

# INVERTER BASIC

## ADV20 - ADV50 - ADV80

# GEFRAN





## THE ACKNOWLEDGED INTERNATIONAL LEADER

Thanks to forty years of experience, Gefran is the world leader in the design and production of solutions for **measuring, controlling, and driving industrial production processes**. We have 14 branches in 12 countries and a network of over 80 worldwide distributors.



## QUALITY AND TECHNOLOGY

Gefran components are a concentrate of technology, the result of constant research and of cooperation with major research centres.

For this reason, Gefran is synonymous with quality and expertise in the design and production of:

- > **sensors** for measuring main variables such as **temperature, pressure, position and force**
- > **state-of-the-art components and solutions for indication and control**, satisfying demands for optimisation of processes and intelligent management of energy consumption
- > **automation platforms** of various complexities
- > **electronic drives and electric motors** in AC and DC for all industrial automation, HVAC, water treatment and lift needs.

**Gefran's know-how and experience guarantee continuity and tangible solutions.**



CONVEYOR AND TRANSPORTATION MACHINERY



FOOD PROCESSING



MACHINE TOOL/METAL PROCESSING MACHINERY



**PERFORMANCE**

In addition to foreseeing the market's application needs, Gefran forms partnerships with its customers to find **the best way to optimise and boost the performance of various applications.** Gefran products communicate with one another to provide integrated solutions, and can dialogue with devices by other companies thanks to compatibility with numerous fieldbuses.



**SERVICES**

**PRE AND POST SALES**

A team of Gefran experts works with the customer to select the ideal product for its application and to help install and configure devices (technohelp@gefran.com).

**TRAINING**

Gefran offers a wide range of courses at different levels for the technical-commercial study of the Gefran product range as well as specific courses on demand.



**WOOD WORKING MACHINERY**



**HVAC AND PUMP SYSTEMS**



**PAPER/TEXTILE MACHINE**

## POWER RANGE

	POWER RANGE ADV20				
<b>AC mains supply</b> kW ( Hp )	<b>0.4</b> <b>( 0.5 )</b>	<b>0.75</b> <b>( 1.0 )</b>	<b>1.5</b> <b>( 2.0 )</b>	<b>2.2</b> <b>( 3.0 )</b>	<b>3.7</b> <b>( 5.0 )</b>
<b>115 Vac, Single phase</b>	Size 1	Size 2			
<b>230 Vac, Single phase</b>	Size 1		Size 2		
<b>460 Vac, 3-phase</b>	Size 1			Size 2	

	POWER RANGE ADV50							
<b>AC mains supply</b> kW ( Hp )	<b>0.4</b> <b>( 0.5 )</b>	<b>0.75</b> <b>( 1.0 )</b>	<b>1.5</b> <b>( 2.0 )</b>	<b>2.2</b> <b>( 3.0 )</b>	<b>3.7</b> <b>( 5.0 )</b>	<b>5.5</b> <b>( 7.5 )</b>	<b>7.5</b> <b>( 10.0 )</b>	<b>11.0</b> <b>( 15.0 )</b>
<b>230 Vac, Single phase</b>	Size 1		Size 2					
<b>230 Vac, 3-phase</b>	Size 1			Size 2		Size 3		
<b>460 Vac, 3-phase</b>	Size 1			Size 2		Size 3		

	POWER RANGE ADV80												
<b>AC mains supply</b> kW ( Hp ) *	<b>1004</b>	<b>1005</b>	<b>1007</b>	<b>1015</b>	<b>2022</b>	<b>2030</b>	<b>2040</b>	<b>2055</b>	<b>2075</b>	<b>2110</b>	<b>3150</b>	<b>3185</b>	<b>3220</b>
	0.37 (0.5)	0.55 (0.75)	0.75 (1)	1.5 (1.5)	2.2 (2)	3 (4)	4 (5)	5.5 (7.5)	7.5 (10)	11 (15)	15 (20)	18.5 (25)	22 (30)
<b>400...480 Vac 3-phase</b>	Size 1				Size 2					Size 3			

\* kW @ U<sub>LN</sub>=3x400Vac/50Hz; Hp @ U<sub>LN</sub>=3x480Vac/60Hz.





### GF-eXpress

The drives can be programmed by the use of the PC, integrated functions: programming through parameter list, Integrated oscilloscope, Trend recorder, Saving/Loading and comparing parameters.



### BUILT-IN PLC FUNCTION (ADV50)

Easy to write Soft PLC ADV50 program without additional PLC.



## ADV20

### Compact design

Space saving and easy DIN rail mounting with optional DIN rail adapter (Built in size 2, Optional for Size 1).

### Complete protection function

High precision current detection, full overload protection, over-voltage/over-current stall prevention, short-circuit protection, reset after fault, speed search function and motor overheat protection by PTC.

### Optional fieldbus modules

Provide connection to a variety of networks, including PROFIBUS, DeviceNet, LonWorks and CANopen®.



### Standard MODBUS protocol

Standard MODBUS Protocol via RS-485 (RJ-45).



### Built-in EMC filter

On 230V Single phase and 400-460V 3-phase models. To reduce electromagnetic interference efficiently it was applied EN61800-3.

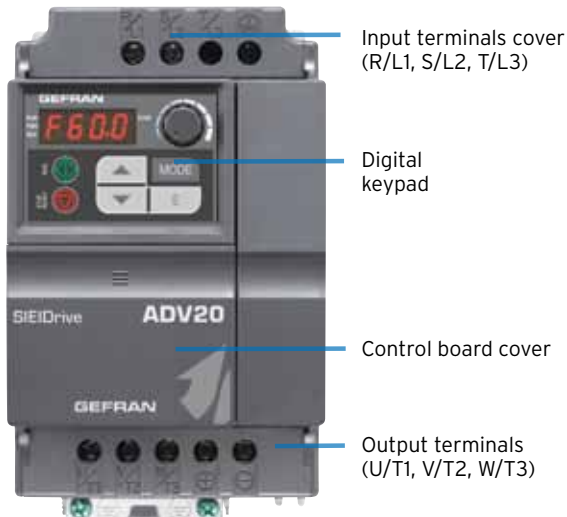


### RFI-Jumper for IT mains

Removable "Y" capacitor for use on IT mains supplies.

### Easy DC BUS sharing

Multiple ADV20 can be connected in parallel to share the regenerative braking energy. In this way, over-voltage is prevented and the DC-bus voltage stabilized.

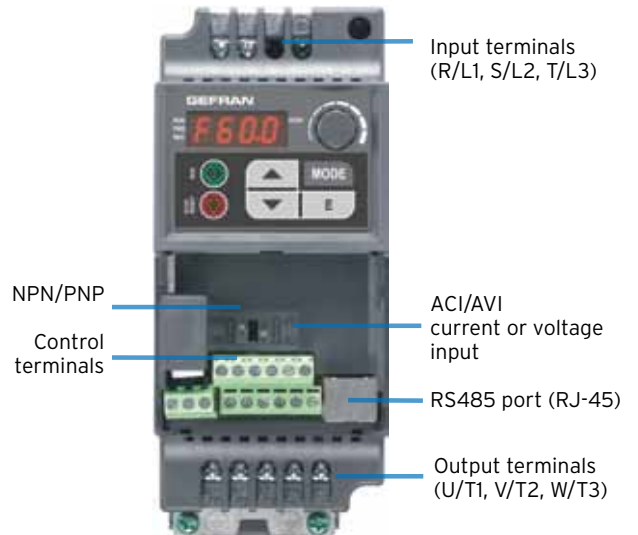


Input terminals (R/L1, S/L2, T/L3)

Digital keypad

Control board cover

Output terminals (U/T1, V/T2, W/T3)



Input terminals (R/L1, S/L2, T/L3)

NPN/PNP Control terminals

ACI/AVI current or voltage input

RS485 port (RJ-45)

Output terminals (U/T1, V/T2, W/T3)

ADV50

Modular and Compact design

Modular structure and extension with optional card. Space saving and easy DIN rail mounting with optional DIN rail adapter.

