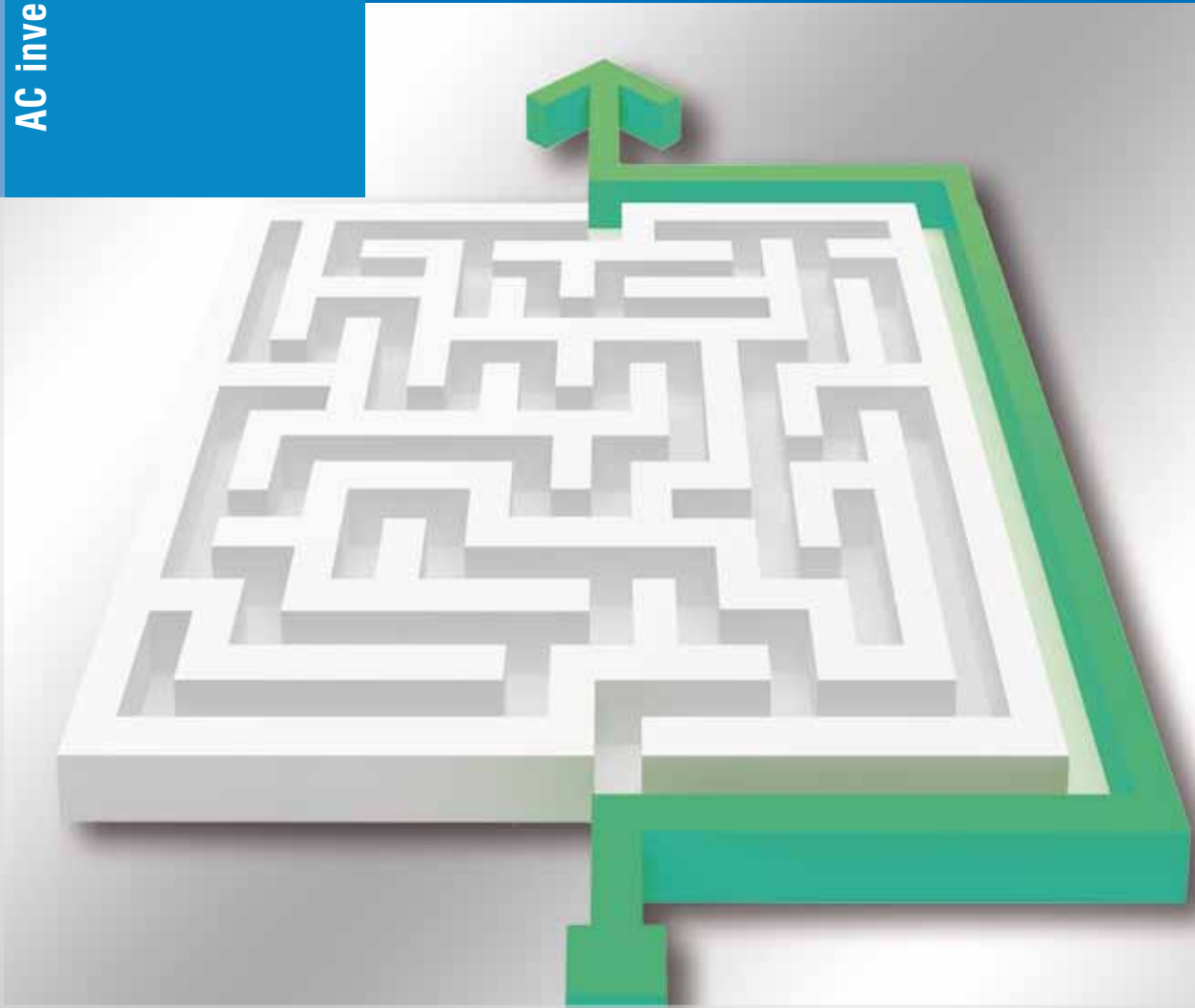


2011

AC inverter_General purpose

SIEDrive ADV80



**Simple Concept ...
... High Performance**

English__Italiano



GEFRAN

...life is flexibility ...life is ADV80

- The ADV80 series brings together in a single product all the features required in modern industrial processes, to satisfy the demands of OEM and System integrators who require advanced and practical technical solutions. The series is particularly advantageous in terms of space and cost.
- Versatile and reliable, the ADV80 inverter offers the benefits of the most recent technology, guaranteeing high dynamic performance and excellent regulation accuracy, in all control situations where small a.c. motor powers are normally used.
- A very simple and intuitive programming module, allows for fast motor start-up or regulation of complex control, thanks to a simplified menu structure and to the PC configurator "GF_eXpress", supplied as standard with the drive.
- Compact and functional, the ADV80 has been engineered and built in order to realise in a flexible and efficient way all the different application requirements in the field of automation, integrating advanced functions and system configuration solutions, which before were only possible through external options.



