

GREEN POWER SYSTEMS Srl

Via Maiano, – Fraz. Caprazzino
61028 SASSOCORVARO (PU)

GENSET COMMAND ELECTRICAL PANEL

QUADRO ELETTRICO DI COMANDO G.E.
CARTE ELECTRONIQUE DU GROUPE
SCHALTAFEL DES STROMERZEUGERS

TYPE :
TIPO :
TYP :
TYPE :
M.F.M + AMF9 NT

VOLTAGE :
TENSIONE :
TENSION :
SPANNUNG :
400 V 3Ph+N

PROTECTION IND :
GRADO DI PROTEZIONE :
COMMAND E.P.PROTEC.IND. :
SCHUTZART :
IP 00

BATTERY VOLTAGE :
TENSIONE BATTERIA :
TENSION BATTERIE :
BATTERIE SPANNUNG :
12 V

FREQUENCY :
FREQUENZA :
FREQUANCE :
FREQUENZ :
50 Hz

NUMBER :
NUMERO DI SERIE :
NUMERO DE SERIE :
SERIALNUMMER :

POWER :
POTENZA :
PUISANCE :
LEISTUNG :
30 KVA

FILE :
FILE :
FILE :
FILE :
M.F.M. REV2

CURRENT :
CORRENTE :
COURANT :
STROM :
43 A

DATE:
DATA :
DATE :
DATUM :
8/01/2014

PAGE DESCRIPTION
FOGLIO DESCRIZIONE
PAGE DESCRIPTION
PAKET BESCHREIBUNG

01 **LAY-OUT CONTROL DEVICE**
DISPOSITIVI ELETTRONICI
FICHE ELECTRONIQUE
ELEKTRONISCHEGERATE

02 **M.F.M.-AMF9 NT OUTPUT CONNECTION**
M.F.M.-AMF9 NT COLLEGAMENTI USCITE (OUT)
M.F.M.-AMF9 NT CONNEXION SORTIE (OUT)
M.F.M.-AMF9 NT AUSGANG ANSCHLUSSE (OUT)

03 **M.F.M.-AMF9 NT INPUT CONNECTION (IN)**
M.F.M.-AMF9 NT COLLEGAMENTI USCITE (IN)
M.F.M.-AMF9 NT CONNEXION ENTRE'E (IN)
M.F.M.-AMF9 NT EINGANG ANSCHLUSSE (IN)

04 **M.F.M.-AMF9 NT INPUT CONNECTION (IN)**
M.F.M.-AMF9 NT COLLEGAMENTI USCITE (IN)
M.F.M.-AMF9 NT CONNEXION ENTRE'E (IN)
M.F.M.-AMF9 NT EINGANG ANSCHLUSSE (IN)

