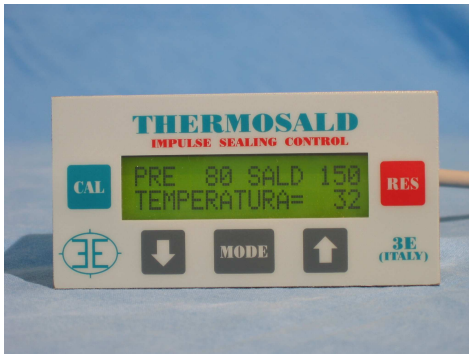
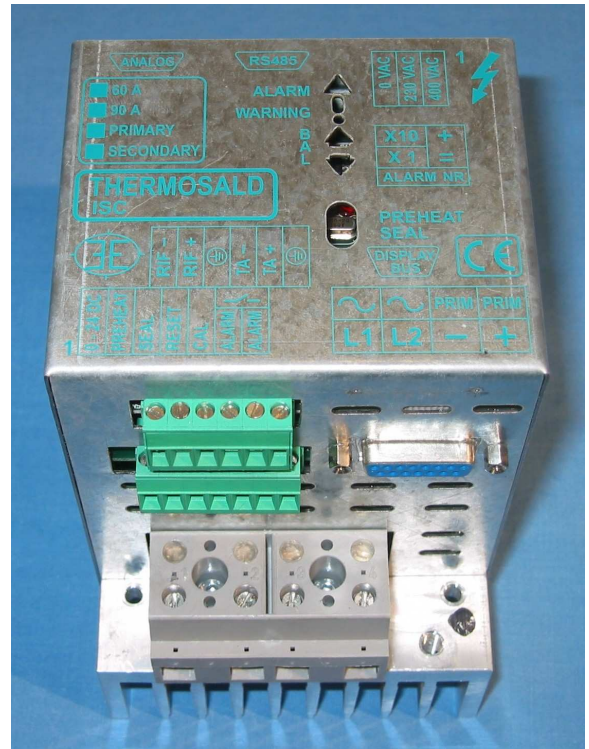


TEMPERATURE CONTROLLER FOR IMPULSE SEALING

THERMOSALD ISC MODULAR SYSTEM



- AUTOMATIC CALIBRATION
- ANALYSIS ON LINE OF BAND CHARACTERISTICS
-
- DIAGNOSTIC PANEL WITH 6 LANGUAGES
- CAN BUS INTERFACE (OPTIONAL)
- PROFIBUS INTERFACE (OPTIONAL)
- RS 485 INTERFACE (OPTIONAL)
- WORKING WITH POTENTIOMETER
-
- BURN IN OF SEALING BAND



COMMERCIAL CATALOGUE

3E S.r.l. - Via del Maccabreccia 37/a - 40012 LIPPO DI CALDERARA-BOLOGNA-ITALY
Tel. ++39 051 6466225-228
Fax ++39 051 6426252

e-Mail: mail@3e3e3e.com
web site: www.3e3e3e.com

INFORMATIONS

DESCRIPTION OF MANUALS

In Italian Language (IT) and in English Language (EN) the following manuals are available:

- **MANUAL COD. 3ES080x_Vx_CO_IT - COMMERCIAL CATALOGUE:** IT DESCRIBES THE PRODUCT AND ITS FUNDAMENTAL CHARACTERISTICS.
 - **MANUAL COD. 3ES080x_Vx_QS_IT - QUICK START MANUAL:** IT'S SUPPLIED WITH THE THERMOREGULATOR AND DESCRIBES THE ELETTRICAL CONNECTIONS, THE START UP OPERATIONS, THE USE OPERATIONS, THE MAINTENANCE OPERATIONS, THE TROUBLE-SHOOTING DIAGNOSTIC.
 - **MANUAL COD. 3ES080x_Vx_MU_IT - MAINTENANCE & OPERATIONS MANUAL:** IT CONTAINS ALL THE INFORMATIONS ABOUT THE PRODUCT AND MUST BE KNOWN BEFORE DOING AN INSTALLATION; IT'S SUPPLIED TO INSTALLATOR AND DESCRIBES THE NORMES USED FOR DESIGN, THE INSTAL CONDITIONS FOR SAFETY, THE ELETTRICAL CONNECTIONS, THE START UP OPERATIONS, THE USE OPERATIONS, THE MAINTENANCE OPERATIONS, THE TROUBLE-SHOOTING DIAGNOSTIC.
-
- **MANUAL COD. 3ES080x_Vx_CO_EN - COMMERCIAL CATALOGUE**
 - **MANUAL COD. 3ES080x_Vx_QS_EN - QUICK START MANUAL**
 - **MANUAL COD. 3ES080x_Vx_MU_EN - MAINTENANCE & OPERATIONS MANUAL**

