

"AVy..." and "AVy...-4A"**Drive Type - kW rating**

		1007	1015	1022	1030	2040	2055	2075	3110	3150	4220	4300	4370	5450	5550	6750	7900	71100	71320	81600	92500	93150	104000	105000	106300																																																
Technical data																																																																									
U _N AC Input voltage	[V]	230 V -15% ... 480 V +10%, 3Ph																				400 V -15% ... 480 V +10%, 3Ph																																																			
AC Input frequency	[Hz]	50/60 Hz ±5%																																																																							
Inverter Output (IEC 146 class1), Continuous service	[kVA]	1.6	2.7	3.8	5	6.5	8.5	12	16.8	22.4	32	42	55	64	79	98	128	145	173	224	335	400	554	685	-																																																
Inverter Output (IEC 146 class2), 150% overload for 60s	[kVA]	1.4	2.4	3.4	4.5	5.9	7.7	10.9	15.3	20.3	29	38.2	50	58.3	72	89.2	116.5	132	157.5	204	305	363	504	623	776																																																
P _N mot (recommended motor output):																																																																									
@ U _N =230Vac; f _{SW} =default; IEC 146 class 1	[kW]	0.37	0.75	1.1	1.5	2.2	3	4	5.5	7.5	11	18.5	22	22	30	37	55	55	75	90	-	-	-	-	-																																																
@ U _N =230Vac; f _{SW} =default; IEC 146 class 2	[kW]	0.37	0.75	1.1	1.5	2.2	3	4	5.5	7.5	11	15	18.5	22	30	37	45	55	55	90	-	-	-	-	-																																																
@ U _N =400Vac; f _{SW} =default; IEC 146 class 1	[kW]	0.75	1.5	2.2	3	4	5.5	7.5	11	15	22	30	37	45	55	75	90	110	132	160	250	315	400	500	-																																																
@ U _N =400Vac; f _{SW} =default; IEC 146 class 2	[kW]	0.75	1.5	2.2	3	4	5.5	7.5	11	15	22	30	37	45	55	75	90	110	160	250	250	400	500	630	-																																																
@ U _N =460Vac; IEC 146 class 1	[Hp]	1	2	3	3	5	7.5	10	15	20	30	40	50	60	75	100	125	150	150	200	350	450	600	700	-																																																
@ U _N =460Vac; IEC 146 class 2	[Hp]	0.75	1.5	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	125	150	200	300	450	500	600	700																																																
U ₂ Max output voltage	[V]	0.98 x U _N (AC Input voltage)																																																																							
f ₂ Max output frequency	[Hz]	400															200																																																								
I _{2N} Rated output current :																																																																									
@ U _N =230-400Vac; f _{SW} = default; IEC 146 class 1	[A]	2.4	4	5.6	7.5	9.6	12.6	17.7	24.8	33	47	63	79	93	114	142	185	210	250	324	(*) 485	(*) 580	(*) 800	(*) 980	-																																																
@ U _N =230-400Vac; f _{SW} =default; IEC 146 class 2	[A]	2.2	3.6	5.1	6.8	8.7	11.5	16.1	22.5	30	43	58	72	85	104	129	169	191	227	295	(*) 441	(*) 525	(*) 728	(*) 892	(*) 1120																																																
@ U _N =460Vac; f _{SW} =default; IEC 146 class 1	[A]	2.1	3.5	4.9	6.5	8.3	11	15.4	21.6	28.7	40	54	68	81	99	124	160	183	217	282	422	566	720	853	-																																																
@ U _N =460Vac; f _{SW} =default; IEC 146 class 2	[A]	1.9	3.2	4.4	5.9	7.6	10	14	19.6	26	36	50	62	74	90	112	146	166	198	256	384	515	655	776	974																																																
f _{SW} switching frequency (Default)	[kHz]	8															4																																																								
f _{SW} switching frequency (Higher)	[kHz]	16															8																																																								
lowId (short term overload current, 200% of I _{2N} for 0.5s on 60s)	[A]	4.4	7.2	10.2	13.6	17.4	23	32.2	45	60	86	116	144	170	208	258	338	382	454																																																						
Dimensions (width)																																																																									
mm		105.5				151.5				208				309				376				509				509				776 (**)				1196 (***)																																							
[inch]		[4.1]				[5.9]				[8.2]				[12.1]				[14.7]				[20]				[20]				[...]				[47.00]																																							
Dimensions (length)																																																																									
mm		306.5								323								489								564								741								909								965								1075 (**)								1250 (***)							
[inch]		[12.0]								[12.7]								[19.2]								[22.2]								[29.2]								[35.8]								[38]								[...]								[49.12]							
Dimensions (depth)																																																																									
mm		199.5								240								268								308								308								297.5								442								450 (**)								456 (***)							
[inch]		[7.8]								[9.5]								[10.5]								[12.1]								[12.1]								[11.7]								[17.4]								[...]								[17.92]							
Weight																																																																									
Kg		3.5	3.6	3.7	4.95	8.6	18	22	22.2	34	59	75.4	80.2	86.5	109	155 (**)	...										(***)																																														
[lbs]		[7.7]	[7.9]	[8.1]	[10.9]	[19]	[39.6]	[48.5]	[48.9]	[74.9]	[130]	[166.1]	[176.7]	[190.6]	[240.3]	[...]	[...]										[...]																																														

(*) : value for 400Vac only

(**) : valid for "92500-C-IP20" and "93150-CP-IP20" only

(***) : valid for "104000-IP00", "105000-IP00" and "106300-IP00" only without input DC supply section (SM32)

