

Programmable electronic ballast

ALSYVAR series



DOMZALE - SLOVENIA



↑
Vertical Mounting

DESCRIPTION

Luminous flux electronic regulator suitable to be used in public lighting. The Programmable electronic ballast is equipped with a microprocessor that automatically adjusts the lamp operation according to the environmental changing light depending on the seasons via an internal astronomical system.

It is mounted inside the streetlight door, away from heat sources, thus lengthening the module life .

Possibility to adapt the night lighting according to traffic by setting. Important energy savings achievable during the night off-peak up to 60%

On request it is possible to install in the closure the GSM module for the control and monitoring system remotely.

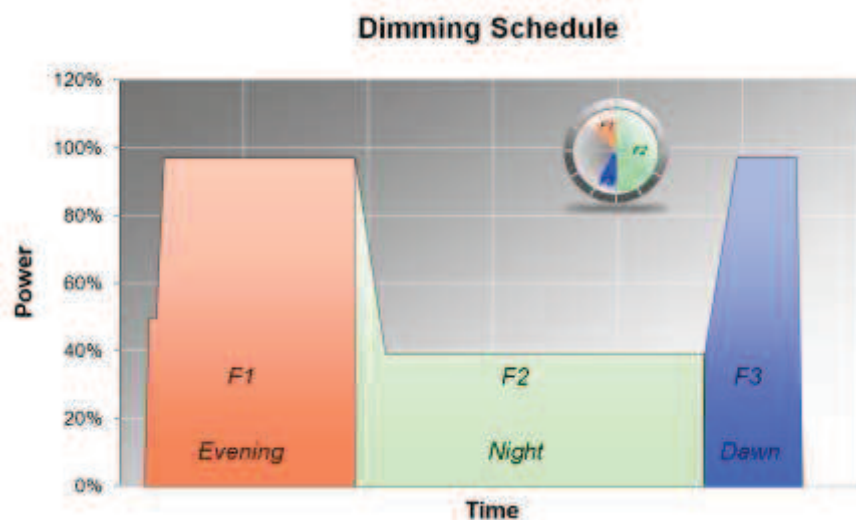
OPERATION

A unit placed at the beginning of the line commanded by a twilight probe enables at dusk and disables the lighting at dawn of a road, a parking lot, a square.

The system can be used in new or existing lighting systems where Sodium Vapor lamps are installed.

An hour before dawn at the start of urban traffic, the system will bring the lamp at full brightness in automatic mode and turn it off thanks to a twilight sensor.