05 **GEN SET CONNECTIONS**
COLLEGAMENTI GENERATORE
CONNEXION DU GROUPE
STROMERZEUGER ANSCHLUSSE

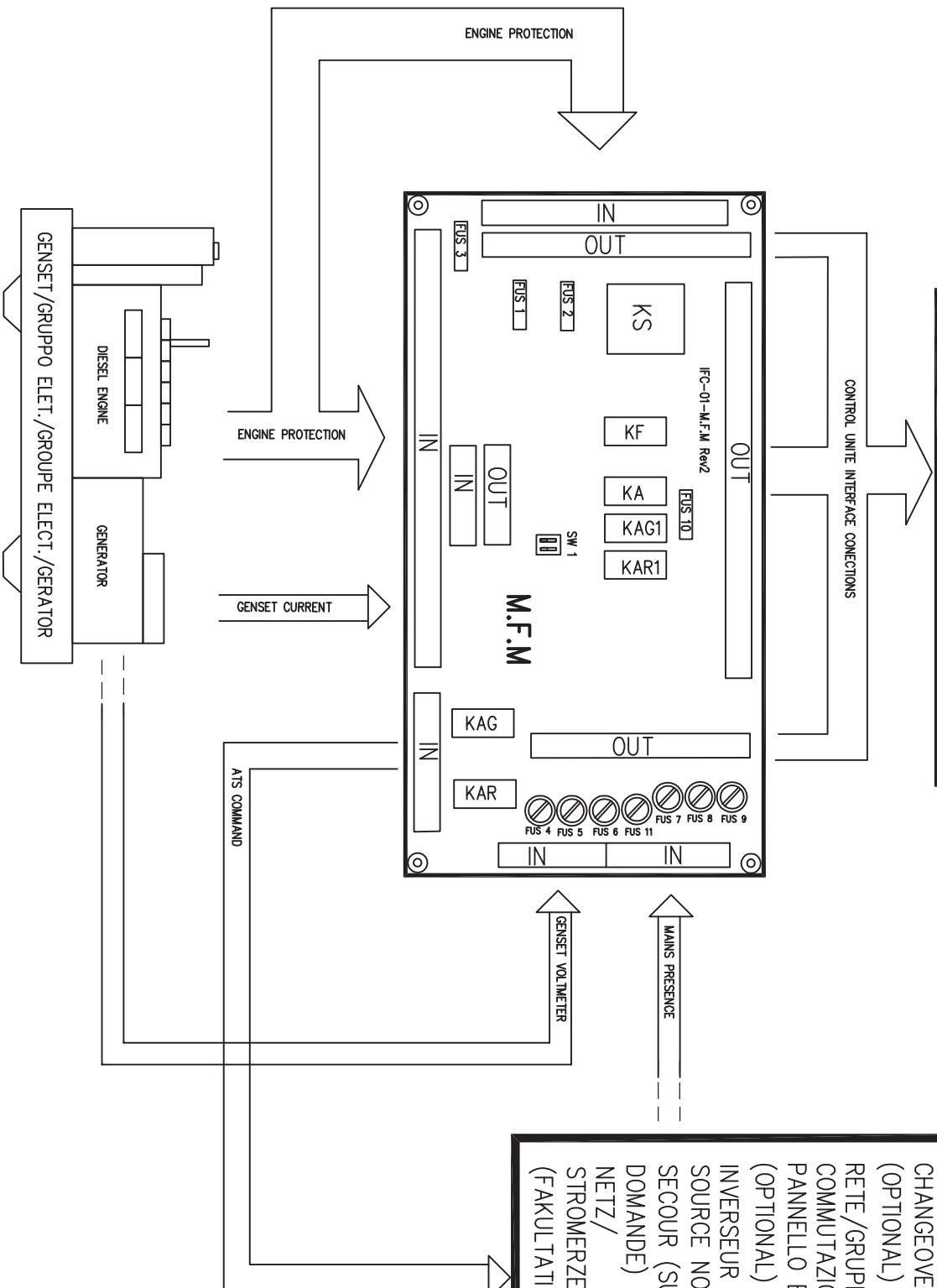
06 **LEGEND-PARAMETER**
LEGGENDA-PARAMETRI
LEGGEND-PARAMETERS
LEGENDE - PARAMETER

