








MICRO ENCODER

MTL rotary encoders are all based on space-saving design and available in many types from ultra-small types to high-resolution products.

Series name	Appearance	Type name	Features				
ME series		<div>MES-3-□P□</div> <table><tr><td>Outside dimensions</td><td>∅5×9.6</td></tr><tr><td>Resolution</td><td>64~1024</td></tr></table>	Outside dimensions	∅5×9.6	Resolution	64~1024	<ul style="list-style-type: none">■The smallest model of ultra-small series.■Square wave, Voltage output.■Only 1024P/R with PST built-in PST multilication circuit.
	Outside dimensions	∅5×9.6					
	Resolution	64~1024					
		<div>MES-6-□PC</div> <table><tr><td>Outside dimensions</td><td>∅7.5×10.5</td></tr><tr><td>Resolution</td><td>100 to 500</td></tr></table>	Outside dimensions	∅7.5×10.5	Resolution	100 to 500	<ul style="list-style-type: none">■The smaller model of ultra-small series.■A, B, and Z phase output.■Open collector output.
	Outside dimensions	∅7.5×10.5					
	Resolution	100 to 500					
	<div>ME-9-□P□</div> <table><tr><td>Outside dimensions</td><td>∅13×20</td></tr><tr><td>Resolution</td><td>100 to 1024 (16,000)</td></tr></table>	Outside dimensions	∅13×20	Resolution	100 to 1024 (16,000)	<ul style="list-style-type: none">■Compactness, light weight.■A, B, and Z phase output.■Hollow-shaft type convenient for small motors. Option <ul style="list-style-type: none">■Sine wave■With built-in PST ×2, ×4, ×8, ×16 multiplication circuit	
Outside dimensions	∅13×20						
Resolution	100 to 1024 (16,000)						
	<div>ME-12-□P□</div> <table><tr><td>Outside dimensions</td><td>∅20×20</td></tr><tr><td>Resolution</td><td>100 to 2048 (32,000)</td></tr></table>	Outside dimensions	∅20×20	Resolution	100 to 2048 (32,000)	<ul style="list-style-type: none">■Compactness, light weight.■A, B, and Z phase output.■Availability of hollow-shaft type convenient for small motors. Option <ul style="list-style-type: none">■Sine wave■With built-in PST ×2, ×4, ×8, ×16 multiplication circuit	
Outside dimensions	∅20×20						
Resolution	100 to 2048 (32,000)						
	<div>ME-17-□P</div> <table><tr><td>Outside dimensions</td><td>∅20×15</td></tr><tr><td>Resolution</td><td>100 to 500</td></tr></table>	Outside dimensions	∅20×15	Resolution	100 to 500	<ul style="list-style-type: none">■Compactness, light weight.■A, B, and Z phase output.■Availability of 3 types of shaft shape, single-shaft types ∅2 and ∅4 and hollow-shaft type.	
Outside dimensions	∅20×15						
Resolution	100 to 500						
	<div>ME-20-□PL□</div> <table><tr><td>Outside dimensions</td><td>∅32×22</td></tr><tr><td>Resolution</td><td>40 to 7200 (57,600)</td></tr></table>	Outside dimensions	∅32×22	Resolution	40 to 7200 (57,600)	<ul style="list-style-type: none">■Thin and compact popular type.■Availability of shaft shape to meet various fitting systems. Option <ul style="list-style-type: none">■Sine wave■With built-in PST ×2, ×4, ×8, ×16 multiplication circuit	
Outside dimensions	∅32×22						
Resolution	40 to 7200 (57,600)						