OPERATING DIAGRAM



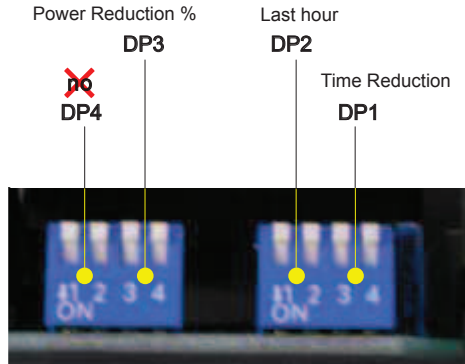
Programmable electronic ballast

ALSYVAR series



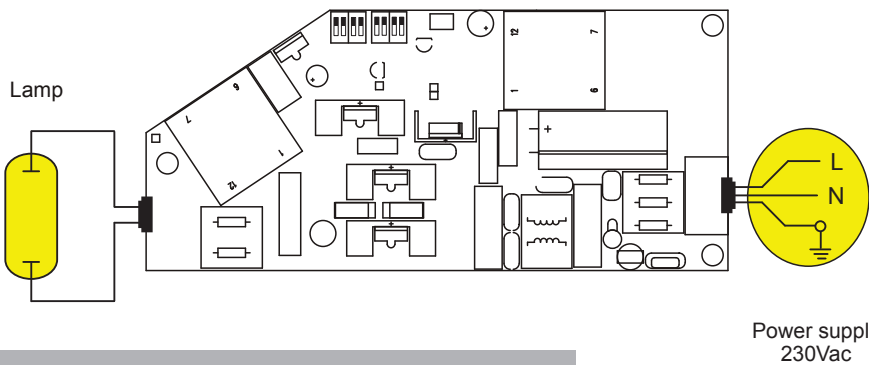
VITROLLES - FRANCE

PROGRAMMING



Programming

Double isolation (L - N) 4 KV



TECHNICAL DATA

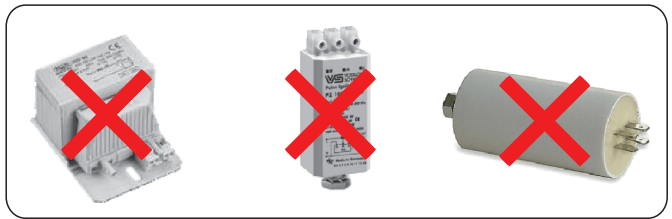
- Power supply from 190 VAC to 260 VAC/50Hz
- Reduced power consumption max = 60%
- Phase displacement power factor $\cos\phi = 0.99$
- Entering hours night reduction
- Last hour programming with the return to maximum power
- Reduced consumption = 0 - 20% - 40% - 60%

SYSTEM STRENGTHS

- 1 - Self-learning during the first night
- 2 - Extending the lamp's life + 40%.
- 3 - Immediate start with hot lamp.
- 4 - Reduction of maintenance costs.
- 5 - Power supply stabilized independent of the network.
- 6 - Remove ballast, starter, capacitor.
- 7 - Very easy to install
- 8 - Maintaining a constant power over time
- 9 - Thermostatically controlled system and self-protected
- 10 - Protection against transient network
- 11 - System with built-in astronomical clock

INSTALLATION

Before installing the module, remove the depicted components from the lamp compartment .



Vertical Mounting



PRODUCT RANGE

Model	Power	Lamp
ALSYVAR-70	70W	HPS70
ALSYVAR-100	100W	HPS100
ALSYVAR-150	150W	HPS150

Every tampering of the module should happen in absence of tension, in the opposite case the company Rasotto declines any responsibility

Programmable electronic ballast

MINIVAR series



ROGNAC - FRANCE

DESCRIPTION



Electronic luminous flux regulator suitable to be used in public lighting.

The Programmable electronic ballast is equipped with a microprocessor that automatically adjusts the lamp according to the environmental changing light depending on the seasons by means of an internal astronomical system.

The module is mounted in the lamp ceiling, its thermostat measures the inner ambient temperature constantly and reduces the output power when reaching the threshold temperature, preserving the module integrity.

Possibility to adapt the night lighting according to traffic by setting.

Important energy savings achievable during the night off-peak up to 60%

On request it is possible to install in the closure the GSM module for the control and monitoring system remotely.

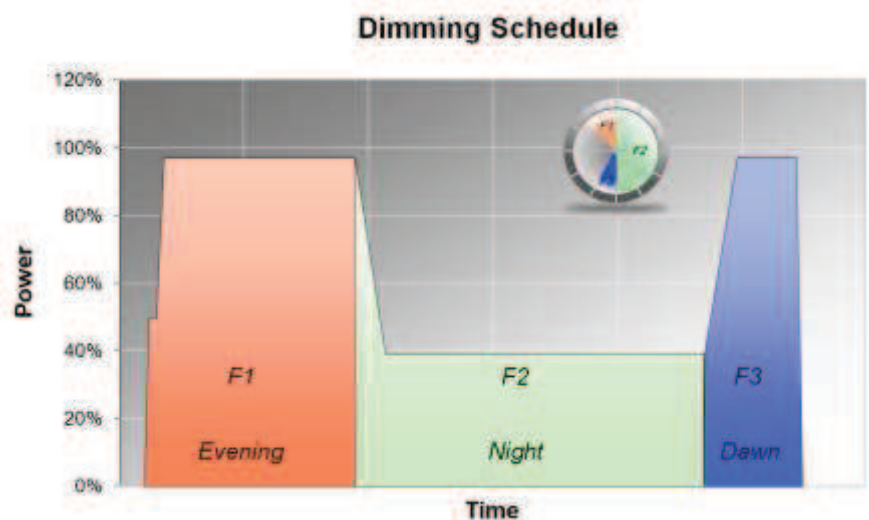
OPERATION

A unit (control panel) placed at the beginning of the line commanded by a twilight probe enables at dusk and disables the lighting at dawn of a road, a parking lot, a square.

