



AC INVERTER

3x 320 ... 550 V 0,55 ... 7,5 kW

INTEGRATO A BORDO MOTORE - IP65
ON BOARD MOTOR INTEGRATED - IP65

SERIE MOTEC



dal 1910



TECHNICAL DATAS / DATI TECNICI

Tipo / Type	Power motor Potenza motore Kw	Input datas Dati in ingresso 3x320..550V +-0% 45..65Hz +-0% A 400V	Ouput datas Dati in uscita		Power loss Potenza dissipata	Weight Peso Kg	Motor Motore Fimet 3MA 4P 1500 rpm std. vent. IC411 - IP55	Weight Peso Motec + 3MA Kg	Motor Motore Fimet 3AA 4P 1500 rpm opt. vent. IC416 - IP44	Weight Peso Motec + 3AA Kg	Forced ventilation G serie Ventilazione assistita serie G 400V 50Hz	
			PWM standard 8Khz								W	A
			A 400V	A 400V max 60s								
XE82MV551-4B	0,55	1,8	1,8	2,7	35	2,8	3MA80C4	12,8	3AA80C4	14,8	35	0,08
XE82MV751-4B	0,75	2,4	2,4	3,6	45	2,8	3MA80A4	13,8	3AA80A4	15,8	35	0,08
XE82MV152-4B	1,5	3,8	3,9	5,8	70	4,1	3MA90L4	18,1	3AA90L4	20,5	50	0,08
XE82MV222-4B	2,2	5,5	5,6	8,4	95	4,1	3MA100L4	27,1	3AA100L4	29,5	65	0,12
XE82MV302-4B	3	9,5	7,3	11	145	9,7	3MA100LA4	35	3AA100LA4	38	65	0,12
XE82MV402-4B	4	12,3	9,5	14,2	180	9,7	3MA112M4	38	3AA112M4	42	65	0,12
XE82MV552-4B	5,5	16,8	13	19,5	230	9,7	3MA132S4	40	3AA132S4	44	90	0,12
XE82MV752-4B	7,5	21,5	16,5	24,8	300	9,7	3MA132M4	65	3AA132M4	69	90	0,12

FEATURES:

Assembly on the motor or on wall (in this case for the 3..7,5kW one add the IP54 cooling method).
Vibration immunity up to 2g.

EMC Immunity Class according to EN 55011 and EN55022.

Temperature: working -20..+55°C, transport -25..+70°C, storage -25..+60°C.

Power reduction: from 40°C to 55°C 2,5% every °C, from 1000 to 4000m s.l.m. 5% every 1000m.

Relative humidity: 85% without condensate.

Output frequency: 0..650Hz (open-loop constant torque 3..50/60 Hz, closed-loop from 1..50/60 Hz).

Each inverter must be equipped with one or two modules:

I/O: standard I/O, application I/O, Bus I/O (this last one must be mounted with Bus module).

Bus: InterBus-S, Profibus-DP, AS-Interface, Systembus (CAN), DeviceNet/CANopen, LECOM-B RS 232.

Choose standard or application I/O according to the inputs/outputs requests.

With the encoder it is requested application I/O. Only Bus I/O can be mounted with Bus module.

Standard module I/O e Bus I/O: 1 analogic, 4 digitals, 1 frequency inputs; 1 analogic and 1 digital outputs.

Application I/O: 2 analogics, 6 digitals, 2 frequency inputs; 2 analogics, 2 digitals, 1 frequency outputs.

Other options: removable keypad complete of ergonomic supports (cable length 2,5, 5 o 10m), potentiometer on board.
Short-circuit, leakage earth, overvoltage, stall motor protections.

PTC motor input or thermic contact, I²t control.

Integrated brake chopper control.

Possibility of working for pumps/ventilators at 120% of rated current in continuous service.

Open-loop working with 24V encoder with application I/O module.

The inverter has not the feeding of the encoder, it is necessary external power supply.

