

knitter-switch



Encoder

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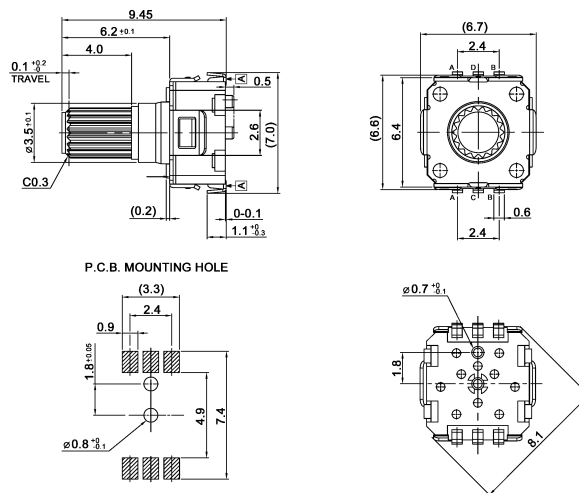
MEOP 14	19
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Specifications:

Contact rating:	5 V DC, 10 mA
Coactance resistance:	< 100mΩ
Insulation resistance:	> 50 MΩ
Dielectric strength:	100 V, 50 Hz for the duration of 1 minute
Operating temperature:	-40°C to +85°C
Detent torque:	2.5 Ncm
Pulses/Detents per turn:	6/12
Mechanical life (cycle funtion):	minimum 50 000 turns
Pushbutton function:	Actuation Force 4 N, travel 0.1 mm, mechanical life > 50 000 operations
Contacts and terminals:	silver-plated
Mounting:	on pc-board – SMD
Soldering conditions:	reflow soldering, max. 10 s, max. 260 °C

Model:

MERPS 6-6210T



Packing: on tapes (400 pieces, Ø 330 mm)



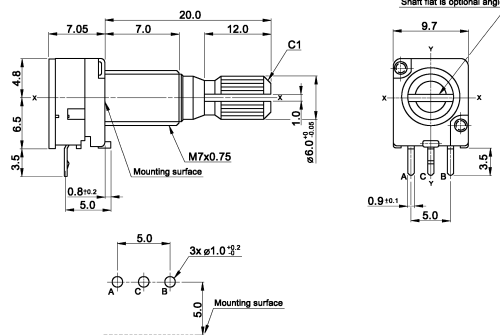
Encoder

Specifications:

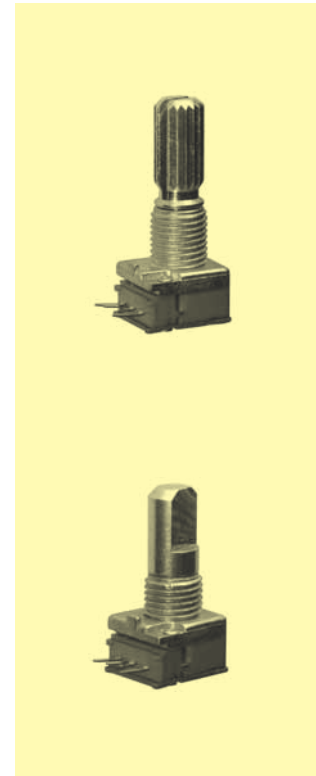
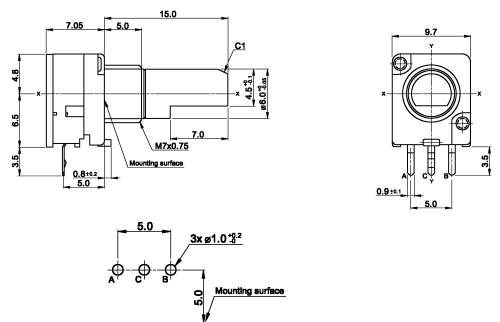
Contact rating:	5 V DC, 1 mA
Insulation resistance:	> 100 MΩ
Dielectric strength:	300 V, 50 Hz for the duration of 1 minute
Operating temperature:	-40 °C to +85 °C
Rotational/Detent torque:	0.5/1.0 Ncm
Pulses/Detents per turn:	15/30
Mechanical life:	> 15 000 cycles
Pushbutton (optional):	actuation force 5 N, travel 0.5 mm, life > 10 000 operations
Contacts:	silver-plated
Terminals:	silver-plated
Mounting:	on pc-board single hole mounting M 7 x 0.75
Soldering conditions:	wave-soldering – max.: 5 sec, 260 °C

Models:

MER9-15220BM7R



MER9-15115AM7R



Output signal format:

Shaft rotational direction	Signal	Output
C.W.	Terminal A-C	OFF ON
	Terminal B-C	OFF ON
C.C.W.	Terminal A-C	OFF ON
	Terminal B-C	OFF ON