"AVy...-5"**Drive Type - Hp rating**

		2002	2003	2005	3007	3010	3015	3020	4025	4030	4040	5050	5060	5075	6100	7125	7150	8200																																							
Technical data																																																									
U _N AC Input voltage	[V]	500 -10% / 575V +10%...-10% , 3Ph																																																							
AC Input frequency	[Hz]	50/60 Hz ±5%																																																							
Inverter Output (IEC 146 class1), Continuous service	[kVA]	3.8	4.5	7.0	10.8	13.7	18.6	24.1	30	36	46	58	69	86	109	136	157	210																																							
Inverter Output (IEC 146 class2), 150% overload for 60s	[kVA]	3.4	4.1	6.3	9.8	12.5	16.9	21.9	27	33	42	53	63	78	99	124	143	191																																							
P _N mot (recommended motor output):																																																									
@ U _N =575Vac; f _{SW} =default; IEC 146 class 1	[Hp]	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	125	150	200																																							
@ U _N =575Vac; f _{SW} =default; IEC 146 class 2	[Hp]	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	125	150	200																																							
U ₂ Max output voltage	[V]	0.98 x U _N (AC Input voltage)																																																							
f ₂ Max output frequency (*)	[Hz]	400																																																							
I _{2N} Rated output current :																																																									
@ U _N =575Vac; f _{SW} = default; IEC 146 class 1	[A]	3.8	4.5	7.0	10.8	13.8	18.7	24.2	30	36	46	58	69	86	109	137	158	211																																							
@ U _N =575Vac; f _{SW} =default; IEC 146 class 2	[A]	3.4	4.1	6.4	9.8	12.6	17.0	22.0	27	33	42	53	63	78	99	125	144	192																																							
f _{SW} switching frequency (Default)	[kHz]	8																																																							
f _{SW} switching frequency (Higher)	[kHz]	16																																																							
lowId (short term overload current, 200% of I _{2N} for 0.5s on 60s)	[A]	7.0	8.2	12.8	19.6	25.2	34.0	44.0	54	66	84	106	126	156	198	249	288	384																																							
Dimensions (width)																																																									
mm		151.5				208				350				418				509																																							
[inch]		[5.9]				[8.2]				[13.8]				[16.4]				[20]																																							
Dimensions (length)																																																									
mm		306.5								323								569								605								921								1113								1183							
[inch]		[12.0]								[12.7]								[22.4]								[23.8]								[36.2]								[43.8]								[46.6]							
Dimensions (depth)																																																									
mm		199.5								240								268								320								297.5																							
[inch]		[7.8]								[9.5]								[10.5]								[12.6]								[11.7]																							
Weight																																																									
kg		4.6	4.8	8.2	8.8	28.6	31.6	47	83	118	131																																														
[lbs]		[10.1]	[10.6]	[18]	[19.4]	[63.1]	[67.9]	[103.6]	[183]	[260.1]	[288.6]																																														

Environmental Condition

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

Normative and marks

CE	in compliance with CEE directives, for low voltage devices.
UL, cUL, CSA	in compliance with American and Canadian market directives.
EMC	in compliance with CEE - EN61800-3/A11 electromagnetic compatibility directive, using optional filters.

Condiciones ambientales

Cajas	IP20 (tipo NEMA 1 opcional)
Temperatura ambiente	0 ... 40°C, +40°C...+50°C con derating
Altitud	hasta 1.000 m sin límite de intensidad

Normativa y marcas

CE	de acuerdo con las directivas CEE, para dispositivos de bajo voltaje.
UL y cUL	de acuerdo con las directivas de mercado Norte Americanas y Canadienses.
EMC	de acuerdo con las directivas de compatibilidad electromagnética CEE - EN 50178/A11, utilizando filtros opcionales.



AVy1...-K..

SIEI Code	Type	Rated power @ 400V _{Ac}	Standard settings
S9L21	AVy1007-KBX	0.75 kW	Braking unit
S9L22	AVy1015-KBX	1.5 kW	Braking unit
S9L23	AVy1022-KBX	2.2 kW	Braking unit
S9L24	AVy1030-KBX	3 kW	Braking unit
S9L25	AVy2040-KBX	4 kW	Braking unit
S9L26	AVy2055-KBX	5.5 kW	Braking unit
S9L27	AVy2075-KBX	7.5 kW	Braking unit
S9L28	AVy3110-KBX	11 kW	Braking unit
S9L29	AVy3150-KBX	15 kW	Braking unit
S9LK1	AVy4220-KBX	22 kW	Braking unit
S9L41	AVy4300-KBX	30 kW	Braking unit
S9L35	AVy4370-KBX	37 kW	Braking unit
S9L17	AVy5450-KBX	45 kW	Braking unit
S9L20	AVy5550-KBX	55 kW	Braking unit
S9L30	AVy4220-KXX	22 kW	
S9L91	AVy4300-KXX	30 kW	

(to be continued)