07

08

CONTROL UNITE IL NT AMF9
 CENTRALINA IL NT AMF9
 CARTE ELECTRONIQUE MOD. IL NT AMF9
 STEUERGERAET IL NT AMF9

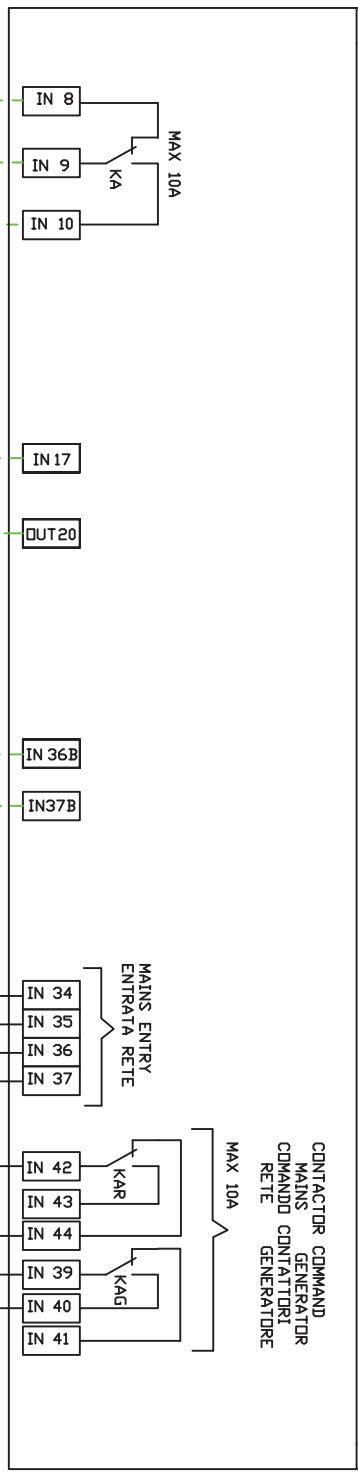
MAINS/GENSET
 CHANGEOVER EL.P
 (OPTIONAL)
 RETE/GRUPPO EL.
 COMMUTAZIONE
 PANNELLO ELETR.
 (OPTIONAL)
 INVERSEUR DE
 SOURCE NORMAL
 SECOUR (SUR
 DOMANDE)
 NETZ/
 STROMERZEUGER
 (FAKULTATIV)



REV.	MODIFICA	DATA	25/05/2016	SCHEMI M.F.M.	Genset	SCHEMI PIASTRE DWG	SCHEMI PIASTRE DWG	FOGLIO	1 DI
		DISSEG.						SEGUE	
		VISTO							
		FIRMA							
		APPR.							
		SOST. IL:							
		SOST. DA:							
		ORIGINE:							

ELECTRONIC CARD M.F.M. (IN)

SCHEDA M.F.M. INGRESSI (IN) FICHE M.F.M. ENTREE (IN)
LEITPLATTE M.F.M. EINGANG (IN)

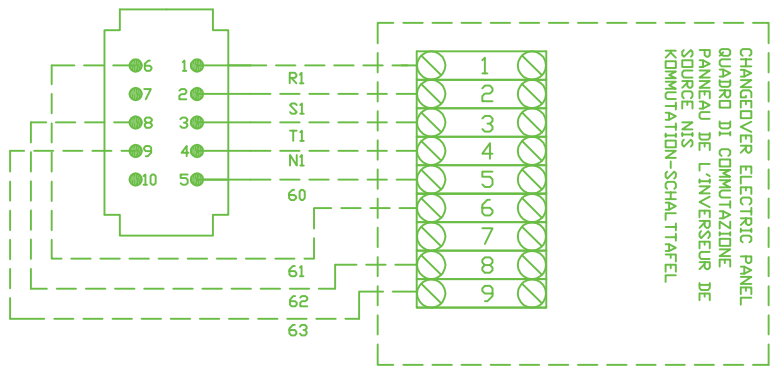
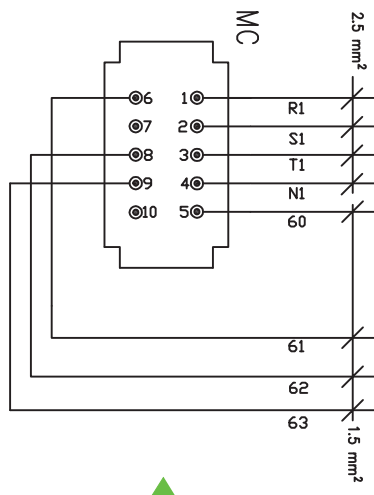
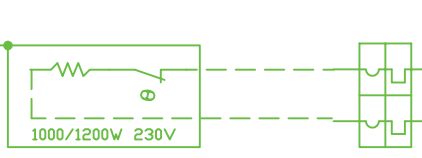