A e B signals connected on E1-E2 terminals (100KHz maximum frequency, not needed negative signal and not accepted zero signal).

CARATTERISTICHE:

Montaggio sul motore o a parete (in questo caso per 3..7,5kW aggiungere modulo di raffreddamento IP54). Immunità alle vibrazioni fino a 2g.

Classe immunità EMC secondo EN 55011 e EN55022.

Temperatura di funzionamento: -20..+55°C, trasporto -25..+70°C, stoccaggio -25..+60°C.

Riduzione di potenza: da 40°C a 55°C riduzione del 2,5% ogni °C, da 1000 a 4000m s.l.m. riduzione del 5% ogni 1000m.

Umidità relativa: 85% senza condensa.

Frequenza di uscita: 0..650Hz (open-loop coppia costante 3..50/60 Hz, closed-loop da 1..50/60 Hz).

Ogni inverter deve avere anche uno o due moduli:

I/O: standard I/O, application I/O, Bus I/O (quest'ultimo da accoppiare ad un modulo Bus).

Bus: InterBus-S, Profibus-DP, AS-Interface, Systembus (CAN), DeviceNet/CANopen, LECOM-B RS 232.

Scegliere il modulo standard o application I/O a seconda della richiesta di ingressi/uscite, con l'encoder occorre application I/O. Con modulo Bus si accoppia soltanto la Bus I/O.

Moduli standard I/O e Bus I/O: 1 ingresso analogico, 4 digitals, 1 in frequenza; 1 uscita analogica e 1 digitale.

Application I/O: 2 ingressi analogici, 6 digitals, 2 in frequenza; 2 ingressi analogici, 2 digitals, e 1 in frequenza.

Altre opzioni: tastiera remota completa di supporto ergonomico (lunghezza cavo 2,5, 5 o 10m), potenziometro da montare a bordo.

Protezioni contro cortocircuito, dispersione a terra, sovratensione, stallo motore.

Ingresso PTC motore o contatto termico, controllo I²t.

Chopper di comando frentaura integrato.

Possibilità di funzionamento per pompe/ventilatori al 120% della corrente nominale in servizio continuo.

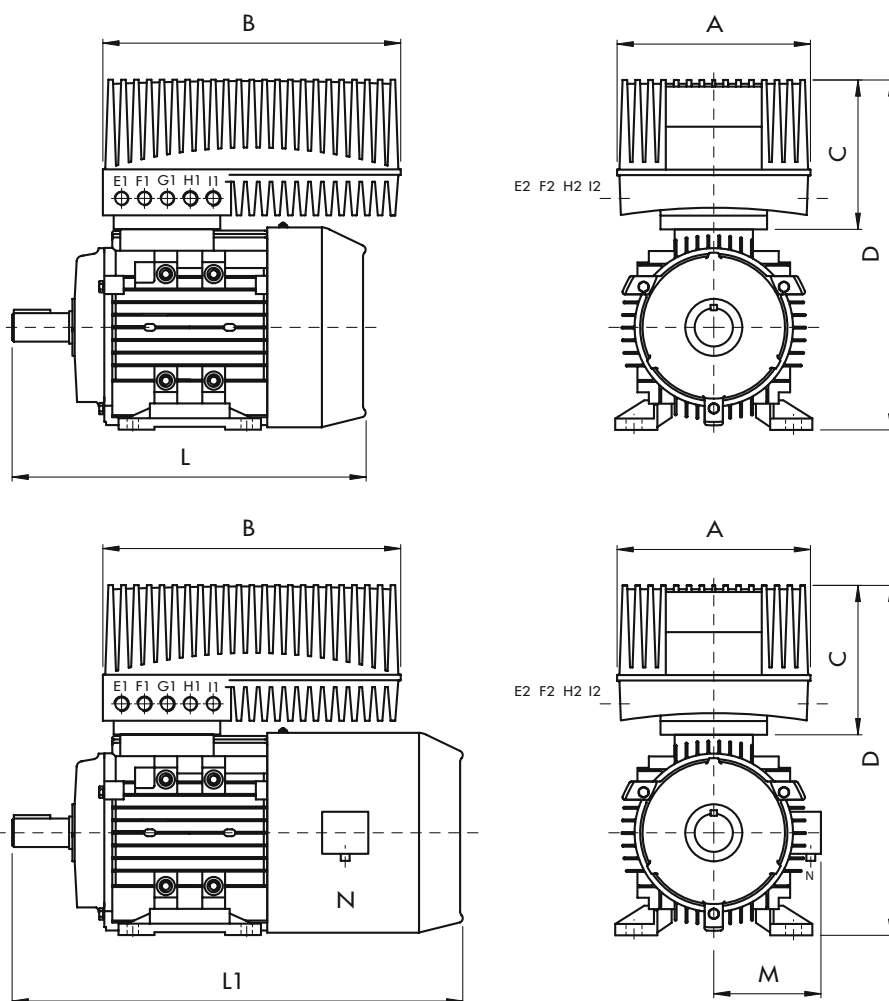
Funzionamento in open-loop con encoder 24V con scheda application I/O.