Complete protection function

High precision current detection, full overload protection, over-voltage/over-current stall prevention, short-circuit protection, reset after fault, speed search function and motor overheat protection by PTC.

Flexible extension

Via optional cards, such as I/O card, Relay card, Encoder card and USB card to meet your application requirement.

Optional fieldbus modules

Provide connection to a variety of networks, including PROFIBUS, DeviceNet, LonWorks and CANopen®.



Standard MODBUS protocol

Standard MODBUS Protocol via RS-485 (RJ-45).

Removable keypad

The standard keypad acts as status monitor. More functions, including parameter modification, RUN/STOP, speed change and status display, via optional keypad.

RFI-Jumper for IT mains

Removable "Y" capacitor for use on IT mains supplies.

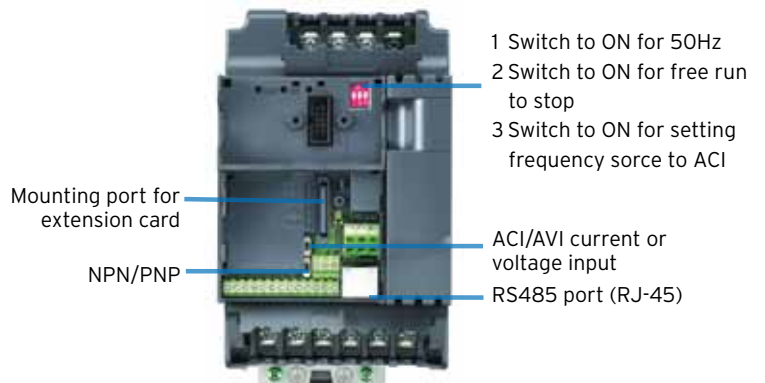
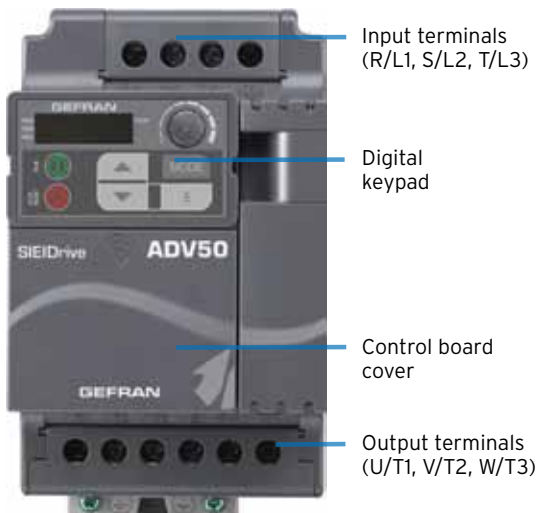


Built-in EMC filter

(230V Single phase and 460V 3-phase). To reduce electromagnetic interference efficiently it was applied EN61800-3.

Easy DC BUS sharing

Multiple ADV50 can be connected in parallel to share the regenerative braking energy. In this way, over-voltage is prevented and the DC-bus voltage stabilized.



ADV80

Small and simple but powerful

- Motor parameters self tuning
- Programmable and predefined V/f curves
- 4 Independent programmable ramps
- 16 Programmable multispeed
- "Autocapture" function (Pick up)
- Mains loss detection with controlled stop
- Programmable autorestart
- PID Application block
- Energy saving function.

Standard MODBUS protocol

- Standard MODBUS Protocol via RS-485 (RJ-45).



Flexible and functional

- 2 Differential analog inputs  $\pm 10V$  (or current)
- 2 Analog outputs (voltage or current)
- 5 Digital inputs (PNP / NPN)
- 2 Digital outputs: 1 static and 1 relays (PNP / NPN)
- Integrated braking unit

Integrated keypad

- The standard keypad includes drive status LEDs.
- The programming keypad can be used to control all drive functions and display all variables.

ADV80-...-C version

- Interfacing with CANopen<sup>®</sup> and DeviceNet fieldbuses.

I/O and fieldbus expansion cards

- Optional expansion cards, such as I/O and Profibus-DP cards, are available to meet the requirements of the various applications.



DIMENSIONS

ADV20 DIMENSIONS - mm [inches]

	W	W1	H	H1	D	Ø	Ø D
<b>1</b>	72.0 [2.83]	59.0 [2.32]	174.0 [6.86]	151.6 [5.97]	136.0 [5.36]	5.4 [0.21]	2.7 [0.11]
<b>2</b>	100.0 [3.94]	89.0 [3.50]	174.0 [6.86]	162.9 [6.42]	136.0 [5.36]	5.4 [0.21]	2.7 [0.11]




ADV50 DIMENSIONS - mm [inches]




	W	W1	H	H1	D	Ø	Ø D
<b>1</b>	72.0 [2.83]	60.0 [2.36]	142.0 [5.59]	120.0 [4.72]	152.0 [5.98]	5.2 [0.04]	7.6 [0.06]
<b>2</b>	100.0 [3.94]	89.0 [3.50]	174.0 [6.86]	162.0 [6.38]	152.0 [5.98]	5.5 [0.22]	9.3 [0.36]
<b>3</b>	130.0 [5.12]	116.0 [4.57]	260.0 [10.24]	246.0 [9.70]	169.2 [6.66]	5.5 [0.22]	9.8 [0.38]




ADV80 DIMENSIONS - mm [inches]

	W	W1	H	H1	D	Ø D
<b>1</b>	70.0 [2.76]	50.0 [1.97]	204.0 [8.03]	192.0 [4.72]	151.0 [5.94]	M4
<b>2</b>	130.0 [5.12]	104.0 [4.09]	221.0 [8.70]	212.0 [8.35]	176.5 [6.95]	M4
<b>3</b>	227.8 [8.97]	On top: 168 [6.61] On bottom: 164 [6.45]	387.0 [15.23]	374.5 [14.74]	181.6 [7.15]	M4