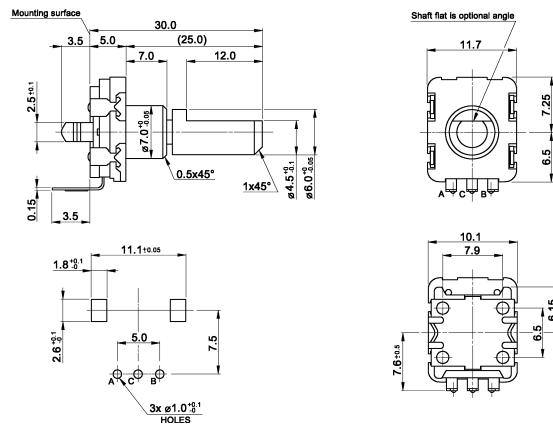
Encoder

Specifications:

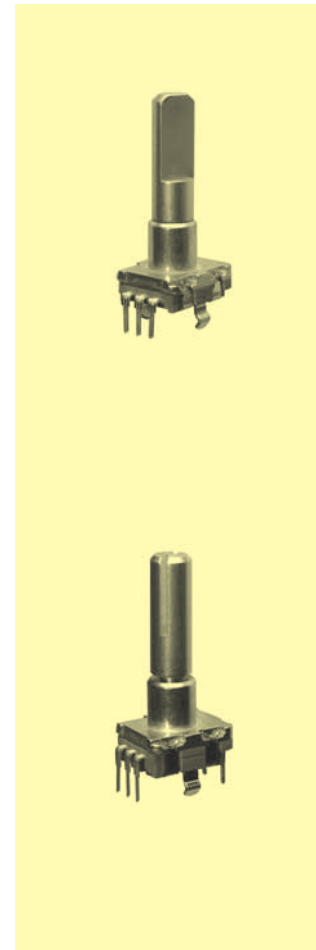
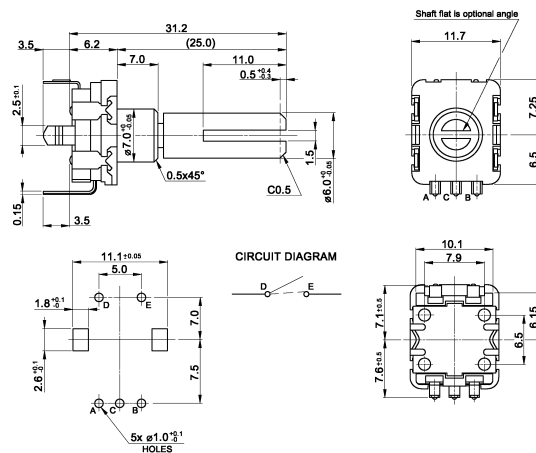
Contact rating:	5 V DC, 10 mA
Insulation resistance:	> 100 MΩ
Dielectric strength:	300 V, 50 Hz for the duration of 1 minute
Operating temperature:	-10 °C to +85°C
Rotational/Detent torque:	0.5/1.2 Ncm
Mechanical life:	> 15 000 cycles
Pushbutton (optional):	actuation force 6 N, travel 0.5 mm, life > 25 000 operations
Contacts:	silver-plated
Terminals:	silver-plated
Mounting:	on pc-board
	single hole mounting, bushing M 7 x 0.75
Soldering conditions:	wave-soldering – max.: 5 sec, 260 °C

Models:

MER11-15125B



MERP11-15325B

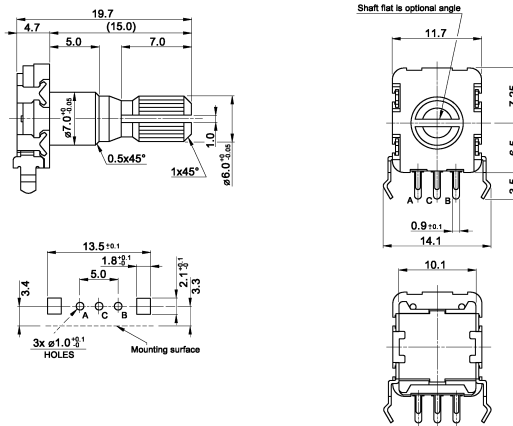


Encoder

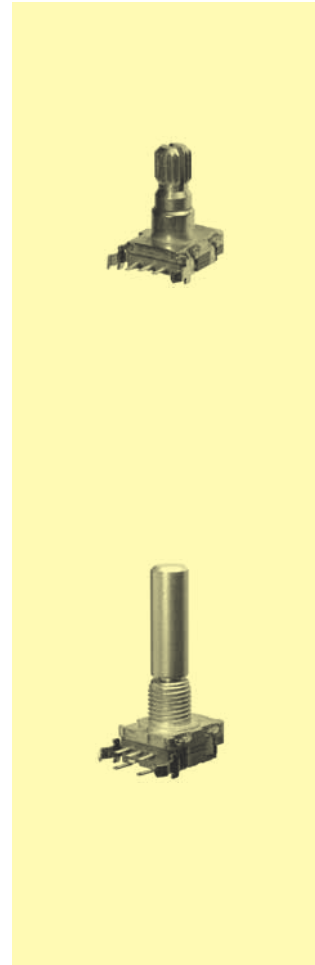
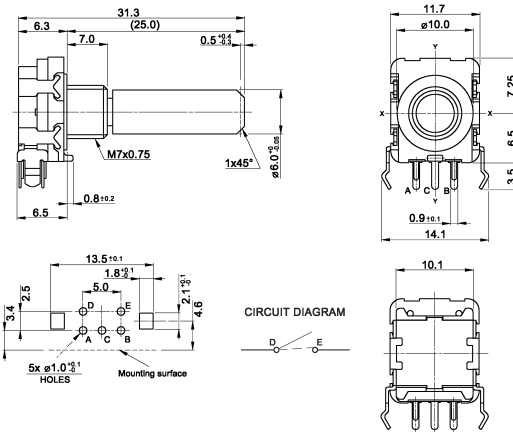