- La serie di Inverter ADV80 concentra in un singolo prodotto tutte le caratteristiche richieste dai moderni processi industriali e soddisfa allo stesso tempo esigenze tipiche di installatori e system integrators che necessitano di soluzioni tecniche avanzate, pratiche ma soprattutto vantaggiose in termini di spazio e costo.
- Versatili ed affidabili, gli inverter ADV80 offrono l'espressione della più recente tecnologia garantendo elevate prestazioni dinamiche ed un'eccellente precisione di regolazione, in tutti i controlli in cui vengano impiegati motori c.a. di piccola potenza.
- La modalità di programmazione semplice ed intuitiva, consente rapide messe in servizio e regolazioni di controlli più complessi, grazie ad una struttura menu semplificata ed al configuratore per PC GF_eXpress fornito come standard.
- Compatto e funzionale, ADV80 è stato studiato e costruito per realizzare in modo flessibile ed efficiente le più svariate richieste applicative nel settore dell'automazione, integrando in una struttura ideale funzioni evolute e soluzioni per configurazione di sistemi prima d'ora esclusivamente opzionali.

Flexible and functional

- Supply: 3 x 400V...480V 50/60Hz
- Motor powers from 0.37kW (0.5Hp) up to 22kW (30Hp)
- Output frequency 500Hz
- Integrated braking module
- Speed feedback with closed loop through encoder (option)
- Digital I/O logic control in PNP and/or NPN configuration
- 2 Differential analog inputs $\pm 10V$ (or current)
- 2 Analog outputs (voltage or current)
- 5 Digital inputs
- 2 Digital outputs (1 static and 1 relays)
- Overload up to 150% in accordance with IEC146-1-1 Class 2
- Integrated programming keypad
- RS485 Serial line (Modbus protocol)
- Interfacing with fieldbus protocol as:
ProfiBus – CANopen[®] – DeviceNet
- Integrated CANopen[®]/DeviceNet version
- Protection degree IP20

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
- Critical frequencies rejection
- Motor thermal protection
- Virtual and remoter I/O standard management
- Area with programmable logic

Flessibile e funzionale

- Alimentazione: 3 x 400V...480V 50/60Hz
- Potenze motori da 0,37kW (0,5Hp) fino a 22kW (30Hp)
- Frequenza di uscita 500Hz
- Unità di frenatura integrata
- Retroazione di velocità ad anello chiuso tramite encoder
- Logica comandi I/O digitali in configurazione PNP e/o NPN
- 2 Ingressi analogici differenziali $\pm 10V$ (od in corrente)
- 2 Uscite analogiche (in tensione o corrente)
- 5 Ingressi digitali
- 2 Uscite digitali (1 statica e 1 a relè)
- Sovraccarico fino al 150% secondo IEC146-1-1 Classe 2
- Tastiera di programmazione integrata
- Linea seriale RS485 (protocollo Modbus)
- Interfacciamento ai più comuni bus di campo
(Profibus – CANopen[®] – DeviceNet)
- Versione con CANopen[®] e DeviceNet integrati
- Grado di protezione IP20

Piccolo e semplice ma potente

- Autotaratura parametri motore
- Curve V/f predefinite e programmabili
- 4 Rampe indipendenti programmabili
- 16 Velocità programmabili
- Funzione "autocapture" (riaggancio al volo)
- Gestione mancanza rete con arresto controllato
- Autorestart programmabile
- Blocco applicativo PID
- Funzione di risparmio energetico
- Salto frequenze critiche
- Protezione termica motore
- Gestione integrata I/O virtuali o remote
- Area con logiche programmabili



Standard Configuration

- Supply 3ph 400V –15%... 480V +10% 50/60Hz ±5%
- Motor powers from 0.37kW up to 22kW (0.5Hp up to 30Hp)
- Standard version with default setting for supply 400V – 50Hz

Configurazione Standard

- Alimentazione trifase 400V –15% 480V +10% 50/60Hz ±5%
- Potenze motore da 0,37kW a 22kW (0,5Hp a 30Hp)
- Versione “Standard” con impostazione di default per alimentazioni a 400V – 50Hz

