

*Highly dynamic, multifunctional and compact:*

*AC servo drives  
MINAS A5 series*



**Highlights**

- Compact and powerful
- Safe (fulfills European safety standards)
- Fast response frequency: 2kHz bandwidth (velocity response)
- Smart (real-time auto-tuning function)

# MINAS A5 series



The MINAS A5 series: Panasonic's standard AC servo drives. The highly dynamic drive controllers can be manipulated with pulses or analog signals.

- Extremely fast response frequency: 2kHz bandwidth (velocity response)
- Pulse inputs and outputs with up to 4MHz
- Real-time auto-tuning function during operation
- 4 notch filters: manual/automatic
- 4 damping filters: manual/automatic
- PANATERM® V5.0: Freeware for configuration and motion simulation
- Supports safety standards according to: EN954-1(CAT3), ISO13849-1 (PLd), EN61508(SIL2), EN62061(SIL2), EN61800-5-2(STO), IEC61326-3-1
- Full-closed control

## MINAS A5

Part no.	MINAS A5 driver 1-phase, 230VAC	Stock type
MADHT1505	Position, velocity and torque control, 50/100W	B
MADHT1507	Position, velocity and torque control, 200W	A
MBDHT2510	Position, velocity and torque control, 400W	A
MCDHT3520	Position, velocity and torque control, 750W	A
MDDHT5540	Position, velocity and torque control, 1/1.5kW	A

Part no.	MINAS A5 driver 3-phase, 400VAC	Stock type
MDDHT2412	Position, velocity and torque control, 1kW	B
MDDHT3420	Position, velocity and torque control, 1.5kW	A
MEDHT4430	Position, velocity and torque control, 2kW	B
MFDHT5440	Position, velocity and torque control, 3kW	A
MFDHTA464	Position, velocity and torque control, 4/5kW	A



The MINAS A5E series: Panasonic's economy version for servo drives.

Pulse control enables the drivers to achieve precise positioning control.

- High performance (like MINAS A5 series standard drives)
- Multifunctional (like MINAS A5 series standard drives)
- Attractive price-performance ratio

## MINAS A5E

Part no.	MINAS A5E driver 1-phase, 230VAC	Stock type
MADHT1505E	Position control via pulse input, without analog input, 50/100W	B
MADHT1507E	Position control via pulse input, without analog input, 200W	B
MBDHT2510E	Position control via pulse input, without analog input, 400W	A
MCDHT3520E	Position control via pulse input, without analog input, 750W	A
MDDHT3530E	Position control via pulse input, without analog input, 1kW	C
MDDHT5540E	Position control via pulse input, without analog input, 1/1.5kW	C

Part no.	MINAS A5E driver 3-phase, 400VAC	Stock type
MDDHT2412E	Position control via pulse input, without analog input, 1kW	C
MDDHT3420E	Position control via pulse input, without analog input, 1.5kW	C
MEDHT4430E	Position control via pulse input, without analog input, 2kW	C
MFDHT5440E	Position control via pulse input, without analog input, 3kW	C
MFDHTA464E	Position control via pulse input, without analog input, 4/5kW	C

Legend, stock type:

A = products normally in stock

B = products partially in stock

C = no stock

## MINAS A5N RTEX

Part no.	MINAS A5N (RTEX)	Stock type
MADHT1505NA1	50/100W, 1-phase, 230VAC	A
MADHT1507NA1	200W, 1-phase, 230VAC	C
MBDHT2510NA1	400W, 1-phase, 230VAC	C
MDDHT2407NA1	400/600W, 3-phase, 400VAC	C
MCDHT3520NA1	750W, 1-phase, 230VAC	A
MDDHT2412NA1	750/1000W, 3-phase, 400VAC	B
MDDHT3420NA1	1000/1500W, 3-phase, 400VAC	B
MEDHT4430NA1	2000/2500W, 3-phase, 400VAC	C
MFDHT5440NA1	3000W, 3-phase, 400VAC	C
MFDHTA464NA1	4000/5000W, 3-phase, 400VAC	C

Part no.	MINAS A5N (RTEX) with safe torque off (STO)	Stock type
MADHT1505N01	50/100W, 1-phase, 230VAC	C
MADHT1507N01	200W, 1-phase, 230VAC	B
MBDHT2510N01	400W, 1-phase, 230VAC	A
MDDHT2407N01	400/600W, 3-phase, 400VAC	C
MCDHT3520N01	750W, 1-phase, 230VAC	C
MDDHT2412N01	750/1000W, 3-phase, 400VAC	C
MDDHT3420N01	1000/1500W, 3-phase, 400VAC	C
MEDHT4430N01	2000/2500W, 3-phase, 400VAC	C
MFDHT5440N01	3000W, 3-phase, 400VAC	C
MFDHTA464N01	4000/5000W, 3-phase, 400VAC	C

## MINAS A5B EtherCAT

Part no.	MINAS A5B (EtherCAT) with safe torque off (STO)	Stock type
MADHT1505B01	100W, 1/3-phase 230VAC	N/A
MADHT1507B01	200W, 1/3-phase 230VAC	N/A
MDDHT2407B01	600W, 3-phase, 400VAC	N/A
MDDHT2412B01	1000W, 3-phase, 400VAC	N/A
MEDHT4430B01	2500W, 3-phase, 400VAC	N/A
MFDHT5440B01	3000W, 3-phase, 400VAC	N/A
MFDHTA464B01	5000W, 3-phase, 400VAC	N/A



The MINAS A5N series with RTEX (Realtime Express) interface. The high-speed, Ethernet-based drive system enables extremely fast motion with utmost precision, e.g. for synchronizing AC servo drives.