The system can be used in new or existing lighting systems where Sodium Vapor lamps are installed.

An hour before dawn at the start of urban traffic, the system will bring the lamp at full brightness in automatic mode and turn it off thanks to a twilight sensor.

OPERATING DIAGRAM

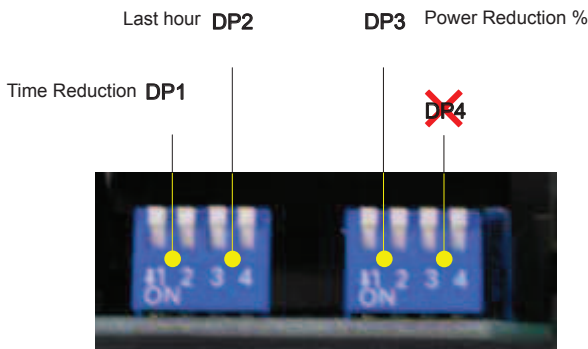


MINIVAR series



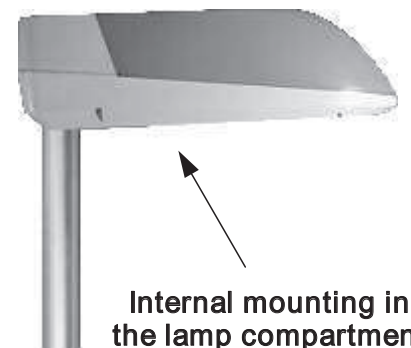
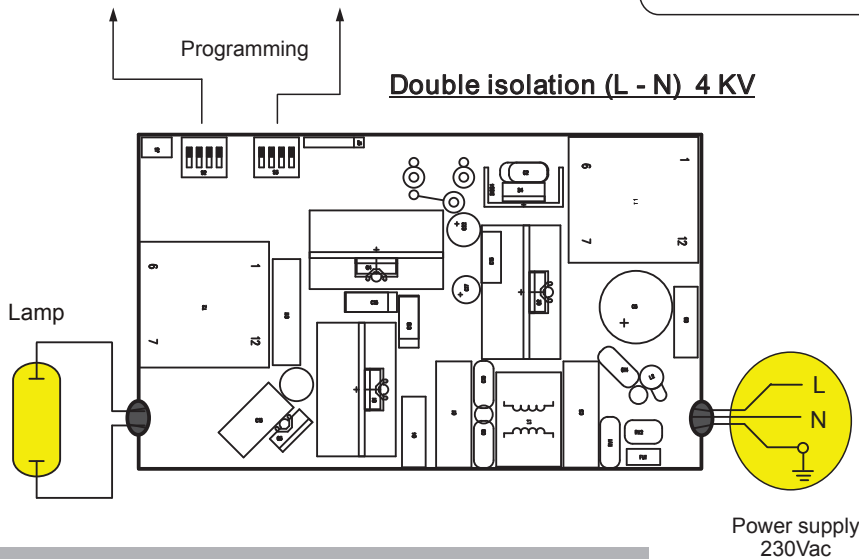
DOMZALE - SLOVENIA

PROGRAMMING



INSTALLATION

Before installing the module, remove the depicted components from the lamp compartment .