L'inverter non ha l'alimentazione per l'encoder, è necessario fornire sorgente esterna.

Canali A e B collegati ai morsetti E1-E2 (frequenza massima 100KHz, non servono canali negati, non accettata tacca di zero).



DIMENSIONS / DIMENSIONI



Dimensions for mounting on board motor / dimensioni per montaggio a bordo motore

Type / tipo	Kw	A	B	C	D.... (3MA-3AA motor size / grandezza motore 3MA-3AA)					
					D 71	D 80	D 90	D 100	D 112	D 132
XE82MV551-4B	0,55	156	202	151	300	315	-	-	-	-
XE82MV751-4B	0,75	156	202	151	-	315	335	-	-	-
XE82MV152-4B	1,5	176	230	167	-	-	350	370	-	-
XE82MV222-4B	2,2	176	230	167	-	-	350	370	395	-
XE82MV302-4B	3	211	325	163	-	-	-	370	-	430
XE82MV402-4B	4	211	325	163	-	-	-	-	395	430
XE82MV552-4B	5,5	211	325	163	-	-	-	-	-	430
XE82MV752-4B	7,5	211	325	163	-	-	-	-	-	430

Input cable hole / foro ingresso cavo

Type / tipo	Kw	E1	F1	G1	H1	I1	E2	F2	H2	I2
XE82MV551-4B	0,55	M25	M20	M16	M16	M16	M25	-	-	M16
XE82MV751-4B	0,75	M25	M20	M16	M16	M16	M25	-	-	M16
XE82MV152-4B	1,5	M25	M20	M16	M16	M16	M25	M20	-	M16
XE82MV222-4B	2,2	M25	M20	M16	M16	M16	M25	M20	-	M16
XE82MV302-4B	3	M16	-	M16	M16	M25	-	M16	M25	M25
XE82MV402-4B	4	M16	-	M16	M16	M25	-	M16	M25	M25
XE82MV552-4B	5,5	M16	-	M16	M16	M25	-	M16	M25	M25
XE82MV752-4B	7,5	M16	-	M16	M16	M25	-	M16	M25	M25