		<div>ME-J-30-IP-L</div> <table><tr><td>Outside dimensions</td><td>Φ44x22</td></tr><tr><td>Resolution</td><td>40 to 10800 (144,000)</td></tr></table>	Outside dimensions	Φ44x22	Resolution	40 to 10800 (144,000)	<ul style="list-style-type: none">Thin and compact popular type.Availability of shaft shape to meet various fitting systems. Option <ul style="list-style-type: none">Sine waveWith built-in PST ×2, ×4, ×8, ×16 multiplication circuit
Outside dimensions	Φ44x22						
Resolution	40 to 10800 (144,000)						
		<div>MES-40-IP</div> <table><tr><td>Outside dimensions</td><td>Φ56x40</td></tr><tr><td>Resolution</td><td>100 to 15000 (80,000)</td></tr></table>	Outside dimensions	Φ56x40	Resolution	100 to 15000 (80,000)	<ul style="list-style-type: none">Robust, general-purpose type.Hostile-environment and drip-proof specifications are also available.Load-resistance. Option <ul style="list-style-type: none">Sine waveWith built-in PST ×4, ×8, ×16 multiplication circuit
Outside dimensions	Φ56x40						
Resolution	100 to 15000 (80,000)						
		<div>ME-50-IP</div> <table><tr><td>Outside dimensions</td><td>Φ65x30</td></tr><tr><td>Resolution</td><td>500 to 10800 172,800</td></tr></table>	Outside dimensions	Φ65x30	Resolution	500 to 10800 172,800	<ul style="list-style-type: none">Thin and compact popular type.Availability of shaft shape to meet various fitting methods.With built-in PST ×2, ×4, ×8, ×16 multiplication circuit
Outside dimensions	Φ65x30						
Resolution	500 to 10800 172,800						
		<div>MEH-60-IP</div> <table><tr><td>Outside dimensions</td><td>Φ74x30</td></tr><tr><td>Resolution</td><td>180 to 21600 345,600</td></tr></table>	Outside dimensions	Φ74x30	Resolution	180 to 21600 345,600	<ul style="list-style-type: none">High resolution.Easy-to-fit thin type.Large hollow shaft of 30 in inside diameter.With built-in PST ×2, ×4, ×8, ×16 multiplication circuit
Outside dimensions	Φ74x30						
Resolution	180 to 21600 345,600						
		<div>MEH-85-IP</div> <table><tr><td>Outside dimensions</td><td>Φ100x26</td></tr><tr><td>Resolution</td><td>200 to 21600 345,600</td></tr></table>	Outside dimensions	Φ100x26	Resolution	200 to 21600 345,600	<ul style="list-style-type: none">High resolution.Easy-to-fit thin type.Large hollow shaft of 36 in inside diameter.With built-in PST ×2, ×4, ×8, ×16 multiplication circuit
Outside dimensions	Φ100x26						
Resolution	200 to 21600 345,600						
		<div>MEH-130-IP</div> <table><tr><td>Outside dimensions</td><td>Φ150x50</td></tr><tr><td>Resolution</td><td>360 to 32400 (518,400)</td></tr></table>	Outside dimensions	Φ150x50	Resolution	360 to 32400 (518,400)	<ul style="list-style-type: none">High resolution.Large hollow shafts of 60 and 75 in inside diameter.With built-in PST ×2, ×4, ×8, ×16 multiplication circuit
Outside dimensions	Φ150x50						
Resolution	360 to 32400 (518,400)						
		<div>MEH-180-IP</div> <table><tr><td>Outside dimensions</td><td>Φ200x71</td></tr><tr><td>Resolution</td><td>36000 54000 (576,000)</td></tr></table>	Outside dimensions	Φ200x71	Resolution	36000 54000 (576,000)	<ul style="list-style-type: none">High resolution.3 power sources.Large hollow shaft of 90 in inside diameter.
Outside dimensions	Φ200x71						
Resolution	36000 54000 (576,000)						
MGH series		<div>MGH-12-LE</div> <table><tr><td>Outside dimensions</td><td>φ20×23</td></tr><tr><td>Resolution</td><td>1024~8192</td></tr></table>	Outside dimensions	φ20×23	Resolution	1024~8192	<ul style="list-style-type: none">Light weight, compactness.Modular type best suited for small motors.With CS signal
Outside dimensions	φ20×23						
Resolution	1024~8192						

		MGH-14-□-C Outside dimensions: $\phi 18.9 \times 20$ Resolution: 100 to 300	
		MGH-20-□-E Outside dimensions: $\phi 32 \times 22.5$ Resolution: 100 to 1200	
		MGH-30-□-E Outside dimensions: $\phi 44 \times 21$ Resolution: 100 to 2000	
MA series		MAS-10-256G Outside dimensions: $\phi 13 \times 15.5$ Resolution: 256	<ul style="list-style-type: none"> ■ Ultra compact 8-bit absolute type ■ Gray code output without reading error
		MA□-17-256 G Outside dimensions: $\phi 20 \times 21$ Resolution: 256 to 1024	<ul style="list-style-type: none"> ■ Ultra-small 8-bit absolute type. ■ Availability of single-shaft (4 in diameter) and hollow shaft (2 in inside diameter). ■ Gray-code output without reading error.
		MA□-20-□□ Outside dimensions: $\phi 32 \times 24$ Resolution: 256~4096	<ul style="list-style-type: none"> ■ Compact 12bit absolute ■ The output codes are gray code, pure binary code, BCD code.
		MA□-36-□□□ Outside dimensions: $\phi 46 \times 30$ Resolution: 256 to 16384	<ul style="list-style-type: none"> ■ Compact 8-bit absolute encoder. ■ Robust, hostile-environment type. ■ Availability of shaft shape to meet various fitting systems.

