



Safety Data Sheet ACOPOSinverter P66/P76

1 Download the manuals

You must have detailed information to be able to carry out the installation and commissioning. This information can be found in the following manuals that can be downloaded on www.br-automation.com.

- ACOPOSinverter P66 User's Manual MAACPIP66
- ACOPOSinverter P76 User's Manual MAACPIP76

2 Verify the delivery of the drive

Danger!

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Only appropriately trained persons who are familiar with and understand the contents of this manual and all other pertinent product documentation and who have received safety training to recognize and avoid hazards involved are authorized to work on and with this drive system. Installation, adjustment, repair and maintenance must be performed by qualified personnel.
- The system integrator is responsible for compliance with all local and national electrical code requirements as well as all other applicable regulations with respect to grounding of all equipment.
- Many components of the product, including the printed circuit boards, operate with mains voltage. Do not touch. Use only electrically insulated tools.
- Do not touch unshielded components or terminals with voltage present.
- Motors can generate voltage when the shaft is rotated. Prior to performing any type of work on the drive system, block the motor shaft to prevent rotation.
- AC voltage can couple voltage to unused conductors in the motor cable. Insulate both ends of unused conductors of the motor cable.
- Do not short across the DC bus terminals or the DC bus capacitors or the braking resistor terminals.
- Before performing work on the drive system:
 - Disconnect all power, including external control power that may be present.
 - Place a "Do Not Turn On" label on all power switches.
 - Lock all power switches in the open position.
 - Wait 15 minutes to allow the DC bus capacitors to discharge. The DC bus LED is not an indicator of the absence of DC bus voltage that can exceed 800 Vdc.
 - Measure the voltage on the DC bus between the DC bus terminals (PA/+, PC/-) using a properly rated voltmeter to verify that the voltage is < 42 Vdc.
 - If the DC bus capacitors do not discharge properly, contact your local B&R representative.
- Install and close all covers before applying voltage.

Failure to follow these instructions will result in death or serious injury.

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by B&R for any consequences arising out of the use of this material.

Information below is designed to use single drive connected to single asynchronous motor with a motor cable length less than 50 m (164 ft). Verify your cables before connecting the drive with motor (length, power, shielded or unshielded).

- Unpack the drive and verify that it has not been damaged.

Damaged products or accessories may cause electric shock or unanticipated equipment operation.

Danger!

ELECTRIC SHOCK OR UNANTICIPATED EQUIPMENT OPERATION

Do not use damaged products or accessories.

Failure to follow these instructions will result in death or serious injury.

Contact your local B&R sales office if you detect any damage whatsoever.

- Verify that the drive catalog number printed on the label is the same as that on the delivery note corresponding to the purchase order.
- Write the drive
 - Model Reference: _____
 - and Serial Number: _____
- For ACOPOSinverter P76 1-phase and ACOPOSinverter P76 3-phase 0.37 to 3 kW, remove the output connector from the packaging and verify that it has not been damaged.

3 Verify The Supply Mains Compatibility

- Verify that the supply mains is compatible with the supply range of the drive.

