-40°C to 200°C PRG 0°C to 200°C	
1 ALARM threshold for CH1-CH2-CH3	•	•		•	•		•	•	
1 TRIP threshold for CH1-CH2-CH3	•	•		•	•		•	•	
1 ALARM threshold for CH4	•	•		•	•		•	•	
1 TRIP threshold for CH4	•	•		•	•		•	•	
2 ON-OFF threshold for FAN 1 and FAN 2	•	•		•	•		•	•	

OPTIONS	T1048 BASIC	T2612 B	T1048 ADVANTAGE	T1048 RS485	T2612 T2612 AD	T1048 ADVANTAGE	T1048 ETH	T2612 C	T1048 ADVANTAGE
Default programming tables	•		✓	•		✓	•		✓
Sensor diagnostics (Fcc-Foc-Fcd)	•	•		•	•		•	•	
Data memory diagnostics (Ech)	•	•		•	•		•	•	
Access to programming through front keyboard	•	•		•	•		•	•	
Automatic exit from relay programming, display and test after 1 minute's inactivity	•	•		•	•		•	•	
Incorrect programming warning	•	•		•	•		•	•	
Selection between channel automatic scanning, hottest channel or manual scanning	•	•		•	•		•	•	
Storage of maximum temperatures reached by channels and alarm status	•	•		•	•		•	•	
Front key to reset the alarms	•	•		•	•		•	•	
Audible alarm (ALARM) with silent key	•	•		•	•		•	•	
Relay hold function		•			•			•	
Intellifan function	•		✓	•		✓	•		✓
Voting function	•		✓	•		✓	•		✓
Isteresi ALARM e TRIP function (HYS)	•		✓	•		✓	•		✓
Failsafe function	•		✓	•		✓	•		✓
Key and Led enable forced ventilation F.ON	•	•		•	•		•	•	
TOTAL ADVANTAGES T1048 SERIES	15								