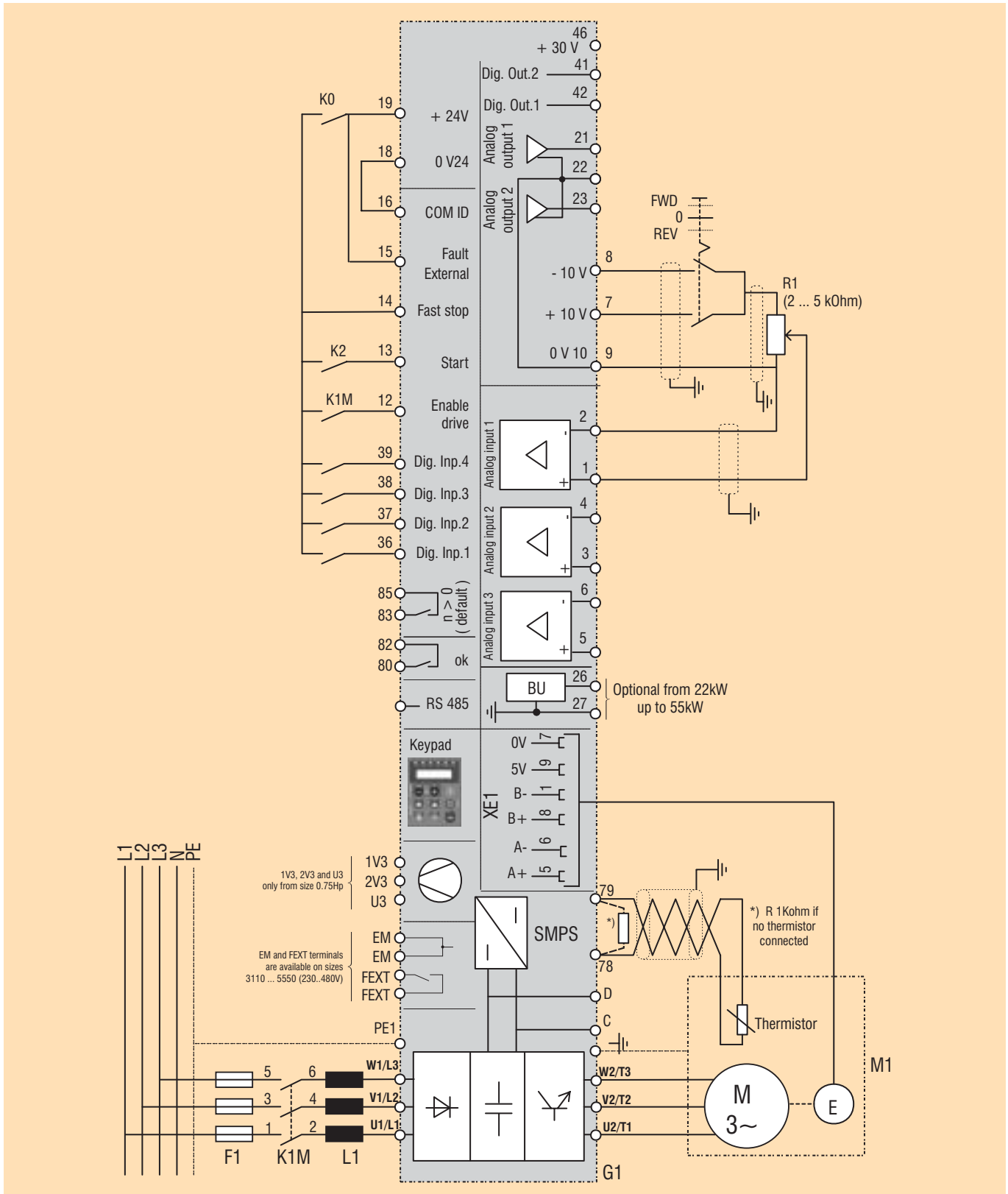
Ordering Codes

SIEI Code	Type	Rated power @ 400V _{Ac}	Standard settings
S9L34	AVy4370-KXX	37 kW	
S9L16	AVy5450-KXX	45 kW	
S9L19	AVy5550-KXX	55 kW	
S9L32	AVy6750-KXX	75 kW	
S9L38	AVy7900-KXX	90 kW	
S9L40	AVy71100-KXX	110 kW	
S9L43	AVy71320-KXX	132 kW	
S9LL5	AVy81600-KXX	160 kW	



AVy4...-K..-DC

SIEI Code	Type	Rated power	Standard settings
S901L	AVy4220-XXX-DC	22 kW	Power supply via the DC bus
S902L	AVy4300-XXX -DC	30 kW	Power supply via the DC bus
S903L	AVy4370-XXX-DC	37 kW	Power supply via the DC bus
S904L	AVy5450-XXX-DC	45 kW	Power supply via the DC bus
S905L	AVy5550-XXX-DC	55 kW	Power supply via the DC bus
S906L	AVy6750-XXX -DC	75 kW	Power supply via the DC bus
S907L	AVy7900-XXX -DC	90 kW	Power supply via the DC bus
S910L	AVy71100-XXX -DC	110 kW	Power supply via the DC bus
S911L	AVy71320-XXX -DC	132 kW	Power supply via the DC bus
S912L	AVy81600-XXX -DC	160 kW	Power supply via the DC bus



The connection diagram describes a typical inverter connection arrangement, set up to handle PNP logic "Terminal box commands". Refer to the instruction manual for additional detailed data.

Note: the connection diagram for the digital I/O applies to the AVy range.

Lo schema di collegamento indica una connessione tipica dell'inverter, predisposto per "Comandi da morsettiere" in logica PNP. Ulteriori informazioni dettagliate, sono disponibili nel relativo manuale d'istruzione.

Nota: lo schema di collegamento degli I/O digitali è relativo alla linea "AVy".

Le schéma de connexion indique une connexion typique du variateur, prévu pour "Commandes par bornes" en logique PNP.

Note: le schéma de raccordement des E/S digitales concerne la ligne "AVy".

Pour de plus amples informations voir la notice d'instruction correspondante.

Der Anschlussplan zeigt einen typischen Frequenzumrichteranschluss, der für "Befehle über Klemmleiste" in PNP-Logik bestimmt ist.

Hinweis: Der Anschlussplan für die Digital-I/O bezieht sich auf die Serie "AVy".

Nähere Informationen sind dem entsprechenden Handbuch zu entnehmen.

El esquema de conexión describe un convertidor de frecuencia con una conexión típica, instalada para manejar en lógica PNP "Mandos de la Caja de Terminales".

Nota: el esquema de conexiones de las E/S digitales es en relación con la línea "AVy".

Utilice el manual de instrucciones para información detallada adicional.