Line voltage _____ Volt

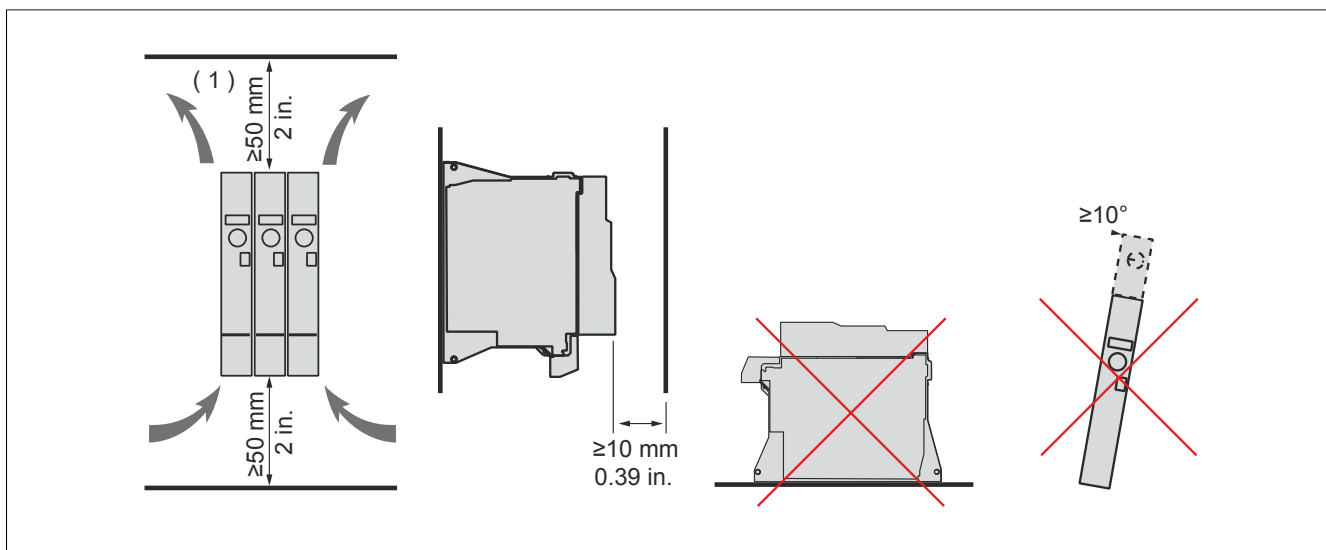
Drive voltage range _____ Volt

Drive range: 8I66S2xxxxx.01P-1 = 200/240 V 1-phase, 8I66T4xxxxx.0P-000 = 380/500 V 3-phase, 8I66T6xxxxx.0P-000 = 500/600 V 3-phase

Drive range: 8I76S2xxxxx.01P-1 = 200/240 V 1-phase, 8I76T4xxxxx.0P-000 = 380/500 V 3-phase

4 Mount The Drive Vertically

For a surrounding air temperature up to 50 °C (122°F). See the ACOPOSinverter P76 User’s Manual MAACPIP76 for other mounting and thermal conditions.



(1) Minimum value corresponding to thermal constraint. On ACOPOSinverter P76 a 150 mm (5.9 in) clearance may help to connect the ground.

ACOPOSinverter P66/P76-Quick Start Guide

Short-Circuit Current Ratings (SCCR) and branch circuit protection

The combinations in the table below have been tested per UL61800-5-1. (Reference UL file E116875). ACOPOSinverter P66/P76 are provided with integral overload and over-speed protection for the motor after activation of the function **[Mot THR memo]** (MtM). (For more information refer to the ACOPOSinverter P66 or ACOPOSinverter P76 user's manual).

Protection at 100% of the full load motor current. The motor thermal protection current **[Mot. therm. current]** (ItH) must be set to the rated current indicated on the motor nameplate. The values for the overcurrent protection devices are the maximum allowable amp rating. Smaller amp ratings may be used. The opening of the branch circuit protective device may be an indication that a fault current has been interrupted.

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- Current-carrying parts and other components of the controller should be examined and replaced if damaged.
- If burnout of the current element of an overload relay occurs, the complete overload relay must be replaced.

Failure to follow these instructions will result in death or serious injury.