## GENERAL SPECIFICATIONS

		ADV20	
<b>Control Characteristics</b>	<b>Control System</b>	SPWM (Sinusoidal Pulse Width Modulation) control (V/f control)	
	<b>Frequency Setting Resolution</b>	0.01Hz	
	<b>Output Frequency Resolution</b>	0.01Hz	
	<b>Torque Characteristics</b>	Including the auto-torque/auto-slip compensation; starting torque can be 150% at 5.0Hz	
	<b>Overload Endurance</b>	150% of rated current for 1 minute	
	<b>Skip Frequency</b>	Three zones, setting range 0.1-600Hz	
	<b>Accel/Decel Time</b>	0.1 to 600 seconds (2 Independent settings for Accel/Decel time)	
	<b>Stall Prevention Level</b>	Setting 20 to 250% of rated current	
	<b>DC Braking</b>	Operation frequency 0.1-600.0Hz, output 0-100% rated current. Start time 0-60 seconds, stop time 0-60 seconds.	
	<b>Regenerated Braking Torque</b>	Approx. 20% (up to 125% possible with optional brake resistor or externally mounted brake unit)	
	<b>V/f Pattern</b>	Adjustable V/f pattern	
<b>Operating Characteristics</b>	<b>Frequency Setting</b>	<b>Keypad</b>	Setting by ▲ ▼
		<b>External Signal</b>	Potentiometer-5kΩ/0.5W, 0 to +10VDC, 4 to 20mA, RS-485 interface; Multi-function Inputs 3 to 6 (15 steps, Jog, motopotentiometer)
	<b>Operation Setting Signal</b>	<b>Keypad</b>	Set by RUN and STOP
		<b>External Signal</b>	2 wires/3 wires (MI1, MI2, MI3), JOG operation, RS-485 serial interface (MODBUS),
	<b>Multi-function Input Signal</b>	Multistep selection 0 to 15, Jog, accel/decel inhibit, 2 accel/decel switches, counter, external Base Block, ACI/ AVI selections, driver reset, UP/DOWN key settings, NPN/PNP input selection	
	<b>Multi-function Output Indication</b>	AC drive operating, frequency attained, non-zero frequency, zero speed, Base Block, fault indication, local/ remote indication, drive is ready, overheat alarm, emergency stop and status selections of input terminals	
	<b>Analog Output Signal</b>	Output frequency/current	
<b>Alarm Output Contact</b>	Contact will be On when drive malfunctions (1 Form C/change-over contact)		
<b>Operation Functions</b>	AVR, accel/decel S-Curve, over-voltage/over-current stall prevention, 5 fault records, reverse inhibition, momentary power loss restart, DC braking, auto torque/slip compensation, adjustable carrier frequency, output frequency limits, parameter lock/reset, PID control, external counter, MODBUS communication, abnormal reset, abnormal re-start, power-saving, fan control, sleep/wake frequency, 1st/2nd frequency source selections, 1st/2nd frequency source combination, NPN/PNP selection		
<b>Protection Functions</b>	Over voltage, over current, under voltage, external fault, overload, ground fault, overheating, electronic thermal, IGBT short circuit, PTC		
<b>Display Keypad</b>	6-key, 7-segment LED with 4-digit, 4 status LEDs, master frequency, output frequency, output current, custom units, parameter values for setup and lock, faults, RUN, STOP, RESET, FWD/REV		
<b>Built-in EMC Filter (EN61800-3)</b>	230V, Single phase models: 2nd Environment, Category 1, carrier frequency ≤8kHz, motor cable lengths ≤1m and Category 2, carrier frequency ≤8kHz, motor cable lengths ≤5m 400-460V, 3phase models: 2nd Environment, Category 3, carrier frequency ≤8kHz, motor cable lengths ≤15m		
<b>Environmental Conditions</b>	<b>Enclosure Rating</b>	IP20	
	<b>Pollution Degree</b>	2	
	<b>Installation Location</b>	Altitude 1,000 m or lower, keep from corrosive gasses, liquid and dust	
	<b>Ambient Temperature</b>	-10°C to 50°C (40°C for side-by-side mounting), non-condensing and not frozen	
	<b>Storage/ Transportation Temperature</b>	-20 °C to 60 °C	
	<b>Ambient Humidity</b>	Below 90% RH (non-condensing)	
<b>Vibration</b>	9.80665m/s <sup>2</sup> (1G) less than 20Hz, 5.88m/s <sup>2</sup> (0.6G) at 20 to 50Hz		
<b>Approvals</b>	  		

ADV50	
V/f or sensorless control with SPWM modulation (Sinusoidal Pulse Width Modulation)	
0.01Hz	
0.01Hz	
Including the auto-torque/auto-slip compensation; starting torque can be 150% at 3.0Hz	
150% of rated current for 1 minute	
Three zones, setting range 0.1-600Hz	
0.1 to 600 seconds (2 Independent settings for Accel/Decel time)	
Setting 20 to 250% of rated current	
Operation frequency 0.1-600.0Hz, output 0-100% rated current. Start time 0-60 seconds, stop time 0-60 seconds.	
Approx. 20% (up to 125% possible with optional brake resistor or externally mounted brake unit)	
Adjustable V/f pattern	
Setting by ▲ ▼	
Potentiometer-5kΩ/0.5W, 0 to +10VDC, 4 to 20mA, RS-485 interface; Multi-function Inputs 3 to 9 (15 steps, Jog, up/down)	
Set by RUN and STOP	
2 wires/3 wires (MI1, MI2, MI3), JOG operation, RS-485 serial interface (MODBUS), programmable logic controller	
Multispeed selection 0 to 15, Jog, accel/decel inhibit, 2 accel/decel switches, counter, external Base Block, ACI/AVI selections, driver reset, UP/DOWN key settings, NPN/PNP input selection	
AC drive operating, frequency attained, non-zero frequency, Base Block, fault indication, local/remote indication, drive is ready, overheat alarm, emergency stop and status selections of input terminals (NC/NO)	
Output frequency/current	
Contact will be On when drive malfunctions (1 Form C/change-over contact and 1 open collector output for standard type)	
Built-in PLC, AVR, accel/decel S-Curve, over-voltage/over-current stall prevention, 5 fault records, reverse inhibition, momentary power loss restart, DC braking, auto torque/slip compensation, auto tuning, adjustable carrier frequency, output frequency limits, parameter lock/reset, vector control, PID control, external counter, MODBUS communication, abnormal reset, abnormal re-start, power-saving, fan control, sleep/wake frequency, 1st/2nd frequency source selections, 1st/2nd frequency source combination, NPN/PNP selection.	
Parameters for motor 0 to motor 3, DEB and OOB (Out Of Balance Detection), for washing machine (fw 1.1)	
Over voltage, over current, under voltage, external fault, overload, ground fault, overheating, electronic thermal, IGBT short circuit, PTC	
6-key, 7-segment LED with 4-digit, 5 status LEDs, master frequency, output frequency, output current, custom units, parameter values for setup and lock, faults, RUN, STOP, RESET, FWD/REV	
2nd Environment, Category 3, carrier frequency ≤8kHz, motor cable lengths ≤15m	
IP20	
2	
Altitude 1,000 m or lower, keep from corrosive gasses, liquid and dust	
-10°C to 50°C (40°C for side-by-side mounting), non-condensing and not frozen	
-20 °C to 60 °C	
Below 90% RH (non-condensing)	
9.80665m/s <sup>2</sup> (1G) less than 20Hz, 5.88m/s <sup>2</sup> (0.6G) at 20 to 50Hz	
  	