TECHNICAL DATA

- Power supply from 190 VAC to 260 VAC/50Hz
- Reduced power consumption max = 60%
- Phase displacement power factor $\cos\phi = 0.99$
- Entering hours night reduction
- Last hour programming with the return to maximum power
- Reduced consumption = 0 - 20% - 40% - 60%

SYSTEM STRENGTHS

- 1 - Self-learning during the first night
- 2 - Extending the lamp's life + 40%.
- 3 - Immediate start with hot lamp.
- 4 - Reduction of maintenance costs.
- 5 - Power supply stabilized independent of the network.
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- 7 - Very easy to install
- 8 - Maintaining a constant power over time
- 9 - Thermostatically controlled system and self-protected
- 10 - Protection against transient network
- 11 - System with built-in astronomical

PRODUCT RANGE

Model	Power	Lamp
ALSYVAR-70	70W	HPS70
ALSYVAR-100	100W	HPS100
ALSYVAR-150	150W	HPS150

Every tampering of the module should happen in absence of tension, in the opposite case the company Rasotto declines any responsibility

Programmable electronic ballast

OMNIVAR series



DOMZALE - SLOVENIA



↑
Vertical
Mounting

DESCRIPTION

OMNIVAR is a universal dimmable electronic ballast (control gear) designed to be housed in the streetlight door, away from heat sources, on street lamps, instead of the traditional ferromagnetic system.

It works with gas discharge lamps of all kinds: high pressure sodium vapors, metal halide, Masters city, mercury vapors, obtaining, during the night operation and save up to 50% compared to the traditional system.

Using the side located Dip-Switch you can set the level of savings, the opening speech, the restoration of the maximum brightness to the resumption of traffic and the choice of the type of lamp

The power line is controlled by twilight or astronomical clock. The module is able to handle the change of seasons and the solar/daylight saving times.

For programming, follow the instructions through the documentation.

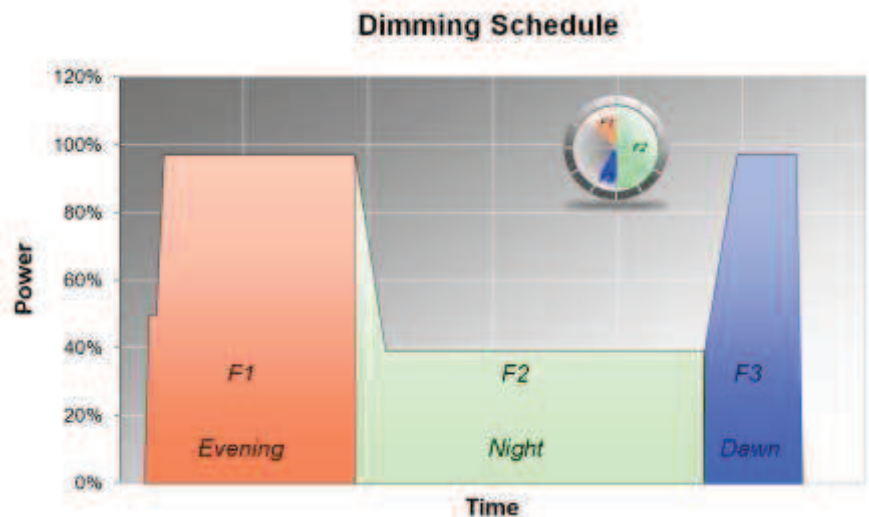
OPERATION

A unit (control panel) placed at the beginning of the line commanded by a twilight probe enables at dusk and disables the lighting at dawn of a road, a parking lot, a square.

The system can be used in new or existing lighting systems where Sodium Vapor lamps are installed.

An hour before dawn at the start of urban traffic, the system will bring the lamp at full brightness in automatic mode and turn it off thanks to a twilight sensor.