Technical Specifications

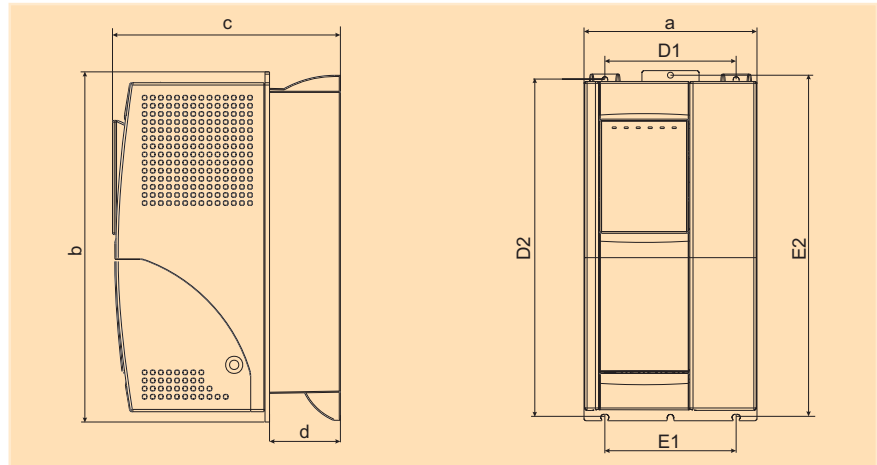
Specifiche Tecniche
Spécifications Techniques

Technische Spezifikationen
Especificaciones Técnicas

Dimensions and Weights

AVy1... , AVy2... , AVy3...

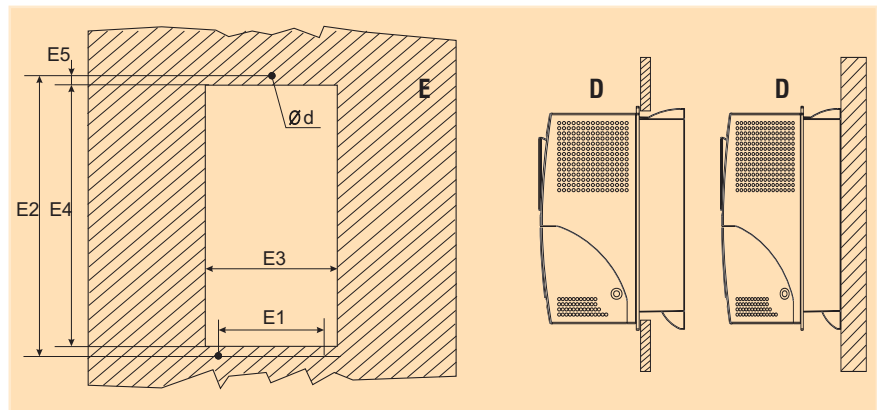
Dimensioni e Pes
Dimensions et Poids
Abmessungen und Gewichte
Dimensiones y Pesos



Mounting Method

Metodo di Montaggio
Mode de Montage
Montageart
Metodos de Montaje

- (E): Assembly with external heatsink
 Montaggio con dissipatore esterno
 Montage avec dissipateur extérieur
 Montage mit externem Kühlkörper
 Montaje con disipador externo
- (D): Wall assembly
 Montaggio a muro
 Montage au mur
 Wandmontage
 Montaje a la pared



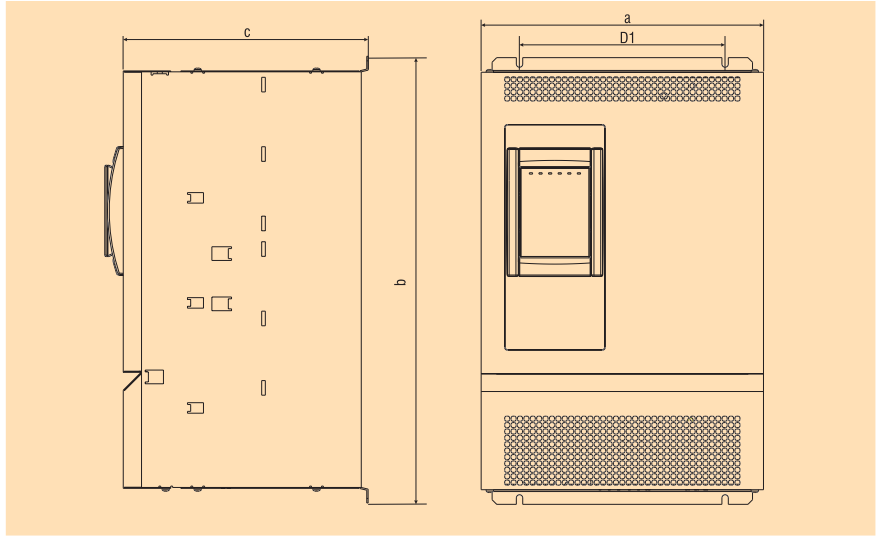
Dimensions mm [inch]	AVy & AVy...-4A									AVy...-5 (575V)						
	1007	1015	1022	1030	2040	2055	2075	3110	3150	2002	2003	2005	3007	3010	3015	3020
a	105.5 [4.1]	105.5 [4.1]	105.5 [4.1]	105.5 [4.1]	151.5 [5.9]	151.5 [5.9]	151.5 [5.9]	208 [8.2]	208 [8.2]	151.5 [5.9]	151.5 [5.9]	151.5 [5.9]	208 [8.2]	208 [8.2]	208 [8.2]	208 [8.2]
b	306.5 [12.0]	306.5 [12.0]	306.5 [12.0]	306.5 [12.0]	306.5 [12.0]	306.5 [12.0]	306.5 [12.0]	323 [12.7]	323 [12.7]	306.5 [12.0]	306.5 [12.0]	306.5 [12.0]	323 [12.7]	323 [12.7]	323 [12.7]	323 [12.7]
c	199.5 [7.8]	199.5 [7.8]	199.5 [7.8]	199.5 [7.8]	199.5 [7.8]	199.5 [7.8]	199.5 [7.8]	240 [9.5]	240 [9.5]	199.5 [7.8]	199.5 [7.8]	199.5 [7.8]	240 [9.5]	240 [9.5]	240 [9.5]	240 [9.5]
d	62 [2.4]	62 [2.4]	62 [2.4]	62 [2.4]	62 [2.4]	62 [2.4]	62 [2.4]	84 [3.3]	84 [3.3]	62 [2.4]	62 [2.4]	62 [2.4]	84 [3.3]	84 [3.3]	84 [3.3]	84 [3.3]
D1	69 [2.7]	69 [2.7]	69 [2.7]	69 [2.7]	115 [4.5]	115 [4.5]	115 [4.5]	168 [6.6]	168 [6.6]	115 [4.5]	115 [4.5]	115 [4.5]	168 [6.6]	168 [6.6]	168 [6.6]	168 [6.6]
D2	296.5 [11.6]	296.5 [11.6]	296.5 [11.6]	296.5 [11.6]	296.5 [11.6]	296.5 [11.6]	296.5 [11.6]	310.5 [12.2]	310.5 [12.2]	296.5 [11.6]	296.5 [11.6]	296.5 [11.6]	310.5 [12.2]	310.5 [12.2]	310.5 [12.2]	310.5 [12.2]
E1	69 [2.7]	69 [2.7]	69 [2.7]	69 [2.7]	115 [4.5]	115 [4.5]	115 [4.5]	164 [6.5]	164 [6.5]	115 [4.5]	115 [4.5]	115 [4.5]	164 [6.5]	164 [6.5]	164 [6.5]	164 [6.5]
E2	299.5 [11.7]	299.5 [11.7]	299.5 [11.7]	299.5 [11.7]	299.5 [11.7]	299.5 [11.7]	299.5 [11.7]	315 [12.4]	315 [12.4]	299.5 [11.7]	299.5 [11.7]	299.5 [11.7]	315 [12.4]	315 [12.4]	315 [12.4]	315 [12.4]
E3	99.5 [3.9]	99.5 [3.9]	99.5 [3.9]	99.5 [3.9]	145.5 [5.7]	145.5 [5.7]	145.5 [5.7]	199 [7.8]	199 [7.8]	145.5 [5.7]	145.5 [5.7]	145.5 [5.7]	199 [7.8]	199 [7.8]	199 [7.8]	199 [7.8]
E4	284 [11.2]	284 [11.2]	284 [11.2]	284 [11.2]	284 [11.2]	284 [11.2]	284 [11.2]	299.5 [11.8]	299.5 [11.8]	284 [11.2]	284 [11.2]	284 [11.2]	299.5 [11.8]	299.5 [11.8]	299.5 [11.8]	299.5 [11.8]
E5	9 [0.35]	9 [0.35]	9 [0.35]	9 [0.35]	9 [0.35]	9 [0.35]	9 [0.35]	9 [0.35]	9 [0.35]	9 [0.35]	9 [0.35]	9 [0.35]	9 [0.35]	9 [0.35]	9 [0.35]	9 [0.35]
Ød	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5	M5
Weight kg [lbs]	3.5 [7.7]	3.6 [7.9]	3.7 [8.1]	3.7 [8.1]	4.95 [10.9]	4.95 [10.9]	4.95 [10.9]	8.6 [19]	8.6 [19]	4.6 [10.1]	4.6 [10.1]	4.8 [10.6]	8.2 [18]	8.2 [18]	8.8 [19.4]	8.8 [19.4]