ADV80		
<b>Power Supply</b>	3 x 400Vac -15% ... 480Vac +10%, 50/60Hz ±5%	
<b>Power ratings</b>	0.37kW (0.5Hp) up to 22kW (30Hp)	
<b>Max output voltage</b>	0,94 x Vin	
<b>Control mode</b>	Open-loop V/f and V/f with feedback	
<b>Overload</b>	150% In for 60 seconds every 5 minutes according to IEC146-1-1 Class 2	
<b>Output frequency</b>	500Hz	
<b>Programming software</b>	GF-eXpress	
<b>Potection rating</b>	Standard IP20	
<b>Reference resolution</b>	Digital = 0.1 Hz	
	Analog input = 10-bit + sign	
	Analog output = 8 bit	
<b>Fieldbus management</b>	<b>Interfacing with the most commonly-used fieldbus systems</b>  CANopen®, DeviceNet and Profibus.  CANopen® and DeviceNet interfaces incorporated in the ADV80-....-C version.	
<b>Standard supply configuration</b>	<b>Regulation</b>  Integrated programming keypad 2 differential analog inputs ±10 V (or current) 2 analog outputs (voltage or current) 5 digital inputs (PNP/NPN) 2 digital outputs: 1 static and 1 relay (PNP)	
	<b>Power</b>  Integrated dynamic braking module	
<b>Options</b>	Input choke	
	Output choke	
	Braking resistors	
	I/O expansion card: EXP_D6A1R1_ADV80	
	Profibus interface: SBL_PDP_ADV80	
	CANopen®/DeviceNet interfaces (incorporated in the ADV80-....-C version)	
EMC filter for external mounting		
<b>Conformity</b>	<b>General</b>	EN 61800-1, IEC 143-1-1
	<b>Vibration</b>	EN 60068-2-6, test Fc.
	<b>EMC</b>	in compliance with CEE - EN 61800 - 3 electromagnetic compatibility directive, using optional filters.
	<b>Immunity / Emissions</b>	EN61800-3 (with the use of dedicated filters)
<b>Environmental conditions</b>	<b>Ambient temperature</b>	-10 ...40°C, +40°C...+50°C con derating
	<b>Altitude</b>	Max 2000 m. (up to 1000 m without derating)
	<b>Protection degree</b>	IP20 (NEMA type 1 option)
<b>Markings</b>	 Complies with the EEC directive concerning low voltage equipment.	
	  Complies with directives for the American and Canadian market (certification pending)	

## SPECIFICATIONS

VOLTAGE CLASS		115V Single phase Class		
Model ADV20-XXXX		1004	2007	
Max. Applicable Motor Output		[kW]	0.4	
Max. Applicable Motor Output		[Hp]	0.5	
Output Rating	Rated Output Capacity	[kVA]	1.0	
	Rated Output Current	[A]	2.5	
	Maximum Output Voltage	V	3-Phase Proportional to twice the Input Voltage	
	Output Frequency	[Hz]	0.1~600 Hz	
	Switching Frequency	[kHz]	2-12	
Input Rating	Rated Input Current	[A]	9	
	Rated Voltage/Frequency	[V / Hz]	Single phase, 100-120V, 50/60Hz	
	Voltage Tolerance		± 10% (90~132 V)	
	Frequency Tolerance		± 5% (47~63Hz)	
Cooling Method			Natural Cooling	
Weight		[kg]	1.1	1.4

VOLTAGE CLASS		230V 3-phase Class						
Model ADV50-XXXX		1007	1015	2022	2037	3055	3075	
Max. Applicable Motor Output		[kW]	0.75	1.5	2.2	3.7	5.5	
Max. Applicable Motor Output		[Hp]	1.0	2.0	3.0	5.0	7.5	
Output Rating	Rated Output Capacity	[kVA]	1.6	2.9	4.2	6.0	9.5	
	Rated Output Current	[A]	4.2	7.5	11.0	17	25	
	Maximum Output Voltage	V	3-Phase Proportional to Input Voltage					
	Output Frequency	[Hz]	0.1~600 Hz					
	Switching Frequency	[kHz]	1-15					
Input Rating	Rated Input Current	[A]	5.1	9	15	20.6	26	
	Rated Voltage/Frequency	[V / Hz]	3-Phase, 200-240 V, 50/60Hz					
	Voltage Tolerance		± 10% (180~264 V)					
	Frequency Tolerance		± 5% (47~63Hz)					
Cooling Method			Natural Cooling	Fan Cooling				
Weight		[kg]	1.1	1.2	1.9	1.9	3.5	

Model ADV80		1004	1005	1007	2015	
Inverter Output (IEC 146 class2), 150% overload for 60s		[kVA]	0.8	1.0	1.4	
PN mot (recommended motor output):						
	@ U <sub>LN</sub> =3x400V <sub>AC</sub> ; f <sub>sw</sub> =default; IEC 146 class 2	[kW]	0.37	0.55	0.75	
	@ U <sub>LN</sub> =3x480V <sub>AC</sub> ; IEC 146 class 2	[Hp]	0.5	0.75	1	
U <sub>2</sub> Max output voltage		[V]	0.94 x U <sub>LN</sub> (AC Input voltage)			
f <sub>2</sub> Max output frequency		[Hz]	500			
I <sub>2N</sub> Rated output current:						
	@ U <sub>LN</sub> =3x400V <sub>AC</sub> ; f <sub>sw</sub> =default; IEC 146 class 2	[A]	1.1	1.5	2	
	@ U <sub>LN</sub> =3x480V <sub>AC</sub> ; f <sub>sw</sub> =default; IEC 146 class 2	[A]	1.0	1.4	1.8	
f <sub>sw</sub> switching frequency (Default)		[kHz]	8	8	8	
f <sub>sw</sub> switching frequency (Higher)		[kHz]	12	12	12	
Derating factor:			0.8 @ 50° C (122° F)			
	KT for ambient temperature		0.7 for higher f <sub>sw</sub>			
U <sub>LN</sub> AC Input voltage		[V]	400 V -15% ... 480 V +10%, 3Ph			
AC Input frequency		[Hz]	50/60 Hz ±5%			
I <sub>N</sub> AC Input current for continuous service:						
- Connection with 3-phase reactor						
	@ 3x400V <sub>AC</sub> ; IEC 146 class 2	[A]	1.3	1.6	2.1	
	@ 3x480V <sub>AC</sub> ; IEC 146 class 2	[A]	1.1	1.3	2	
- Connection without 3-phase reactor						
	@ 3x400V <sub>AC</sub> ; IEC 146 class 2	[A]	2.1	2.6	3.4	
	@ 3x480V <sub>AC</sub> ; IEC 146 class 2	[A]	1.7	2	3.1	
Max short circuit power without line reactor (Z <sub>min</sub> =1%)		[kVA]	85	115	160	
Overvoltage threshold			800 V <sub>dc</sub>			
Undervoltage threshold			380 V <sub>dc</sub> (for 380/400V <sub>AC</sub> ), 400 V <sub>dc</sub> (for 420/440 V <sub>AC</sub> ), 415 V <sub>dc</sub> (for 460/480 V <sub>AC</sub> )			
Braking IGBT Unit (standard drive)			Standard internal (with external resistor); Braking torque 150%			
Weight		kg [lbs]	1.31 [2.89]		3.05 [6.72]	

230V Single phase Class				460V 3-phase Class							
1004	1007	2015	2022	1004	1007	1015	2022	2037			
0.4	0.75	1.5	2.2	0.4	0.75	1.5	2.2	3.7			
0.5	1.0	2.0	3.0	0.5	1.0	2.0	3.0	5.0			
1.0	1.6	2.9	4.2	1.2	2.0	3.3	4.4	6.8			
2.5	4.2	7.5	11.0	1.5	2.5	4.2	5.5	8.2			
3-Phase Proportional to Input Voltage 0.1~600 Hz 2-12				3-Phase Proportional to Input Voltage 0.1~600 Hz 2-12							
6.5	9.5	15.7	24	1.8	3.2	4.3	7.1	9.0			
Single phase, 200-240 V, 50/60Hz				3-phase, 380-480V, 50/60Hz							
± 10% (180~264 V)				± 10% (342~528V)							
± 5% (47~63Hz)				± 5% (47~63Hz)							
Natural Cooling		Fan Cooling		Natural Cooling		Fan Cooling					
1.2	1.2	1.7	1.7	1.2	1.2	1.2	1.7	1.7			