In French Language (FR), German (DE), Spanish (SP) the following manuals are available:

- **MANUALE COD. 3ES080x_Vx_QS_FR - QUICK START MANUAL**
- **MANUALE COD. 3ES080x_Vx_QS_DE - QUICK START MANUAL**
- **MANUALE COD. 3ES080x_Vx_QS_SP - QUICK START MANUAL**

If requested It will be possible to edit specific language.

ALL MANUALS ARE AVAILABLE ON OUR INTERNET WEB SITE:

www.3e3e3e.com

0.1 GENERAL PRODUCT DESCRIPTION

- **APPLICATION:** Impulse heat-seal technology is used to seal, rapidly and with great accuracy, polyethylen films, polypropilene films, single-component plastic films, multilayer plastic films in general, that must reach their melting temperature and a cool down immediately to avoid deformations.
- **OPERATING PRINCIPLES:** To execute impulse sealing, use a sealing bar with a sealing band o wire electrically insulated from earth, supplied by an equipment specific for impulse sealing, i.e. an impulse thermoregulator. This equipment must supply the power required to heat the band at the desired sealing temperature in an extremely short time and maintain the desired temperature with high precision during all the sealing operations; No additional probe are required, the equipment simply reads the feedback signals from the bands and controls the heating current with a closed-loop circuit. The thermoregulator first receives a pre-heat signal from the outside so that the sealing bar can reach a required pre-heat temperature not far from sealing temperature before starting works. The thermoregulator further receive a sealing signal from the outside so that the sealing bars can reach the correct sealing temperature when brought together.
- **MAIN FEATURES:** The thermoregulator THERMOSALD ISC is manufactured in 3 versions: switch of the power transformer on the secondary up to 60 or 90 ampere, switch on the primary up to 300 Ampere; it's interchangeable with all the previous thermoregulator by our company; it's very easy to use.
- **RS485 SERIAL INTERFACE:** The low cost option /RS485 let user to interface thermoregulator with PLC or PC with or without digital panel; in this way it's possible to exchange RUN TIME data, SETTING data and MACHINE data; with an external temperature probe connected to PLC, it's possible read temperature of the bar and calibrating the machine with a very high precision
- **EASY TO USE:** At start up a calibrating command, automatically calibrate (for sealing bands from 10 cm length to 400)

IMPORTANT

- **START UP SUPPORT:** The thermoregulator has a special software to dimension the plant: the user introduces bands characteristics and the thermoregulator display the optimum voltage and power of transformer (see field diagnostic).
- **FIELD DIAGNOSTIC:** The thermoregulator has a potent diagnostic to compare easily and immediately, the current , voltage, resistance, power read in real time with the same memorized during start up and the same calculated theoretically (see start up support): in this way the thermoregulator can enhance the differences which can causes the trouble.
- **ALARM DIAGNOSTICS:** The temperature controller comes with an efficient diagnostics system capable of identifying faults which have occurred during the production process, indicating the cause and suggesting the remedies required to restore normal operating conditions.