Standard Versions

Dimensions and Weights

AVy4... , AVy5... , AVy6... ,
AVy7... , AVy8...

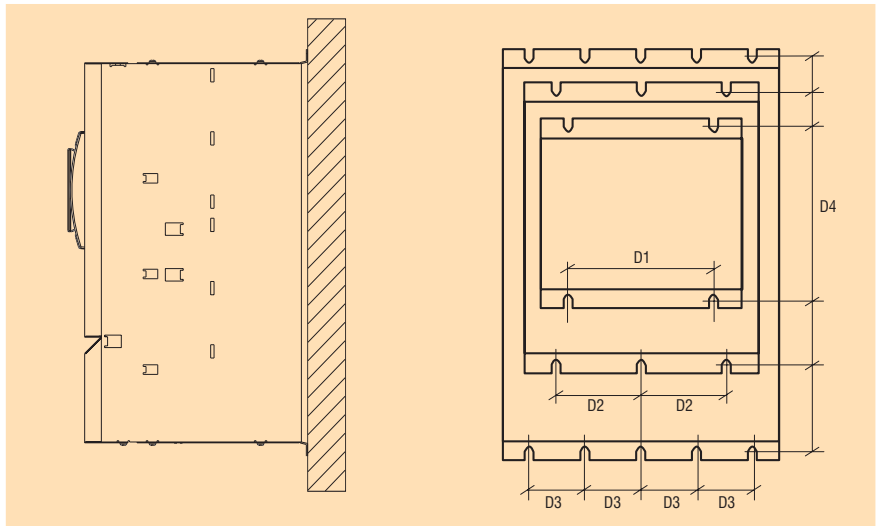
*Dimensioni e Pesì
Dimensions et Poids
Abmessungen und Gewichte
Dimensiones y Pesos*



