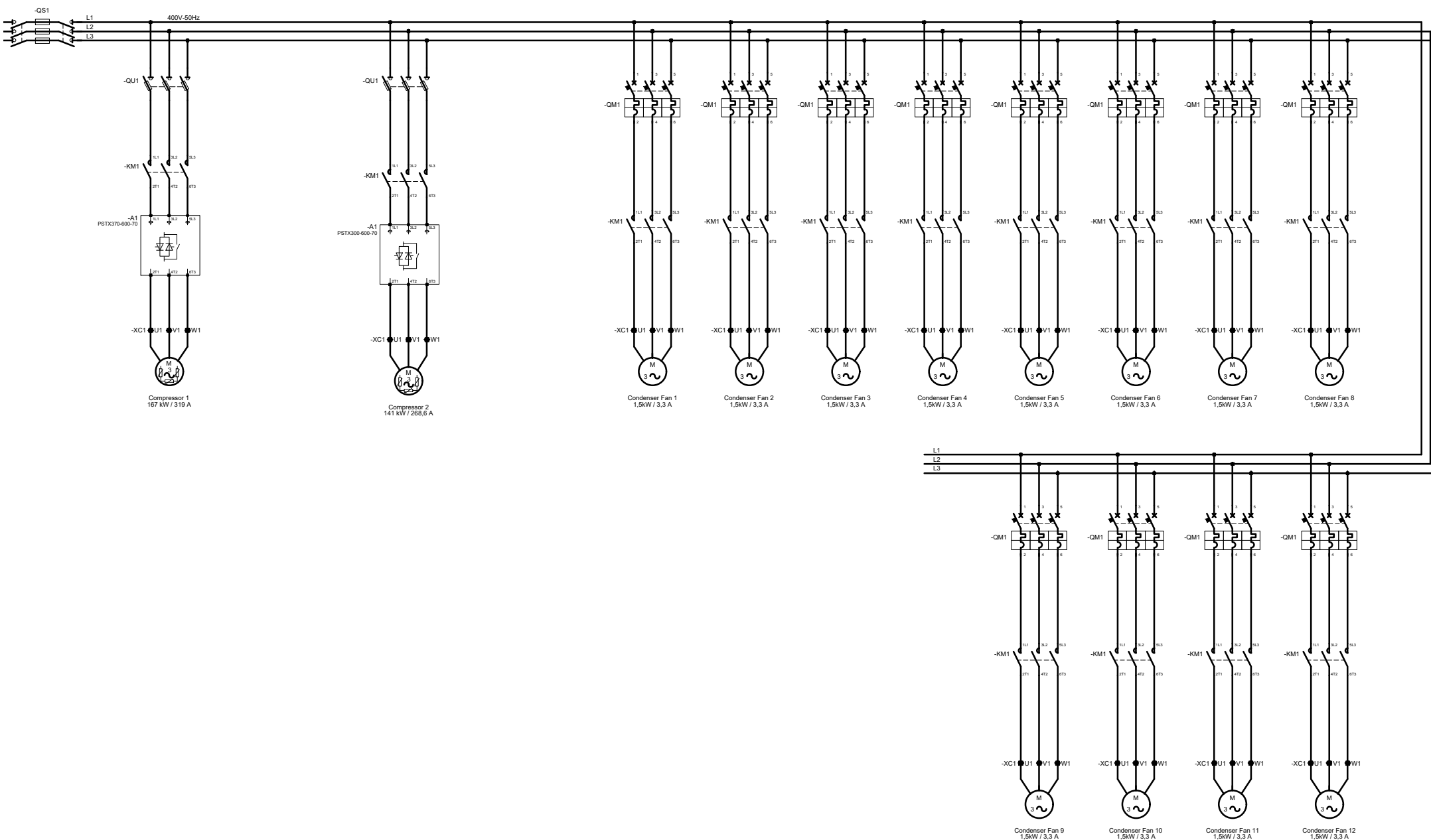




PACCHETTO D'INSTALLAZIONE

INSTALLATION PACKAGE

Motor starting and protection solution for Air-cooled
chiller system with 2 Nos. of compressors 167 & 141kW
and 12Nos. of 1.5kW condenser fans (IEC Market)

