Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

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Технические характеристики на распределительные щиты для генераторных установок LEM-430-436, NEC-402, NEC-405 компании ELCOS

EMERGENCY AUTOMATIC PANELS FOR GENSET UNITS FITTING DIESEL OR PETROL (For petrol motor please request the relative documentation)

LEM-430-435 VERSION

This only controls and commands the genset unit, maintains the charge of the start battery and connects the user to the mains or generator. It has been designed on a wall.

INSTRUCTION AND USER MANUAL

TYPE	CONTACTOR CAPACITY A(Ac1)	Thermal-magnetic circuit breaker ON REQUEST A	
LEM-435/15	30 Three-phase 48 Single-phase	25 40	
LEM-430/30	45	50	Three-phase

COMPLETE WITH DISPLAY TO SHOW:

- useful signals for generator set management.
- **7 instruments**:
  - mains voltmeter
  - generator voltmeter
  - generator frequency meter
  - total hour meter
  - partial hour meter
  - battery voltmeter
  - fuel level indicator

SIMULTANEOUS READING OF 3 INSTRUMENTS

- REMOTE SWITCHING MAINS/GENSET
- SINGLE-PHASE VOLTMETRIC MAINS/GENERATOR CONTROL
- AUTOMATIC BATTERY CHARGING (1A)
- AUTOMATIC SUPERVISION OF FAULTS
- GLOW PLUGS CONTROL
- STARTER CONTROL
- REMOTE COMMANDS WITH CONTACTS (STARTUP- STOP - TEST)
- PROGRAMMING OF PARAMETERS MADE EASY BY DIP SWITCHES
- AVAILABLE INPUT FOR ANOMALY
- CLOCK FOR PROGRAMMING THE START UP OR STOPPING OF THE GENSET
- PROGRAMMABLE WEEKLY SELFTEST
- ANOMALY HISTORICAL RECORD (Including data from the last 100 anomalies)

FUNCTIONS ON REQUEST

- THREE-PHASE MAINS VOLTMETRIC CONTROL

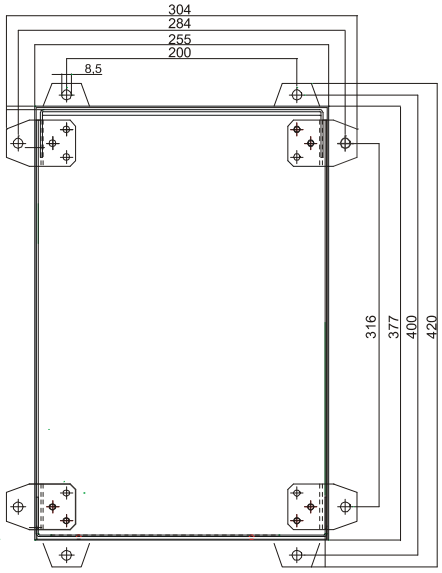
- GENERATOR OVERLOAD SWITCH

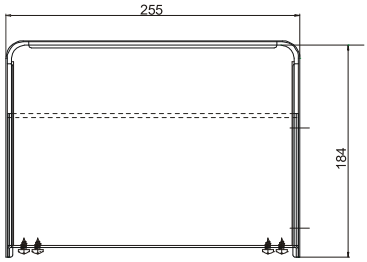
- PRE-WIRED MALE CONNECTOR

COMPONENTS LIST

DESCRIPTION	TYPE	ELCOS CODE	MANUFACTURER	QUANTITY
Structure	bottom cove	40750674 40750670		1 1
ELECTRONIC CARD	SEA-430/10 12 V 24 V	40243025 40243026	ELCOS	1
FUSES HOLDERS	PS 10/E 50.101.001	70450833	WIMEX	2
FUSES	10A	70400306		
TERMINAL BOARDS	CBD16	70421790	CABUR	4 (LEM-430/30) 12 (LEM-435/15)
CONTACTORS	AF16400013 VERSION LEM-435/15	70100825	ABB	2
CONTACTORS	AF26400013 VERSION LEM-430/30	70100826		2
MECHANICAL LOCK	VEM4	70100845		1

DIMENSIONS





TECHNICAL DATA

TYPE	PRP (1)	COP (2)	POWER SUPPLY RATED CURRENT A	CONTACTOR CAPACITY (AC1)	CONTACTORS SHORT DURATION CURRENT
LEM-435/15	15 THREE-PHASE	13,5	22	30	300 A x 1”
	10 SINGLE-PHASE	9	43	48	
LEM-430/30	30	27	43	45	450 A x 1”

Simplified definition of power in accordance with standard ISO8528

(1) **PRP (Prime Power)**
The PRP is the maximum power that the generator set can supply at variable load during a work cycle for an unlimited number of hours per year.“The Permissible Average Power (Ppp) during a 24-hour cycle must not exceed 70% of the PRP value.

(2) **COP (Continuous Power)**
The COP is the maximum power that the generator set can supply, for an unlimited number of“hours per year, at constant load.