• **CHAMFERED SPECIAL ALLOY ELEMENTS RESISTANCES CHART**

Band width (mm)	Band thickness (mm)	Specific resistance R0 Ω / mt
1.5	0.3	1.67
2	0.25	1.59
3	0.1	2.95
3	0.15	1.95
3	0.2	1.50
3	0.25	1.27
4	0.15	1.40
4	0.25	0.96
5	0.2	0.8
5	0.25	0.69
6	0.1	1.6
6	0.2	0.72
8	0.1	1.2
8	0.2	0.51

• **T-SHAPE SPECIAL ALLOY ELEMENTS RESISTANCES CHART**

Band width (mm)	Band thickness (mm)	Specific resistance R0 Ω / mt
2.8	0.3	0.9
4	0.3	0.6

• **BEADED SPECIAL ALLOY ELEMENTS RESISTANCES CHART**

Band width (mm)	Band thickness (mm)	Specific resistance R0 Ω / mt
4	0.15	1.4
4	0.25	0.9
6	0.15	0.99
6	0.25	0.6

• **CONCAVE SPECIAL ALLOY ELEMENTS RESISTANCES CHART**

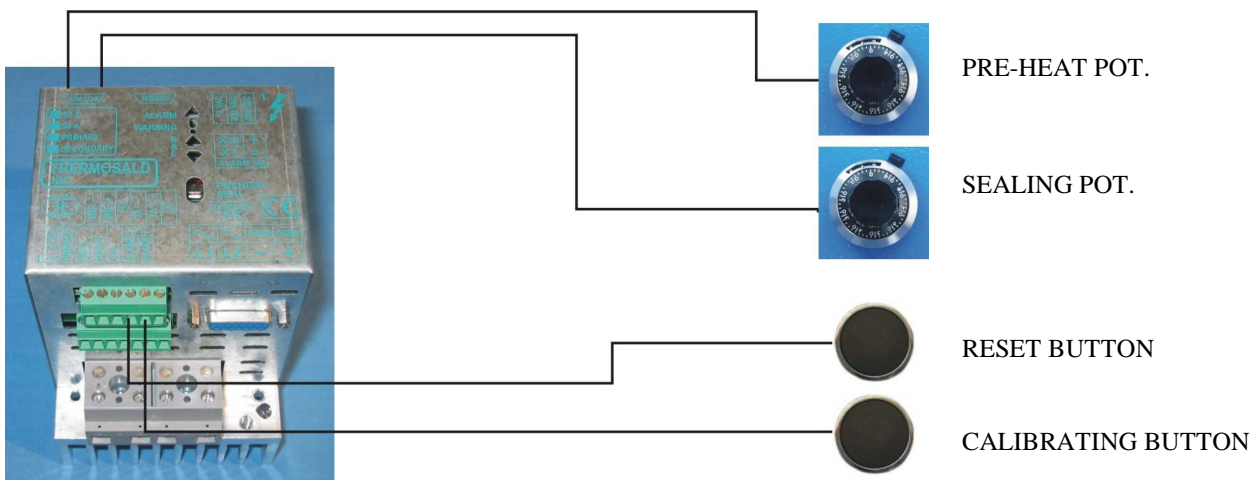
Band width (mm)	Band thickness (mm)	Specific resistance R0 Ω / mt
2.8	0.3	0.9

START UP DESCRIPTION

GENERAL OPERATIONS VALID FOR ALL THE CONFIGURATIONS

- The machine must be at ambient temperature.
- Pre-heat and seal commands must be off.
- Do a calibrating: Press the external push button CALIBRATING for 3 seconds or the key “CAL” on multilanguage panel.
- The machine is ready to start: set pre_heat and seal temperature.