ABB

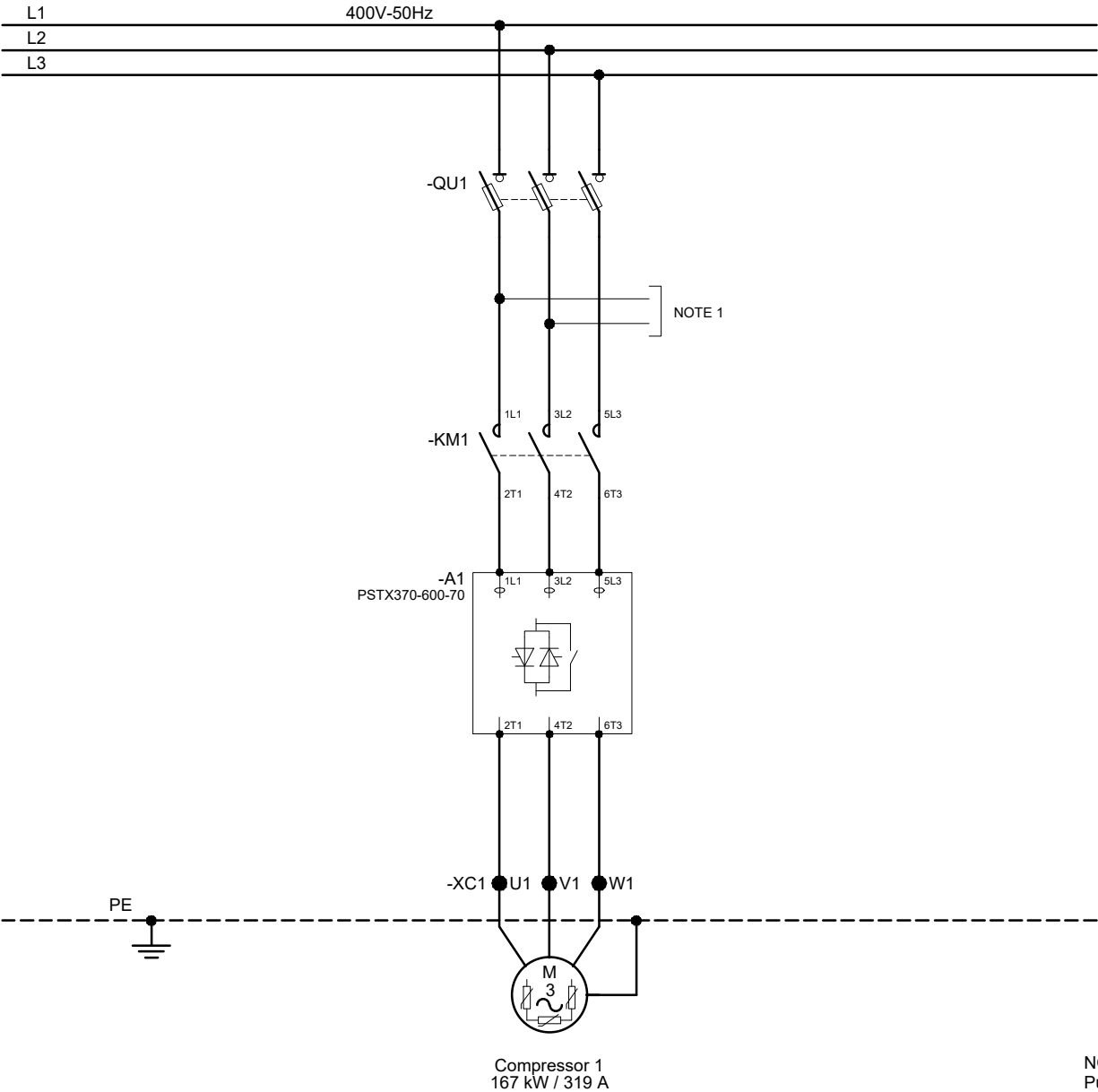
ADVANCED LEVEL WITH SOFTSTARTER

1SD000046A1004

ECN_____

1/10

PARTENZA MOTORE SOFTSTARTER 167kW / 319A / SOFTSTARTER 167kW / 319A

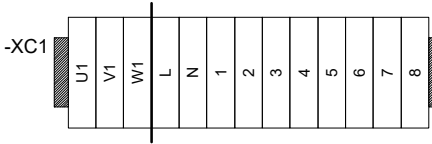
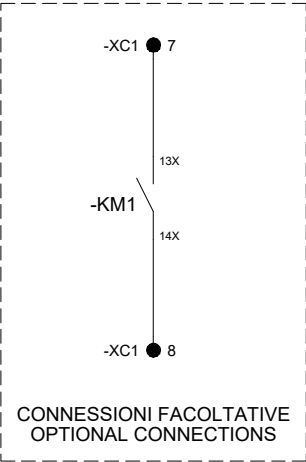
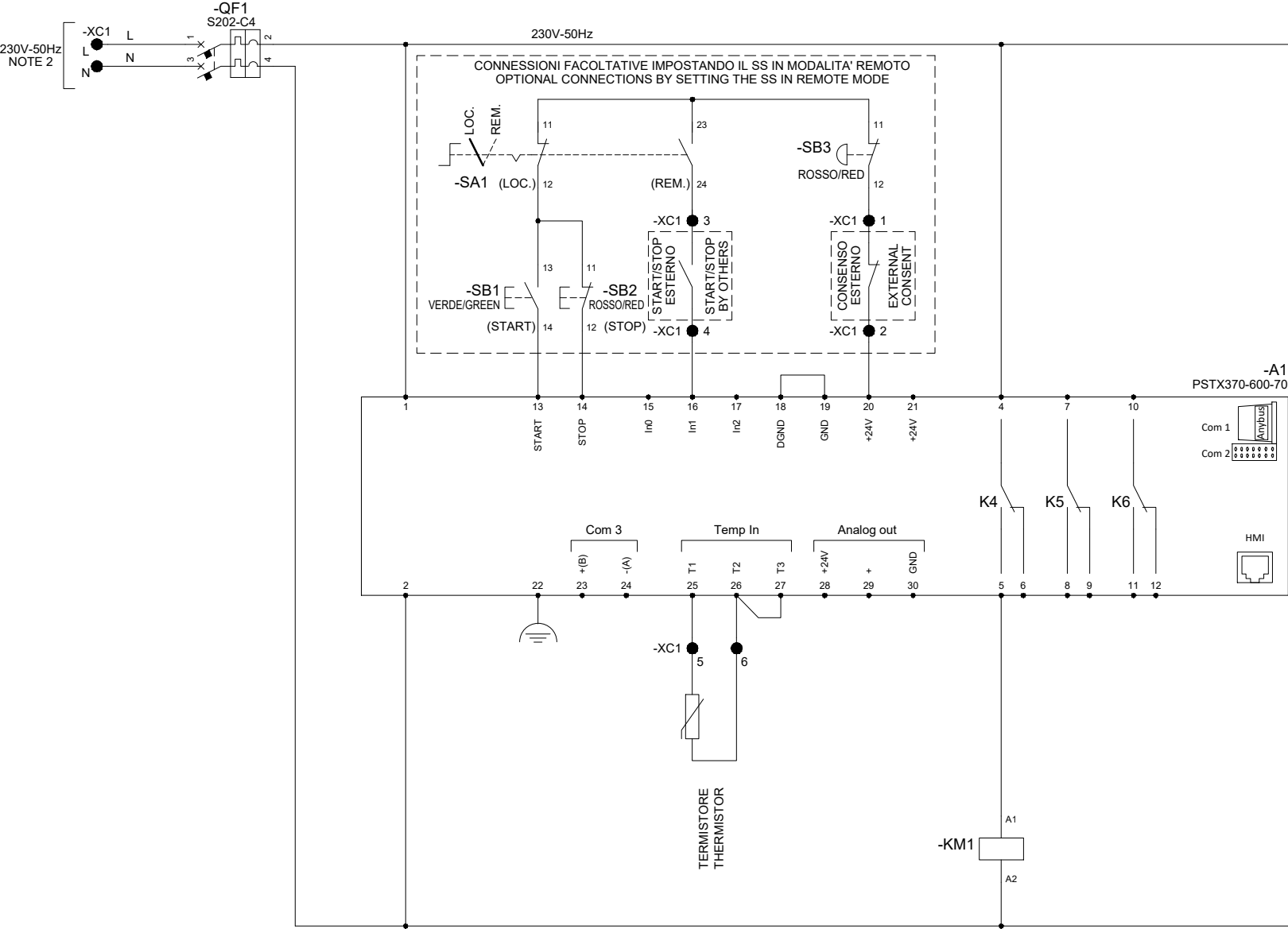