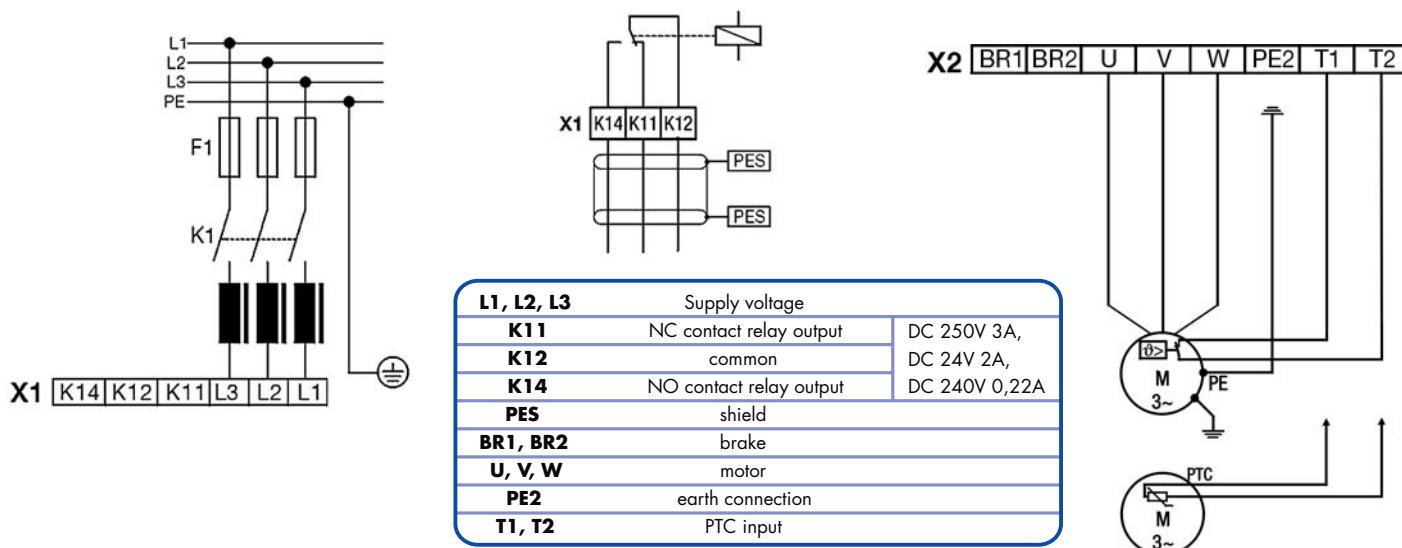
Motor dimensions / dimensioni motore

std vent. IC 411 IP55		opt vent. IC 416 IP44			
Type / tipo	L	Type / tipo	L1	M	N
3MA80	287	3AA80	455	130	M20 x 1,5
3MA90S	315	3AA90S	470	150	M20 x 1,5
3MA90L	340	3AA90L	495	150	M20 x 1,5
3MA100	385	3AA100	550	160	M20 x 1,5
3MA112	400	3AA112	565	170	M20 x 1,5
3MA132S-SA	483	3AA132	625	190	M20 x 1,5
3MA132M-MA-MB-L	510	3AA132	650	190	M20 x 1,5

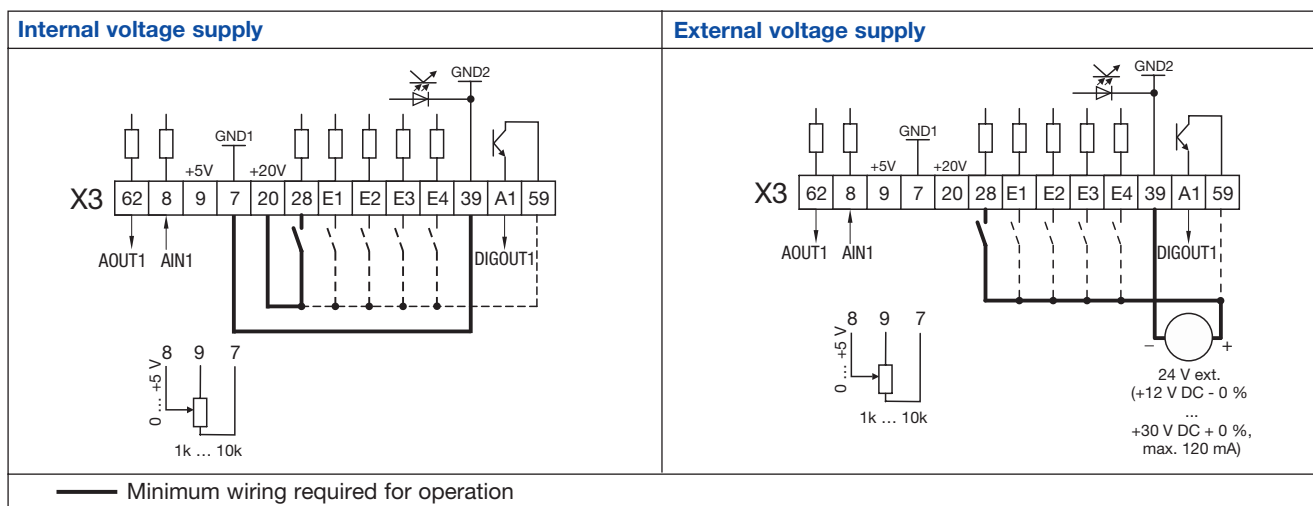
For the other motor datas, please refer to 3MA catalogue.