CUMULATIVE ALARM/ALLARME CUMULATIVO
ALARME CUMULATIF/SCHALTSCHUTZ STEUERUNG

APERTE= START G.E.
CHISD=STOP
OPEN=GS START
CLOSE=GS STOP

MAINS FORCING / FORZATURA RETE
SIMULATION RESEAU / NETZ AUSLÖSER

ENGINE PRHEATING/SCANDIGLIA
PRECHAUFFAGE DE L'EAU/WARMER



OPTIONAL

NOTE

REV.	MODIFICA	DATA	25/05/2016	SCHEMI M.F.M.	Genset	SCHEMI PIASTRE DWG	SCHEMI PIASTRE DWG	FOGLIO 4 DI
		DISEG.						
		VISTO						
		FIRMA						
		APPR.						
		SOST. IL.						
		SOST. DA.						
		ORIGINE:						

PLATE M.F.M. / PIASTRA M.F.M. / PLAQUE M.F.M. / PLATTE M.F.M.

FUSE PROTECTION / PROTEZIONE FUSIBILI

FUSIBLES DE PROTECTION / SCHMELZSICHERUNG-SCHUTZ

- FUS3** = Battery positive protection (20-25amp)/Fusibile di protezione alimentazione scheda (20-25 amps)
Fusible protection batterie (20-25amp)/Schmelzsicherung zum Schutz der Batterieladung 20-25Amp
- FUS2** = Electronic device positive (IN6) 10amp/Fusibile di protezione uscita (IN6) eccitata in marcia(10Amp)
Fusible de protection sortie/ Schmelzsicherung zum Schutz des Ausgang (IN6) 10 Amp
- FUS4** = 400 V gen set side protection 1amp/Fusibile di prot. per segnale tensione gruppo alla centralina
Fusible de protection tension groupe(1amp)/Schmelzsicherung zur Signalspannung des Stromaggregates an Der Steuergehäuse (1amp)
- FUS5** = 400 V gen set side protection(1amp)/Fusibile di prot. per segnale tensione gruppo alla centralina (1amps)
Fusible de protection tension groupe (1amp)/Schmelzsicherung zur Signalspannung des Stro maggregates an Der Steuergehäuse (1amp)
- FUS6** = 400 V gen set side protection(1amp)/Fusibile di prot. per segnale tensione gruppo alla centralina (1amps)
Fusible de protection tension groupe (1amp)/Schmelzsicherung zur Signalspannung des Stro maggregates an Der Steuergehäuse (1amp)
- FUS7** = 400 V gen set side protection(1amp)/Fusibile di prot. per segnale tensione rete alla centralina (1amps)
Fusible de protection tension reseau(1amp)/Schmelzsicherung zur Netz-Signalspannung an der Steuergehäuse (1amp)
- FUS8** = 400V mains side protection (1amp)/Fusibile di protezione per segnale tensione rete alla centralina (1amps)
Fusible de protection tension reseau(1amp)/Schmelzsicherung zur Netz-Signalspannung an der Steuergehäuse (1amp)
- FUS9** = 400V mains side protection (1amp)/Fusibile di prote zione per segnale tensione rete alla centralina (1amps)
Fusible de protection tension reseau(1amp)/Schmelzsicherung zur Netz-Signalspannung an der Steuergehäuse (1 Amp)
- FUS11**=400V mains side protection (1amp)/Fusibile di prot ezione per trasformatore carica batteria(5amps)
Fusible de protection pour transformateur chargeur de batterie (1amp)/Schmelzsicherung für Batterieladegerät-Umspanner (5 Amp)

SWITCH / INTERRUTTORI

INTERRUPTEUR / SCHALTER

- SW1** = Control unit type/seleziona il tipo di centralina
Type de unité de control/Zur Wahl des Steuergehäuse-Typ