230V Single phase Class				460V 3-phase Class								
1004	1007	2015	2022	1004	1007	1015	2022	2037	3055	3075	3110	
0.4	0.75	1.5	2.2	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	
0.5	1.0	2.0	3.0	0.5	1.0	2.0	3.0	5.0	7.5	10	15	
1.0	1.6	2.9	4.2	1.2	2.0	3.3	4.4	6.8	9.9	13.7	18.3	
2.5	4.2	7.5	11.0	1.5	2.5	4.2	5.5	8.2	13	18	24	
3-Phase Proportional to Input Voltage 0.1~600 Hz 1-15				3-Phase Proportional to Input Voltage 0.1~600 Hz 1-15								
6.5	9.5	15.7	24	1.8	3.2	4.3	7.1	11.2	14	19	26	
Single phase. 200-240V. 50/60Hz				3-Phase, 380-480V, 50/60Hz								
± 10% (180~264 V)				± 10% (342~528V)								
± 5% (47~63Hz)				± 5% (47~63Hz)								
Natural Cooling		Fan Cooling		Natural Cooling		Fan Cooling						
1.1	1.1	1.9	1.9	1.2	1.2	1.2	1.9	1.9	4.2	4.2	4.2	

2022	2030	2040	2055	2075	2110	3150	3185	3220
3.6	4.7	6.4	8.2	11.2	15.9	21.5	26.3	31.8
2.2	3	4	5.5	7.5	11	15	18.5	22
2	4	5	7.5	10	15	20	25	30
0.94 x U <sub>LN</sub> (AC Input voltage)								
500								
5.2	6.8	9.2	11.8	16.1	23.0	31.0	38.0	46.0
4.5	5.9	7.6	9.7	13.2	20.7	27.9	34.2	41.4
8	8	8	8	8	6	8	8	8
12	12	12	12	12	8	12	12	12
0.8 @ 50° C (122° F)								
0.7 for higher fsw								
400 V -15% ... 480 V +10%, 3Ph								
50/60 Hz ±5%								
5.6	7.1	9.6	10.8	16	23	33	38	43
5	6.5	8.8	9.1	14.3	21	31	36	40
8.1	10.2	13.0	17	19	28	40	47	53
7.2	9.1	12	14.5	17	26	38	44	49
380	500	650	850	1115	1600	2200	2700	3200
800 V <sub>CC</sub>								
380 V <sub>DC</sub> (for 380/400V <sub>AC</sub> ), 400 V <sub>DC</sub> (for 420/440 V <sub>AC</sub> ), 415 V <sub>DC</sub> (for 460/480 V <sub>AC</sub> )								
Standard internal (with external resistor); Braking torque 150%								
3.05 [6.72]						10.5 (23.15)		



**ADVXX 1XXX - XXX - XX**

Drive  
ADV50 series  
ADV20 series

**Mechanical drive sizes:**  
1 = Size 1 (frame A)  
2 = Size 2 (frame B)  
3 = Size 3 (frame C)

**Drive powers, in kW:**  
004 = 0.4 kW  
007 = 0.75 kW  
015 = 1.5 kW  
022 = 2.2 kW  
037 = 3.7 kW  
055 = 5.5 kW  
075 = 7.5 kW  
110 = 11.0 kW

**EMI Filter:**  
F = included  
= not included

**Rated voltage:**  
1M=115 Vac, 1ph  
2M=230 Vac, 1ph  
2T=230 Vac, 3ph  
4=400-460 Vac, 3ph

**Software :**  
X = standard

**Braking unit:**  
X = not included  
B = included

**Keypad:**  
X = not included  
K = included


## DRIVE MODELS & CODES

Models	Code	Note
<b>230V - Single phase Class</b>		
ADV50-1004-XXX-2MF	S6D20	Size 1 - 0.4 kW No keypad EMC Filter included
ADV50-1007-XXX-2MF	S6D21	Size 1 - 0.75 kW No keypad EMC Filter included
ADV50-2015-XXB-2MF	S6D22	Size 2 - 1.5 kW No keypad EMC Filter included
ADV50-2022-XXB-2MF	S6D23	Size 2 - 2.2 kW No keypad EMC Filter included
<b>230V - 3-phase Class</b>		
ADV50-1007-XXX-2T	S6D25	Size 1 - 0.75 kW No keypad
ADV50-1015-XXX-2T	S6D26	Size 1 - 1.5 kW No keypad
ADV50-2022-XXB-2T	S6D27	Size 2 - 2.2 kW No keypad
ADV50-2037-XXB-2T	S6D28	Size 2 - 3.7 kW No keypad
ADV50-3055-XXB-2T	S6D29	Size 3 - 5.5 kW No keypad
ADV50-3075-XXB-2T	S6D30	Size 3 - 7.5 kW No keypad
<b>400-460V - 3-phase Class</b>		
ADV50-1004-XXX-4F	S6D31	Size 1 - 0.4 kW No keypad EMC Filter included
ADV50-1007-XXX-4F	S6D32	Size 1 - 0.75 kW No keypad EMC Filter included
ADV50-1015-XXX-4F	S6D33	Size 1 - 1.5 kW No keypad EMC Filter included
ADV50-2022-XXB-4F	S6D34	Size 2 - 2.2 kW No keypad EMC Filter included
ADV50-2037-XXB-4F	S6D35	Size 2 - 3.7 kW No keypad EMC Filter included
ADV50-3055-XXB-4F	S6D36	Size 3 - 5.5 kW No keypad EMC Filter included
ADV50-3075-XXB-4F	S6D37	Size 3 - 7.5 kW No keypad EMC Filter included
ADV50-3110-XXB-4F	S6D38	Size 3 - 11 kW No keypad EMC Filter included




Models	Code	Note
<b>115V - Single phase Class</b>		
ADV20-1004-KXX-1M	S6D01	Size 1 - 0.4 kW With keypad
ADV20-2007-KXX-1M	S6D02	Size 2 - 0.75 kW With keypad
<b>230V - Single phase Class</b>		
ADV20-1004-KXX-2MF	S6D03	Size 1 - 0.4 kW With keypad EMC Filter included
ADV20-1007-KXX-2MF	S6D04	Size 1 - 0.75 kW With keypad EMC Filter included
ADV20-2015-KXX-2MF	S6D05	Size 2 - 1.5 kW With keypad EMC Filter included
ADV20-2022-KXX-2MF	S6D06	Size 2 - 2.2 kW With keypad EMC Filter included
<b>400-460V - 3-phase Class</b>		
ADV20-1004-KXX-4F	S6D10	Size 1 - 0.4 kW With keypad EMC Filter included
ADV20-1007-KXX-4F	S6D11	Size 1 - 0.75 kW With keypad EMC Filter included
ADV20-1015-KXX-4F	S6D12	Size 1 - 1.5 kW With keypad EMC Filter included
ADV20-2022-KXX-4F	S6D13	Size 2 - 2.2 kW With keypad EMC Filter included
ADV20-2037-KXX-4F	S6D14	Size 2 - 3.7 kW With keypad EMC Filter included

