Certificate of Compliance

Certificate: 70011640

Master Contract: 261831

Project: 70129940

Date Issued: 2017-05-24

Issued to: **Eliwell Controls s.r.l.**
Via dell'Industria 15-Z.I. Paludi
Alpago, Belluno 32016
ITALY

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: *Khaled Feddad*
Khaled Feddad

PRODUCTS

CLASS - C482351 - TEMPERATURE INDICATING AND REGULATING EQUIPMENT-Appliance Type Controls - Temperature Controls
CLASS - C482387 - TEMPERATURE-INDICATING AND REGULATING EQUIP.-Appliance Type-Temperature Controls-Cert to US Stds

Component Type, DIN rail mounting Operating Control:

a. Series Energy Flex, SD, SC or SE, followed by 6, followed 0, 1, 2, 3, 4 or 5, followed 0 or 2, followed 0, 1 or 2, followed 0, 1, 2 or 3, followed 0, 1, 2, 3, 4 or 5, followed by one alphanumeric digit, followed 0, 1, 2 or 3, followed by 4, may be followed by two alphanumeric digits.
b. Series Modicon M171 Optimised, TM171EO, followed by 1 to 22, followed by R, may be followed by three alphanumeric digits.
c. Series Energy Flex, SD, SC or SE, followed by 6, followed 0, 1, 2, 3, or 4, followed 0, followed 0, 1 or 2, followed 0, 1, 2 or 3, followed 0, 1, 2, 3, 4 or 5, followed by one alphanumeric digit, followed 0, 1, 2 or 3, followed by H, may be followed by two alphanumeric digits.
d. Series Free Smart, SMD, SMC or SME, followed 0, 1, 2, 3, 4 or 5 followed 2, 5, or 6, followed by two alphanumeric digits, followed 00, 01, 02 or 05, followed by one alphanumeric digit, followed by 4, may be followed by two alphanumeric digits.
e. Series Modicon M171 Optimised, TM171O, followed by B, D, may be followed by M, followed by 1 to 22, followed by S, R, may be followed by three alphanumeric digits.

f. Series Free Smart, SMD, SMC or SME, followed 0, 1, 2, 3, or 4, followed 2 or 5, followed by two alphanumeric digits, followed 00, 01, 02 or 05, followed by one alphanumeric digit, followed by H, may be followed by two alphanumeric digits.

g. Series Modicon M171 Optimised, TM171EO, followed by 1 to 14, followed by R, may be followed by three alphanumeric digits.

h. DIN rail mounting - Series EP, followed by DO or DT or EO or CO, followed by 0 or 1, followed by 0 or P or F, followed by 000 or any three alphanumeric character, followed by 0 or 4 or B or 5,followed by 00 or any two alphanumeric character.

RATINGS:

	Model(s)	Function	Terminal Designation	Rating	connector ID
INPUTS	SC6xxxxxxx4xx SD6xxxxxxx4xx SE6xxxxxxx4xx TM171EO SMDxxxxxxx4xx SMCxxxxxxx4xx TM171OB TM171OD	Power Supply	Supply (L-N)	12-24 Vac, 50/60 Hz, or 24 Vdc Class 2 source, SELV Limited energy <15W	CN3.1-2
		Analog Input probe	AI1 AI2 AI5	NTC type 10 KΩ at 25°C, or digital input max. 0.5mA Class 2 source, SELV Limited energy <15W	CN3.19 CN3.17 CN3.15
			AI3 AI4	NTC type 10 KΩ at 25°C or 0-5V or 4-20mA/0-1V Class 2 source, SELV Limited energy <15W	CN3.13 CN3.11
		Digital input	DI1 DI2	Dry contact, max. 0.5mA Class 2 source, SELV Limited energy <15W	CN3.20 CN3.18
			DI3 DI4 DI5 DI6		CN3.16 CN3.14 CN3.12 CN3.10
	SC6xxxxxxxHxx SD6xxxxxxxHxx SMCxxxxxxxHxx SMDxxxxxxxHxx SMExxxxxxxHxx TM171OB TM171OD TM171EO	Power Supply	Supply (L-N)	100 up to 240Vac, 50/60 Hz, max 4VA	CN7.1-2
		Analog Input probe	AI1 AI2 AI5	NTC type 10 KΩ at 25°C, or digital input max. 0.5mA SELV, Limited energy <15W	CN10.7 CN10.8 CN10.11
			AI3 AI4	NTC type 10 KΩ at 25°C or 0-5V or 4-20mA/0-1V SELV, Limited energy <15W	CN10.9 CN10.10
		Digital input	DI1 DI2	Dry contact, max. 0.5mA SELV, Limited energy <15W	CN10.1 CN10.2
	*SC6x2xxxxx4xx SD6x2xxxxx4xx	Power Supply	Supply(L-N)	12-24 Vac, 50/60 Hz, or 24 Vdc Class 2 source, PELV Limited energy <15W	CN3.1-2