- Rated mains/generator voltage	400 VAC
- Battery supply voltage	12VDC (16VDC MAX)
- Frequency	50÷60 Hz
- Absorption with engine running without mains	150 mA at 12V
- Selfabsorption with engine stationary without mains	38 mA at 12V
- Battery charger supply	MAX 1 A
- Heater output	230 VAC MAX 1500 W
- Rated insulation voltage:	
- Mains voltage terminals	400V
- Battery voltage terminals	32V
- Insulation class	Class I
- Hour meter	4 digits
- Frequency meter	0-85 Hz, Precision ±0,1 Hz
- Battery voltmeter	Max 38V, Precision 2%
- Mains voltmeter	Max 440V, Precision ±2%
- Generator Voltmeter	Max 440V, Precision ±2%
- Generator ammeter	Max 60A, Precision ±2%
- Outputs 6-17	MAX 1A
- Outputs 15 - 19 - 70	MAX 3W
- Degree of protection:	
Accessible sides	IP40
Wall sides	IP20
- Temperature range	-30 ÷ +40 ° C
- Relative humidity	90% MAX (without condensation of water) at 40°C
- Altitude	MAX 1000 mt a.s.l.
- Functioning of system	in insulation
- Installation conditions	for internal use
- Plant system to which it is connected	TN-IT-TT
- Panel weight:	
- VERSION LEM-435/15	Kg. 6,5
- VERSION LEM-430/30	Kg .6,5

The protections against direct/indirect contacts on the genset unit line, must adhere to the requirements described in the regulation CEI 64-8

ORDERING DATA

Type	Volt	Code
LEM-435/15	12	00021367
LEM-430/30	12	00021365

SUPPLIED ACCESSORIES

LEM MOUNTING BRACKET KIT	40750689
JUMPERS KIT SOLELY FOR LEM-435/15 VERSION	40179911

INSTRUCTION AND USER MANUAL

EMERGENCY AUTOMATIC PANELS FOR GENSET UNITS FITTING DIESEL OR PETROL (For petrol motor please request the relative documentation)

LEM-436-431 VERSION

This only controls and commands the genset unit, maintains the charge of the start battery and connects the user to the mains or generator. It has beeen designed on a wall.

TYPE	CONTACTOR CAPACITY Amp (Ac1)	Thermal-magnetic circuit breaker ON REQUEST A
LEM-436/15	30	25
LEM-431/30	45	50

COMPLETE WITH DISPLAY TO SHOW:
- useful signals for generator set management.
- **8 instruments**:
- mains voltmeter
- generator voltmeter
- **generator ammeter**
- generator frequency meter
- total hour meter
- partial hour meter
- battery voltmeter
- fuel level indicator

SIMULTANEOUS READING OF 3 INSTRUMENTS

- REMOTE SWITCHING MAINS/GENSET
- SINGLE-PHASE VOLTMETRIC MAINS/GENERATOR CONTROL
- AUTOMATIC BATTERY CHARGING (1A)
- AUTOMATIC SUPERVISION OF FAULTS
- GLOW PLUGS CONTROL
- STARTER CONTROL
- REMOTE COMMANDS WITH CONTACTS (STARTUP- STOP - TEST)
- PROGRAMMING OF PARAMETERS MADE EASY BY DIP SWITCHES
- AVAILABLE INPUT FOR ANOMALY
- CLOCK FOR PROGRAMMING THE START UP OR STOPPING OF THE GENSET
- PROGRAMMABLE WEEKLY SELFTEST
- ANOMALY HISTORICAL RECORD (Including data from the last 100 anomalies)
- EMERGENCY BUTTON

FUNCTIONS ON REQUEST

- THREE-PHASE MAINS VOLTMETRIC CONTROL

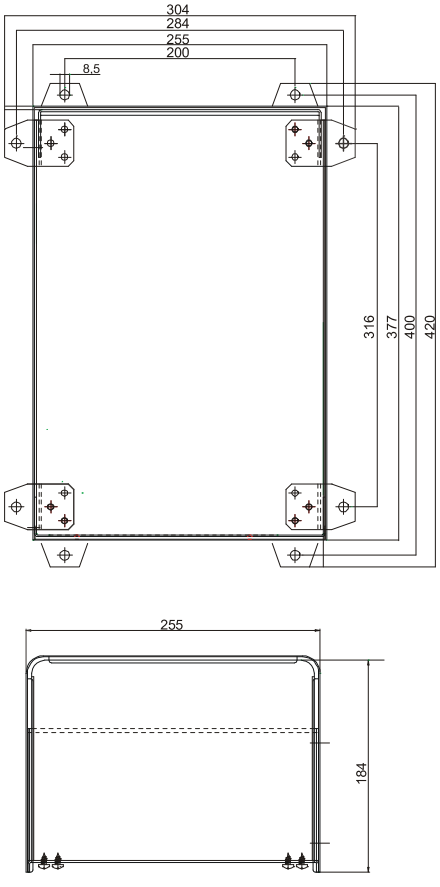
- GENERATOR OVERLOAD SWITCH

- PRE-WIRED MALE CONNECTOR

COMPONENT LIST

DESCRIPTION	TYPE	ELCOS CODE	MANUFACTURER	QUANTITY
STRUCTURE	BOTTOM	40750674		1
	COVER	40750670		1
ELECTRONIC CARD	SEA-430/10 12V 24V WITH ACTIVATED AMMETER	40243025 40243026	ELCOS	1
FUSES HOLDERS	PS 10/E 50.101.001	70450833	WIMEX	2
FUSES	10A	70400306		
TERMINAL BOARDS	CBD16	70421790	CABUR	12 (LEM-436/15)
				4 (LEM-431/30)
CONTACTORS	AF16400013 VERSION LEM-436/15	70100825	ABB	2
	AF26400013 VERSION LEM-431/20	70100826		
ELECTROMECHANICAL INTERBLOCK	VEM4	70100845		1
MUSHROOM BUTTON WITH LOCK	PPFN 1 R 4N	70601200	OMRON	1
AMPEROMETRIC TRANSFORMER	TAIBB-60/5-	70512401	IME	1
THERMAL-MAGNETIC CIRCUIT BREAKER ON REQUEST	25A VERSION LEM-436/15	40100062	ABB	1
	50A VERSION LEM-431/30	40100064		

