

SAFETY INSTRUCTIONS



Read carefully and completely before installing, operating, or maintaining the equipment this manual.

Legend:

H01R(B) means H01R or/and H01B. For other application terms in this instruction sheet, this is equivalent.



DANGER



Hazardous Voltage!
Danger of life or serious injury!



Any work on electrical equipment may only be performed by qualified electricians in accordance with the National or local codes.

Before starting work:

- Disconnect power mains
- Prevent reconnection with OSHA lockout/tagout procedures!
- Test for absence of harmful voltages!
- Ground and short circuits!
- Cover or close of nearby live parts!



Reliable functioning of the equipment is only guaranteed with approved MERZ Schaltgeräte GMBH + CO KG components!

Storage and transport

- Dry and dust free
- Storage temperatures min./max.: -25°C/+50°C [-77°F/+122°F]
- During transport secure against shock and/or falling

Installation and commissioning



- Confirm rating of device is sized properly for application
- Do not use damaged units in application
- The device specifications must be complied with
- Laws, regulations, guidelines and standards that apply in the country of operation must be followed

Specifications acc. UL 60947-4-1 and CSA C22.2 NO. 60947-4-1-14

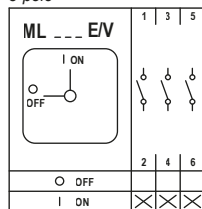
Type		ML1-016	ML1-025	ML1-032	ML1-040	ML2-063	ML2-080	ML3-125
GENERAL PURPOSE 600 Vac, 3-ph	A	16	25	32	40	63	80	125
Motor 3-ph 240 V	hp (FLA)	7.5 (22)	7.5 (22)	10 (28)	10 (28)	15 (42)	20 (54)	25 (68)
480 V	hp (FLA)	10 (14)	10 (14)	20 (27)	20 (27)	30 (40)	40 (52)	50 (65)
600 V	hp (FLA)	10 (11)	10 (11)	20 (22)	20 (22)	30 (32)	40 (41)	50 (52)
Motor 1-ph 120 V	hp (FLA)	1 (16)	1 (16)	1.5 (20)	1.5 (20)	3 (34)	5 (56)	7.5 (80)
240 V (2-pole)	hp (FLA)	2 (12)	2 (12)	3 (17)	3 (17)	7.5 (40)	10 (50)	15 (68)
Max. surrounding air temperature (open type)	°C [°F]	60 [140]	60 [140]	60 [140]	60 [140]	70 [158]	70 [158]	75 [167]
Max. ambient temperature (enclosed type)	°C [°F]	45 [113]	45 [113]	45 [113]	45 [113]	50 [122]	50 [122]	55 [131]

Suitable for use on a circuit capable of delivering not more than 5 kA rms symmetrical amperes, 600 Volts maximum.

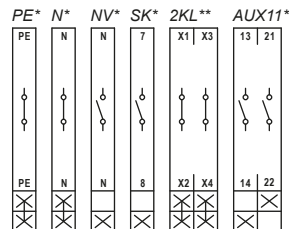
Contact diagrams

ML1 / ML2 / ML3

3-pole



ML - Optional accessories



Type			AUX11
Rating code		A	A600
Thermal current		A	10
Maximum current			
Make / Break	120 V	A	60 / 6.0
Make / Break	240 V	A	30 / 3.0
Make / Break	480 V	A	15 / 1.5
Make / Break	600 V	A	12 / 1.2
Maximum volt-amperes			
Make / Break		VA	7200 / 720

* Followed by 1, 2 or 3. This number stands for the ML series for which it can be used.

** Can be used with ML1, ML2 and ML3 series.

Connection

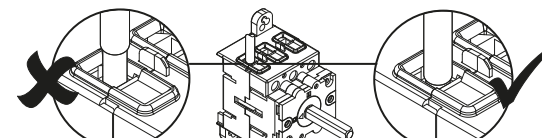
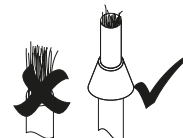


Use Copper (CU) wire only, 75°C or higher.