OPERATING DIAGRAM



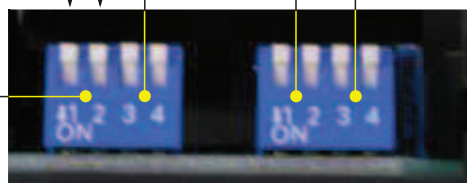
OMNIVAR series



ZABORST - SLOVENIA

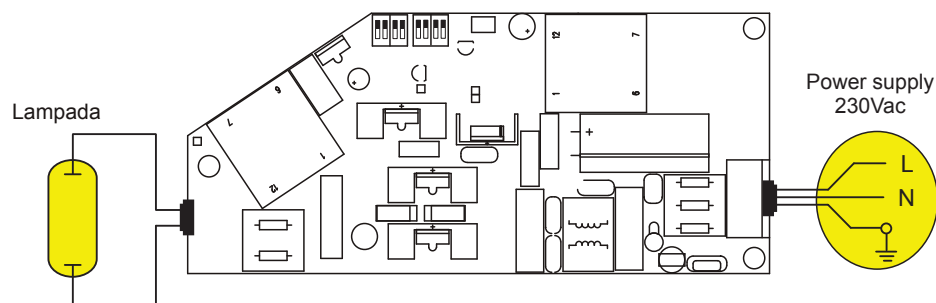
PROGRAMMING

Power Reduction % DP3
Sodium Cycle
DP2 Latest Hour
DP1 Timer Reduction
DP4



DEMO
Iodides and other
Programming

Double isolation (L - N) 4 KV
Painting on 2 sides



INSTALLATION

Before installing the module, remove the depicted components from the lamp compartment .



Mounting System



TECHNICAL DATA

- Power supply from 190 VAC to 260 VAC/50Hz
- Reduced power consumption max = 60%
- Phase displacement power factor $\cos \phi = 0.99$
- Entering hours night reduction
- Last hour programming with the return to maximum power
- Reduced consumption = 0 - 20% - 40% - 60%

PUNTI DI FORZA DEL SISTEMA

- 1 - Self-learning during the first night
- 2 - Extending the lamp's life + 40%.
- 3 - Immediate start with hot lamp.
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GAMMA PRODOTTI

Model	Power	Lamp
OMNIVAR-70	70W	Sodium/Iodide
OMNIVAR-100	100W	"
OMNIVAR-150	150W	"

Every tampering of the module should happen in absence of tension, in the opposite case the company Rasotto declines any responsibility

RAPPORTO DI PROVA
 TEST REPORT

N. 15.RA09 redatto il 14.05.2009

IDENTIFICAZIONE CLIENTE Customer/Manufacturer Identification	Rasotto s.n.c. Via dell'Artigianato, 3 36034 – Molina di Malo (Vicenza)	
RESPONSABILE PER IL CLIENTE Customer/Manufacturer Responsible	Sig. F. Rasotto	
APPARECCHIATURA SOTTO PROVA System under test	Tipo: Ballast elettronico per lampade al sodio ad alta pressione Modello: REB150 s.n.: campione di preserie Appartenenti Famiglia di prodotto: REB150-REB100-REB70	
NORME DI PRODOTTO APPLICATE Product standards applied	EN 55015 (Limiti e metodi di misura delle caratteristiche di radiodisturbo degli apparecchi di illuminazione elettrici e degli apparecchi analoghi)	ed. 2006
	EN 61547+A1 (Apparecchiature per illuminazione generale – Prescrizioni di immunità EMC)	ed. 1995
	EN 61000-3-2 (Limiti di Emissione di Corrente armonica)	ed. 2006
	EN 61000-3-3+A1+A2 (Limiti di Emiss.e Flutt. tensione / Flicker)	ed. 1995
NORME DI BASE APPLICATE Basic standards applied	EN 61000-4-2+A1+A2 (Immunità alle scariche elettrostatiche)	ed. 1995
	EN 61000-4-3 (Immunità ai campi EM a radiofrequenza irradiati)	ed. 2006
	EN 61000-4-4 (Immunità ai Fast Transient e Burst)	ed. 2004
	EN 61000-4-5 (Immunità al SURGE)	ed. 2006
	EN 61000-4-6 (Immunità condotta al campo indotto a RF)	ed. 2007
	EN 61000-4-8+A1 (Immunità al campo magnetico a 50 Hz)	ed. 1993
	EN 61000-4-11 (Immunità a interruzioni e buchi di tensione)	ed. 2004
DOCUMENTI DI RIFERIMENTO Reference documents	Piano di Prova per la marcatura CE Il Piano delle Verifiche è stato concordato con il cliente in base agli attuali requisiti di marcatura e alle specifiche richieste del prodotto.	
SCOPO DELLE PROVE Nature of Testing	Qualificazione del prodotto a scopo marcatura CE secondo i requisiti della Direttiva di prodotto 24/108/EEC (Compatibilità Elettromagnetica)	
DATA INIZIO PROVE Start test date	24.04.2009	
DATA FINE PROVE End test date	08.05.2009	
DATI LABORATORIO DI PROVA Test Facility Identification	ETL Laboratorio di Prova s.r.l. Via Lisbona, 28 - 35 127 Padova (Italy) Tel. 049 8705412 Fax. 049 8708513	
RESPONSABILE DELLE PROVE Test manager	Ing. V. Gobbi signature	
VERIFICATORE Inspection manager	Ing. M. Salmaso signature	

