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Motor Connector and Plug specifications

fig 1

MSMA 30W ~ 750W, MQMA 100W ~ 400W

• Plug specification

• Motor

AMP plug 172167-1
Pin 170360-1
Included in connected equipment.
(Not included in MINAS series)
Cap 172159-1
Socket 170362-1
or 170366-1

• 2500P/r incremental encoder

AMP plug 172171-1
Pin 170359-1
Included in connected equipment.
(Not included in MINAS series)
Cap 172163-1
Socket 170361-1
or 170365-1

• 17-bit absolute encoder

AMP plug 172169-1
Pin 170359-1
Included in connected equipment.
(Not included in MINAS series)
Cap 172161-1
Socket 170361-1
or 170365-1

• Brake (option)

AMP plug 172165-1
Pin 170360-1
Included in connected equipment.
(Not included in MINAS series)
Cap 172157-1
Socket 170362-1
or 170366-1

• Connector specification

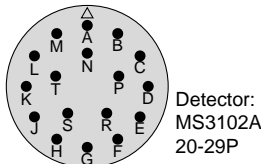
Application	Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Motor		U	V	W	E											
2500P/r incremental encoder		A	\bar{A}	B	\bar{B}	Z	\bar{Z}	NC	NC	NC	NC	RX	$\bar{R}\bar{X}$	+5V	0V	FG
17-bit absolute encoder		BAT+	BAT-	FG	PS	$\bar{P}\bar{S}$	NC	+5V	0V	NC						
Brake		Brake														

NC: No connection - leave the pin open

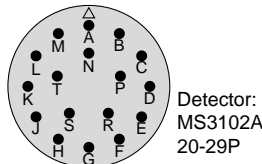
fig 2

MSMA 1kW ~ 5kW, MDMA 750W ~ 7.5kW, MFMA 400W ~ 4.5kW, MHMA 500W ~ 7.5kW, MGMA 300W ~ 6kW

• Encoder connector specification (Common to MSMA, MDMA, MFMA, MHMA, MGMA)



Detector: MS3102A 20-29P



Detector: MS3102A 20-29P

• 2500P/r incremental encoder specification

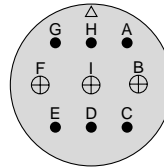
Pin No.	Description
A	A
B	\bar{A}
C	B
D	\bar{B}
E	Z
F	\bar{Z}
G	0V
H	+5V
J	Frame GND
K	NC
L	NC
M	NC
N	NC
P	RX
R	$\bar{R}\bar{X}$
S	NC
T	NC

• 17-bit encoder specification

Pin No.	Description
A	NC
B	NC
C	NC
D	NC
E	NC
F	NC
G	0V
H	+5V
J	Frame GND
K	SD
L	$\bar{S}\bar{D}$
M	NC
N	NC
P	NC
R	NC
S	BAT-*
T	BAT+*

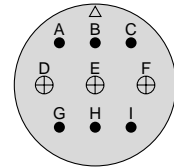
* Leave pins S and T unconnected when the encoder is incremental.

• Motor brake connector specification



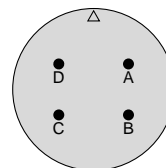
Motor(w/brake; w/o brake) JL04V-2E20-18PE-B(JAE) or equivalent

Pin No.	Description
G	w/Brake (w/o brake) NC
H	w/Brake (w/o brake) NC
A	NC
F	U phase
I	V phase
B	W phase
E	E-GND
D	E-GND
C	NC



Motor(w/brake; w/o brake) JL04V-2E24-11PE-B(JAE) or equivalent

Pin No.	Description
A	w/Brake (w/o brake) NC
B	w/Brake (w/o brake) NC
C	NC
D	U phase
E	V phase
F	W phase
G	E-GND
H	E-GND
I	NC



- 1) Motor(w/o brake)
JL04V-2E20-4PE-B(JAE) or equivalent
JL04V-2E22-22PE-B(JAE) or equivalent
JL04V-2E32-17PE-B(JAE) or equivalent
- 2) Brake(MDMA 7.5kW, MHMA 7.5kW, MGMA 6kW):
MS3102A14S-2P(JAE) or equivalent

Pin No.	1) Motor	2) Brake
A	U phase	Brake
B	V phase	Brake
C	W phase	NC
D	E-GND	NC

• Connector pins and compatible models

Brake	Motor (kW)	MSMA		MDMA		MFMA		MHMA		MGMA		MDMA, MHMA, MGMA
		1.0 ~ 2.5	3.0 ~ 5.0	0.75 ~ 2.5	3.0 ~ 5.0	0.4 ~ 1.5	2.5 ~ 4.5	0.5 ~ 1.5	2.0 ~ 5.0	0.3 ~ 0.9	1.2 ~ 4.5	
Yes		20-18P	24-11P	20-18P	24-11P	20-18P	24-11P	20-18P	24-11P	20-18P	24-11P	32-17P-14-2P
No		20-4P	22-22P	20-4P	22-22P	20-18P	24-11P	20-4P	22-22P	20-4P	22-22P	32-17P

*The specified dimensions are subject to change. To refer to these dimensions for design purpose, contact us for determined dimensions.