## ACCESSORIES & OPTIONS ADV20/50




### KEYPAD

Models	Code	Description
 <b>KB-ADV50</b>	S6D56	Display keypad (6-key, 7-segment LED with 4-digit)


### MODULE

Models	Code	Description
 <b>EXP-DN-ADV20/50</b>	S6D50	DeviceNet module
 <b>EXP-PDP-ADV20/50</b>	S6D52	Profibus module
 <b>EXP-CAN-ADV20/50</b>	S6D53	CANopen® module


### ADAPTER

Models	Code	Description
 <b>KIT DIN ADV20-SA</b>	S6D57	DIN-rail adapter for ADV50 size 1
 <b>KIT DIN ADV20-SB</b>	S6D58	DIN-rail adapter for ADV50 size 2
 <b>KIT DIN ADV20-SA</b>	S6D55	DIN-rail adapter for ADV20 size 1

### BRAKING UNIT

Models	Code	Description
	<b>BU-2-ADV20/50</b>	S6D70 Braking Unit 1.5kW 230V series
	<b>BU-4-ADV20/50</b>	S6D71 Braking Unit 1.5kW 400V series

### OTHER

Models	Code	Description
 <b>EXP-D6-ADV50</b>	S6D59	Digital I/O Expansion card: 3 Digital PNP/NPN inputs, 3 digital NPN outputs
 <b>USB-485-ADV20/50</b>	S6D65	USB-RS485 RJ45 Converter
 <b>KIT EMC ADV20/50</b>	S6D54	Earthing plate
<b>Cable 2mt ADV50</b>	S6D82	Standard keypad extension cable 2 mt

ACCESSORIES & OPTIONS ADV20/50

<b>OTHERS OPTIONS (on request only)</b>		
Models	Code	Description
EXP-LWK-ADV20/50	S6D51	LonWorks module
BU-2A-ADV20/50	S6D72	Braking Unit 3.7kW 230V series
BU-4A-ADV20/50	S6D73	Braking Unit 3.7kW 400V series
RF-OUT-ADV20/50	S6D67	Zero Phase Reactor
Memory KB-ADV20/50	S6D66	Digital Keypad for parameters copy
EXP-A4-ADV50	S6D62	I/O Expansion card (2 AI / 2 AO)
EXP-R2-ADV50	S6D60	2 Relays expansion card
EXP-R3-ADV50	S6D61	3 Relays expansion card
EXP-ENC-ADV50	S6D63	Encoder Expansion card (5-24V)
EXP-USB-ADV50	S6D64	USB 1.1 Expansion card

<b>FUSES</b>					
Following table shows the suggested fuses matching. Those fuses are not available in Gefran.					
Models	Europe	America	Models	Europe	America
	Fuse current (A) - Suggested type	Bussmann P/N (UL 508C)		Fuse current (A) - Suggested type	Bussmann P/N (UL 508C)
<b>115V Class</b>			<b>230V Class</b>		
ADV20-1004-KXX-1M	10 A , gR type	JJN-15	ADV50-1007-XXX-2T	8 A , gR type	JJN-10
ADV20-2007-KXX-1M	32 A , gR type	JJN-30	ADV50-1004-XXX-2MF	10 A , gR type	JJN-15
<b>230V Class</b>			ADV50-1015-XXX-2T	16 A , gR type	JJN-20
ADV20-1004-KXX-2MF	10 A , gR type	JJN-15	ADV50-1007-XXX-2MF	16 A , gR type	JJN-20
ADV20-1007-KXX-2MF	16 A , gR type	JJN-20	ADV50-2022-XXB-2T	25 A , gR type	JJN-30
ADV20-2015-KXX-2MF	25 A , gR type	JJN-30	ADV50-2015-XXB-2MF	32 A , gR type	JJN-40
ADV20-2022-KXX-2MF	40 A , gR type	JJN-50	ADV50-2037-XXB-2T	32 A , gR type	JJN-40
<b>460V Class</b>			ADV50-2022-XXB-2MF	40 A , gR type	JJN-50
ADV20-1004-KXX-4F	6 A , gR type	JJS-6	ADV50-3055-XXB-2T	40 A , gR type	JJN-50
ADV20-1007-KXX-4F	6 A , gR type	JJS-6	ADV50-3075-XXB-2T	50 A , gR type	JJN-60
ADV20-1015-KXX-4F	8 A , gR type	JJS-10	<b>460V Class</b>		
ADV20-2022-KXX-4F	12 A , gR type	JJS-15	ADV50-1004-XXX-4F	6 A , gR type	JJS-6
ADV20-2037-KXX-4F	16 A , gR type	JJS-20	ADV50-1007-XXX-4F	6 A , gR type	JJS-6
			ADV50-1015-XXX-4F	8 A , gR type	JJS-10
			ADV50-2022-XXB-4F	12 A , gR type	JJS-15
			ADV50-2037-XXB-4F	20 A , gR type	JJS-20
			ADV50-3055-XXB-4F	25 A , gR type	JJS-30
			ADV50-3075-XXB-4F	32 A , gR type	JJS-40
			ADV50-3110-XXB-4F	40 A , gR type	JJS-50

BRAKING RESISTORS	Models	Brake Unit		Brake Resistors Model			Brake Res. Dimensions
		Models	(No. Units)	Models	Code	(No. Units)	Width x Height x Depth (Weigth)
	<b>115V Class</b>						
ADV50-1004-XXX-2MF	BU-2-ADV20/50	(1)	RF220T 250R	S8TOCP	(1)	300 x 27 x 36 mm (500 g)	
ADV50-1007-XXX-2MF/2T	BU-2-ADV20/50	(1)	RF220T 150R	S8TOCQ	(1)	300 x 27 x 36 mm (500 g)	
ADV50-2015-XXB-2MF	Internal Braking Unit		RF300DT100R	S8TOCB	(1)	260 x 47 x 106 mm (1400 g)	
ADV50-1015-XXX-2T	BU-2-ADV20/50	(1)	RF300DT100R	S8TOCB	(1)	260 x 47 x 106 mm (1400 g)	
ADV50-2022-XXB-2MF/2T	Internal Braking Unit		RF300DT 68R	S8TOCS	(1)	260 x 47 x 106 mm (1400 g)	
ADV50-3037-XXB-2T	Internal Braking Unit		RFPD750DT 45R	S8TOCV	(1)	200 x 70 x 106 mm (1700 g)	
ADV50-3055-XXB-2T	Internal Braking Unit		RFPD750DT 38R	S8TOCU	(1)	200 x 70 x 106 mm (1700 g)	
ADV50-3075-XXB-2T	Internal Braking Unit		RFPD750DT 26R	S8TOCZ	(1)	200 x 70 x 106 mm (1700 g)	
<b>460V Class</b>							
ADV50-1004-XXX-4F	BU-4-ADV20/50	(1)	RF300DT 400R	S8TOCR	(1)	260 x 47 x 106 mm (1400 g)	
ADV50-1007-XXX-4F	BU-4-ADV20/50	(1)	RF300DT 400R	S8TOCR	(1)	260 x 47 x 106 mm (1400 g)	
ADV50-1015-XXX-4F	BU-4-ADV20/50	(1)	RF300DT 200R	S8TIDB	(1)	260 x 47 x 106 mm (1400 g)	
ADV50-2022-XXB-4F	Internal Braking Unit		RF300DT 150R	S8TOCT	(1)	260 x 47 x 106 mm (1400 g)	
ADV50-2037-XXB-4F	Internal Braking Unit		RFPD750DT 100R	S8SY4	(1)	200 x 70 x 106 mm (1700 g)	
ADV50-3055-XXB-4F	Internal Braking Unit		RFPD750DT 100R	S8SY4	(1)	200 x 70 x 106 mm (1700 g)	
ADV50-3075-XXB-4F	Internal Braking Unit		RFPD750DT 80R	S8T1DC	(1)	200 x 70 x 106 mm (1700 g)	
ADV50-3110-XXB-4F	Internal Braking Unit		RFPD1100DT 55R	S8T1DA	(1)	320 x 70 x 106 mm (2700 g)	

The table shows the combinations of braking resistors that can be used with internal braking units and with any external braking units (if not integrated). Values for standard resistors refer to a typical braking duty cycle of 10%.