Mounting Method

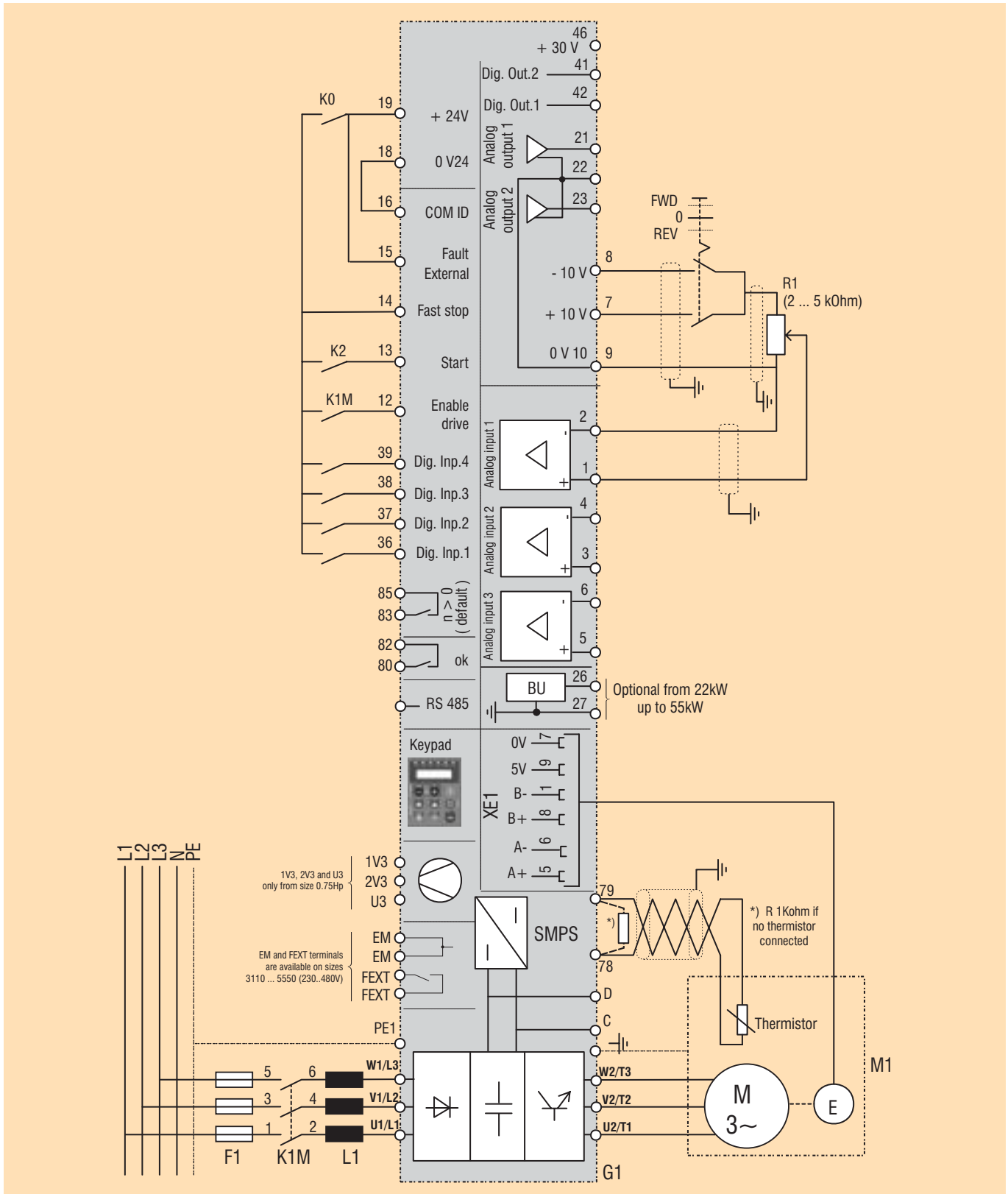
*Metodo di Montaggio
Mode de Montage
Montageart
Metodos de Montaje*

- (D): Wall mounting
 Montaggio a muro
 Montage au mur
 Wandmontage
 Montaje a la pared



Standard Versions

Dimensions	AVy & AVy...-4A										AVy...-5 (575V)									
	4220	4300	4370	5450	5550	6750	7900	7110	71320	81600	4025	4030	4040	5050	5060	5075	6100	7125	7150	8200
a	309 [12.1]	309 [12.1]	309 [12.1]	376 [14.7]	376 [14.7]	509 [20]	509 [20]	509 [20]	509 [20]	509 [20]	350 [13.8]	350 [13.8]	350 [13.8]	418 [16.4]	418 [16.4]	418 [16.4]	509 [20]	509 [20]	509 [20]	509 [20]
b	489 [19.2]	489 [19.2]	489 [19.2]	564 [22.2]	564 [22.2]	741 [29.2]	909 [35.8]	909 [35.8]	909 [35.8]	965 [38]	569 [22.4]	569 [22.4]	569 [22.4]	605 [23.8]	605 [23.8]	605 [23.8]	921 [36.2]	1113 [43.8]	1113 [43.8]	1183 [46.6]
c	268 [10.5]	308 [12.1]	308 [12.1]	308 [12.1]	308 [12.1]	297.5 [11.7]	297.5 [11.7]	297.5 [11.7]	297.5 [11.7]	442 [17.4]	268 [10.5]	268 [10.5]	320 [12.6]	320 [12.6]	320 [12.6]	320 [12.6]	297.5 [11.7]	297.5 [11.7]	297.5 [11.7]	297.5 [11.7]
D1	225 [8.8]	225 [8.8]	225 [8.8]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D2	-	-	-	150 [15.9]	150 [15.9]	-	-	-	-	-	150 [15.9]	150 [15.9]	150 [15.9]	150 [15.9]	150 [15.9]	150 [15.9]	-	-	-	-
D3	-	-	-	-	-	100 [3.9]	100 [3.9]	100 [3.9]	100 [3.9]	100 [3.9]	-	-	-	-	-	-	100 [3.9]	100 [3.9]	100 [3.9]	100 [3.9]
D4	457 [18.7]	457 [18.7]	457 [18.7]	550 [21.6]	550 [21.6]	725 [28.5]	891 [35]	891 [35]	891 [35]	947 [37.3]	555 [21.2]	555 [21.2]	555 [21.2]	590 [23.2]	590 [23.2]	590 [23.2]	903 [35.5]	1095 [43.1]	1095 [43.1]	1095 [43.1]
Ø d	M6	M6	M6	M6	M6	M6	M6	M6	M6	M6	M6	M6	M6	M6	M6	M6	M6	M6	M6	M6
Weight kg [lbs]	18 [39.6]	22 [48.5]	22.2 [48.9]	34 [74.9]	34 [74.9]	59 [130]	75.4 [166.1]	80.2 [176.7]	86.5 [190.6]	109 [240.3]	28.6 [62.9]	28.6 [62.9]	31.6 [69.5]	47 [103.6]	47 [103.6]	47 [103.6]	83 [183]	118 [260.1]	118 [260.1]	131 [288.8]



The connection diagram describes a typical inverter connection arrangement, set up to handle PNP logic "Terminal box commands". Refer to the instruction manual for additional detailed data.