DIMENSIONS



TECHNICAL DATA

TYPE	PRP (1)	COP (1)	POWER SUPPLY RATED CURRENT A	CONTACTOR CAPACITY (AC1)	CONTACTORS SHORT DURATION CURRENT
LEM-436/15	15 Threephase	13,5	22	30	300 A x 1”
LEM-431/30	30	27	43	45	450 A x 1”

Simplified definition of power in accordance with standard ISO8528

(1) **PRP (Prime Power)**
The PRP is the maximum power that the generator set can supply at variable load during a work cycle for an unlimited number of hours per year.“The Permissible Average Power (Ppp) during a 24-hour cycle must not exceed 70% of the PRP value.

(2) **COP (Continuous Power)**
The COP is the maximum power that the generator set can supply, for an unlimited number of“hours per year, at constant load.

- Selfabsorption with engine stationary, without mains — 38 mA at 12V
- Electrical input with engine running without mains — 150 mA at 12V
- Max consumption — 385mA at 12V
- Battery charger supply — MAX 1 A
- Mains/generator rated voltage — 220÷ 450Vac ±10%; frequency 50÷60Hz
- Battery supply voltage — 12VDC (16VDC MAX)
- Rated insulation voltage:
  - Terminal board mains/generator — 400V
  - Terminal board of battery — 32V
- Insulation class — Class I
- Max amperes of the outputs:
  - 6-17 — MAX 1A
  - 15 - 19 - 70 — MAX 3W
- Amperes of contacts for gen./mains contactors — 250V 3A
- Heater output — 230 V 1500 W
- Degree of instruments:
  - Battery voltmeter — Max 38V, Precision 2%
  - Mains/Generator Voltmeter — Precision ±2% field of measurement 50÷ 253Vac
  - Generator ammeter — Max 1000A, Precision ±2%field of measurement 0,02(20ma) 6A
  - Frequency meter — 0-85 Hz, Precision ±0,1 Hz frequency field 45÷85Hz
- Hour meter — 4 digits
- Degree of protection:
  - Accessible sides — IP40
  - Wall sides — IP20
- Temperature range — -30 ÷ +40 ° C
- Relative humidity — 90% MAX (without condensation of water) at 40°C
- Altitude — MAX 1000mt a.s.l.
- Functioning of system — in insulation
- Plant system to which it is connected — TN-IT-TT
- Installation conditions — for internal use
- Panel weight:
  - VERSION LEM-436/15 — Kg. 7
  - VERSION LEM-431/30 — Kg .7

The protections against direct/indirect contacts on the genset unit line, must adhere to the requirements described in the regulation CEI 64-8

INFORMATION FOR ORDERING	
Type	**Code (12V battery)**
NEC-402/15	00022691
NEC-402/30	00022692
NEC-402/40	00022693
NEC-402/65	00022695
NEC-402/80	00022697

STANDARD ACCESSORIES	
Type	**Code**
4 wall mount brackets kit ZN001000	70750626

ACCESSORIES AVAILABLE ON REQUEST
AUTOMATIC 4-POLE MAGNETOTHERMAL SWITCH

AUTOMATIC CONTROL PANEL FOR THREE-PHASE EMERGENCY GENERATING SET

Type NEC-402

It exclusively controls and operates the genset, maintains the starter battery charge and connects the power user to the mains or generator. Built for wall installation.

INSTALLATION MANUAL

Type	kVA (PRP)	In (A)	Dimensions L x H x P (mm)	Switching
NEC-402/15	15	22	400x600x250	With CONTACTORS
NEC-402/30	30	43	400x600x250	
NEC-402/40	40	58	400x600x250	
NEC-402/65	65	94	600x800x300	
NEC-402/80	80	116	600x800x300	

Complete with:

- Automatic CAM-402 type control unit.
- CBS-010 1A 12V type automatic battery charger.

INFORMATION FOR ORDERING	
Type	**Code (12V battery)**
NEC-402/15	00022691
NEC-402/30	00022692
NEC-402/40	00022693
NEC-402/65	00022695
NEC-402/80	00022697

STANDARD ACCESSORIES	
Type	**Code**
4 wall mount brackets kit ZN001000	70750626

ACCESSORIES AVAILABLE ON REQUEST
AUTOMATIC 4-POLE MAGNETOTHERMAL SWITCH

TECHNICAL SPECIFICATIONS									
Type	**Power PRP (1)**		**Power COP (2)**		**Capacity at 40°C**	**Short time current**	**Making capacity at 400V**	**Breaking capacity at 400V**	**Panel dimensions**
	kVA	**A**	**kVA**	**A**	**A**	**A x 1sec**	**A**	**A**	**L x H x P (mm)**
NEC-402/15	15	22	13,5	19	30(AC1)	300	300 (AC1)	240 (AC1)	400x600x250
NEC-402/30	30	43	27	38	45 (AC1)	450	450 (AC1)	360 (AC1)	400x600x250
NEC-402/40	40	58	36	52	70 (AC1)	1000	700 (AC1)	560 (AC1)	400x600x250
NEC-402/65	65	94	58	85	100 (AC1)	1000	1000 (AC1)	800 (AC1)	600x800x300
NEC-402/80	80	116	72	104	125 (AC1)	1200	1250 (AC1)	1000 (AC1)	600x800x300

Simplified definition of power according to the ISO8528 standard.