Models:

MER11-15215A-R



MERP11-20425BM7-R



Output signal format:

Shaft rotational direction	Signal	Output
C.W.	Terminal A-C	OFF ON
	Terminal B-C	OFF ON
C.C.W.	Terminal A-C	OFF ON
	Terminal B-C	OFF ON

Ordering code 11 mm Encoder:

MER - -

Pushbutton:
 without
 with

Number of pulses:
 08 8 pulses, 16 detents
 08N 8 pulses, no detents
 15 15 pulses, 30 detents
 15N 15 pulses, no detents
 16 16 pulses, 16 detents
 16N 16 pulses, no detents
 20 20 pulses, 20 detents
 20N 20 pulses, no detents

Shaft type:
 1 flat
 2 knurled
 3 cut
 4 round

Shaft length:
 15 15 mm
 17.5 17.5 mm
 20 20 mm
 25 25 mm

Bushing height:
 A 5 mm
 B 7 mm

Thread:
 M7 M7
 no thread

Shaft orientation:
 R horizontal
 vertical

Travel (only for "P"):
 0.5 mm
 1.5 mm



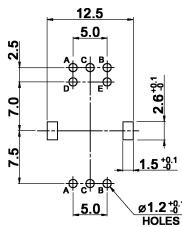
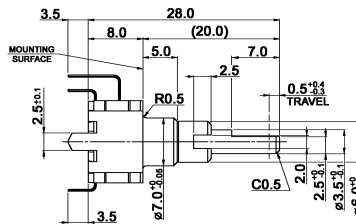
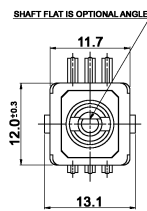
Encoder

Specifications:

Contact rating:	5 V DC, 10 mA
Cocontact resistance:	< 100mΩ
Insulation resistance:	> 100 MΩ
Dielectric strength:	300 V, 50 Hz for the duration of 1 minute
Operating temperature:	-40°C to +85°C
Detent torque:	1 Ncm
Pulses/Detents per turn:	15/30, version "N": no detent
Mechanical life (cycle funtion):	minimum 15 000 turns
Pushbutton function:	Actuation Force 3.5 N, travel 0.5 mm, mechanical life > 20 000 operations
Contacts and terminals:	silver-plated
Mounting:	on pc-board with pin-contact
Soldering conditions:	wave soldering, max. 5 s, max. 260 °C

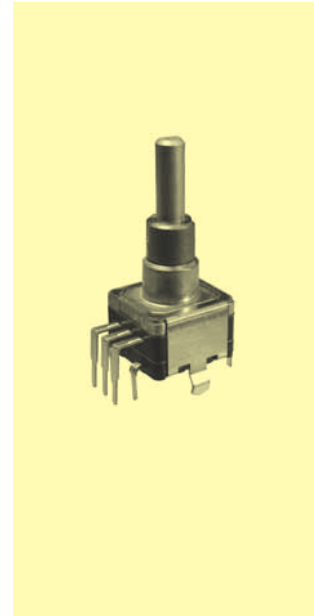
Model:

MERP11-15520A



Output signal format:

Shaft rotational direction	Signal	Output
C.W.	Terminal A-C	OFF ON
	Terminal B-C	OFF ON
C.C.W.	Terminal A-C	OFF ON
	Terminal B-C	OFF ON



Ordering code:

MER 11 - -

Pushbutton:

- without
 P with

Pulses/Detents:

- 15 15 / 30
 15N 15 / none

Shaft style:

- 5 flat

Shaft length:

- 20 20 mm

Bushing height:

- A 5 mm

Travel (for "P" only):

- 0.5 mm
 1.5 1.5 mm

Encoder

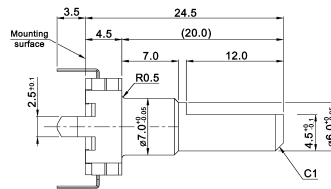
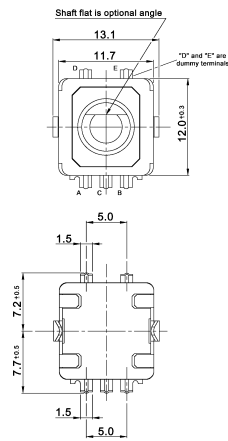


Specifications:

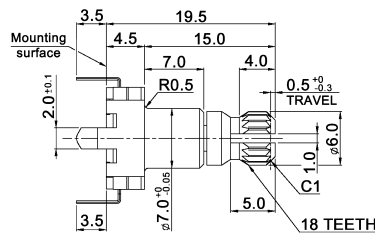
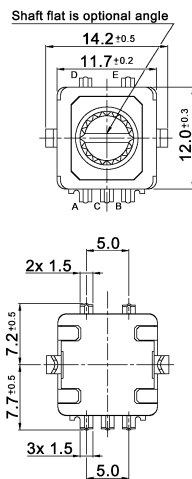
Contact rating:	5 V DC, 10 mA
Coactance resistance:	< 100mΩ
Insulation resistance:	> 100 MΩ
Dielectric strength:	300 V, 50 Hz for the duration of 1 minute
Operating temperature:	-40°C to +85°C
Detent torque:	1 Ncm
Pulses/Detents per turn:	15/30, version "N": no detent
Mechanical life (cycle funtion):	minimum 15 000 turns
Pushbutton function:	Actuation Force 3.5 N, travel 0.5 mm, mechanical life > 20 000 operations
Contacts and terminals:	silver-plated
Mounting:	on pc-board with pin-contact
Soldering conditions:	wave soldering, max. 5 s, max. 260 °C

Models:

MERL11-15120B



MERLP11-15215



Ordering code:

MERL 11 - -

Pushbutton:

- without
- P with

Pulses/Detents:

- 15 15 / 30
- 15N 15 / none

Shaft style:

- 1 flat
- 2 knurled

Shaft length:

- 95 9.5 mm
- 15 15 mm
- 20 20 mm
- 25 25 mm

Bushing height:

- A 5 mm
- B 7 mm
- 7 mm (for some types)

Travel (for "P" only):

- 0.5 mm
- 1.5 1.5 mm

Encoder

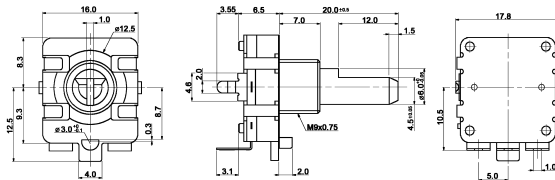


Specifications:

Contact rating:	5 V DC, 10 mA
Contact resistance:	< 100 mΩ
Insulation resistance:	> 100 MΩ
Dielectric strength:	50 V, 50 Hz for the duration of 1 minute
Operating temperature:	-10°C to +70°C
Detent torque:	0.5 to 2.0 Ncm
Pulses/Detents per turn:	24/24
Mechanical life (cycle funtion):	minimum 50 000 turns
Material:	Contacts and terminals: copper alloy, silver-plated
Mounting:	on pc-board with pin-contact single hole mounting M9x0.75
Soldering conditions:	wave soldering, max. 5 s max. 260 °C

Model:

MER16-24120 M9-TW



Output signal format:

Shaft rotational direction	Signal	Output
C.W.	Terminal A-C	OFF ON
	Terminal B-C	OFF ON
C.C.W.	Terminal A-C	OFF ON
	Terminal B-C	OFF ON



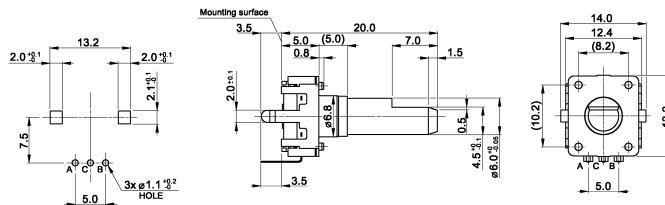
Encoder

Specifications:

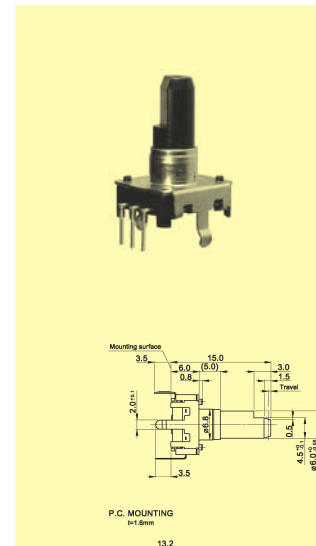
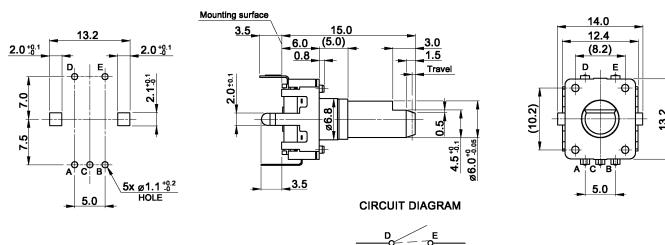
Contact rating:	5 V DC, 0.5 mA
Insulation resistance:	> 100 MΩ
Dielectric strength:	300 V, 50 Hz for the duration of 1 minute
Operating temperature:	-10 °C to +70 °C
Rotational/Detent torque:	0.5 N/2.0 Ncm
Pulses/Detents per turn:	12/24 or 24/24 (12/12, 12/0, 24/0 on demand)
Mechanical life:	> 30 000 cycles
Pushbutton (optional):	actuation force 3 N, travel 0.5 mm, life > 20 000 operations
Contacts:	silver-plated
Terminals:	silver-plated
Mounting:	on pc-board
Soldering conditions:	single hole mounting, bushing M 9 x 0.75 wave-soldering – max.: 5 sec, 260 °C