NOTE 1
Punto di connessione per trasformatore ausiliario 400 / 230V
Connection point for auxiliary transformer 400 / 230V

PARTENZA MOTORE SOFTSTARTER 167kW / 319A / SOFTSTARTER 167kW / 319A

ALIMENTAZIONE AUSILIARIA AUXILIARY POWER SUPPLY	PROTEZIONE CIRCUITO AUSILIARIO AUXILIARY CIRCUIT PROTECTION	ALIMENTAZIONE AUSILIARIA AUXILIARY POWER SUPPLY	CIRCUITO DI COMANDO COMMAND CIRCUIT	MARCIA RUN	DISPONIBILE AVAILABLE	GUASTO FAULT	
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MOTORE MARCIA MOTOR RUN

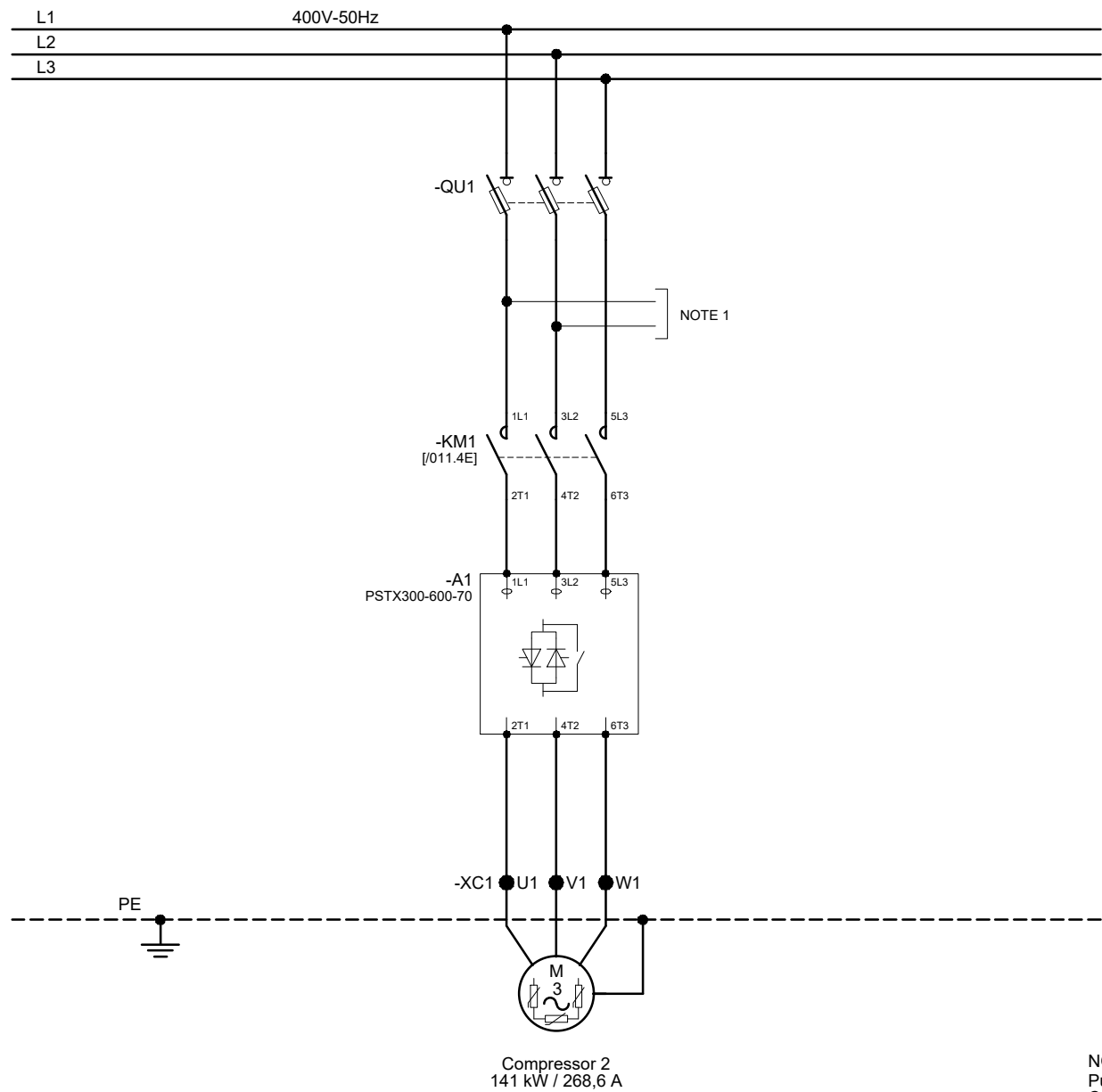


NOTE 2
Arrivo da linea principale con trasformatore 400/230V
Incoming from main line with 400 / 230V transformer

PARTENZA MOTORE SOFTSTARTER 167kW / 319A / SOFTSTARTER 167kW / 319A

SIGLA / ITEM	Q.TA' / Q.TY	DESCRIZIONE / DESCRIPTION	TIPO / TYPE	FORNITORE / MANUFACTURER	CODICE / CODE
-QU1	1	Sezionatore con fusibile Switch fuse	OS630D03P	ABB	1SCA022825R2830
-QU1	3	Fusibile rapido 690V/700V 900 AMP High speed fuses 690V/700V 900 AMP	HIGH SPEED FUSES	BUSSMANN	170M6813D
-A1	1	Softstarter Softstarter	PSTX370-600-70	ABB	1SFA898115R7000
-KM1	1	Contattore AF370-30-11-13 bob. 100...250 V c.a./c.c., aux 1NA+1NC AF370-30-11-13 Contactor, 100...250 VAC/DC, aux 1NO+1NC	AF370-30-11-13	ABB	1SFL607002R1311
-QF1	1	Interruttore magnetotermico - 6kA Curva C 4A - 2P - C - 4 A Miniature Circuit Breaker - 6kA Curve C 4A - 2P - C - 4 A	S202-C4	ABB	2CDS252001R0044
-SB1	1	Pulsante verde, ghiera in plastica nera Green Modular Pushbutton, Black plastic	(FACOLTATIVO) (OPTIONAL) MP1-10G	ABB	1SFA611100R1002
-SB2	1	Pulsante rosso, ghiera in plastica nera Red Modular Pushbutton, Black plastic	(FACOLTATIVO) (OPTIONAL) MP1-10R	ABB	1SFA611100R1001
-SB1, -SB2, SB3, -SA1	4	Supporto per 3 blocchi Contact Block Holder	(FACOLTATIVO) (OPTIONAL) MCBH-00	ABB	1SFA611605R1100
-SB1, -SA1	2	contatto singolo 1NO per montaggio frontale 1NO Modular contact block	(FACOLTATIVO) (OPTIONAL) MCB-10	ABB	1SFA611610R1001
-SB2, -SB3, -SA1	3	contatto singolo 1NC per montaggio frontale 1NC Modular contact block	(FACOLTATIVO) (OPTIONAL) MCB-01	ABB	1SFA611610R1010
-SB3	1	Pulsante modulare di emergenza rosso, 40mm Modular Emergency Stop - Twist release - Mushroom 40mm - Red	(FACOLTATIVO) (OPTIONAL) MPET4-10R	ABB	1SFA611523R1001
-SA1	1	Selettore modulare a due posizioni, ghiera in plastica nera Modular Selector Switch - 2-Pos Maintained - Short handle - Black plastic	(FACOLTATIVO) (OPTIONAL) M2SS1-10B	ABB	1SFA611200R1006