Type		ML1*	ML2*	ML3*	AUX11	2KL
Terminal cross section	AWG	14 - 8	14 - 2	8 - 1/0	17 - 13	17 - 13
Single or multi-core	mm ²	2.5 - 16	2.5 - 35	6 - 70	1 - 4	1 - 4
Finely stranded with sleeve	mm ²	2.5 - 16	1.5 - 25	6 - 50	1 - 2.5	1 - 2.5
Stripping distance connector cable	mm [in]	10 [0.39]	13 [0.51]	16 [0.63]	10 [0.39]	10 [0.39]
Torque terminal screw	Nm [ft.lb]	1.2 [0.89]	2.5 [1.84]	3 [2.21]	0.6 [0.44]	0.6 [0.44]
Screw driver terminal screw		PZ2/PH2	PZ2/PH2	PZ3/PH3	PZ1/PH1	PZ1/PH1

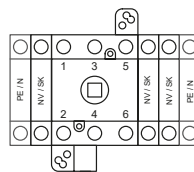
* Values also valid for optional contacts PE, N, NV and SK

Note: Pozi Drive set can be ordered at automation.direct.com.
Part number: 05057460055 and 05073220055 (WERA).

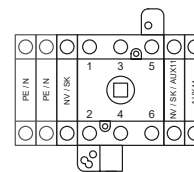


Ensure there are no loose stray wire strands.

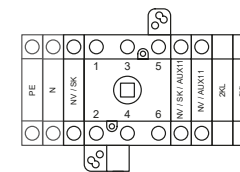
Optional contact, Auxiliary contact and Terminal 2-pole



optional contact / terminal
max. 2 NV / SK
in total max. 3 contacts
+ max. 1 PE terminal
+ max. 1 N terminal



optional contact / auxiliary contact / terminal
max. 2 NV / SK / AUX11
in total max. 3 contacts
+ max. 1 PE terminal
+ max. 1 N terminal

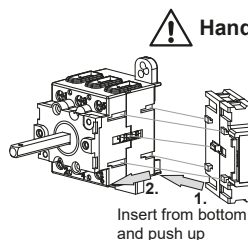


optional contact / auxiliary contact / terminal 2-pole / terminal
max. 2 NV / SK / AUX11
in total max. 3 contacts
+ max. 2 2KL terminal 2-pole
+ max. 1 PE terminal
+ max. 1 N terminal