Models:

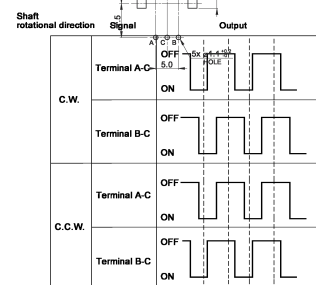
MER12-24120



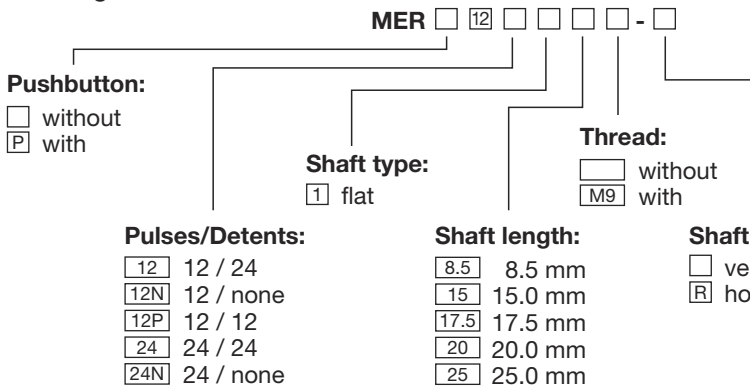
MERP12-24115



Output signal format:



Ordering code 12 mm Encoder:





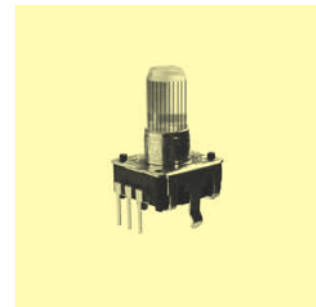
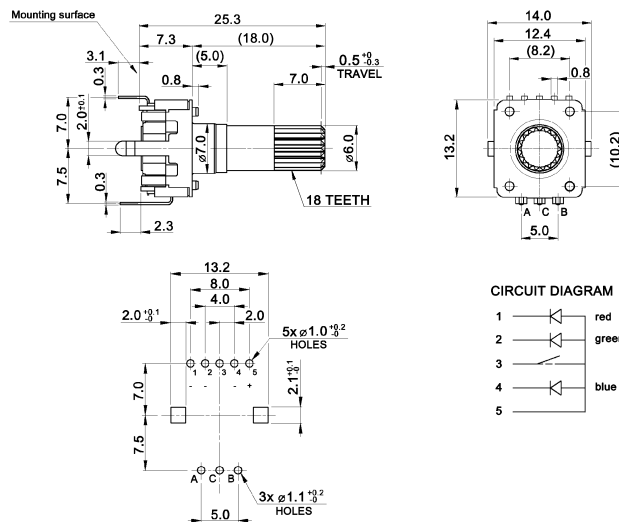
Illuminated Encoder

Specifications:

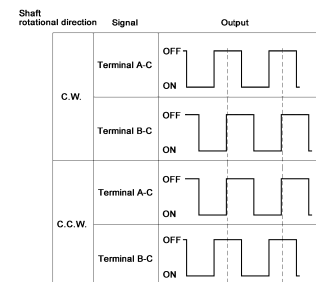
Contact rating:	5 V DC, 0.5 mA
Insulation resistance:	> 100 MΩ
Dielectric strength:	300 V, 50 Hz for the duration of 1 minute
Operating temperature:	-10 °C to +70 °C
Rotational/Detent torque:	0.5 Ncm / 2.0 Ncm
Pulses/Detents per turn:	12/12 or 24/24, version "N": no detent
Mechanical life (cycle function):	minimum 30 000 turns
Pushbutton function:	Actuation force 4.5 ± 2 N, travel 0.5 mm, mechanical life >20 000 operations
Material:	Contacts: stainless steel, silver-plated
Contacts and terminals:	silver-plated
Mounting:	on pc-board with pin-contact
Illuminating:	RGB-LED
Soldering conditions:	wave-soldering – max.: 5 sec, 260 °C

Model:

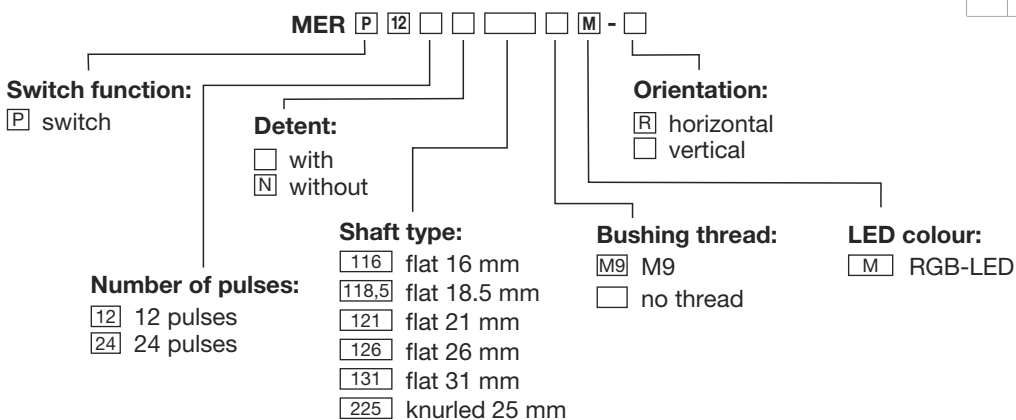
MERP12-24225M



Output signal format:



Ordering code 12 mm Encoder:



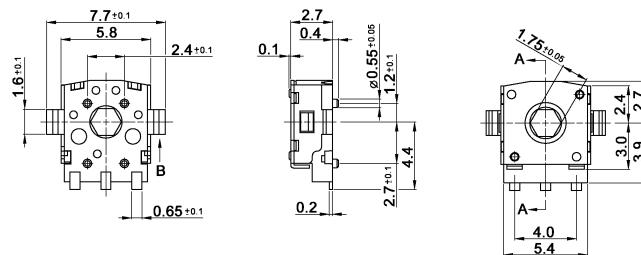
Hollow Shaft Encoder

Specifications:

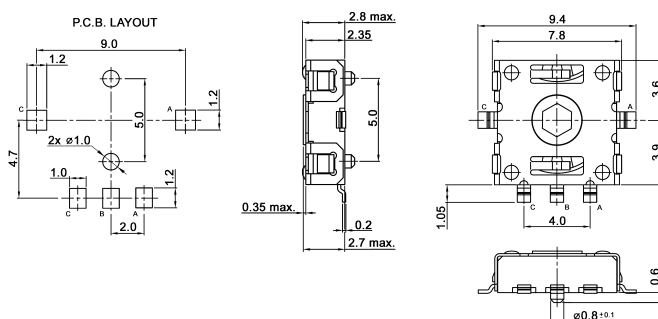
Contact rating:	5 V DC, 1 mA
Contact resistance:	< 1 Ω
Insulation resistance:	> 10 MΩ
Dielectric strength:	50 V, 50 Hz for the duration of 1 minute
Operating temperature:	-40 °C to +85 °C
Rotational torque:	0.5 ± 0.3 Ncm
Pulses/Detents per turn:	12/24
Mechanical life:	minimum 100 000 turns
Contacts and terminals:	silver-plated
Mounting:	on pc-board with pin-contact
Soldering conditions:	wave-soldering: max. 3 s, max. 260 °C; pre-heat: max. 60 s, max. 100 °C

Models:

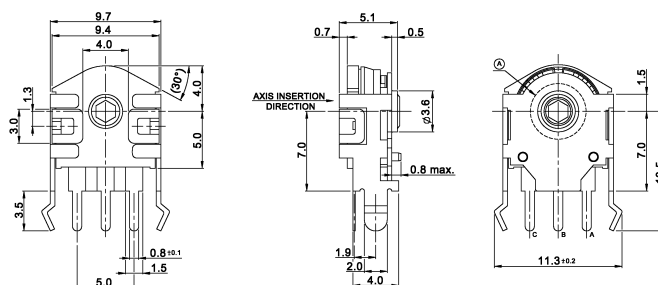
MERS5-12A-V



MERS7-12
MERS7-24



MER10-12 R7

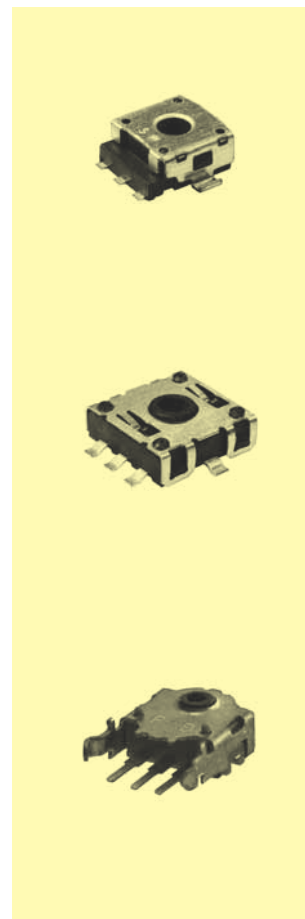


Packing:

MERS5-12 A-V, tape & reel 1400 pcs.

MERS7-12, MERS7-24, bulk 500 pcs., MERS7-12 T, MERS7-24 T, tape & reel 1200 pcs.

MER10-12 R7, bulk, 400 pcs.