PARTENZA MOTORE SOFTSTARTER 141 kW / 268,6 A / SOFTSTARTER 141 kW / 268,6 A

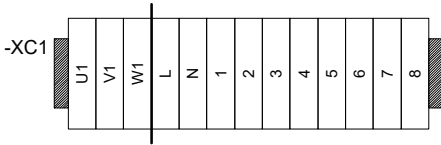
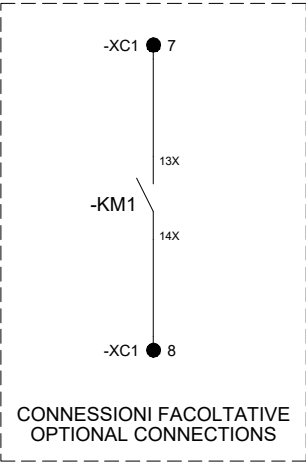
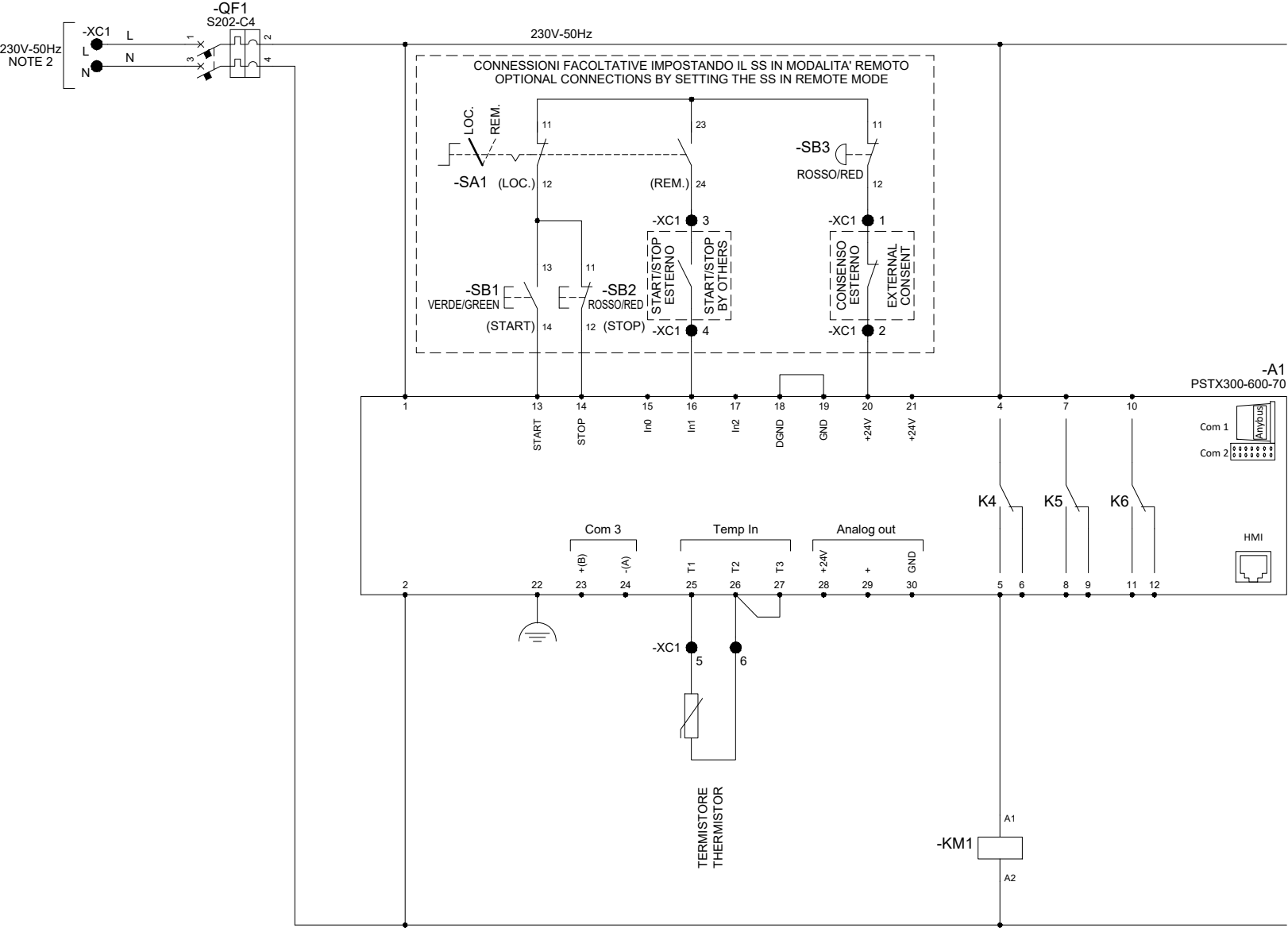


NOTE 1
Punto di connessione per trasformatore ausiliario 400 / 230V
Connection point for auxiliary transformer 400 / 230V

PARTENZA MOTORE SOFTSTARTER 141 kW / 268,6 A / SOFTSTARTER 141 kW / 268,6 A

ALIMENTAZIONE AUSILIARIA AUXILIARY POWER SUPPLY	PROTEZIONE CIRCUITO AUSILIARIO AUXILIARY CIRCUIT PROTECTION	ALIMENTAZIONE AUSILIARIA AUXILIARY POWER SUPPLY	CIRCUITO DI COMANDO COMMAND CIRCUIT	MARCIA RUN	DISPONIBILE AVAILABLE	GUASTO FAULT	
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MOTORE MARCIA MOTOR RUN