Note: the connection diagram for the digital I/O applies to the AVy range.



Lo schema di collegamento indica una connessione tipica dell'inverter, predisposto per "Comandi da morsettiere" in logica PNP. Ulteriori informazioni dettagliate, sono disponibili nel relativo manuale d'istruzione.

Nota: lo schema di collegamento degli I/O digitali è relativo alla linea "AVy".



Le schéma de connexion indique une connexion typique du variateur, prévu pour "Commandes par bornes" en logique PNP.

Note: le schéma de raccordement des E/S digitales concerne la ligne "AVy".



Der Anschlussplan zeigt einen typischen Frequenzumrichteranschluss, der für "Befehle über Klemmleiste" in PNP-Logik bestimmt ist. Nähere Informationen sind dem entsprechenden Handbuch zu entnehmen.

Hinweis: Der Anschlussplan für die Digital-I/O bezieht sich auf die Serie "AVy".



El esquema de conexión describe un convertidor de frecuencia con una conexión típica, instalada para manejar en lógica PNP "Mandos de la Caja de Terminales". Utilice el manual de instrucciones para información detallada adicional.

Nota: el esquema de conexiones de las E/S digitales es en relación con la línea "AVy".

A new concept in automation

The ARTDrive - AVy series represents an innovative field-oriented vector inverter concept, capable of incorporating the needs of OEMs, systems integrators and panel builders in order to make them more innovative and competitive in international markets.

Thanks to its advanced functions, high level of precision and ultimate performance, AVy is at the cutting edge of any application area where maximum motor performance and sophisticated regulating control architectures are an absolute must.

AVy is extremely adaptable to every technical requirement of state-of-the-art processes and control systems. Furthermore, its extensive range and series of specialized configurations guarantee success in almost any automation system.

An extensive, versatile range

ARTDrive - AVy has been designed and developed to guarantee state-of-the-art machine configurations at an affordable price. Its full range of products, widely integrated hardware configurations, combined with intuitive and totally configurable programming software, ensure that AVy offers an excellent and flexible solution capable of meeting the widest range of system requirements quickly.

- Power supply:
 - 3 x 230V - 15%...480V + 10% 50/60 Hz
 - 3 x 575V ± 10% 50/60 Hz
- Motor powers from 0.75kW (1Hp) up to 630kW (700Hp)
- Regulation control modes:
 - Flux Vector closed-loop with feedback
 - Flux Vector open-loop without feedback (Sensorless)
 - Scalar V/f
- Output frequency 400Hz
- Integrated braking module up to 15kW, integrated as option up to 55kW
- Alphanumeric programming keypad
- Digital I/O commands in PNP and/or NPN logic
- 3 differential analog inputs ± 10V (voltage/current)
- 2 programmable analog outputs
- 8 digital inputs
- 4 digital outputs (2 opto-coupled and 2 relays)
- Programmable Overload up to 200% (IEC 146-1-1 Class 1 and Class 2)
- RS485 serial port (Modbus RTU protocol)
- Interfacing with the more common field bus interfaces: ProfiBus - CANopen - DeviceNet
- IP20 protection degree as standard (drive predisposition for mounting in IP54 with external heatsink)

Un nuevo concepto de automatización

La serie ARTDrive - AVy es una nueva concepción de Inverter Vectorial de orientación de campo, resultado de la integración de las necesidades de los fabricantes OEM y de los integradores de sistemas de automatización, como ayuda para ser más innovadores y competitivos en el mercado internacional.

Las funciones evolucionadas, la elevada precisión y la altísima dinámica, dan como resultado el convertidor AVy, un producto a la vanguardia en todo tipo de aplicaciones, en las que sean indispensables las máximas prestaciones de regulación por medio de sofisticadas arquitecturas de control.

Altamente flexibles en todo tipo de exigencias tecnológicas de los modernos sistemas de control y proceso, AVy gracias a la amplia gama y a una serie de estructuras dedicadas, garantiza el éxito en soluciones de automatización prácticamente universales.

Una gama amplia y versátil

ARTDrive - AVy ha sido estudiado y producido para garantizar vanguardistas configuraciones de máquina y al mismo tiempo, económicamente ventajosas. La gama completa de los productos, la gran integración de la configuración por hardware, unida a un software de programación intuitivo y completamente configurable, dan como resultado que el AVy sea una solución excelente para dar satisfacción de forma inmediata y flexible a las más variadas exigencias del sistema.

- Alimentación:
 - Trifásica 230V...480V 50/60 (Hz)
 - Trifásica 575V 50/60Hz
- Potencias de motores desde 0,75kW (1Hp) hasta 630kW (700Hp)
- Modalidad de control
 - Vectorial de flujo con realimentación
 - Vectorial de flujo sin realimentación (Sensorless)
 - Escalar V/f
- Frecuencia de salida 400Hz
- Unidad de frenado integrada hasta 15kW, opcional integrada hasta 55kW
- Teclado alfanumérico de programación
- Lógica de los comandos I/O digitales PNP y/o NPN
- 3 entradas analógicas diferenciales ± 10V
- 8 Entradas digitales
- 4 Salidas digitales (estáticas y 2 a relé)
- Sobrecarga programable hasta el 200% según IEC146-1-1 Clase 1 y Clase 2.
- Línea serie RS485 (protocolo Modbus RTU)
- Interfaz para los buses de campo más comunes: ProfiBus - CANopen - DeviceNet
- Grado de protección estándar IP20 (opción de IP54 para montaje con disipador exterior)



Flexible and powerful

AVy includes as standard advanced control functions which offer totally flexible programming, making it ideal for both controlling single-motor solutions and implementing complex systems, such as those involved with automated machines, production lines, hoisting equipment, etc. where advanced control management is required.