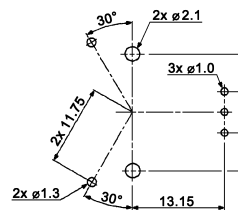
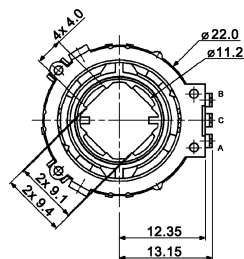
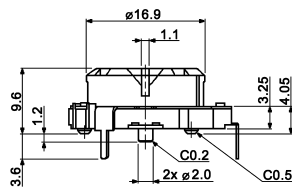
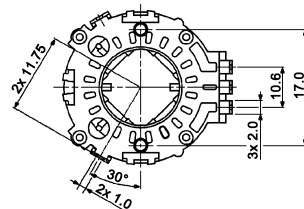
Hollow Shaft Encoder

Specifications:

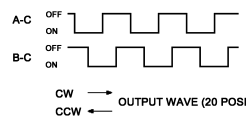
Contact rating:	5 V DC, 10 mA
Contact resistance:	<1 Ω
Insulation resistance:	>100 MΩ
Dielectric strength:	100 V, 50 Hz for the duration of 1 minute
Operating temperature:	-10 °C to +70 °C
Rotational torque:	0.6 ± 0.41 Ncm
Pulses/Detents per turn:	20/20
Mechanical life:	minimum 30 000 turns
Material:	Contacts: stainless steel, silver-plated
Contacts and terminals:	silver-plated
Mounting:	on pc-board with pin-contact
Soldering conditions:	wave-soldering: max. 5 s max. 250 °C; pre-heat: max. 60 s max. 100 °C

Model:

MER23-20



Output signal format:



Hollow Shaft Encoder

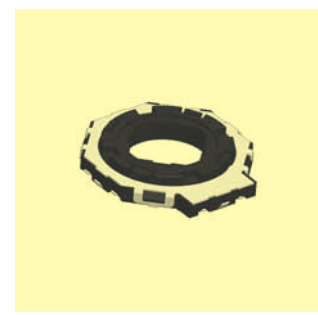
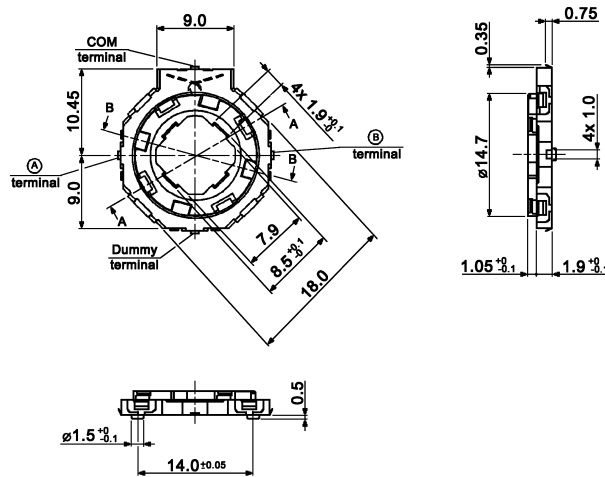


Specifications:

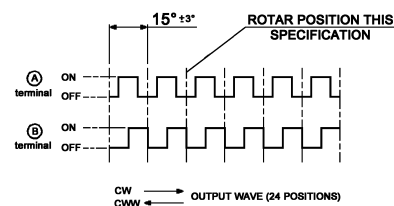
Contact rating:	5 V DC, 10 mA
Contact resistance:	< 1 Ω
Insulation resistance:	> 100 MΩ
Dielectric strength:	100 V, 50 Hz for the duration of 1 minute
Operating temperature:	-10 °C to +60 °C
Rotational torque:	0.3 ± 0.05 Ncm
Pulses/Detents per turn:	24/24
Mechanical life:	minimum 50 000 turns
Contacts and terminals:	silver-plated
Mounting:	on pc-board – SMD
Soldering conditions:	reflow-soldering, max. 10 sec, max. 240 °C

Models:

MER1045-24



Output signal format:





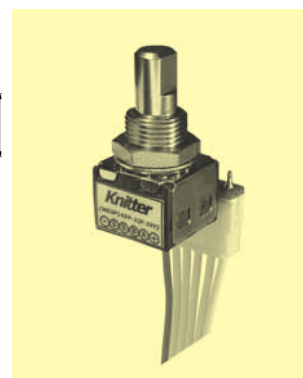
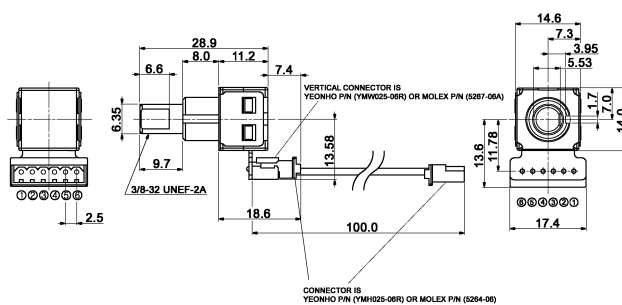
Optical Encoder

Specifications:

Power supply:	3.3 or 5 V DC, 20 mA max.
Insulation resistance:	> 100 M Ω
Dielectric strength:	300 V, 50 Hz for the duration of 1 minute
Operating temperature:	-10 °C to +50 °C
Rotational torque:	1 or 2 Ncm
Pulses/Detents per turn:	4/16, 8/32
Frequency response:	100 Hz max.
Electrical life:	> 1 000 000 turns
Pushbutton:	Contact rating: 12 V DC, 10 mA, min. 0.1 mA Contact resistance: < 10 Ω Operating force: 10 N Electrical Life: > 1 000 000 cycles Travel: 0.3 mm
Mounting:	single hole mounting, thread 3/8-32 UNEF-2A