(1) PRP (Prime Power): PRP is the maximum power the generator set can provide under a variable load during a work cycle for an unlimited number of hours per year. The average permitted power during a 24-hour cycle (Ppp - Permissible Average Power) must not exceed 70% of the PRP.

(2) COP (Continuous Power): COP is the maximum power the generator set can provide for an unlimited number of hours per year under a constant load.

TECHNICAL SPECIFICATIONS		
Battery power supply		
Suitable for batteries		12Vdc
Operating range		8 ÷ 48Vdc
Absorption with engine not running		110mA@12Vdc
Battery charger		
Maximum current supplied		1Adc
Self-consumption in a blackout		12mAdc
Mains and generator voltmetric inputs		
Mains / generator rated voltage		400Vac ±10%
Rated insulation voltage	Mains voltage terminal	450Vac
	Genset voltage terminal	450Vac
	Battery voltage terminal	32Vac
Insulation class		CLASS 1
Overvoltage category		CATEGORY 3
Mains and generator frequency		50 ÷ 60Hz
Heater output		
Rated voltage		230Vac
Maximum power		1000W
Digital output		
Type of output		Positive (battery voltage)
Maximum load	Terminal X4-8, X4-9, X4-11, X4-30	0,25A
	Terminal X4-10	1,5A
Environmental conditions		
Operating temperature		-20 ÷ 40°C
Storage temperature		-20 ÷ 60°C
Maximum relative humidity		≤ 80% without condensate at @ 40°C
Maximum altitude		1000 m a.s.l.
Protection class		
Protection class		IP 54
Installation conditions		FOR INDOOR USE
Electrical specifications		
Operation		STAND-ALON
Power systems to which it is connected		TN-IT-TT
Panel weight		
NEC-402/15		20kg
NEC-402/30		20kg
NEC-402/40		20kg
NEC-402/65		25kg
NEC-402/80		25kg