Name	Firmware ver.	Application	Date	App. ver.	Ser. num.	Filename		
	IL-NT-GPRIT-1.2.0 R:22.06.2016	AMF9	28/07/2016	1.2	16011FC9			
Group	Name	Value	Dimension	Password	Com. obj.	Low limit	High limit	Data type
Basic Settings	Gen-set Name			No	8637			Short string
Basic Settings	CT Ratio	60	/5A	Yes	8274	1	5000	Unsigned 16
Basic Settings	Nominal Freq	50	Hz	Yes	8278	45	65	Unsigned 16
Basic Settings	Nomin Current	43	A	Yes	8275	1	5000	Unsigned 16
Basic Settings	Prestart Time	1	s	No	8394	0	600	Unsigned 16
Basic Settings	MaxCrank Time	8	s	No	8256	1	255	Unsigned 8
Basic Settings	Idle Time	3	s	No	9097	0	600	Unsigned 16
Basic Settings	Cooling Time	60	s	Yes	8258	0	3600	Unsigned 16
Basic Settings	Cooling Speed	NOMINAL		No	10046			String list
Basic Settings	WrmMaintenance	250	h	Yes	9648	0	10000	Unsigned 16
Basic Settings	Test Period	0	d	Yes	10044	0	240	Unsigned 16
Basic Settings	Test Duration	0	min	Yes	10201	0	240	Unsigned 16
Basic Settings	ConnectionType	3Ph4Wire		Yes	11628			String list
Basic Settings	COM1 Mode	DIRECT		Yes	24522			String list
Engine Protect	ProtectHoldOff	10	s	No	8262	5	10	Unsigned 16
Engine Protect	OverspeedStRPM	125	%	Yes	11033	50	150	Unsigned 16
Engine Protect	AI1 Wrn	2		Yes	8369	0	10	Integer 16
Engine Protect	AI1 Sd	1		Yes	8370	0	10	Integer 16
Engine Protect	AI1 Del	3	s	Yes	8365	0	900	Unsigned 16
Engine Protect	AI2 Wrn	100		Yes	8375	-16	120	Integer 16
Engine Protect	AI2 Sd	110		Yes	8376	-16	120	Integer 16
Engine Protect	AI2 Del	5	s	Yes	8371	0	900	Unsigned 16
Engine Protect	Fuel Level Wrn	20	%	Yes	8381	0	100	Integer 16
Engine Protect	Fuel Level Sd	10	%	Yes	8382	0	100	Integer 16
Engine Protect	Fuel Level Del	10	s	Yes	8377	0	900	Unsigned 16
Engine Protect	Batt Undervolt	9,0	V	Yes	8387	8,0	40,0	Integer 16
Gener Protect	Short Crct Sd	110	%	Yes	8282	100	500	Unsigned 16
Gener Protect	Short Crct Del	10,00	s	Yes	9991	0,00	60,00	Unsigned 16
Gener Protect	Amps Unbal BOC	50	%	No	8284	1	200	Unsigned 16
Gener Protect	Amps Unbal Del	5,0	s	No	8285	0,0	600,0	Unsigned 16
Gener Protect	Gen >V Sd	440	V	Yes	8291	160	600	Unsigned 16
Gener Protect	Gen <V BOC	320	V	Yes	8293	0	450	Unsigned 16
Gener Protect	Gen V Del	3,0	s	Yes	8292	0,0	600,0	Unsigned 16
Gener Protect	Gen >Freq BOC	110,0	%	Yes	8296	85,0	115,0	Unsigned 16
Gener Protect	Gen <Freq BOC	90,0	%	Yes	8298	0,0	110,0	Unsigned 16
Gener Protect	Gen Freq Del	10,0	s	Yes	8297	0,0	600,0	Unsigned 16
AMF Settings	EmergStart Del	5	s	No	8301	0	6000	Unsigned 16
AMF Settings	MainsReturnDel	30	s	No	8302	1	3600	Unsigned 16
AMF Settings	Mains >V	460	V	No	8305	320	600	Unsigned 16
AMF Settings	Mains <V	320	V	No	8307	50	460	Unsigned 16
AMF Settings	Mains >Freq	110,0	%	No	8310	90,0	150,0	Unsigned 16
AMF Settings	Mains <Freq	90,0	%	No	8312	50,0	110,0	Unsigned 16
AMF Settings	Operation Mode	AMF		No	12157			String list
SMS/E-Mail	Yel Alarm Msg	OFF		No	8482			String list
SMS/E-Mail	Red Alarm Msg	OFF		No	8484			String list
SMS/E-Mail	Event Msg	OFF		No	10926			String list
SMS/E-Mail	Tel Number			No	9597			Long string