Model:

MEOP 14 DP32F10-Y



Optical Encoder

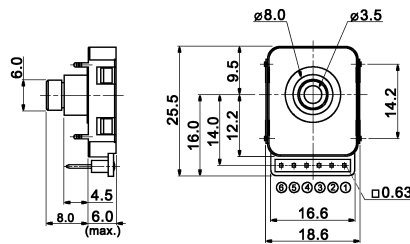


Specifications:

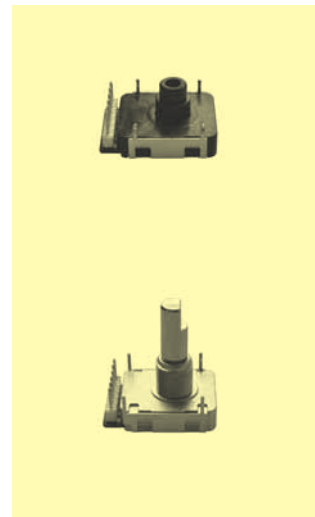
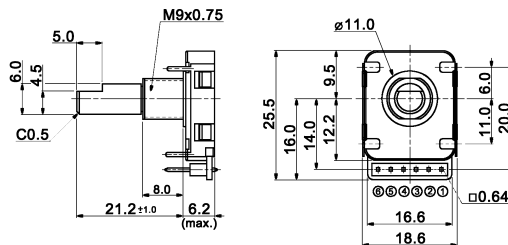
Power supply:	3.3 or 5 V DC (+/- 5%), 20 mA max.
Insulation resistance:	>100 MΩ
Dielectric strength:	300 V, 50 Hz for the duration of 1 minute
Operating temperature:	-20 °C to +70 °C
Rotational torque:	0.5 ± 0.2 Ncm
Pulses/Detents per turn:	6/0, 6/24, 16/0, 16/16, 24/0, 24/24
Frequency response:	100 Hz max.
Electrical life:	> 1 000 000 turns
Pushbutton:	Contact rating: 12 V DC, 10 mA, min. 0.1 mA Contact resistance: <10 Ω Operating force: 5 ± 2 N Mechanical Life: > 1 000 000 cycles Travel: 0.3 or 1 mm
Mounting:	on pc-board with pin-contact single hole mounting M 9 x 0.75
Soldering conditions:	wave soldering, max. 5 s, 260 °C, pre-heat max. 60 s, 100 °C

Models:

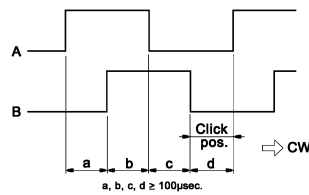
MEOP 19 VGP-06C-P2R08-PF-3F



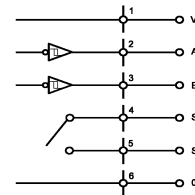
MEOP 19 VGM-24C-M2F21-PF-5F



Output signal format:



Pin assignment:



4 location pins:

- F front
- R rear
- N none

Ordering code: MEOP 19

Shaft direction:

- H horizontal
- V vertical

Case material:

- M metal
- P plastic

Switch travel:

- D 1 ± 0.2 mm
- G 0.3 ± 0.05 mm

Pulse:

- 06
- 16
- 24

Detents:

- C with
- N no detent

Shaft material:

- M metal
- P plastic

Shaft diameter:

- 1 6.35 mm
- 2 6.00 mm
- 3 4.00 mm

Shaft typ:

- F flat
- R round

Shaft length:

- 08 8 mm
- 17 17 mm
- 21 21 mm
- other on request

Connector type:

- P pin-header
- Y (*)
- T (**)

Voltage:

- 3 3.3 V
- 5 5 V

Connector direction:

- F front
- R rear

(*) Molex 5264 -06 (or compatibel) with 100 mm cable
(**) AMP 215083-6 (or compatibel) with 100 mm cable

Notes

Encoder



knitter-switch
GmbH & Co. KG

D-85593 Baldham · Postfach 10 02 33 · Neue Poststrasse 17
Tel.: +49 (0) 81 06 / 36 21-0 · Telefax: +49 (0) 81 06 / 36 21 40
E-Mail: info@knitter-switch.com · www.knitter-switch.com

knitter-switch
UK Limited

GB-Basingstoke Hants RG24 8AG · Grove House, Lutyens Close
Chineham Court · Phone: +44(0)1256/338670 · Fax: +44(0)1256/338671
E-Mail: ksuk@knitter-switch.com · www.knitter-switch.com

knitter-switch
Office Scandinavia

DK-4872 Idestrup · Østersøvej 6
Phone: +45 (0) 6913 7787 · Fax: +45 (0) 8175 7787
E-Mail: j.hansen@knitter-switch.com · www.knitter-switch.com

knitter-switch
ASIA Limited

Hong Kong, Room 1013, 10/F, Block A, Tonic Industrial Centre
26 Kai Cheung Road, Kowloon Bay, Kowloon
Phone: +85223118799 · Fax: +85223118739
E-Mail: ksasia@knitter-switch.com.hk · www.knitter-switch.com

knitter-switch