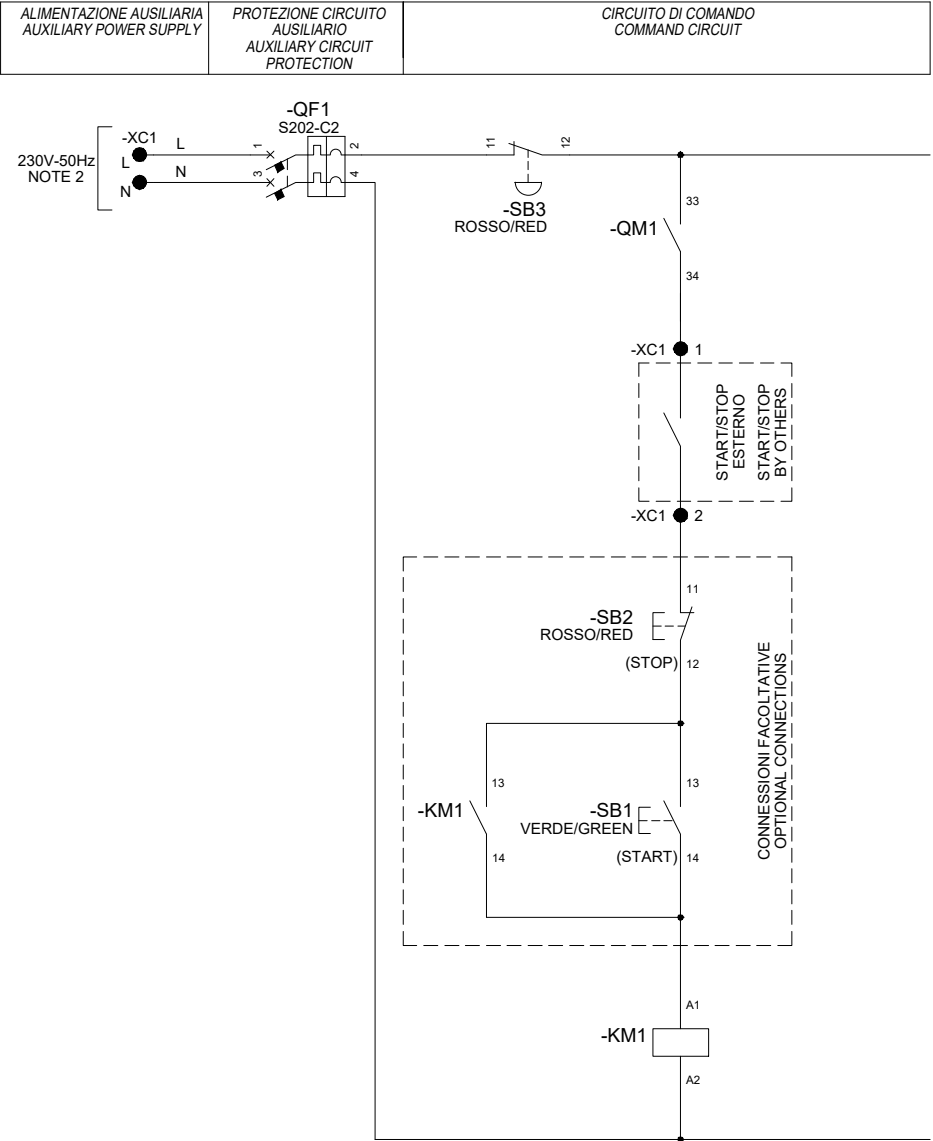
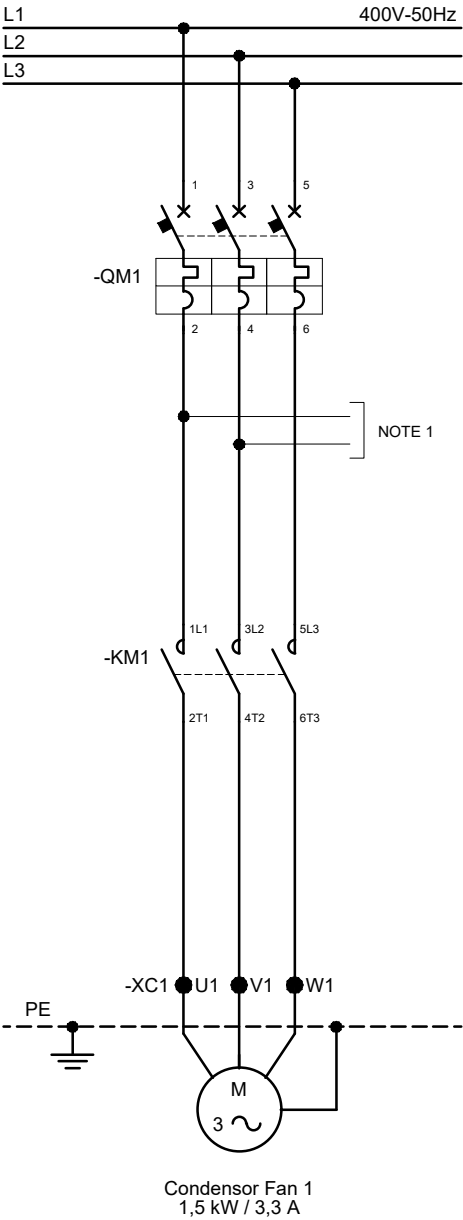


NOTE 2
Arrivo da linea principale con trasformatore 400/230V
Incoming from main line with 400 / 230V transformer

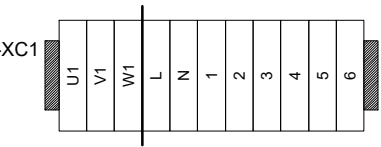
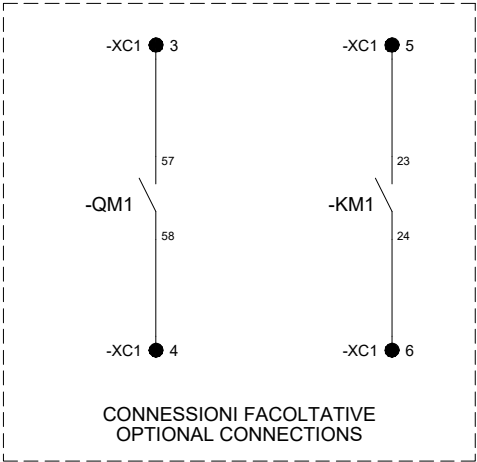
PARTENZA MOTORE SOFTSTARTER 141 kW / 268,6 A / SOFTSTARTER 141 kW / 268,6 A