	Model(s)	Function	Terminal Designation	Rating	connector ID
	SE6x2xxxxx4xx TM171EO15 (to 22) Series Energy Free Smart, SMC36xxxxx4xx SMD36xxxxx4xx Series Modicon M171 Optimised TM171OD, TM171OB (based on model code)	Analog Input probe	AI1 AI2 AI5	NTC type 10 KΩ at 25°C, or digital input max. 0.5mA Class 2 source, SELV Limited energy <15W	CN3.19 CN3.17 CN3.15
			AI3 AI4	NTC type 10 KΩ at 25°C or 0-5V or 4-20mA/0-1V Class 2 source, SELV Limited energy <15W	CN3.13 CN3.11
		Digital Input	DI1 DI2 DI3 DI4 DI5 DI6	Dry contact, max. 0.5mA Class 2 source, SELV Limited energy <15W	CN3.20 CN3.18 CN3.16 CN3.14 CN3.12 CN3.10
OUT COMUNICATIONS	Series Energy Flex, SD, SC, SE ,EP (based on model code); Series Modicon M171 Optimised TM171EO and Series Energy Free Smart, SMD, SMC (based on model code); Series Modicon M171 Optimised TM171OD, TM171OB	RS-485 Serial	RS-485	Class 2 source, SELV Limited energy <15W	CN5
		Remote keyboard	LAN		CN1
		TTL	TTL		CN2
	Series Energy Flex, SD, SC, EP (based on model code) and Series Energy Free Smart, SMD, SMC, SME (based on model code); Series Modicon M171 Optimised TM171OD, TM171OB	RS-485 Serial	RS-485	SELV, Limited energy <15W	CN8
		Remote keyboard	LAN		CN1
		TTL	TTL		CN2
	*Series Energy Flex, SD, SC, SE, TM171EO (based on model code); Series Energy Free Smart, SMC,SMD Series Modicon M171 Optimised TM171OD, TM171OB (based on model code)	RS-485 Serial	RS-485	Class 2 source, SELV Limited energy <15W	CN5
		Remote keyboard	LAN		CN1
		TTL	TTL		CN2
	Series Energy Flex, SD, SC, SE, EP; Series	Relay Output	DO1 (NO)	Resistive 2A, 240Vac, 30K cycles	CN6.3-6

	Model(s)	Function	Terminal Designation	Rating	connector ID
	Modicon M171 Optimised TM171EO and Series Energy Free Smart, SMD, SMC; Series Modicon M171 Optimised TM171OD, TM171OB (relay populated based on model code – up to 5 relays)	RY1			
		Relay Output RY2	DO2 (NO)		CN6.4-6
		Relay Output RY3	DO3 (NO)		CN6.5-6
		Relay Output RY4	DO4 (NO)		CN6.7-8
		Relay Output RY5	DO6 (NO)		CN6.1-2
	Series Energy Flex, SD, SC, EP and Series Energy Free Smart, SMD, SMC, SME; Series Modicon M171 Optimised TM171OD, TM171OB (relay populated based on model code – up to 4 relays)	Relay Output RY1	DO1 (NO)	Resistive 2A, 240Vac, 30K cycles	CN6.4-7
		Relay Output RY2	DO2 (NO)		CN6.5-7
		Relay Output RY3	DO3 (NO)		CN6.6-7
		Relay Output RY6	DO6 (NO)		CN6.1-2
			DO6 (NC)		CN6.3-2
	Series Energy Flex, SD, SC, SE, EP (based on model code); Series Modicon M171 Optimised TM171EO and Series Energy Free Smart, SMD, SMC; Series Modicon M171 Optimised TM171OD, TM171OB (based on model code)	Digital Output	DO5	Class 2 source, SELV Limited energy <15W	CN3.5
		Analog Output	AO1 AO2	Class 2 source, SELV Limited energy <15W	CN3.6 CN3.8
			AO [3 G] AO [4 G]	0-10V max. Class 2 source, SELV Limited energy <15W	CN2.2-3 CN2.4-3
			AO[5 G]	20mA max. Class 2 source, SELV Limited energy <15W	CN2.1-3
	Series Energy Flex, SD, SC, EP (based on model code) and Series Energy Free Smart, SMD, SMC, SME; Series Modicon M171 Optimised	Digital Output	DO5	SELV, Limited energy <15W	CN10.6
		Analog Output	AO1 AO2	SELV, Limited energy <15W	CN10.1 CN10.2
			AO [3 G] AO [4 G]	0-10V max. SELV, Limited energy <15W	CN10.3 CN10.4