**BRAKING RESISTORS**

Models	Brake Unit		Brake Resistors			Brake Res. Dimensions
	Models	(No. Units)	Models	Code	(No. Units)	Width x Height x Depth (Weigth)
<b>115V Class</b>						
ADV20-1004-KXX-1M	BU-2-ADV20/50	(1)	RF220T 250R	S8TOCP	(1)	300 x 27 x 36 mm (500 g)
ADV20-2007-KXX-1M	BU-2-ADV20/50	(1)	RF220T 150R	S8TOCQ	(1)	300 x 27 x 36 mm (500 g)
<b>230V Class</b>						
ADV20-1004-KXX-2MF	BU-2-ADV20/50	(1)	RF220T 250R	S8TOCP	(1)	300 x 27 x 36 mm (500 g)
ADV20-1007-KXX-2MF	BU-2-ADV20/50	(1)	RF220T 150R	S8TOCQ	(1)	300 x 27 x 36 mm (500 g)
ADV20-2015-KXX-2MF	BU-2-ADV20/50	(1)	RF300DT 100R	S8TOCB	(1)	260 x 47 x 106 mm (1400 g)
ADV20-2022-KXX-2MF	BU-2A-ADV20/50	(1)	RF300DT 68R	S8TOCS	(1)	260 x 47 x 106 mm (1400 g)
<b>460V Class</b>						
ADV20-1004-KXX-4F	BU-4-ADV20/50	(1)	RF300DT 400R	S8TOCR	(1)	260 x 47 x 106 mm (1400 g)
ADV20-1007-KXX-4F	BU-4-ADV20/50	(1)	RF300DT 400R	S8TOCR	(1)	260 x 47 x 106 mm (1400 g)
ADV20-1015-KXX-4F	BU-4-ADV20/50	(1)	RF300DT 200R	S8TIDB	(1)	260 x 47 x 106 mm (1400 g)
ADV20-2022-KXX-4F	BU-4A-ADV20/50	(1)	RF300DT 150R	S8TOCT	(1)	260 x 47 x 106 mm (1400 g)
ADV20-2037-KXX-4F	BU-4A-ADV20/50	(1)	RFPD750DT 100R	S8SY4	(1)	200 x 70 x 106 mm (1700 g)

MODELS



**ADV80 -X XXX - K B X - C**

Drive  
ADV80 series

**Drive mechanical dimensions:**

- 1 = Size 1
- 2 = Size 2
- 3 = Size 3

**CANopen/DeviceNet:**  
= NOT integrated  
C = integrated

**Software :**  
X = standard

**Braking unit:**  
B = included

**Keypad:**  
K = included


**Drive kW rating:**

- 004 = 0.37 kW      040 = 4.0 kW
- 005 = 0.55 kW      055 = 5.5 kW
- 007 = 0.75 kW      075 = 7.5 kW
- 015 = 1.5 kW      110 = 11.0 kW
- 022 = 2.2 kW      185 = 18.5 kW
- 030 = 3.0 kW      220 = 22.0 kW


ADV80	CODE	PRODUCT IDENTIFICATION	PN @ 400Vac	CONFIGURATION
Control for asynchronous motors in open loop mode  Power supply 3 x 400 Vac - 480 Vac  Integrated programming keypad	S9AGV1	ADV80-1004-KBX	0.4 kW	Integrated braking unit
	S9AGV2	ADV80-1005-KBX	0.55 kW	Integrated braking unit
	S9AGV3	ADV80-1007-KBX	0.75 kW	Integrated braking unit
	S9AGV18	ADV80-1015-KBX	1.5 kW	Integrated braking unit
	S9AGV5	ADV80-2022-KBX	2.2 kW	Integrated braking unit
	S9AGV6	ADV80-2030-KBX	3 kW	Integrated braking unit
	S9AGV7	ADV80-2040-KBX	4 kW	Integrated braking unit
	S9AGV8	ADV80-2055-KBX	5.5 kW	Integrated braking unit
	S9AGV9	ADV80-2075-KBX	7.5 kW	Integrated braking unit
	S9AGV14	ADV80-2110-KBX	11 kW	Integrated braking unit
	S9AGV11	ADV80-3150-KBX	15 kW	Integrated braking unit
	S9AGV12	ADV80-3185-KBX	18.5 kW	Integrated braking unit
	S9AGV13	ADV80-3220-KBX	22 kW	Integrated braking unit
<b>ADV80-...-C</b>  Control for asynchronous motors in open loop mode  Power supply 3 x 400 Vac - 480 Vac  Integrated programming keypad  Integrated CAN	S9AGV21	ADV80-1004-KBX-C	0.4 kW	Integrated braking unit - Integrated CAN/DeviceNet
	S9AGV22	ADV80-1005-KBX-C	0.55 kW	Integrated braking unit - Integrated CAN/DeviceNet
	S9AGV23	ADV80-1007-KBX-C	0.75 kW	Integrated braking unit - Integrated CAN/DeviceNet
	S9AGV38	ADV80-1015-KBX-C	1.5 kW	Integrated braking unit - Integrated CAN/DeviceNet
	S9AGV25	ADV80-2022-KBX-C	2.2 kW	Integrated braking unit - Integrated CAN/DeviceNet
	S9AGV26	ADV80-2030-KBX-C	3 kW	Integrated braking unit - Integrated CAN/DeviceNet
	S9AGV27	ADV80-2040-KBX-C	4 kW	Integrated braking unit - Integrated CAN/DeviceNet
	S9AGV28	ADV80-2055-KBX-C	5.5 kW	Integrated braking unit - Integrated CAN/DeviceNet
	S9AGV29	ADV80-2075-KBX-C	7.5 kW	Integrated braking unit - Integrated CAN/DeviceNet
	S9AGV34	ADV80-2110-KBX-C	11 kW	Integrated braking unit - Integrated CAN/DeviceNet
	S9AGV31	ADV80-3150-KBX-C	15 kW	Integrated braking unit - Integrated CAN/DeviceNet
	S9AGV32	ADV80-3185-KBX-C	18.5 kW	Integrated braking unit - Integrated CAN/DeviceNet
	S9AGV33	ADV80-3220-KBX-C	22 kW	Integrated braking unit - Integrated CAN/DeviceNet

## ACCESSORIES & OPTIONS ADV80


### I/O EXPANSION

Models	Code	Description
 <b>EXP-D6A1R1-ADV80</b>	S5AGV10	6 digital inputs - 1 analog input - 1 relay