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SOMMARIO

CODICE PROVA	NOME PROVA	SPECIFICHE STANDARD	LIMITE - CLASSE CRITERIO ACC.	RISULTATO PROVA
T1.1	Emissione dei disturbi irradiati	CEI EN 55015: 2008 Limiti e metodi di misura delle caratteristiche di radiodisturbo degli apparecchi di illuminazione elettrici e degli apparecchi analoghi	EN 55015 Criterio 1	Conforme
T1.2	Emissione dei disturbi Condotti	CEI EN 55015: 2008 Limiti e metodi di misura delle caratteristiche di radiodisturbo agli apparecchi di illuminazione elettrici e degli apparecchi analoghi	EN 55015 Criterio 1	Conforme
T1.3	Emissione di corrente armonica	EN61000-3-2: 2006 Compatibilità elettromagnetica (EMC) Parte 3-2: Limiti -Limiti per le emissioni di corrente armonica (apparecchiature con corrente di ingresso <= 16 A per fase).	Limite Classe C	Conforme
T1.4	Emissione: fluttuazioni di tensione e di flicker	EN61000-3-3:1995+A1:2001+A2:2005 Compatibilità elettromagnetica (EMC) Parte 3-3: Limiti -Limitazione delle fluttuazioni di tensione e del flicker nei sistemi di alimentazione in bassa tensione per apparecchiature con corrente nominale <= 16 A e non soggette ad allacciamento su condizione.	Pst, Plt, dc, dmax, dt	Conforme
T1.5	Immunità alle Scariche Elettrostatiche	EN61000-4-2:1995+A1:1998+A2:2001 Compatibilità elettromagnetica (EMC) – Parte 4: Tecniche di prova e di misura Sezione 2: Prove di immunità a scarica elettrostatica.	Livello 2, 3 (CD) Livello 3 (AD) Criterio B	Conforme
T1.6	Immunità irradiata	EN 61000 - 4-3+A1: 2006 Compatibilità elettromagnetica (EMC) – Parte 4: Tecniche di prova e di misura Sezione 3: Prove di immunità al campo elettromagnetico irradiato a radio frequenza.	Level 2 Criterio A	Conforme
T1.7	Immunità ai Transitori veloci/ Bursts	EN 61000-4-4: 2004 Compatibilità elettromagnetica (EMC) – Parte 4.4: Tecniche di prova e di misura. Prove di immunità a transitori/raffiche di impulsi elettrici veloci.	Livello 2 Criterio B	Conforme
T1.8	Immunità all' impulso ad alta energia / SURGE	EN 61000-4-5: 2006 Compatibilità elettromagnetica (EMC). Parte 4-5: Tecniche di prova e di misura - Prova di immunità ad impulso	Livelli 2, 3 Criterio B	Conforme
T1.9	Immunità ai disturbi condotti a radiofrequenza	EN 61000-4-6: 2007 - Compatibilità elettromagnetica (EMC). Parte 4-6: Tecniche di prova e di misura - Immunità ai disturbi condotti, indotti da campi a radiofrequenza	Livello 2 Criterio A	Conforme
T1.10	Immunità al campo magnetico a 50 Hz	EN 61000-4-8:1993+A1:2001 Compatibilità elettromagnetica (EMC) – Part 4: Tecniche di prova e di misura Sezione 8: Prove di immunità al campo magnetico a 50 Hz	Level 2 3 A/m Criterio A	Conforme
T1.11	Immunità alle microinterruzioni e variazioni di tensione	EN61000-4-11:2004 Compatibilità elettromagnetica (EMC). Parte 4-11: Tecniche di prova e di misura - Prove di immunità a buchi di tensione, brevi interruzioni e variazioni di tensione	-100% @ 0.5 periodi -30% @ 10 periodi Criterio C	Conforme

