Variable speed drives
Altivar Machine ATV320
Option: braking resistors

Presentation

Braking resistors allow Altivar Machine ATV320 drives to operate while braking to a standstill or during slowdown braking, by dissipating the braking energy. They enable maximum transient braking torque.

Depending on the drive rating, the following types of resistor are available:
- Non-protected model (IP 00) for lower power ratings only
- Enclosed model (IP 20 casing) designed to comply with the EMC standard and protected by a temperature-controlled switch or thermal overload relay
- Enclosed model (IP 65 casing) with cordset

***Note**: To optimize the size of the braking resistor, the DC buses on Altivar Machine ATV320 drives in the same application can be connected in parallel (see page 60881/2).*

Applications

Machines with high inertia, driving loads, and machines with fast cycles.

References

For drives	Ohmic value	Average power available at 50 °C/*122 °F* *(1)*	Length of connection cable	Reference	Weight
	Ω	W	m/*ft*		kg/*lb*
IP 00 resistors - single-phase supply voltage: 200...240V 50/60 Hz					
ATV320U02M2C…U07M2C ATV320U02M2B…U07M2B	100	28	–	**VW3A7723**	0.600/ *1.323*
ATV320U11M2C, U15M2C ATV320U11M2B, U15M2B					
ATV320U22M2C ATV320U22M2B	68	28	–	**VW3A7724**	0.600/ *1.323*
IP 20 resistors - single-phase supply voltage: 200...240V 50/60 Hz					
ATV320U22M2C ATV320U22M2B	60	100	–	**VW3A7702**	2.400/ *5.291*
IP 65 resistors - Single-phase supply voltage: 200…240 V 50/60 Hz					
ATV320U02M2C…U22M2C ATV320U02M2B…U22M2B	100	25	0.75/ *2.46*	**VW3A7608R07**	0.410/ *0.904*
			3.0/ *9.84*	**VW3A7608R30**	0.760/ *1.675*
ATV320U11M2C, U15M2C ATV320U11M2B, U15M2B	72	25	0.75/ *2.46*	**VW3A7605R07**	0.620/ *1.367*
			3.0/ *9.84*	**VW3A7605R30**	0.850/ *1.874*
ATV320U22M2C ATV320U22M2B	27	50	0.75/ *2.46*	**VW3A7603R07**	0.930/ *2.050*
			3.0/ *9.84*	**VW3A7603R30**	1.200/ *2.645*

PF106005

VW3A7608R●●

(1) Load factor for resistors: the value of the average power that can be dissipated at 50 °C/122 °F from the resistor into the casing is determined for a load factor during braking that corresponds to the majority of normal applications:
- 2 s braking with a 0.6 Tn braking torque for a 40 s cycle
- 0.8 s braking with a 1.5 Tn braking torque for a 40 s cycle

Variable speed drives
Altivar Machine ATV320
Option: braking resistors

PF105659

VW3A7701

References *(continued)*

For drives	Ohmic value	Average power available at 50 °C/*122 °F* (1)	Length of connection cable	Reference	Weight
	Ω	W	m/*ft*		kg/*lb*
IP 00 resistors - three-phase supply voltage: 380…500 V 50/60 Hz					
ATV320U30N4C, ATV320U40N4C ATV320U30N4B, ATV320U40N4B	100	35	–	**VW3A7725**	0.850/ *1.874*
IP 20 resistors - three-phase supply voltage: 380…500 V 50/60 Hz					
ATV320U04N4C…U40N4C ATV320U04N4B…U40N4B	100	50	–	**VW3A7701**	2.000/ *4.409*
ATV320U55N4B, U75N4B	60	100	–	**VW3A7702**	2.400/ *5.291*
ATV320D11N4B, D15N4B	28	200	–	**VW3A7703**	3.500/ *7.716*
ATV320U04N4C…U22N4C ATV320U04N4B…U22N4B	100	28	–	**VW3A7723**	0.600/ *1.323*
IP 65 resistors - three-phase supply voltage: 380…500 V 50/60 Hz					
ATV320U30N4C, U40N4C ATV320U30N4B, U40N4B	72	50	0.75/ *2.46*	**VW3A7606R07**	0.930/ *2.050*
			3.0/ *9.84*	**VW3A7606R30**	1.200/ *2.645*
ATV320U04N4C…U22N4C ATV320U04N4B…U22N4B	100	25	0.75/ *2.46*	**VW3A7608R07**	0.410/ *0.904*
			3.0/ *9.84*	**VW3A7608R30**	0.760/ *1.675*
ATV320U55N4B, U75N4B	27	100	0.75/ *2.46*	**VW3A7604R07**	1.420/ *3.131*
			3.0/ *9.84*	**VW3A7604R30**	1.620/ *3.571*

(1) Load factor for resistors: the value of the average power that can be dissipated at 50 °C/122 °F from the resistor into the casing is determined for a load factor during braking that corresponds to the majority of normal applications:
- 2 s braking with a 0.6 Tn braking torque for a 40 s cycle
- 0.8 s braking with a 1.5 Tn braking torque for a 40 s cycle