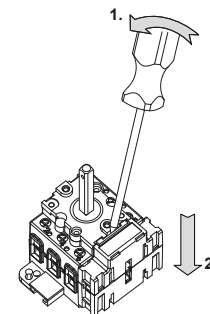
Assembly

Dismantling

Terminal cover

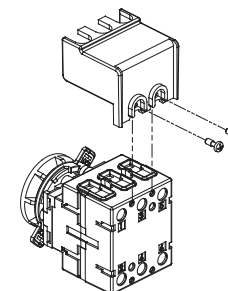


Insert from bottom and push up

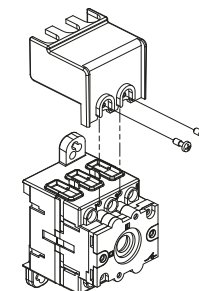


Red adapter included with Aux contact.
Not needed with 2KL

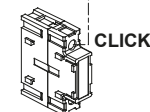
No adapter



E-Version
example ML1-025-E-xxx

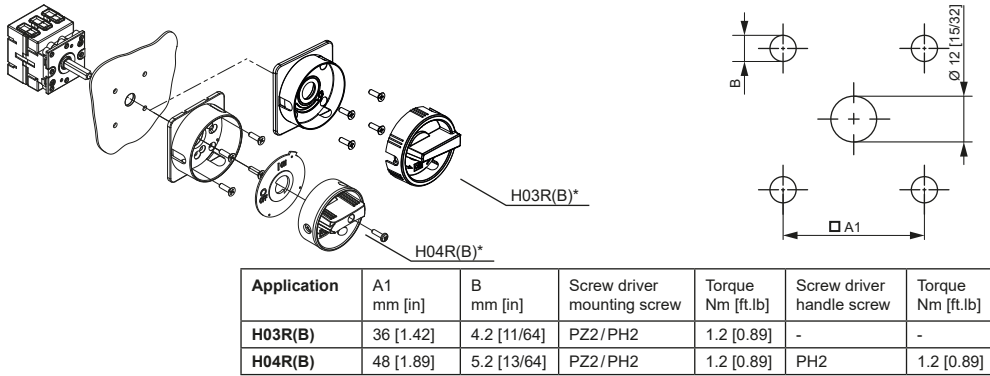


V-Version
example ML1-025-V-xxx



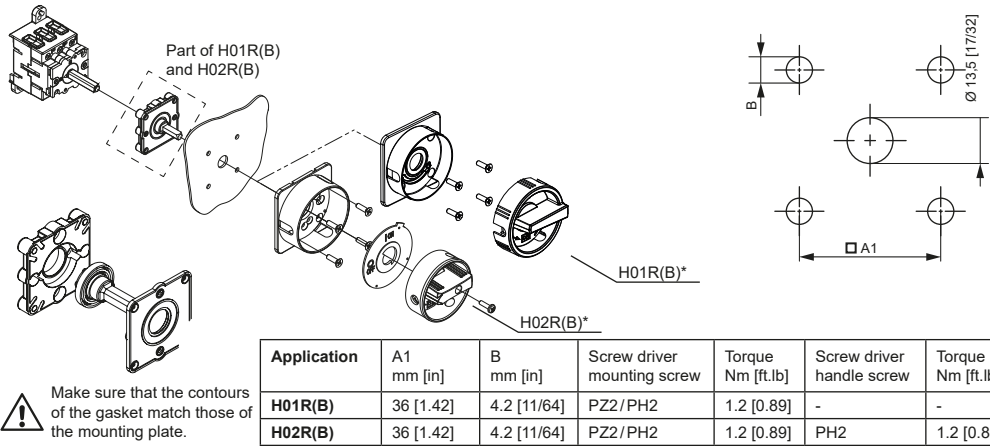
CLICK

4-hole mounting



Note: Pozi Drive set can be ordered at automationdirect.com. Part number: 05057460055 and 05073220055 (WERA).

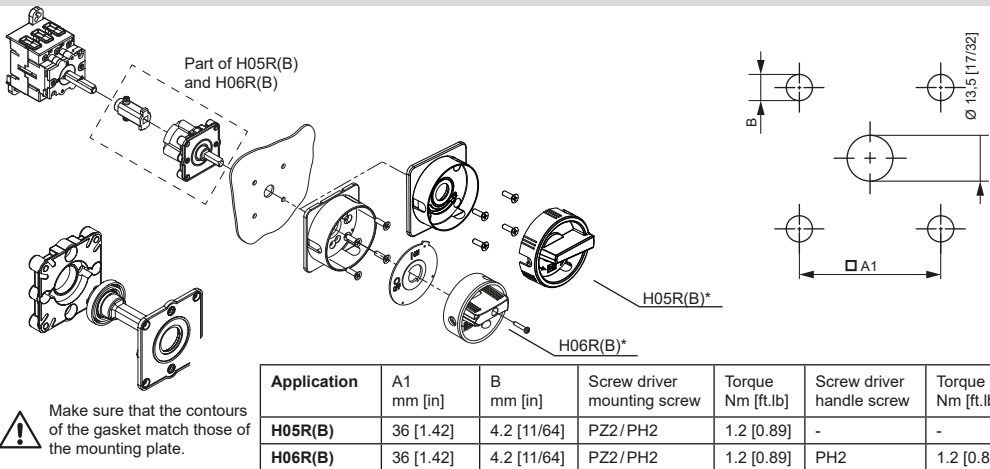
Cover coupling



Make sure that the contours of the gasket match those of the mounting plate.