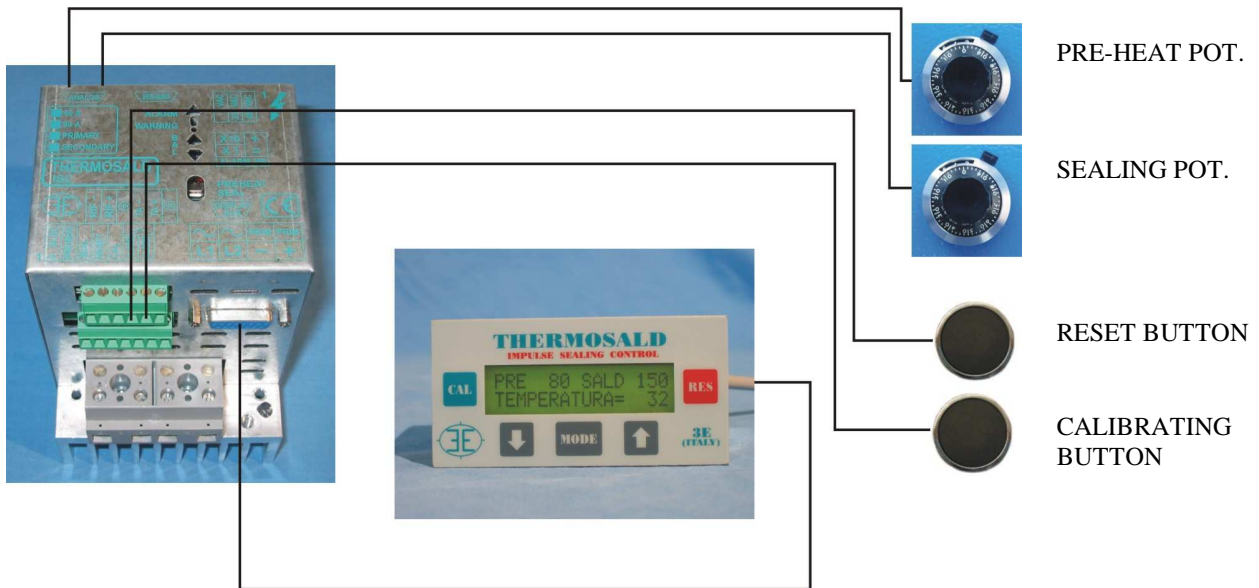
BASE CONFIGURATION (+RS485 OPTIONAL)



BASE CONFIGURATION + MULTILANGUAGE (+RS485 OPTIONAL)



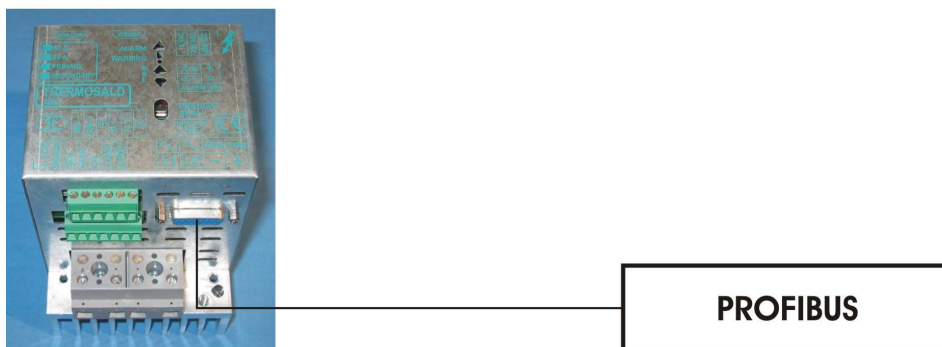
BASE CONFIGURATION + MULTILANGUAGE + POTENTIOMETERS (+RS485 OPTIONAL)



BASE CONFIGURATION + CAN BUS (PRELIMINARY)



BASE CONFIGURATION + PROFIBUS (PRELIMINARY)