Open type with enclosure, no line reactor

ACOPOSinverter P66/P76 AC Drive Short Circuit Ratings ¹			SCCR	Minimum Enclosure Volume		With Circuit Breaker	With GVxP			Fuses	
Input Voltage	Power Rating		Reference ⁸	(kA)	(liter)	(inch ³)	PowerPact ³ Reference	GV2P/3P	GVxP		600 V Class J ⁶
	(kW)	(HP)						Type E ⁴	Voltage Rating	Power ⁷	(A)
								-	(V)	(HP)	(A)
208/230 V 1-phase	0.18	0.25	8I66S200018.0x-000 8I76S200018.0x-000	1	53	3223	HxL36015	GV2P08	240	1	7
	0.37	0.5	8I66S200037.0x-000 8I76S200037.0x-000	1	53	3223	HxL36015	GV2P10	240	1.5	15
	0.55	0.75	8I66S200055.0x-000 8I76S200055.0x-000	1	53	3223	HxL36015	GV2P14	240	3	25
	0.75	1	8I66S200075.0x-000 8I76S200075.0x-000	1	53	3223	HxL36015	GV3P13 ⁵	240	4	25
	1.1	1.5	8I66S200110.0x-000 8I76S200110.0x-000	1	53	3223	HxL36020	GV3P18 ⁵	240	5	25
	1.5	2	8I66S200150.0x-000 8I76S200150.0x-000	1	53	3223	HxL36030	GV3P25 ⁵	240	7.5	40
	2.2	3	8I66S200220.0x-000 8I76S200220.0x-000	1	53	3223	HxL36035	GV3P25 ⁵	240	7.5	45
480 V 3-phase	0.37	0.25	8I66T400037.0x-000 8I76T400037.0x-000	5	53	3223	HxL36015	GV2P07	480Y/277	1	6
	0.55	0.75	8I66T400055.0x-000 8I76T400055.0x-000	5	53	3223	HxL36015	GV2P07	480Y/277	1	6
	0.75	1	8I66T400075.0x-000 8I76T400075.0x-000	5	53	3223	HxL36015	GV2P08	480Y/277	2	6
	1.1	1.5	8I66T400110.0x-000 8I76T400110.0x-000	5	53	3223	HxL36015	GV2P08	480Y/277	2	12
	1.5	2	8I66T400150.0x-000 8I76T400150.0x-000	5	53	3223	HxL36015	GV2P10	480Y/277	3	12
	2.2	3	8I66T400220.0x-000 8I76T400220.0x-000	5	53	3223	HxL36015	GV2P14	480Y/277	5	15
	3	4	8I66T400300.0x-000 8I76T400300.0x-000	5	53	3223	HxL36015	GV2P14	480Y/277	5	17.5
	4	5	8I66T400400.0x-000 8I76T400400.0x-000	5	53	3223	HxL36015	GV2P13 ⁵	480Y/277	7.5	25
	5.5	7.5	8I76T400550.0x-000	22	53	3223	HxL36020	GV2P18	480Y/277	10	40
	7.5	10	8I76T400750.0x-000	22	53	3223	HxL36030	GV2P25	480Y/277	15	40
	11	15	8I76T401100.0x-000	22	53	3223	HxL36040	GV2P32	480Y/277	20	60
	15	20	8I76T401500.0x-000	22	53	3223	HxL36050	GV2P40	480Y/277	25	60

Type 1 with conduit box

ACOPOSinverter P66/P76 AC Drive Short Circuit Current Ratings ¹					Fuses	
Input Voltage 60 Hz	Power Rating		Reference	SCCR (kA)	Fuses ⁶	Line Reactor min. value
	(kW)	(HP)			-	(mH)
208/230 V 1-phase	0.18	0.25	8I66S200018.0x-000, 8I76S200018.0x-000	1	7	-
	0.37	0.5	8I66S200037.0x-000, 8I76S200037.0x-000	1	15	-
	0.55	0.75	8I66S200055.0x-000, 8I76S200055.0x-000	1	25	-
	0.75	1	8I66S200075.0x-000, 8I76S200075.0x-000	1	25	-
	1.1	1.5	8I66S200110.0x-000, 8I76S200110.0x-000	1	25	-
	1.5	2	8I66S200150.0x-000, 8I76S200150.0x-000	1	40	-
	2.2	3	8I66S200220.0x-000, 8I76S200220.0x-000	1	45	-
480 V 3-phase	0.37	0.5	8I66T400037.0x-000, 8I76T400037.0x-000	5	6	-
	0.55	0.75	8I66T400055.0x-000, 8I76T400055.0x-000	5	6	-
	0.75	1	8I66T400075.0x-000, 8I76T400075.0x-000	5	6	-
	1.1	1.5	8I66T400110.0x-000, 8I76T400110.0x-000	5	12	-
	1.5	2	8I66T400150.0x-000, 8I76T400150.0x-000	5	12	-
	2.2	3	8I66T400220.0x-000, 8I76T400220.0x-000	5	15	-
	3	4	8I66T400300.0x-000, 8I76T400300.0x-000	5	17.5	-
	4	5	8I66T400400.0x-000, 8I76T400400.0x-000	5	25	-
	5.5	7.5	8I76T400550.0x-000	5	40	-
	7.5	10	8I76T400750.0x-000	5	40	-
11	15	8I76T401100.0x-000	22	60	-	
15	20	8I76T401500.0x-000	22	60	-	
600 V 3-phase	0.75	1	8I66T600075.0x-000	5	6	9
	1.5	2	8I66T600150.0x-000	5	6	9
	2.2	3	8I66T600220.0x-000	5	10	5
	4	5	8I66T600400.0x-000	5	15	5
	5.5	7.5	8I66T600550.0x-000	5	20	2.5
	7.5	10	8I66T600750.0x-000	5	25	2.5
	11	15	8I66T601100.0x-000	5	35	1.2
	15	20	8I66T601500.0x-000	5	45	1.2