LIST OF COMPONENTS						
Panel	**Item**	**Description**	**Type**	**Code**	**Brand**	**Q.ty**
NEC-405/15	KM-G, KM-R	CONTACTOR AF16400013 4P 30A AC1 100-250VAC/DC	AF16400013	70100825	ABB	2
	TA1,TA2,TA3	CURRENT TRANSFORMER TAIBB D21/16*12.5 40/5	TAIBB 40/5	70512399	IME	3
	S1	HORIZONTAL MECHANICAL INTERLOCK VEM4	VEM4	70100845	ABB	1
	X2	FEED-THROUGH TERMINAL BLOCK	CBC.16/GR	70421790	CABUR	4
	SC2	BATTERY CHARGER P/CBS-010 12V	CBS-010 12V	40010101	ELCOS	1
	Q1 (Optional)	MAGNETOTHERMAL SWITCH 4P 25A - S204 C25 6KA	S529235	70100963	ABB	1
	FU2	FUSE 10,3X38 1A gG	5400101	70400301	WIMEX	1
	FU7	FUSE 10,3X38 2A gG	5400102	70400302	WIMEX	1
NEC-405/30	KM-G, KM-R	CONTACTOR AF26400013 45A AC1 100-250VAC/DC	AF26400013	70100826	ABB	2
	TA1,TA2,TA3	CURRENT TRANSFORMER TAIBB D21/16*12.5 50/5	TAIBB 50/5	70512400	IME	3
	S1	HORIZONTAL MECHANICAL INTERLOCK VEM4	VEM4	70100845	ABB	1
	X2	FEED-THROUGH TERMINAL BLOCK	CBC.16/GR	70421790	CABUR	4
	SC2	BATTERY CHARGER P/CBS-010 12V	CBS-010 12V	40010101	ELCOS	1
	Q1 (Optional)	MAGNETOTHERMAL SWITCH 4P 50A – S204 C50 6KA	S551106	70100966	ABB	1
	FU2	FUSE 10,3X38 1A gG	5400101	70400301	WIMEX	1
	FU7	FUSE 10,3X38 2A gG	5400102	70400302	WIMEX	1
NEC-405/40	KM-G, KM-R	CONTACTOR AF40400013 4P 70A AC1 100-250VAC/DC	AF40400013	70100829	ABB	2
	TA1,TA2,TA3	CURRENT TRANSFORMER TAIBB D21/16*12.5 60/5	TAIBB 60/5	70512401	IME	3
	S1	HORIZONTAL MECHANICAL INTERLOCK	VM964	70100846	ABB	1
	KM-R, KM-G	SIDE AUX CONTACT	CAL411	70100857	ABB	2
	X2	FEED-THROUGH TERMINAL BLOCK	CBC.16/GR	70421790	CABUR	4
	SC2	BATTERY CHARGER P/CBS-010 12V	CBS-010 12V	40010101	ELCOS	1
	Q1 (Optional)	MAGNETOTHERMAL SWITCH 4P 63A – S204 C63 6KA	S551113	70100967	ABB	1
	FU2	FUSE 10,3X38 1A gG	5400101	70400301	WIMEX	1
	FU7	FUSE 10,3X38 2A gG	5400102	70400302	WIMEX	1
NEC-405/65	KM-G, KM-R	CONTACTOR AF52400013 4P 100A AC1 100-250VAC/DC	AF52400013	70100831	ABB	2
	TA1,TA2,TA3	CURRENT TRANSFORMER TAIBB D21/16*12.5 100/5	TAIBB 100/5	70512403	IME	3
	S1	HORIZONTAL MECHANICAL INTERLOCK	VM964	70100846	ABB	1
	KM-R, KM-G	SIDE AUX CONTACT	CAL411	70100857	ABB	2
	X2	FEED-THROUGH TERMINAL BLOCK	GPA.70/GR	70421789	CABUR	4
	SC2	BATTERY CHARGER P/CBS-010 12V	CBS-010 12V	40010101	ELCOS	1
	Q1 (Optional)	MAGNETOTHERMAL SWITCH 4P 100A-S804B C100 16KA	S804BC100	70100976	ABB	1
	FU2	FUSE 10,3X38 1A gG	5400101	70400301	WIMEX	1
	FU7	FUSE 10,3X38 2A gG	5400102	70400302	WIMEX	1
NEC-405/65CM	KM	POWERED SWITCHING ATyS 4X100A AC23 230V	95034010	70100363	SOCOMEC	1
	TA1,TA2,TA3	CURRENT TRANSFORMER TAIBB D21/16*12.5 100/5	TAIBB 100/5	70512403	IME	3
	X2	FEED-THROUGH TERMINAL BLOCK	GPA.70/GR	70421789	CABUR	4
	SC2	BATTERY CHARGER P/CBS-010 12V	CBS-010 12V	40010101	ELCOS	1
	Q1 (Optional)	MAGNETOTHERMAL SWITCH 4P 100A-S804B C100 16KA	S804BC100	70100976	ABB	1
	FU2	FUSE 10,3X38 1A gG	5400101	70400301	WIMEX	1
	FU7	FUSE 10,3X38 2A gG	5400102	70400302	WIMEX	1
NEC-405/80	KM-G, KM-R	CONTACTOR AF80400013 4P 125A AC1 100-250VAC/DC	AF80400013	70100833	ABB	2
	TA1,TA2,TA3	CURRENT TRANSFORMER TAIBB D21/16*12.5 150/5	TAIBB 150/5	70512404	IME	3
	S1	HORIZONTAL MECHANICAL INTERLOCK	VM964	70100846	ABB	1
	KM-R, KM-G	SIDE AUX CONTACT	CAL411	70100857	ABB	2
	X2	FEED-THROUGH TERMINAL BLOCK	GPA.70/GR	70421789	CABUR	4
	SC2	BATTERY CHARGER P/CBS-031 12V	CBS-031 12V	40010440	ELCOS	1
	Q1 (Optional)	MAGNETOTHERMAL SWITCH 4P 125A-S804B C125 16KA	S2084BC125	70100977	ABB	1
	FU2	FUSE 10,3X38 2A gG	5400102	70400302	WIMEX	1
	FU7	FUSE 10,3X38 6A gG	5400106	70400306	WIMEX	1
NEC-405/80CM	KM	POWERED SWITCHING ATyS 4X125A AC23 230V	95034012	70100364	SOCOMEC	1
	TA1,TA2,TA3	CURRENT TRANSFORMER TAIBB D21/16*12.5 150/5	TAIBB 150/5	70512404	IME	3
	X2	FEED-THROUGH TERMINAL BLOCK	GPA.70/GR	70421789	CABUR	4
	SC2	BATTERY CHARGER P/CBS-031 12V	CBS-031 12V	40010440	ELCOS	1
	Q1 (Optional)	MAGNETOTHERMAL SWITCH 4P 125A-S804B C125 16KA	S2084BC125	70100977	ABB	1
	FU2	FUSE 10,3X38 2A gG	5400102	70400302	WIMEX	1
	FU7	FUSE 10,3X38 6A gG	5400106	70400306	WIMEX	1
NEC-405/110	KM	POWERED SWITCHING ATySr 4X160A AC23 230V	95034016	70100365	SOCOMEC	1
	TA1,TA2,TA3	CURRENT TRANSFORMER TA327 D27/32*10,5 250/5	TA327	70512407	IME	3
	SC2	BATTERY CHARGER P/CBS-031 12V	CBS-031 12V	40010440	ELCOS	1
	Q1 (Optional)	MAGNETOTHERMAL SWITCH 4P 160A TMG 36kA	XT2N160TMGN	70100905	ABB	1
	FU2	FUSE 10,3X38 2A gG	5400102	70400302	WIMEX	1
	FU7	FUSE 10,3X38 6A gG	5400106	70400306	WIMEX	1
NEC-405/150	KM	POWERED SWITCHING ATySr 4X250A AC23 230V	95234025	70100367	SOCOMEC	1
	TA1,TA2,TA3	CURRENT TRANSFORMER TA327 D27/32*10,5 250/5	TA327 250/5	70512407	IME	3
	SC2	BATTERY CHARGER P/CBS-061 12V	CBS-061 12V	40010444	ELCOS	1
	Q1 (Optional)	MAGNETOTHERMAL SWITCH 4P 250A TMG 36kA	XT3N250TMGN	70100907	ABB	1
	FU2	FUSE 10,3X38 4A gG	5400104	70400304	WIMEX	1
	FU7	FUSE 10,3X38 10A gG	5400110	70400306	WIMEX	1
NEC-405/250	KM	POWERED SWITCHING ATySr 4X400A AC23 230V	95234040	70100369	SOCOMEC	1
	TA1,TA2,TA3	CURRENT TRANSFORMER TA540 400/5	TA540 400/5	70512454	IME	3
	SC2 12V	BATTERY CHARGER P/CBS-061 12V	CBS-061 12V	40010444	ELCOS	1
	SC2 24V	BATTERY CHARGER P/CBS-061 24V	CBS-061 24V	40010445	ELCOS	1