		<div>MA□-42-□□□</div> <table><tr><td>Outside dimensions</td><td>φ52x30</td></tr><tr><td>Resolution</td><td>256 to 4096</td></tr></table>	Outside dimensions	φ52x30	Resolution	256 to 4096	<ul style="list-style-type: none">12-bit absolute encoder.The output codes are gray code, pure binary code, and BCD code.
Outside dimensions	φ52x30						
Resolution	256 to 4096						
MXS series		<div>MXS-36-□□□□C6□□</div> <table><tr><td>Outside dimensions</td><td>φ46×55</td></tr><tr><td>Resolution</td><td>128 to 1024</td></tr></table>	Outside dimensions	φ46×55	Resolution	128 to 1024	<ul style="list-style-type: none">Mechanical multiturn encoder with reduction gearDurable metal code discUp to 64revolution
	Outside dimensions	φ46×55					
Resolution	128 to 1024						
		<div>MXS-42-□□□□□□□□</div> <table><tr><td>Outside dimensions</td><td>φ65x63.5</td></tr><tr><td>Resolution</td><td>128 to 4096</td></tr></table>	Outside dimensions	φ65x63.5	Resolution	128 to 4096	<ul style="list-style-type: none">Multiple-rotation absolute encoderHigh resolution, up to 12bit/revolutionMechanical multiturn encoder with reduction gearUp to 64revolution
Outside dimensions	φ65x63.5						
Resolution	128 to 4096						
SE series		<div>SES-10-□□</div> <table><tr><td>Outside dimensions</td><td>φ13x10</td></tr><tr><td>Resolution</td><td>100 to 200</td></tr></table>	Outside dimensions	φ13x10	Resolution	100 to 200	<ul style="list-style-type: none">This is adopted as a multi-functional sensor for detecting angle and movement of small-unit-type systems such as OA equipment, automatic vending machine, and card reader.With current consumption 10 to 12mA, approximate sine wave to sufficiently meet actual application can be obtained.
	Outside dimensions	φ13x10					
Resolution	100 to 200						
		<div>SE □-17-□□□</div> <table><tr><td>Outside dimensions</td><td>φ20x12.5</td></tr><tr><td>Resolution</td><td>100 to 360</td></tr></table>	Outside dimensions	φ20x12.5	Resolution	100 to 360	<ul style="list-style-type: none">This is adopted as a multi-functional sensor for detecting angle and movement of small-unit-type systems such as OA equipment, automatic vending machine, and card reader.With current consumption 10 to 12mA, approximate sine wave to sufficiently meet actual application can be obtained.
Outside dimensions	φ20x12.5						
Resolution	100 to 360						
MLS series		<div>MLS-12-□□□</div>	<ul style="list-style-type: none">Smallest in the series: Outside dimensions 23 x 24 x 25 (H)Stroke: 250 mmResolution: Selection from among 1, 0.2, 0.1, and 0.04 mmLightweight: 60 g				
		<div>MLS-30-□□□</div>	<ul style="list-style-type: none">Wire-typed linear scale, Absolute output.Minimum reading 0.02mm, 0.2mm *0.005mm, 0.05mm is possible with 4-multiplying circuits.Measuring range: 500mm, 1000mm.Also available is a set type with indicator.				

		<u>MLS-50-□-□</u>		<ul style="list-style-type: none">■Wire-type linear scale■Minimum reading is 0.1mm■Mesuring range are 2000mm,4000mm
MLA series		<u>MLA-17-□-□</u>		<ul style="list-style-type: none">■Wire-typed linear scale, Absolute output.■Smallest in the series: Outside dimensions 23 x 24 x 27.4 (H)■Output 1,024(G,N)or 1,000(B)■Main Applications: Robot Machine, small actuator, manipulator and etc.
		<u>MLA-30-□□□-90</u>		<ul style="list-style-type: none">■Wire-type absolute linear scale■Minimum reading is 0.088mm■Mesuring range is 90mm
		<u>MLA-36</u>		<ul style="list-style-type: none">■Wire-type absolute linear scale■Minimum reading is 0.1mm■Mesuring range is 1000mm
		<u>MLA-50-□□-□</u>		<ul style="list-style-type: none">■Wire pulling linear absolute encoderDetection of absolute position does not need backup.■Resolution/measuring range: 0.01/40 mm, 0.1/400 mm, 0.25/1000 mm, 0.5/2000 mm, 1/4000 mm
REH series		<u>REH-30-□R□</u>		<ul style="list-style-type: none">■Roller type encoder.■Easy measuring.■Minimum reading 0.1 to 1mm.
DC series		<u>DC-□-□</u>		<ul style="list-style-type: none">■Small and robust counter.■Decimal point moving, dividing/multiplying possible.
MT series		<u>MT-16S</u>		<ul style="list-style-type: none">■In combination with ME-12PS, ME-20PS or ME-30PS, division is made into 8 multiple and 16 multiple.
		Outside dimensions	150x65x45	
Series name		Type name		
Setting Option/ Coupling		Spring flange		
		Flange coupling		

■For the details of products, see the page of each product.

●You are requested to consult sales personnel of our company because the specifications, etc. may be changed for improvement without prior notice.

▼ How to read type name

SES - 10 -

SE - 17 -

ME - -

Series name

Shaft shape *1

Slit diameter

Output pulse number -- pulse number per rotation

Voltage output: no mark/open collector output: C/line driver output: E

*1

Single-shaft type	Hole type	Both-shaft type
S	H	D

*2

Gray	Pure binary	BCD
G	N	B

*3

DC5V	DC12V	DC5~12V	24V	DC12~24V
1	2	3	4	5

MA - -

Series name

Shaft shape *1

Slit diameter

Resolution

Output code *2

Supply voltage *3

MLS - - -

Linear series

Shape

Resolution, minimum reading

Measuring length (mm)