SIGLA / ITEM	Q.TA' / Q.TY	DESCRIZIONE / DESCRIPTION	TIPO / TYPE	FORNITORE / MANUFACTURER	CODICE / CODE
-QU1	1	Sezionatore con fusibile Switch fuse	OS630D03P	ABB	1SCA022825R2830
-QU1	3	Fusibile rapido 690V/700V 800 AMP High speed fuses 690V/700V 800 AMP	HIGH SPEED FUSES	BUSSMANN	170M6812D
-A1	1	Softstarter Softstarter	PSTX300-600-70	ABB	1SFA898114R7000
-KM1	1	Contattore AF305-30-11-13 bob. 100...250 V c.a./c.c., aux 1NA+1NC AF305-30-11-13 Contactor, 100...250 VAC/DC, aux 1NO+1NC	AF305-30-11-13	ABB	1SFL587002R1311
-QF1	1	Interruttore magnetotermico - 6kA Curva C 4A - 2P - C - 4 A Miniature Circuit Breaker - 6kA Curve C 4A - 2P - C - 4 A	S202-C4	ABB	2CDS252001R0044
-SB1	1	Pulsante verde, ghiera in plastica nera Green Modular Pushbutton, Black plastic	(FACOLTATIVO) (OPTIONAL) MP1-10G	ABB	1SFA611100R1002
-SB2	1	Pulsante rosso, ghiera in plastica nera Red Modular Pushbutton, Black plastic	(FACOLTATIVO) (OPTIONAL) MP1-10R	ABB	1SFA611100R1001
-SB1, -SB2, SB3, -SA1	4	Supporto per 3 blocchi Contact Block Holder	(FACOLTATIVO) (OPTIONAL) MCBH-00	ABB	1SFA611605R1100
-SB1, -SA1	2	contatto singolo 1NO per montaggio frontale 1NO Modular contact block	(FACOLTATIVO) (OPTIONAL) MCB-10	ABB	1SFA611610R1001
-SB2, -SB3, -SA1	3	contatto singolo 1NC per montaggio frontale 1NC Modular contact block	(FACOLTATIVO) (OPTIONAL) MCB-01	ABB	1SFA611610R1010
-SB3	1	Pulsante modulare di emergenza rosso, 40mm Modular Emergency Stop - Twist release - Mushroom 40mm - Red	(FACOLTATIVO) (OPTIONAL) MPET4-10R	ABB	1SFA611523R1001
-SA1	1	Selettore modulare a due posizioni, ghiera in plastica nera Modular Selector Switch - 2-Pos Maintained - Short handle - Black plastic	(FACOLTATIVO) (OPTIONAL) M2SS1-10B	ABB	1SFA611200R1006

PARTENZA MOTORE DOL 1,5 kW / 3,3 A / DOL MOTOR STARTER 1,5 kW / 3,3 A



SEGNALAZIONE ELETTRICA INTERRUTTORE SCATTATO ELECTRICAL SIGNALLING OF CIRCUIT-BREAKER TRIPPED	MOTORE MARCIA MOTOR RUN
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NOTE 1
Punto di connessione per trasformatore ausiliario 400 / 230V
Connection point for auxiliary transformer 400 / 230V

NOTE 2
Arrivo da linea principale con trasformatore 400/230V
Incoming from main line with 400 / 230V transformer

PARTENZA MOTORE DOL 1,5 kW / 3,3 A / DOL MOTOR STARTER 1,5 kW / 3,3 A

SIGLA / ITEM	Q.TA' / Q.TY	DESCRIZIONE / DESCRIPTION	TIPO / TYPE	FORNITORE / MANUFACTURER	CODICE / CODE
-QM1	12	Salvatore - In : 4A - Connessioni a molla Push-in Manual Motor Starter - In : 4A - Push-in spring terminals	MS132-4.0K	ABB	1SAM350010R1008
-QM1	12	Contatti ausiliari 1NO + 1NC per MS116, Mx132 e Mx165 - Connessioni a molla Push-in Aux.-contact 1NO + 1NC for MS116, Mx132 e Mx165 - Push-in spring terminals	HK1-11K	ABB	1SAM201902R1201
-QM1	12	Contatto di segnalazione intervento magnetotermico 1NO + 1NC - Connessioni a molla Push-in (FACOLTATIVO) Signaling contacts 1NO + 1NC signal the tripping of the manual motor starter - Push-in spring terminals (OPTIONAL)	SK1-11K	ABB	1SAM201903R1201
-KM1	12	AF09-30-10-13 bob. 100...250 V c.a./c.c., aux 1NO - Connessioni a molla Push-in AF09-30-10-13 100...250 VAC/DC, aux 1NO - Push-in spring terminals	AF09-30-10K-13	ABB	1SBL137005R1310
-KM1	12	Blocco contatto ausiliario unipolare per montaggio frontale, 1NO - Connessioni a molla Push-in (FACOLTATIVO) Auxiliary contact block for front mounting, 1NO - Push-in spring terminals (OPTIONAL)	CA4-10K	ABB	1SBN010160R1010
-QM1, -KM1	12	Adatt. tra AF09..16 con MS116/132 fino a 25A, per connessioni a molla Connecting Link with Manual Motor Starter, for push-in spring terminals	BEA16-4K1	ABB	1SBN081324T1000
-KM1	4	Barrette di collegamento max 65 A per MS116 e Mx132 3-phase busbar for 3 MS116 / Mx132, Ie=65A	PS1-3-65K	ABB	1SAM301903R1013
-KM1	4	Accessori per barrette di collegamento 3-phase power infeed block	S1-M1-25	ABB	1SAM201907R1101
-QF1	12	Interruttore magnetotermico - 6kA Curva C 2A - 2P - C - 2 A Miniature Circuit Breaker - 6kA Curve C 2A - 2P - C - 2 A	S202-C2	ABB	2CDS252001R0024
-SB1	12	Pulsante verde, ghiera in plastica nera (FACOLTATIVO) Green Modular Pushbutton, Black plastic (OPTIONAL)	MP1-10G	ABB	1SFA611100R1002
-SB2	12	Pulsante rosso, ghiera in plastica nera (FACOLTATIVO) Red Modular Pushbutton, Black plastic (OPTIONAL)	MP1-10R	ABB	1SFA611100R1001
-SB1, -SB2, -SB3	36	Supporto per 3 blocchi Contact Block Holder	MCBH-00	ABB	1SFA611605R1100
-SB1	12	contatto singolo 1NO per montaggio frontale 1NO Modular contact block	MCB-10	ABB	1SFA611610R1001
-SB2, -SB3	24	contatto singolo 1NC per montaggio frontale 1NC Modular contact block	MCB-01	ABB	1SFA611610R1010
-SB3	12	Pulsante modulare di emergenza rosso, 40mm Modular Emergency Stop - Twist release - Mushroom 40mm - Red	MPET4-10R	ABB	1SFA611523R1001