### FIELDBUS EXPANSION

Models	Code	Description
 <b>SBI-PDP-ADV80</b>	S5AGV9	Profibus-DP interface

### CONNECTION VIA SERIAL LINE

Models	Code	Description
 <b>OPT-QUIX</b>	S587E	Serial line optoisolator (for Multidrop connections)
<b>A-RS485</b>	S5Z40	External power supply for RS-485 serial network
<b>Kit RS485 - PCI COM</b>	S50T6	Universal kit for RS485 serial line (PCI COM + connection cables)
<b>Kit RS485-QX Serial adapter</b>	S5QQ2	RS485 serial line kit (PCI-QX + connection cable)
<b>PCI COM</b>	S560T	Universal RS-232 / RS-485 serial interface
<b>PCI-QX</b>	S557Z	RS-232 / RS-485 serial interface
<b>Shielded cable for PCI-QX</b>	S7QAF9	RS-485 serial interface cable (L = 5 m)

### EXTERNAL NETWORK SIDE FUSES

Size	Europe		America	
	Code	Model	Model	Code
<b>Connections without CA input choke</b>				
<b>ADV80-1004</b>	Z14GR10	F4M03	A70P10	S7G49
<b>ADV80-1005</b>	Z14GR10	F4M03	A70P10	S7G49
<b>ADV80-1007</b>	Z14GR10	F4M03	A70P10	S7G49
<b>ADV80-1015</b>	Z14GR10	F4M03	A70P10	S7G49
<b>ADV80-2022</b>	Z14GR16	F4M05	A70P20	S7G48
<b>ADV80-2030</b>	Z14GR16	F4M05	A70P20	S7G48
<b>ADV80-2040</b>	Z14GR20	F4M07	A70P20	S7G48
<b>ADV80-2055</b>	Z14GR25	F4M09	A70P25	S7G51
<b>ADV80-2075</b>	Z14GR25	F4M09	A70P30	S7I50
<b>ADV80-2110</b>	GRD3/35	F4D20	A70P35	S7G51
<b>ADV80-3150</b>	Z22GR63	F4MI7	A70P60-4	S7I34
<b>ADV80-3185</b>	Z22GR63	F4MI7	A70P60-4	S7I34
<b>ADV80-3220</b>	Z22GR80	F4MI9	A70P80	S7G54
<b>Connections with CA input choke</b>				
<b>ADV80-1004</b>	Z14GR10	F4M03	A70P10	S7G49
<b>ADV80-1005</b>	Z14GR10	F4M03	A70P10	S7G49
<b>ADV80-1007</b>	Z14GR10	F4M03	A70P10	S7G49
<b>ADV80-1015</b>	Z14GR10	F4M03	A70P10	S7G49
<b>ADV80-2022</b>	Z14GR10	F4M03	A70P10	S7G49
<b>ADV80-2030</b>	Z14GR16	F4M05	A70P20	S7G48
<b>ADV80-2040</b>	Z14GR16	F4M05	A70P20	S7G48
<b>ADV80-2055</b>	Z14GR20	F4M07	A70P20	S7G48
<b>ADV80-2075</b>	Z14GR20	F4M07	A70P25	S7G51
<b>ADV80-2110</b>	GRD3/35	F4D20	A70P35	S7G51
<b>ADV80-3150</b>	Z22GR63	F4MI7	A70P60-4	S7I34
<b>ADV80-3185</b>	Z22GR63	F4MI7	A70P60-4	S7I34
<b>ADV80-3220</b>	Z22GR80	F4MI9	A70P80	S7G54

Technical data for fuses, including dimensions, weights, dissipated power, fuse blocks, etc. can be found in the manufacturers' catalogues:

Tipo M... (blade), GRD... , Z22... , S...

Jean Müller, Eltville

A70...

Ferraz

FWP...

Bussmann

**INPUT CHOKE**

Size	Choke rating	Current rating	Current saturation	Model	Code
	[mH]	[A]	[A]		
ADV80-1004	6.1	2.5	5	LR3y-1007	S7AAD
ADV80-1005	6.1	2.5	5	LR3y-1007	S7AAD
ADV80-1007	6.1	2.5	5	LR3y-1007	S7AAD
ADV80-1015	3.69	3.7	7.4	LR3y-1015	S7AAE
ADV80-2022	2.71	5.5	11	LR3y-1022	S7AAF
ADV80-2030	2.3	7.1	16	LR3y-1030	S7AB3
ADV80-2040	1.63	9.6	22	LR3y-2040	S7AAG
ADV80-2055	1.29	11.8	24.5	LR3y-2055	S7AB5
ADV80-2075	0.89	17.4	36.5	LR3y-2075	S7AB6
ADV80-2110	0.68	22	46.5	LR3y-3110	S7AB7
ADV80-3150	0.51	30	61	LR3y-3150	S7AB8
ADV80-3185	0.35	38	83	LR3-022	S7FF4
ADV80-3220	0.35	45	83	LR3-022	S7FF4

**OUTPUT CHOKE**

Choke rating	Current rating	Current saturation	Model	Code
[mH]	[A]	[A]		
1.4	2.15	3.9	LU3-QX01	S7FL2
1.4	2.15	3.9	LU3-QX01	S7FL2
1.4	2.15	3.9	LU3-QX01	S7FL2
0.87	10.1	18.4	LU3-QX02	S7FL3
0.87	10.1	18.4	LU3-QX02	S7FL3
0.87	10.1	18.4	LU3-QX02	S7FL3
0.87	10.1	18.4	LU3-QX02	S7FL3
0.87	16	34	LU3-005	S7FG3
0.51	27	57	LU3-011	S7FG4
0.51	27	57	LU3-011	S7FG4
0.43	32	68	LU3-015	S7FH2
0.33	42	72	LU3-022	S7FH3
0.23	58	100	LU3-030	S7FH4

**BRAKING RESISTORS**

Size	Model	Code	Max. overload 1"- service 10%	Max. overload 30"- service 25%	PBraking resistor power rating	Braking resistor value	Housing
			Ebr (kJ)	Ebr (kJ)	Pnbr (W)	Rbr (Ω)	
ADV80-1004	RF 100 T 360R	S8S81	0.7	5	150	360	IP44
ADV80-1005	RF 100 T 360R	S8S81	0.7	5	150	360	IP44
ADV80-1007	RF 100 T 360R	S8S81	0.7	5	150	360	IP44
ADV80-1015	RF 150 T 100R	S8S82	1	9	300	100	IP44
ADV80-2022	RF 150 T 100R	S8S82	1	9	300	100	IP44
ADV80-2030	RF 150 T 100R	S8S82	1	9	300	100	IP44
ADV80-2040	RF 200 T 75R	S8S83	1.5	11	200	75	IP44
ADV80-2055	RF 200 T 68R	S8T00T	1.5	11	200	68	IP44
ADV80-2075	RF 400 68R	S85A16	3.5	25	400	68	IP44
ADV80-2110	RFPD 1100 DT 40R	S8SY6	11	58	1100	40	IP44
ADV80-3150	RFPD 1900 D 28R	S8SZS	19	75	1900	28	IP44
ADV80-3185	BRT4K0-15R4	S8T00G	40	150	4000	15.4	IP20
ADV80-3220	BRT4K0-15R4	S8T00G	40	150	4000	15.4	IP20