Name	Firmware ver.	Application	Date	App. ver.	Ser. num.	Filename								
	IL-NT-GPRIT-1.2.0 R:22.06.2016	AMF9	28/07/2016	1.2	16011FC9									
		Order	Module	Function	Name	Contact type	Alarm type	Alarm active						
Binary input		1	IL-NT	Emergency Stop	Emergency Stop	Open to activate								
Binary input		2	IL-NT	Alarm	Fuel Reserve	Close to activate	Warning	All the time						
Binary input		3	IL-NT	Not Used	Not Used									
Binary input		4	IL-NT	MainsFailBlock	MainsFailBlock	Close to activate								
		Order	Module	Function										
Binary output		1	IL-NT	Starter										
Binary output		2	IL-NT	Fuel Solenoid										
Binary output		3	IL-NT	GCB Close/Open										
Binary output		4	IL-NT	MCB Close/Open										
Binary output		5	IL-NT	Glow Plugs										
Binary output		6	IL-NT	Alarm										
		Order	Module	Name	Abbr	Type	Measures	Dimension	Limits	Contact type	Alarm type	Alarm active	Curve	Decimals
Analog input		1	IL-NT	Oil Pressure	OilP	Binary	Resistive			Close to activate	Shutdown	Engine running only		
Analog input		2	IL-NT	Engine Temp	EngT	Binary	Resistive			Close to activate	Shutdown	Engine running only		
Analog input		3	IL-NT	Fuel Level	FLvl	Analog	Resistive	%	Under Limit		Wrm+BOC	All the time	tubolare 3-83	0

Autostart panel board with M.F.M. electronic card / Quadro di controllo a bordo macchina su SCHEDA M.F.M.
T.E. commande et controle g.e. M.F.M / Steuergeraet auf der maschine auf platte M.F.M.

Control unit / centralina IL NT AMF9
Carte electronique / Steuergerat

Number / Numero M.F.M. rev1
Matricule / Nummer

COMPONENTS DESCRIPTION / ELENCO COMPONENTI
DESCRIPTION COMPOSANT / LISTE DER KOMPONENTE

DESCRIPTION / DESCRIZIONE DESCRIPTION / BESCHREIBUNG	CONSTRUCTOR COSTRUTTORE COSTRUCTER FABRIKAT	CODEX CODICE TYPE MENGE	QUANTITY QUANTITA' QUANTITE' HÖHE	SYMBOL SIMBOLO NOM SYMBOL
BATTERY CHARGER CARICA BATTERIE CHARGEUR DE BATTERIE BATTERIE LADEGERÄT	LOVATO	BCF025012	1	CB
AUTOMATIC SWICH (OPTIONAL) INTERRUPTORE BIPOLARE 2*10A INTERUPTEUR 2*10A ZWEIPOLIGER SCHALTER 2*10A	ABB	SN201LC10	1	WH
10 POLES CONNECTOR CONNETTORE 10 POLI CONNECTEUR 10 POLES 10 POLIGER VERBINDER	GEWIS	gw76404+gws03187c	1	MC
CURRENT TRASFORMER TRASFORMATORE AMPEROMETRICO TRANSFORM COURANT AMPEROMETRISCHER UMSPANNE	REVALCO	60 /5A	3	TA
CONTROL UNITE CENTRALINA DI CONTROLLO UNITE' DE CONTROL GROUPE ELECTR. STEUERGERÄT	COMAP	IL NT AMF9	1	AMF9
M.F.M. ELECTRONIC CARD SCHEDA M.F.M. FICHE M.F.M. PLATTE M.F.M.	G.P.S.	M.F.M.	1	M.F.M.
AUTOMATIC SWICH INTERRUPTORE QUADRIPOLORE INTERUPTEUR VIERPOLIGER SCHLTER	ABB	S204SL-B50	1	AS
EMERGENCY STOP PULSANTE DI EMERGENZA BOUTON D'URGENCE NOTSCHALTER	ABB	MPMT3-10R	1	ES
CONTACT BLOCK E.S. CONTATTO P.E. CONTACT P.E. E.S. KONTAKT	ABB	MCB-01	2	