¹ This table shows the maximum Short Circuit Current Rating the ACOPOSinverter P66/P76 drive can be installed on without adding impedance to the drive. Ratings apply to an ACOPOSinverter P66/76 mounted in a Type 1, 3R, 4(X) or 12 rated enclosure. Minimum enclosure volume allows for specified SCCR. Thermal requirements may require a larger enclosure.

² Ratings apply to ACOPOSinverter P66/76 drive mounted in a Type 1, 3R, 4(X) or 12 rated enclosure. Minimum enclosure volume allows for specified SCCR. Thermal requirements may require a larger enclosure. The listed line reactor minimum inductance is required to get these higher ratings.

³ Circuit Breaker part number designations: x = short circuit current rating. For 208 / 230 V range, use: x = D for 25 kA, G for 65 kA, J for 65 kA, L for 65kA. For 480 V range, use: x = D for 18 kA, G for 35 kA, J for 65 kA, L for 65 kA.

⁴ For GV2P/3P use, 480 V and 600 V ratings are for Wye connected electrical distribution systems. GV2Pxx self protected manual combination starter must be used with GV2GH7 insulating barrier to meet UL 508 Type E rating. GV3Pxx self protected manual combination starter must be used with GV3G66 + GVAM11 insulating barrier and auxiliary contact to meet UL 508 Type E rating. The GVAM11 provides a visual indication if the GV3P has tripped.

⁵ GV2P products detailed below can be used in place of the GV3P products for obtaining the ratings listed in the SCCR column. GV2P16 for GV3P13, GV2P20 for GV3P18, GV2P22 for GV3P25.

⁶ Fuse type can be fast acting or time delay Class J, or Class CC.

⁷ UL508C Par. 57.1 & UL61800-5-1 Par. 6.3.7DV.2.1.1 require publishing the standard Type E combination motor controller power rating since this is a basic identification marking of the Type E devices. However, when applied as an input overcurrent protective device for a drive, the rated current of the Type E combination motor controller, not the rated power, is the key parameter for dimensioning (reference UL61800-5-1 Par. 5.2.3.6.2DV.4.1.11 & 5.2.3.6.2DV.4.1.12).

B&R GVxP Type E combination motor controllers are adjustable, their current range is shown on the adjustment dial and their selection is based on the input current and not power rating of the drive.

⁸ Catalog Number designations: x = B for the book form factor drives P76 and C for compact form factor drives P66.

Information:

- Integral solid state short circuit protection in the drive does not provide branch circuit protection. Branch circuit protection must be provided in accordance with the National Electrical Code and any local codes.
- The ACOPOSinverter P66 & P76 drive has a 100 kA interrupt rating on the output of the drive. In addition to providing a rating based on shorting the output of the drive, these short circuit current ratings have been obtained by shorting components internal to the ACOPOSinverter P66/P76. These ratings allow proper coordination of short circuit protection.