Output Data

Input Data

Inverter Model - ADV80		1004	1005	1007	2015	2022	2030	2040	2055	2075	3110	3150	3185	3220		
Inverter Output (IEC 146 class2), 150% overload for 60s	[kVA]	0.8	1.0	1.4	2.6	3.6	4.7	6.4	8.2	11.2	15.9	21.5	26.3	31.8		
P_n mot (recommended motor output):																
@ U _{LN} =3x400VAC; fsw=default; IEC 146 class 2	[kW]	0.37	0.55	0.75	1.5	2.2	3	4	5.5	7.5	11	15	18.5	22		
@ U _{LN} =3x480VAC; IEC 146 class 2	[Hp]	0.5	0.75	1	1.5	2	4	5	7.5	10	15	20	25	30		
U₂ Max output voltage	[V]	0.94 x U _{LN} (AC Input voltage)														
f₂ Max output frequency	[Hz]	500														
I_{2N} Rated output current :																
@ U _{LN} =3x400VAC; fsw=default; IEC 146 class 2	[A]	1.1	1.5	2	3.7	5.2	6.8	9.2	11.8	16.1	23.0	31.0	38.0	46.0		
@ U _{LN} =3x480VAC; fsw=default; IEC 146 class 2	[A]	1.0	1.4	1.8	3.2	4.5	5.9	7.6	9.7	13.2	20.7	27.9	34.2	41.4		
fsw switching frequency (Default)	[kHz]	8	8	8	8	8	8	8	8	8	8	8	8	8		
fsw switching frequency (Higher)	[kHz]	12	12	12	12	12	12	12	12	12	12	12	12	12		
Derating factor:																
KT for ambient temperature		0.8 @ 50° C (122° F)														
KF for switching frequency		0.7 for higher fsw														
U_{LN} AC Input voltage	[V]	400 V –15% ... 480 V +10%, 3Ph														
AC Input frequency	[Hz]	50/60 Hz ±5%														
In AC Input current for continuous service:																
– Connection with 3-phase reactor																
@ 3x400VAC; IEC 146 class 2	[A]	1.3	1.6	2.1	4	5.6	7.1	9.6	10.8	16	23	33	38	43		
@ 3x480VAC; IEC 146 class 2	[A]	1.1	1.3	2	3.6	5	6.5	8.8	9.1	14.3	21	31	36	40		
– Connection without 3-phase reactor																
@ 3x400VAC; IEC 146 class 2	[A]	2.1	2.6	3.4	5.9	8.1	10.2	13.0	17	19	28	40	47	53		
@ 3x480VAC; IEC 146 class 2	[A]	1.7	2	3.1	5.3	7.2	9.1	12	14.5	17	26	38	44	49		
Max short circuit power without line reactor (Z_{min}=1%)	[kVA]	85	115	160	270	380	500	650	850	1115	1600	2200	2700	3200		
Overvoltage threshold		800 V _{DC}														
Undervoltage threshold		380 V _{DC} (for 380/400VAC), 400 V _{DC} for (420/440 VAC), 415 V _{DC} for (460/480 VAC)														
Braking IGBT Unit (standard drive)		Standard internal (with external resistor); Braking torque 150%														
Dimensions (width x length x depth)	mm [inches]	70 x 204 x 151 [2.76 x 8.03 x 5.94]					130 x 221 x 175.5 [5.12 x 8.70 x 6.95]					227.8 x 387 x 181.26 [8.97 x 15.23 x 7.15]				
Weight	kg [lbs]	1.31 [2.89]					3.05 [6.72]					10.5 (23.15)				

Environmental Condition

Enclosures	IP20 (NEMA type 1 option)
Ambient temperature	0 ...40°C, +40°C... +50°C with derating
Altitude	Max 2000 m. (up to 1000 m without current limitation)

Normative and marks

CE	in compliance with CEE directives, for low voltage devices
UL & cUL	in compliance with American and Canadian market directives (in certification phase)
EMC	in compliance with CEE - EN 61800 - 3 electromagnetic compatibility directive, using optional filters.

Condizioni ambientali

Alloggiamento	IP20 (NEMA type 1 opzionale)
Temperatura	0 ...40°C, +40°C... +50°C con derating
Altitudine	max 2000 m (fino a 1000 m senza limitazioni di corrente)

Norme e marchi

CE	conforme alla direttiva CEE sugli apparecchi a bassa tensione
UL & cUL	conforme alle direttive per il mercato Americano e Canadese (in corso)
EMC	conforme alla direttiva CEE - EN 61800-3, sulla compatibilità elettromagnetica con l'impiego dei filtri opzionali.

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