	Q1 (Optional)	MAGNETOTHERMAL SWITCH 4P 400A PR221DS-LS/I 36kA	1SDA054325R1	70100909	ABB	1
	FU2	FUSE 10,3X38 4A gG	5400104	70400304	WIMEX	1
	FU7	FUSE 10,3X38 10A gG	5400110	70400306	WIMEX	1
NEC-405/330	KM	POWERED SWITCHING ATySr 4X500A AC23 220V	95234050	70100370	SOCOMEC	1
	TA1,TA2,TA3	CURRENT TRANSFORMER TA540 600/5	TA540 600/5	70512455	IME	3
	SC2	BATTERY CHARGER P/CBS-061 24V	CBS-061 24V	40010445	ELCOS	1
	Q1 (Optional)	MAGNETOTHERMAL SWITCH 4P 630A PR221DS-LS/I 36kA	1SDA054400R1	70100911	ABB	1
	FU2	FUSE 10,3X38 4A gG	5400104	70400304	WIMEX	1
	FU7	FUSE 10,3X38 10A gG	5400110	70400306	WIMEX	1
NEC-405/410	KM	POWERED SWITCHING ATySr 4X630A AC23 230V	95234063	70100371	SOCOMEC	1
	TA1,TA2,TA3	CURRENT TRANSFORMER TA540 600/5	TA540 600/5	70512455	IME	3
	SC2	BATTERY CHARGER P/CBS-061 24V	CBS-061 24V	40010445	ELCOS	1
	Q1 (Optional)	MAGNETOTHERMAL SWITCH 4P 630A PR221DS-LS/I 36kA	1SDA054400R1	70100911	ABB	1
	FU2	FUSE 10,3X38 4A gG	5400104	70400304	WIMEX	1
	FU7	FUSE 10,3X38 10A gG	5400110	70400306	WIMEX	1
NEC-405/500	KM	POWERED SWITCHING ATySr 4X800A AC23 230V	95234079	70100372	SOCOMEC	1
	TA1,TA2,TA3	CURRENT TRANSFORMER TAS64 800/5	TAS64 800/5	70512456	IME	3
	SC2	BATTERY CHARGER P/CBS-061 24V	CBS-061 24V	40010445	ELCOS	1
	Q1 (Optional)	MAGNETOTHERMAL SWITCH 4P 800A PR221DS-LS/I 36kA	1SDA060273R1	70100913	ABB	1
	FU2	FUSE 10,3X38 4A gG	5400104	70400304	WIMEX	1
	FU7	FUSE 10,3X38 10A gG	5400110	70400306	WIMEX	1
NEC-405/650	KM	POWERED SWITCHING ATySr 4X1000A AC23 230V	95234100	70100373	SOCOMEC	1
	TA1,TA2,TA3	CURRENT TRANSFORMER TAS64 1200/5	TAS64 1200/5	70512457	IME	3
	SC2	BATTERY CHARGER P/CBS-061 24V	CBS-061 24V	40010445	ELCOS	1
	FU2	FUSE 10,3X38 4A gG	5400104	70400304	WIMEX	1
	FU7	FUSE 10,3X38 10A gG	5400110	70400306	WIMEX	1
NEC-405/800	KM	POWERED SWITCHING ATySr 4X1250A AC23 230V	95234120	70100374	SOCOMEC	1
	TA1,TA2,TA3	CURRENT TRANSFORMER TAS64 1200/5	TAS64 1200/5	70512457	IME	3
	SC2	BATTERY CHARGER P/CBS-061 24V	CBS-061 24V	40010445	ELCOS	1
	FU2	FUSE 10,3X38 4A gG	5400104	70400304	WIMEX	1
	FU7	FUSE 10,3X38 10A gG	5400110	70400306	WIMEX	1
NEC-405/1000	KM	POWERED SWITCHING ATySr 4X1600A AC23 230V	95234160	70100375	SOCOMEC	1
	TA1,TA2,TA3	CURRENT TRANSFORMER TAS64 1600/5	TAS64 1600/5	70512458	IME	3
	SC2	BATTERY CHARGER P/CBS-061 24V	CBS-061 24V	40010445	ELCOS	1
	FU2	FUSE 10,3X38 4A gG	5400104	70400304	WIMEX	1
	FU7	FUSE 10,3X38 10A gG	5400110	70400306	WIMEX	1