- Real-time communication: 100Mbps using RTEX protocol
- Supports position, velocity and torque control and safety standards just like MINAS A5
- Manual and automatic damping filters
- Complete set of commands for up to 32 axes per network
- RTEX positioning units for FPΣ (Sigma) and FP2 controllers
- Easy wiring using standard Ethernet cables (CAT5e, up to 100m between units)

**New:**



The MINAS A5B series with an EtherCAT interface offers the tried and true range of functions of the A5N series. In addition, it offers the advantage of open communication with EtherCAT motion controllers.

- Real-time communication: 100Mbps via CAN application protocol over EtherCAT (CoE)
- Supports positions (pp, csp, ip, hm), velocity (pv, csv), torque control (tq, cst) and safety standards just like MINAS A5
- Manual and automatic damping filters
- Complete set of commands for up to 64 axes per network
- Easy wiring using standard Ethernet cables (CAT5e, up to 100m between units)

## MINAS A5 motors

Suited for use with all drive controllers (A5, A5E, A5N, A5B), an overview of all MINAS A5 motors.

- 20-bit, high-precision incremental encoder
- Low cogging torque
- IP65/IP67 degree of protection for all MSME motor types (Excluding shaft feedthrough and connectors)
- Compact design



Part no.	MINAS A5 motor – high inertia	Stock type
MHME104G1G	1kW, 4.77Nm, key shaft, oil seal	B
MHME204G1H	1kW, 9.55Nm, key shaft oil seal, holding brake	B
MHME154G1G	1.5kW, 7.16Nm, key shaft, oil seal	A
MHME154G1H	1.5kW, 7.16Nm, key shaft, oil seal, holding brake	B
MHME204G1G	2kW, 9.55Nm, key shaft, oil seal	B
MHME304G1G	3kW, 14.3Nm, key shaft, oil seal	B
MHME404G1H	4kW, 19.1Nm, key shaft, oil seal, holding brake	C
MHME504G1H	5kW, 23.9Nm, key shaft, oil seal, holding brake	B

Part no.	MINAS A5 motor – medium inertia	Stock type
MDME102G1G	1kW, 4.77Nm, key shaft, oil seal	C
MDME152G1G	1.5kW, 7.16Nm, key shaft, oil seal	C
MDME304G1G	3kW, 14.3Nm, key shaft, oil seal	C
MDME504G1G	5kW, 23.9Nm, key shaft, oil seal	C

You can find more information on our homepage:  
[www.panasonic-electric-works.com](http://www.panasonic-electric-works.com)

Legend, stock type:

- A = products normally in stock
- B = products partially in stock
- C = no stock

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Part no.	MINAS A5 motor – low inertia	Stock type
MSME5AZG1U	50W, 0.16Nm, key shaft, oil seal	B
MSME012G1S	100W, 0.32Nm, key shaft	B
MSME012G1U	100W, 0.32Nm, key shaft, oil seal	A
MSME022G1C	200W, 0.64Nm, round shaft, oil seal	A
MSME022G1D	200W, 0.64Nm, round shaft, oil seal, holding brake	B
MSME022G1U	200W, 0.64Nm, key shaft, oil seal	A
MSME022G1V	200W, 0.64Nm, key shaft, oil seal, holding brake	B
MSME022S1V	200W, 0.64Nm, absolute encoder, key shaft, oil seal, holding brake	B
MSME042G1C	400W, 1.3Nm, round shaft, oil seal	B
MSME042G1D	400W, 1.3Nm, round shaft, oil seal, oil seal	B
MSME042G1S	400W, 1.3Nm, key shaft	B
MSME042G1U	400W, 1.3Nm, key shaft, oil seal	A
MSME042G1V	400W, 1.3Nm, key shaft, oil seal, holding brake	B
MSME082G1C	750W, 2.4Nm, round shaft, oil seal	A
MSME082G1D	750W, 2.4Nm, key shaft, oil seal, holding brake	B
MSME082G1U	750W, 2.4Nm, key shaft, oil seal	A
MSME082G1V	750W, 2.4Nm, key shaft, oil seal, holding brake	B
MSME102G1G	1kW, 3.18Nm, key shaft, oil seal	B
MSME152G1G	1.5kW, 4.77Nm, key shaft, oil seal	B
MSME152G1H	1.5kW, 4.77Nm, key shaft, oil seal, holding brake	B
MSME154G1G	1.5kW, 4.77Nm, key shaft, oil seal	B
MSME304G1G	3kW, 9.55Nm, key shaft, oil seal	B
MSME304G1H	3kW, 9.55Nm, key shaft, oil seal, holding brake	A
MSME404G1H	4kW, 12.7Nm, key shaft, oil seal, holding brake	B
MSME504G1H	5kW, 15.9Nm, key shaft, oil seal, holding brake	B