HARMONIZED STANDARDS FOR CE MARKING

The below listed standards, as per the harmonized Italian version CEI, allow to apply the principle of “*Presumption of Conformity*” to the European directives, related to the minimum requirements of Electromagnetic Compatibility.

ELECTROMAGNETIC COMPATIBILITY

CEI EN 55015: 2008

Limits and measurement methods of Radio disturbance of electric lighting devices and similar equipments.

CEI EN 61547: 1996

General lighting equipments – Requirements of Immunity EMC

CEI EN 6100-3-2: 2007

Electromagnetic compatibility (EMC) – Part 3: Limits – Section 2: limits of harmonic current (devices with input current $\leq 16A$ / phase).

CEI EN 6100-3-3: 1997+A1: 2002+A2/ISI: 2006

Electromagnetic Compatibility (EMC) – Part 3: Limits – Section 3: limitation of voltage and flicker's fluctuations on systems with low tension power supply for equipments with rated current $< 16A$ and without conditional connection.



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CERTIFICATO n. **3143/3**
CERTIFICATE No. _____

SI CERTIFICA CHE IL SISTEMA DI GESTIONE PER LA QUALITA' DI
WE HEREBY CERTIFY THAT THE QUALITY MANAGEMENT SYSTEM OPERATED BY

RASOTTO S.n.c.
di Rasotto Francesco & C.

UNITA' OPERATIVE
OPERATIVE UNITS

Via dell'Artigianato, 3 - 36034 Malo (VI)
Italia

E' CONFORME ALLA NORMA
IS IN COMPLIANCE WITH THE STANDARD

UNI EN ISO 9001:2008

PER LE SEGUENTI ATTIVITA'
FOR THE FOLLOWING ACTIVITIES

EA: 19

Progettazione, produzione e assistenza di apparecchiature per
l'automazione industriale integrata e per la domotica.

*Design, production and assistance for integrated industrial
automation appliances and home automation devices.*

Riferirsi al Manuale della Qualità per l'applicabilità dei requisiti della norma di riferimento.
Refer to Quality Manual for details of application to reference standard requirements.

Il presente certificato è soggetto al rispetto del regolamento per la certificazione dei sistemi di gestione per la qualità delle aziende.
The use and the validity of this certificate shall satisfy the requirements of the rules for the certification of company quality management systems.

Data emissione
First issue
14/07/2004

Emissione corrente
Current issue
14/07/2013

Data di scadenza
Expiring date
13/07/2016

ICIM S.p.A.

Piazza Don Enrico Mapelli, 75 - 20099 Sesto San Giovanni (MI)

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Certification in the world.
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bodies and counts over 150 subsidiaries
all over the globe.



SGQ N° 0044
SGA N° 0050
SCR N° 006F
PRS N° 002C

SEI N° 0090
RIT N° 0048
ISP N° 046E

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Signatory of EA, IAF and ILAC Mutual Recognition Agreements



www.cisq.com



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