SEGNI GRAFICI PER SCHEMI ELETTRICI (NORME IEC 617 E CEI 3-14...3-26)

GRAPHICAL SYMBOLS FOR ELECTRICAL DIAGRAMS (617 IEC STANDARDS)

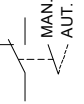
SEGNO SYMBOL	IEC REF. NUMBER	LEGENDA CAPTION		03-03-05	-PRESA E SPINA (FEMMINA E MASCHIO) -PLUG AND SOCKET (MALE AND FEMALE)		07-15-07	-BOBINA DI COMANDO DI UN RELE' CON RITARDO ALLA RICADUTA -RELAY COIL OF A SLOW-RELEASING RELAY
	02-08-01	-EFFETTO TERMICO -THERMAL EFFECT		06-04-01	-MOTORE (SEGNO GENERALE) -MOTOR (GENERAL SYMBOL)		07-15-08	-BOBINA DI COMANDO DI UN RELE' CON RITARDO ALL'ATTRAZIONE -RELAY COIL OF A SLOW-OPERATING RELAY
	02-08-02	-EFFETTO ELETTROMAGNETICO -ELECTROMAGNETIC EFFECT		06-09-11	-TRASFORMATORE DI CORRENTE -CURRENT TRANSFORMER		07-21-01	-FUSIBILE (SEGNO GENERALE) -FUSE (GENERAL SYMBOL)
-----	02-12-01	-COLLEGAMENTO MECCANICO, PNEUMATICO O IDRAULICO -MECHANICAL, PNEUMATIC OR HYDRAULIC CONNECTION (LINK)		07-02-01	-CONTATTO DI CHIUSURA -MAKE CONTACT		07-21-08	-SEZIONATORE CON FUSIBILE INCORPORATO -FUSE-DISCONNECTOR (FUSE ISOLATOR)
	02-12-05	-MOVIMENTO RITARDATO (NEL SENSO DELLO SPOSTA- MENTO DELL'ARCO VERSO IL PROPRIO CENTRO) -DELAYED ACTION (IN THE DIRECTION OF MOVEMENT FROM THE ARC TOWARDS ITS CENTRE)		07-02-03	-CONTATTO DI APERTURA -BREAK CONTACT		07-13-02	-CONTATTORE (CONTATTO APERTO A RIPOSO) -CONTACTOR (CONTACT OPEN IN UNOPERATED POS.)
-----▽-----	02-12-11	-INTERBLOCCO MECCANICO TRA DUE APPARECCHI -MECHANICAL INTERLOCK BETWEEN TWO DEVICES		07-02-04	-CONTATTO DI SCAMBIO CON INTERRUZIONE MOMEN- -CHANGE-OVER BREAK BEFORE MAKE CONTACT TANEA			
└-----	02-13-01	-COMANDO MECCANICO MANUALE (CASO GENERALE) -MANUALLY OPERATED CONTROL (GENERAL CASE)		07-08-02	-CONTATTO DI POSIZIONE DI APERTURA (FINE CORSA) -POSITION SWITCH (LIMIT SWITCH), BREAK CONTACT			
(M)-----	02-13-26	-COMANDO A MOTORE ELETTRICO -OPERATED BY ELECTRIC MOTOR		(07-11-06)	-ELEMENTO DI COMMUTATORE UNIPOLARE A DUE POSIZIONI CON DIAGRAMMA DI POSIZIONE -SINGLE-POLE TWO-POSITION SWITCH WITH POSITION DIAGRAM			
•	03-02-01	-CONNESSIONE DI CONDUTTORI -CONNECTION OF CONDUCTORS		(07-13-101)	-INTERRUTTORE DI POTENZA AD APERTURA AUTOMATICA -CIRCUIT BREAKER WITH AUTOMATIC RELEASE			
•	03-02-02	-TERMINALE O MORSETTO -TERMINAL		07-15-01	-BOBINA DI COMANDO (SEGNO GENERALE) -OPERATING DEVICE (GENERAL SYMBOL)			



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