08/07/2013

GENSET COMMAND ELECTRICAL PANEL

QUADRO ELETTRICO DI COMANDO G.E. CARTE ELECTRONIQUE DU GROUPE SCHALTAFEL DES STROMERZEUGERS

TYPE :
TIPO :
TYP :
TYPE :

M.F.M + AMF9 NT

VOLTAGE :
TENSIONE :
TENSION :
SPANNUNG :

400 V 3Ph+N

PROTECTION IND :
GRADO DI PROTEZIONE :
COMMAND E.P.PROTEC.IND. :
SCHUTZART :

IP 00

BATTERY VOLTAGE :
TENSIONE BATTERIA :
TENSION BATTERIE :
BATTERIE SPANNUNG :

12 V

FREQUENCY :
FREQUENZA :
FREQUENCE :
FREQUENZ :

50 HZ

NUMBER :
NUMERO DI SERIE :
NUMERO DE SERIE :
SERIALNUMBER :

POWER :
POTENZA :
PUISANCE :
LEISTUNG :

30 KVA

FILE :
FILE :
FILE :
FILE :

M.F.M. REV2

CURRENT :
CORRENTE :
COURANT :
STROM :

43 A

DATE:
DATA :
DATE :
DATUM :

8/01/2014

PAGE	DESCRIPTION
FOGLIO	DESCRIZIONE
PAGE	DESCRIPTION
PAKET	BESCHREIBUNG

01	LAY-OUT CONTROL DEVICE DISPOSITIVI ELETTRONICI FICHE ELECTRONIQUE ELEKTRONISCHEGERATE
----	---

02	M.F.M.-AMF9 NT OUTPUT CONNECTION M.F.M.-AMF9 NT COLLEGAMENTI USCITE (OUT) M.F.M.-AMF9 NT CONNEXION SORTIE (OUT) M.F.M.-AMF9 NT AUSGANG ANSCHLUSSE (OUT)
----	---

03	M.F.M.-AMF9 NT INPUT CONNECTION (IN) M.F.M.-AMF9 NT COLLEGAMENTI USCITE (IN) M.F.M.-AMF9 NT CONNEXION ENTRE'E (IN) M.F.M.-AMF9 NT EINGANG ANSCHLUSSE (IN)
----	---

04	M.F.M.-AMF9 NT INPUT CONNECTION (IN) M.F.M.-AMF9 NT COLLEGAMENTI USCITE (IN) M.F.M.-AMF9 NT CONNEXION ENTRE'E (IN) M.F.M.-AMF9 NT EINGANG ANSCHLUSSE (IN)
----	---

05	GEN SET CONNECTIONS COLLEGAMENTI GENERATORE CONNEXION DU GROUPE STROMERZEUGER ANSCHLUSSE
----	--

06	LEGEND-PARAMETER LEGGENDA-PARAMETRI LEGGEND-PARAMETERS LEGENDE - PARAMETER
----	--

07	
----	--

08	
----	--