Per altri dati del motore prego riferirsi al catalogo 3MA.

CONNECTION / COLLEGAMENTO



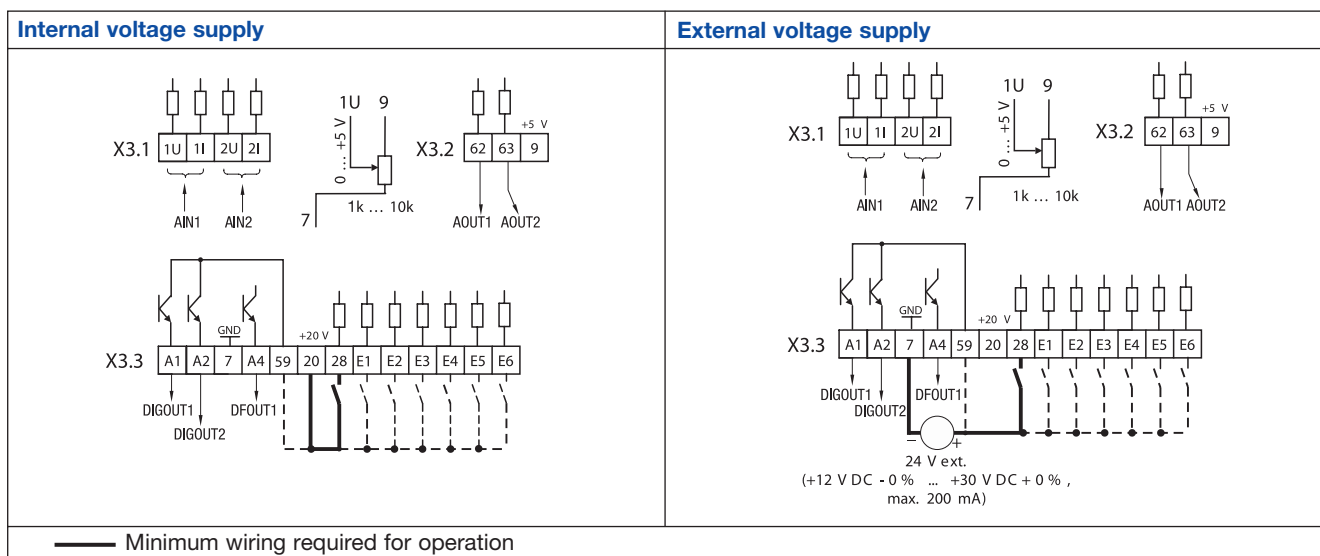
STANDARD I/O MODULE / MODULO



X3	Signal type	Function (bold = setting)	Level	Technical data
8	Analog input	Actual or setpoint value input	0 ... +5 V 0 ... +10 V -10 V... +10 V 0 ... +20 mA +4 ... +20 mA +4 ... +20 mA (monitored for open circuit)	Resolution: 10-bit Linearity error: ±0.5% Temp. sensitivity: 0.3% (0 ... +60°C) Input resistance – Voltage signal: > 50 k? – Current signal: 250 ?
62	Analog output	Output frequency	0... +10 V	Resolution: 10-bit Linearity error: ±0.5% Temp. sensitivity: 0.3% (0 ... +60°C) Load capacity: max. 2 mA
28		Controller inhibit	1 = START	Input resistance: 3.3 k? 1 = HIGH (+12...+30 V) 0 = LOW (0...+3 V) (PLC level, HTL)
E1 1)	Digital inputs	Activation of fixed frequencies (JOG)	E1	
E2 1)		JOG1 = 20 Hz	JOG1	
		JOG2 = 30 Hz	JOG2	
		JOG3 = 40 Hz	JOG3	
E3		DC brake (DCB)	1 = DCB active	
E4		Reversal of direction of rotation	E4	
		Clock./counter-clock. rotation (CW/CCW)	CW	
			CCW	
A1	Digital output	Ready for operation	0/+20 V with internal DC 0/+24 V with external DC	Load capacity: 10 mA 50 mA
9	–	Internal, stabilised DC supply for setpoint value potentiometer	+5.2 V (reference: X3/7)	Load capacity: max. 10 mA
20	–	Internal DC supply for actuation of the digital inputs and outputs	+20 V ±10% (reference: X3/7)	Max. load capacity: ? I = 40 mA
59	–	DC supply for A1	+20 V (internal, bridge to X3/20) +24 V (external)	
7	–	GND1, reference potential for analog signals	–	Isolated to GND2
39	–	GND2, reference potential for digital signals	–	Isolated to GND1

1) Optional 0...10 kHz single-track (via E1) or 0...1 kHz two-track frequency input (via E1 and E2) 8200 vector E82xVxxxKxxxxXXxx2x or later