Model(s)	Function	Terminal Designation	Rating	connector ID
TM171OD, TM171OB, TM171EO (based on model code)		AO[5 G]	20mA max. SELV, Limited energy <15W	CN10.5
*Series Energy Flex, SD, SC, SE, Series Modicon M171 Optimised TM171EO; Series Energy Free Smart, SMC,SMD,SME Series Modicon M171 Optimised TM171OD, TM171OB, TM171EO (based on model code)	Relay Output RY1	DO1 (NO)	Resistive 2A, 240Vac, 30K cycles	CN6.5-8
	Relay Output RY2	DO2 (NO)		CN6.6-8
	Relay Output RY3	DO3 (NO)		CN6.7-8
	Triac Output IC6	TC1	Resistive 2A, 240Vac, 30K cycles	CN6.1-2
	Triac Output IC4	TC2	Resistive 2A, 240Vac, 30K cycles	CN6.3-4
*Series Energy Flex, SD, SC, SE, Series Modicon M171Optimised TM171EO (based on model code). Series Energy Free Smart, SMC,SMD,SME	Digital Output	DO5	Class 2 source, SELV Limited energy <15W	CN3.5
	Analog Output	AO1, AO2	Class 2 source, SELV Limited energy <15W	CN3.6 CN3.8
		AO [3 G] AO [4 G]	0-10V max. Class 2 source, SELV Limited energy <15W	CN2.2-3 CN2.4-3
		AO[5 G]	20mA max. Class 2 source, SELV Limited energy <15W	CN2.1-3

Thermal - Operating Temperature range -20°C to +55°C.
Pollution degree – 2 or better
Power supply circuit
Overvoltage Category – I for models 12-24Vac, 24Vdc
Overvoltage Category – II for models rated 100-240Vac
Relay and Triac Outputs outputs
Overvoltage Category – II
Software Class - A
*Thermal - Operating Temperature range -20°C to +65°C.
*Operating control Class I suitable for Class I end use appliances.

Notes:

1. These devices are certified as component type operating control for use in CSA Certified equipment where the suitability of the combination is to be determined by the CSA Group, Certification and Testing Division.
2. These devices are microprocessor based programmable controllers intended primarily for monitor and control of air conditioning and refrigeration units. These devices are intended for indoor application only.
3. These devices are intended for DIN rail mounting and were declared as open type devices. Based on the model code, the electronic controls may be optionally provided with user interface along with LCD display and four push buttons to set up the parameters for operations.
4. These devices are provided with main terminal block necessary to connect the board to input supply and to the power outputs, to external controlled devices such as display and NTC or PTC probes dedicated to monitor the temperature, and I/O serial interface in extra low voltage.
5. Based on model nomenclature these devices are intended to be supplied by certified Class 2 power source, SELV with limited energy less than 15 Watts, or supplied by an internal switching transformer circuitry that can be directly supplied from 100Vac up to 240Vac line voltage.
6. Devices intended to be supplied by Class 2 power source the line voltage outputs are controlled by up to 5 mechanically relay or up to three relay and 2 Triac, mounted on the board intended to control external loads like as compressors, fans, defrost, etc for ventilation and/or heating functions.
7. Devices intended to be supplied by an internal switching transformer circuitry the line voltage outputs are controlled by up to 4 mechanically relay mounted on the board intended to control external loads like as compressors, fans, defrost, etc for ventilation and/or heating functions.
8. These devices were investigated as a Type 1 action OPERATING CONTROL and to be INCORPORATED in the end use equipment and have not been evaluated for safety or limiting applications.

APPLICABLE REQUIREMENTS

CAN/CSA-E60730-1:13 - Automatic Electrical Controls for Household and Similar Use - Part 1: General
            Requirements - Third Edition
CAN/CSA-E60730-2-9:01 (R2011) - Automatic Electrical Controls for Household and Similar Use - Part 2-9:
            Particular Requirements for Temperature Sensing Controls - Second Edition
UL 60730-1: 2009 - Automatic Electrical Controls for Household and Similar Use; Part 1: General Requirements
            - Fourth Edition
UL 60730-2-9: 2010 - Automatic Electrical Controls For Household and Similar Use; Part 2: Particular
            Requirements For Temperature Sensing Controls - First Edition

Supplement to Certificate of Compliance

Certificate: 70011640   **Master Contract:**   261831

The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
70129940	2017-05-24	Update to the report for the addition of 3 digits on the product nomenclature for M171 and TM171 series, addition of Series EP identical to series SMD, SMC in this report, except for commercial agreement provided with different silk-screen printing. Extend the working temperature from -10 to -20ºC for all product series within this report.
70011640	2015-03-27	cCSAus Certifiation of air conditioning and refrigeration controllers Series Family Energy Flex SD, SC or SE and series Family Free Smart SMD, SMC and SME. Conversion of UL file E233482 V1S12.