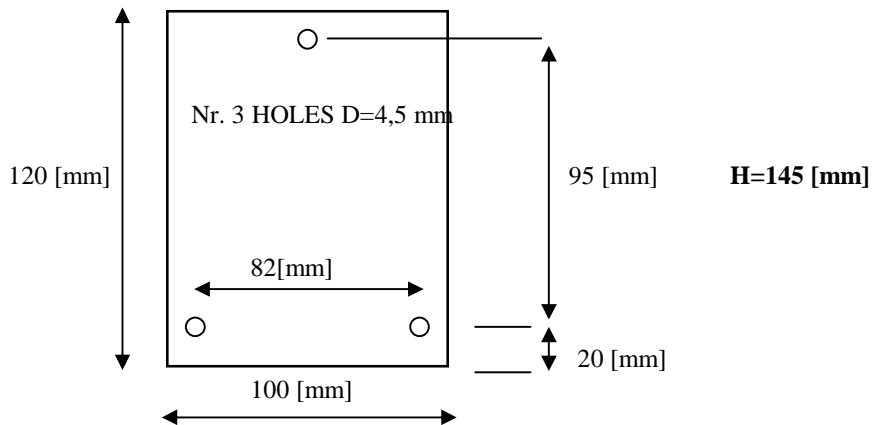
DETAILS FOR ORDER FORM

MODEL:	- Description	CODE
THERMOSALD ISC	- Impulse Thermoregulator 100V 60A	3ES080DH
THERMOSALD ISC	- Impulse Thermoregulator 100V 90A (obsolete)	3ES081DH
THERMOSALD ISC	- Impulse Thermoregulator 100V 60A on PRIMARY	3ES082DH
THERMOSALD ISC	- Impulse Thermoregulator 100V 90A	3ES083DH
PANEL	- Multilanguage Panel data input	3ES080DL
PANEL RS485	- Multilanguage Panel data input connection RS485	3ES080DM
CAVO	- Cable panel-Thermoregulator	3ES080A001
TA	- Amperometric Transformer	3ES080A002
CORNICE ADATT.	- Aluminum molding for mounting ISC panel on old machines with old UPSCR panel	3ES080A003
OPTIONS:		
RS485	- Option serial interface RS485	3ES080DZ=485
INAN	- Option analog input	3ES080DZ=INAN
LOWVOLT	- Opzione low volts	3ES080DZ=LOVL
- OPTIONAL EQUIPMENT:		
TRANSFORMER 2100VA/70V/30A		3ESD0063
Impulsive transformer for Thermoregulator 60 Ampere 0 / 230 / 400 / SCH / GND = 0 / 30 / 40 / 50 / 60 / 70		
TRANSFORMER 3000VA/50V/60A		3ESD0064
Impulsive transformer for Thermoregulator 60 Ampere 0 / 230 / 400 / SCH / GND = 0 / 30 / 40 / 50		
TRANSFORMER 3000VA/30V/90A		3ESD0065
Impulsive transformer for Thermoregulator 90 Ampere 0 / 230 / 400 / SCH / GND = 0 / 20 / 30		
TRANSFORMER 3000VA/15V/200A (PER PRIMARIO)		3ES082A001
Impulsive transformer for Thermoregulator 120 Ampere on PRIMARY 0 / 230 / 400 / 500 / 900 / SCH / GND = 0 / 15		
SEALING BANDS WIRES ENDLESS BELT		
Bands, wires and endless belts with many profiles, sold in meters, on specific draw, Copper/Silver ended, teflon coated.		
THERMOSALD_485	- Supervisor simulator for RS485 (CD + Box RS232-RS485)	3ESD0075
- MANUALS:		
ITALIAN COMMERCIAL CATALOGUE		3ES080x_Vx_CO_IT
ITALIAN QUICK START MANUAL		3ES080x_Vx_QS_IT
ITALIAN MAINTENANCE & OPERATOR MANUAL		3ES080x_Vx_MU_IT
ENGLISH COMMERCIAL CATALOGUE		3ES080x_Vx_CO_EN
ENGLISH QUICK START MANUAL		3ES080x_Vx_QS_EN
ENGLISH MAINTENANCE & OPERATOR MANUAL		3ES080x_Vx_MU_EN
FRENCH MANUAL QUICK START MANUAL		3ES080x_Vx_QS_FR
GERMAN MANUAL QUICK START MANUAL		3ES080x_Vx_QS_DE
SPANISH MANUAL QUICK START MANUAL		3ES080x_Vx_QS_SP

PANEL BORING (DIGITAL PANEL 96x48 – BACK DIMENSION 86x40.5)



TOP VIEW TERMOREGULATOR 60 AMPERE + 90 AMPERE AND HOLES FOR PANEL MOUNTING



TOP VIEW TERMOREGULATOR 90 AMPERE (OBSOLETE) AND HOLES FOR PANEL MOUNTING