LIST OF COMPONENTS					
Item	**Description**	**Type**	**Code**	**Brand**	**Q.ty**
FU1	FUSE 10,3X38 10A Gg	5400110	70400306	WIMEX	2
FU1	FUSE HOLDER 2P 10,3X38 DIN BAR	5450103S	70450835	WIMEX	1
FU2	FUSE HOLDER 1P 10,3X38 DIN BAR	5450101S	70450833	WIMEX	1
FU3	FUSE 10,3X38 1A gG	5400101	70400301	WIMEX	3
FU3	FUSE HOLDER 3P 10,3X38 DIN BAR	5450104S	70450836	WIMEX	1
FU4	FUSE 10,3X38 4A gG	5400104	70400304	WIMEX	1
FU4	FUSE HOLDER 1P 10,3X38 DIN BAR	5450101S	70450833	WIMEX	1
FU5	FUSE 10,3X38 4A gG	5400104	70400304	WIMEX	1
FU5	FUSE HOLDER 1P 10,3X38 DIN BAR	5450101S	70450833	WIMEX	1
FU6	FUSE 10,3X38 1A gG	5400101	70400301	WIMEX	3
FU6	FUSE HOLDER 3P 10,3X38 DIN BAR	5450104S	70450836	WIMEX	1
FU7	FUSE HOLDER 1P 10,3X38 DIN BAR	5450101S	70450833	WIMEX	1
FU8	FUSE 10,3X38 4A gG	5400104	70400304	WIMEX	1
FU8	FUSE HOLDER 1P 10,3X38 DIN BAR	5450101S	70450833	WIMEX	1
FU9	FUSE 10,3X38 1A Gg	5400101	70400301	WIMEX	2
FU9	FUSE HOLDER 2P 10,3X38 DIN BAR	5450103S	70450835	WIMEX	1
S1	MUSHROOM BUTTON WITH LOCK D.40 – 2NC -	ER 695 5	70100881	ABB	1
E1	FAN 150X150X5.5	ART1	70730116	CEPI	1
E1	FAN FILTER 150X150X5.5	ART4	70730117	CEPI	1
SC1	CONTROL UNIT P/CAM-405	40242262	40242262	ELCOS	1
X4	FEED-THROUGH TERMINAL BLOCK	CBC.2/GR	70421782	CABUR	23
X4	FEED-THROUGH TERMINAL BLOCK	CBC.4/GR	70421784	CABUR	2
X4	FEED-THROUGH TERMINAL BLOCK	CBC.6/GR	70421785	CABUR	2
K1	CONTACTOR CJX2-12008 25A 230 VAC 2NO + 2NC	CJX2-12008	70100100	HUAYU	1

TECHNICAL SPECIFICATIONS											
Type	**Power PRP (1)**		**Power COP (2)**		**Capacity at 40°C**	**Short time current**	**Short-circuit current at 415V**	**Making capacity at 400V**	**Breaking capacity at 400V**	**Standard panel dimensions**	**Magnetothermal panel dimensions**
	kVA	**A**	**kVA**	**A**	**A**	**A x 1sec**	**kA**	**A**	**A**	**L x H x W (mm)**	**L x H x W (mm)**
NEC-405/15	15	22	13,5	19	30 (AC1)	300		300 (AC1)	240 (AC1)	600x800x300	600x800x300
NEC-405/30	30	43	27	38	45 (AC1)	450		450 (AC1)	360 (AC1)	600x800x300	600x800x300
NEC-405/40	40	58	36	52	70 (AC1)	1000		700 (AC1)	560 (AC1)	600x800x300	600x800x300
NEC-405/65	65	94	58	85	100 (AC1)	1000		1000 (AC1)	800 (AC1)	600x800x300	600x800x300
NEC-405/65CM	65	94	58	85	100 (AC23)	-	2,5	-	-	600x800x300	600x800x300
NEC-405/80	80	116	72	104	125 (AC1)	1200		1250 (AC1)	1000 (AC1)	600x800x300	600x800x300
NEC-405/80CM	80	116	72	104	125 (AC23)	-	2,5	-	-	600x800x300	600x800x300
NEC-405/110	110	159	100	144	160 (AC23)	-	7	-	-	600x800x300	600x1000x300
NEC-405/150	150	217	135	195	250 (AC23)	-	10	-	-	600x800x300	600x1000x300
NEC-405/250	250	360	225	326	400 (AC23)	-	10	-	-	800x1000x450	800x1600x400
NEC-405/330	330	477	295	430	500 (AC23)	-	10	-	-	800x1000x450	800x1600x400
NEC-405/410	410	595	370	535	630 (AC23)	-	12,6	-	-	800x1000x450	800x1600x400
NEC-405/500	500	725	450	652	800 (AC23)	-	16	-	-	800x1000x450	800x1600x500
NEC-405/650	650	940	585	846	1000 (AC23)	-	20	-	-	800x1800x600	-
NEC-405/800	800	1160	720	1044	1250 (AC23)	-	25	-	-	800x1800x600	-
NEC-405/1000	1000	1450	900	1305	1600 (AC23)	-	32	-	-	1000x1800x800	-

Simplified definition of power according to the ISO8528 standard.