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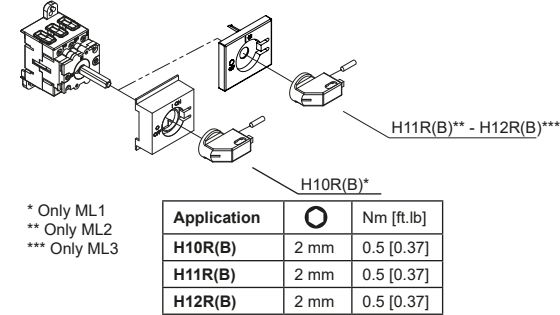
Door coupling



Make sure that the contours of the gasket match those of the mounting plate.

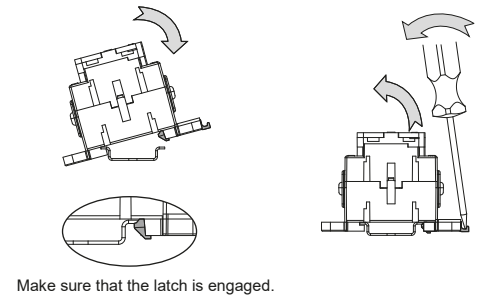
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Distribution board mounting



* Only ML1
** Only ML2
*** Only ML3

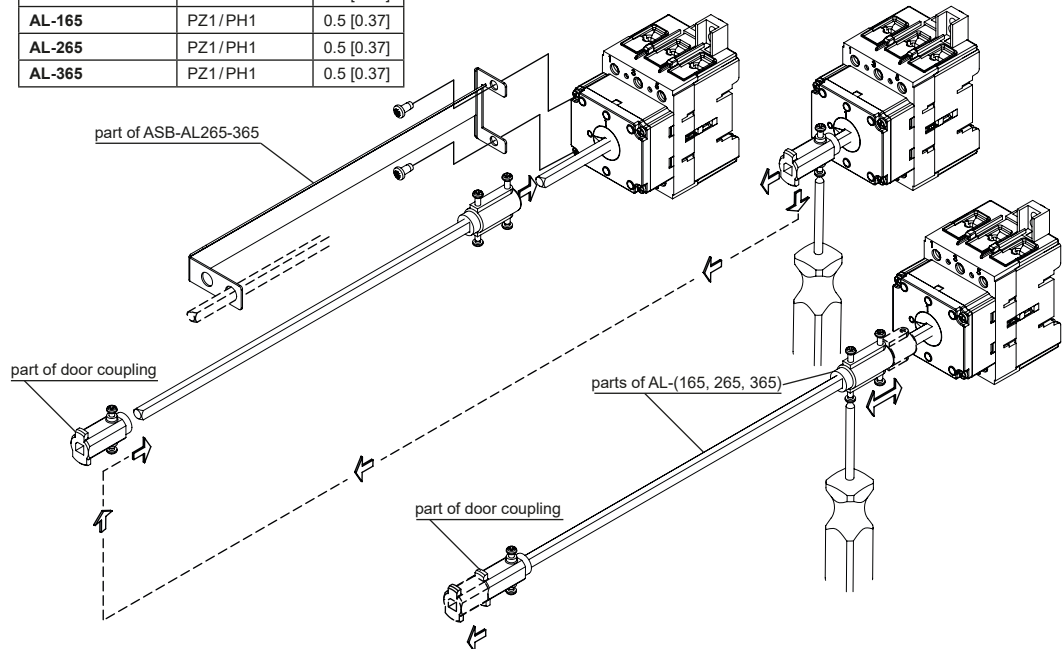
Snap-on mounting



Extension shaft and shaft support

Application	Screw driver mounting screw	Torque Nm [ft.lb]
ASB-AL265-365	PZ2/PH2	1.0 [0.74]
AL-165	PZ1/PH1	0.5 [0.37]
AL-265	PZ1/PH1	0.5 [0.37]
AL-365	PZ1/PH1	0.5 [0.37]

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Replacement screw sets

ML-SKT-3: includes all necessary screws for HS3-ML1, HS3-ML2, HS3-ML3, AL-165, AL-265, AL-365 and ASB-AL265-365

ML-SKT-4: includes all necessary screws for H01R(B), H02R(B), H03R(B), H04R(B), H05R(B), H06R(B), H10R(B), H11R(B), H12R(B)

Subject to change without notice. Store for use at a later date.

For more information please contact: www.automationdirect.com

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