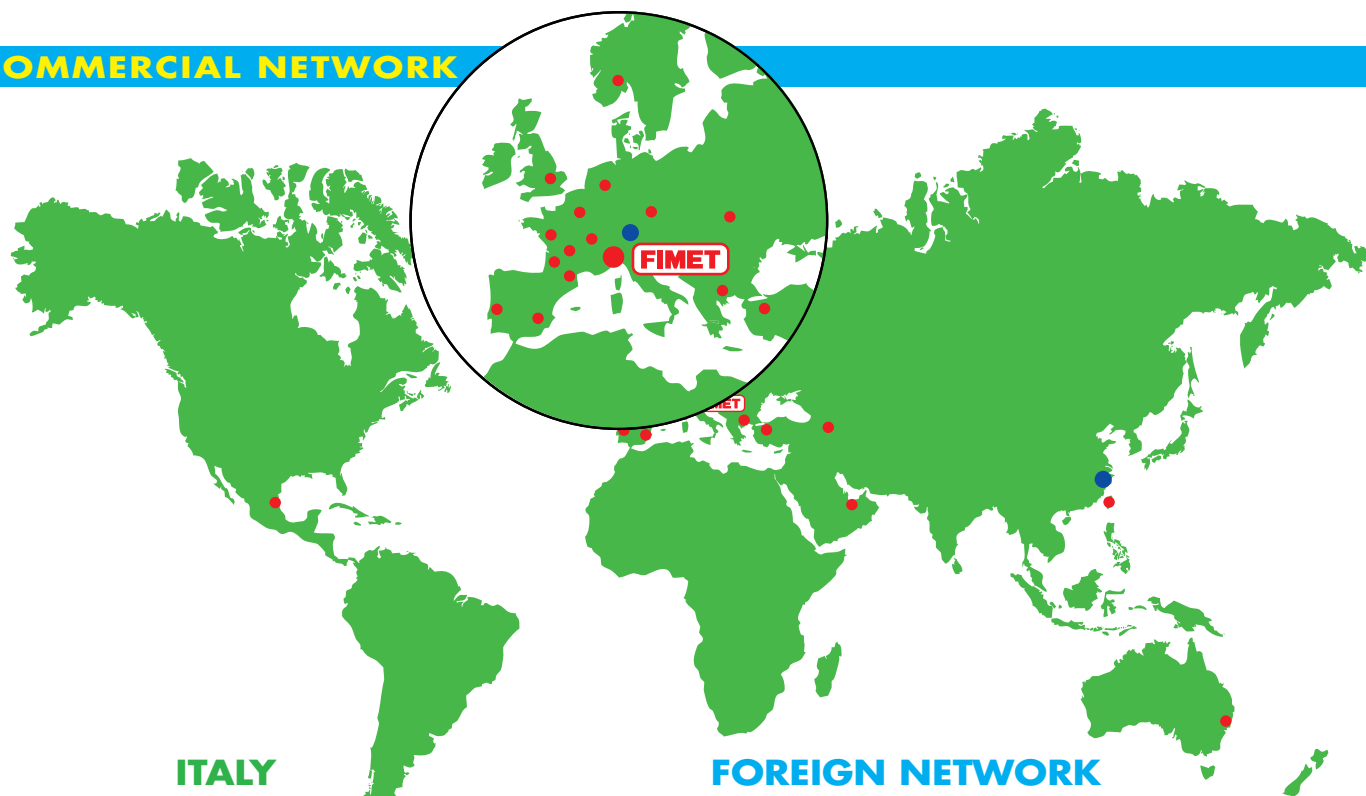
APPLICATION I/O



X3	Signal type	Function (bold = setting)	Level			Technical data
1U/ 2U	Analog inputs	Actual or setpoint value inputs (master reference voltage)	0 ... +5 V 0 ... +10 V -10 V... +10 V			Resolution: 10-bit Linearity error: ±0.5%
1I/2I		Actual or setpoint value inputs (master reference current)	0 ... +20 mA +4 ... +20 mA +4 ... +20 mA (monitored for open circuit)			Input resistance – Voltage signal: > 50 kΩ – Current signal: 250 Ω
62	Analog outputs	Output frequency	0... +10 V 0 ... +20 mA +4 ... +20 mA			Resolution: 10-bit Linearity error: ±0.5% Temp. sensitivity: 0.6% (0 ... +60°C)
63		Motor current				Load capacity: (0...+10 V): max. 2 mA RL (0/4...20 mA) ≤ 500 Ω
28		Controller inhibit	1 = START			Input resistance: 3.2 kΩ 1 = HIGH (+12...+30 V) 0 = LOW (0...+3 V) (PLC level, HTL)
E1 ¹⁾	Digital inputs	Activation of fixed frequencies (JOG) JOG1 = 20 Hz JOG2 = 30 Hz JOG3 = 40 Hz		E1	E2	
E2 ¹⁾			JOG1	1	0	
			JOG2	0	1	
			JOG3	1	1	
E3		DC brake (DCB)	1 = DCB active			
E4		Reversal of direction of rotation Clock./counter-clock. rotation (CW/CCW)		E4		
	CW		0			
	CCW		1			
E5		Not pre-configured	–			
E6		Not pre-configured	–			
A1	Digital outputs	Ready for operation	0/+20 V with internal DC 0/+24 V with external DC			Load capacity:
A2		Not pre-configured				10 mA 50 mA
A4	Frequency output	DC bus voltage	HIGH: +18 V... +24 V (HTL) LOW: 0 V			0.05 kHz...10 kHz Load capacity: max. 8 mA
9	–	Internal, stabilised DC supply for setpoint value potentiometer	+5.2 V			Load capacity: max. 5 mA
20	–	Internal DC supply for actuation of the digital inputs and outputs	+20 V ±10%			Load capacity: max. 60 mA
59	–	DC supply for X3/A1 and X3/A2	+20 V (internal, bridge to X3/20) +24 V (external)			
7	–	GND, reference potential	–			

¹⁾ Optional 0...102.4 kHz frequency input, single-track or two-track

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