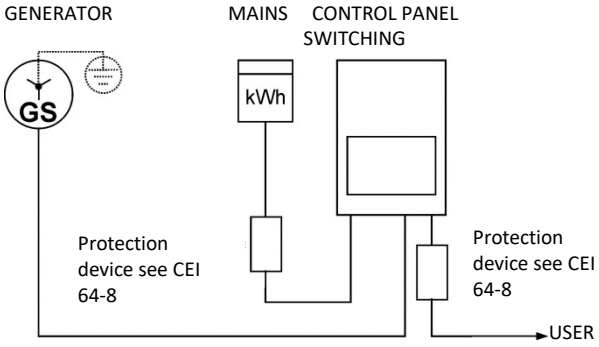
(1) PRP (Prime Power): PRP is the maximum power the generator set can provide under a variable load during a work cycle for an unlimited number of hours per year. The average permitted power during a 24-hour cycle (Ppp - Permissible Average Power) must not exceed 70% of the PRP.

(2) COP (Continuous Power): COP is the maximum power the generator set can provide for an unlimited number of hours per year under a constant load.

TECHNICAL SPECIFICATIONS				
Battery power supply				
Suitable for batteries		12Vdc		24Vdc
Operating range		8 ÷ 48Vdc		
Absorption with engine not running		130mA@12Vdc		90mA@24Vdc
Battery charger				
Maximum current supplied		1Adc	3,5Adc	6Adc
Self-consumption in a blackout		12mAdc	15mAdc	36mAdc
Mains and generator voltmetric inputs				
Mains / generator rated voltage		400Vac ±10%		
Rated insulation voltage	Mains voltage terminal	450Vac		
	Genset voltage terminal	450Vac		
	Battery voltage terminal	32Vac		
Insulation class		CLASS 1		
Overvoltage category		CATEGORY 3		
Mains and generator frequency		50 ÷ 60Hz		
Heater output				
Rated voltage		230Vac		
Maximum power		1000W		
Digital outputs				
Type of output		Positive (battery voltage)		
Maximum load	Terminal X4-8, X4-9, X4-11, X4-30	0,25A		
	Terminal X4-10	1,5A		
Environmental conditions				
Operating temperature		-20 ÷ 40°C		
Storage temperature		-20 ÷ 60°C		
Maximum relative humidity		≤ 80% without condensate at 40°C		
Maximum altitude		1000 m a.s.l..		
Protection class				
Protection class		IP 54		
Installation conditions		FOR INDOOR USE		
Electrical specifications				
Operation		STAND-ALON		
Power systems to which it is connected		TN-IT-TT		
Panel weight				
NEC-405/15 – 30 – 40		33Kg		
NEC-405/65		42Kg		
NEC-405/65CM		42Kg		
NEC-405/80		44Kg		
NEC-405/80CM		43Kg		
NEC-405/110		55Kg		
NEC-405/150		55Kg		
NEC-405/250		65Kg		
NEC-405/330		98Kg		
NEC-405/410		98kg		

CONNECTION TO THE MAINS

You must connect the panel with the MAINS SWITCHED OFF and the BATTERY DISCONNECTED, and follow the electrical diagram shown in this manual. You must connect the panel to the existing earth system in compliance with the laws in force.
The panel is suitable for installation in an area where the prospective short circuit current is Icp ≤ 10kA.
Alternatively, you can install it in an area with a short circuit conditional current of Icc ≤ 17kA.
The installer must ensure protection against direct/indirect contact on the unit line according to the legislation in force on electrical user systems up to 1000V in AC and 1500V in DC (for Italy CEI 64-8).
Protective devices against direct/indirect contact on the genset line must be installed according to the provisions described in the standard CEI 64-8.



BEFORE POWER-UP:

- Make sure live parts are inaccessible.
- Check the earth connection.
- Check the signals, alarms, lock devices and the contactors or powered switch are all working correctly.

WARNING! THIS ELECTRICAL CONTROL PANEL IS NOT SUITABLE FOR USE UNDER THE FOLLOWING WORKING CONDITIONS:

- At different temperature, relative humidity and altitude values to those specified;
- in places where variations in temperature and air pressure are so abrupt as to produce exceptional condensation inside the panel;
- in very polluted places due to dust, fumes, corrosive or radioactive particles, vapours and salts;
- where it is exposed to high temperatures due to the sun or kilns;
- where it may be attacked by mould or small animals;
- in places where there is a danger of explosions or fires;
- where there may be strong vibrations or shocks;
- in installations where the current flow rate or switch-off power can be influenced by particular conditions (e.g. equipment incorporated in the machine).

INFORMATION FOR ORDERING		
Type	**Code (12V battery)**	**Code (24V battery)**
NEC-405/15	00022700	Not available
NEC-405/30	00022701	Not available
NEC-405/40	00022702	Not available
NEC-405/65	00022704	Not available
NEC-405/80	00022706	Not available
NEC-405/65CM	00022705	Not available
NEC-405/80CM	00022707	Not available
NEC-405/110	00022709	Not available
NEC-405/150	00022711	Not available
NEC-405/250	00022713	00022714
NEC-405/330	Not available	00022716
NEC-405/410	Not available	00022718
NEC-405/500	Not available	00022720
NEC-405/650	Not available	00022721
NEC-405/800	Not available	00022722
NEC-405/1000	Not available	00022723

STANDARD ACCESSORIES	
Type	**Code**
4 wall mount brackets kit ZN001000	70750626
Lever for emergency manual operation in panels NEC-405/ 65CM-80CM-110-150-250-330-410-500-650-800-1000	

ACCESSORIES AVAILABLE ON REQUEST
Type
AUTOMATIC 4-POLE MAGNETOTHERMAL SWITCH (case dimensions may vary).
FUEL FILLING PUMP KIT
GSM MODEM

Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

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