- Off-line self-tuning: of speed-current-flux regulators and motor data identification (available with stand-still and/or rotating motor shaft)
- On-line self-tuning: motor parameters compensation according to the temperature variations
- Torque control: with OR built-in function, for the gradual communication between speed and torque regulators
- Simplified Start-up menu
- Instantaneous Overload up to 200%
- Motor and Drive I²t thermal protection
- Multispeed function (7 programmable presets)
- 5 independent programmable Multi-ramp ("linear" and "S" types)
- Motorpotentiometer function
- Flying restart function
- Droop function
- Double motor parameters setting
- PID block function
- Mains loss detection managed through controlled stop and/or energy optimization
- Virtual and Remote I/O management
- Internal Links with logical/mathematical functions

Options

Given the availability of a huge range of specialized options, AVy can support integration in an almost unlimited number of control environments.

- I/O expansion cards, configurable according to the customer's machine needs
- Expansion cards for the management of auxiliary encoders (Incremental - Absolute - Resolver)
- Field-bus interface cards on board or in "stand alone" configuration: ProfiBus , CANopen, DeviceNet
- Programmable Application Card
- Safety cards for the power output bridge disabling (UNI IN 954-1 category 3)

Flexible y potente

AVy integra como equipo estándar, evolucionadas funciones de control, caracterizadas por una flexibilidad total de programación que lo hacen ideal tanto para el control de soluciones monomotores como para sistemas complejos, como pueden ser máquinas automáticas, líneas de producción , elevación y muchos otros contextos de aplicación en los que se necesiten de sofisticadas gestiones de regulación.

- Calibración automática off-line: de los reguladores de velocidad-intensidad-flujo e identificación de datos de los motores (posible con motores parados y en rotación)
- Calibración automática on-line: compensación de los parámetros de los motores en función de las variaciones de temperatura
- Control de par: con función OR integrada, por comunicación gradual de los reguladores de velocidad y de los reguladores de par
- Menú Startup simplificado
- Sobrecarga instantánea del 200 %
- Protección térmica I²t por motor y Drive
- Función multivelocidad (7 programaciones)
- 5 rampas independientes y programables (lineales y en S)
- Función Motopotenciómetro
- Función de reenganche del motor al vuelo
- Función Droop
- Gestión doble motor
- Bloqueo función PID
- Gestión en caso de fallo red mediante: parada controlada y/o optimización de la energía
- Gestiones de E/S virtuales o remotas
- Links internos con funciones lógico/matemáticas

Opciones

Gracias a una amplia serie de opciones específicas, AVy permite la integración en aplicaciones de control prácticamente ilimitadas.

- Tarjetas de ampliación de E/S, combinables en función de la necesidades de la máquina
- Tarjetas para la gestión de encoder suplementarios (Incremental - Absoluto - Resolver)
- Interfaz para buses de campo integrados o en configuración "stand alone" (solo) ProfiBus - CANopen - DeviceNet
- Placa aplicativa programable
- Tarjeta de seguridad por inhibición del puente de salida

Accessories

- Dedicated EMC filters (in compliance with CEE - EN61800-3/A11)
- Braking resistors (standardized for the whole line)
- Input and Output chokes (standardized for the whole line)
- NEMA 1 type kit
- Remote keypad kit

“EasyDrive” PC configuration software

With EasyDrive configuration software you can program and use AVy series inverters via your PC.

Its intuitive programming methodology enables you not only to have complete management of the inverter, but also to have natural and immediate confidence in using it, at whatever level of use, thereby guaranteeing the development of rapid procedures for implementing, optimizing and performing diagnostics on the system.

- RS485 serial communication device using Modbus RTU protocol
- setting parameters via main menus based on a tree structure
- read and write operations involving all parameters/commands
- off-line user file configuration
- on-line programming in a graphical environment
- parameter download and upload procedure
- user file archiving
- guided programming procedure for implementation using a Wizard function
- displaying variables graphically via a “Trend recorder” oscilloscope function
- multi-drop network management with up to 32 inverters

Accesorios

- Filtros EMC dedicados (según la normativa europea (CEE - EN61800-3/A11)
- Resistencia de frenado (normalizada para toda la gama)
- Inductancia de entrada y salida (normalizada para toda la gama)
- Kit para el grado de protección NEMA 1
- Kit para teclado de programación remota

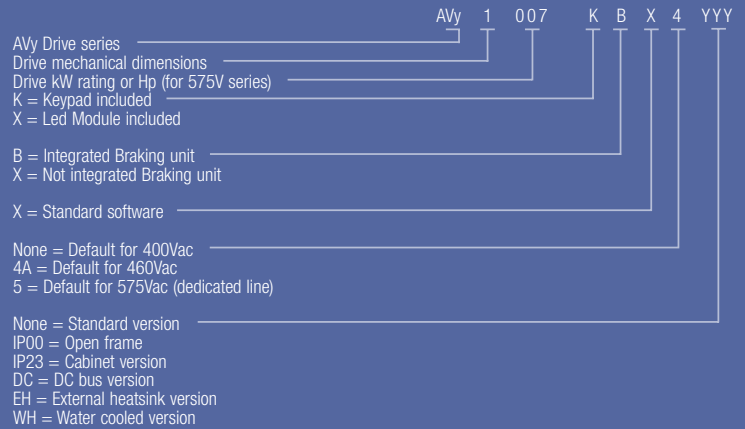
Configurador para PC “Easy-Drive”

El software de configuración EasyDrive está diseñado para la programación y uso de los inverter de la AVy a través de PC.

La intuitiva modalidad de programación, además de permitir una gestión total del inverter, permite a cualquier nivel la utilización una fácil e inmediata, garantizando unos procedimientos rápidos de puesta en marcha, optimización y diagnóstico.

- comunicación serie RS485 por medio del protocolo Modbus RTU
- ajustes de los parámetros con estructura de árbol a través del menú principal
- lectura y escritura de todos los parámetros / comandos
- configuración off-line de los archivos de salida
- programación on-line en entorno gráfico
- procedimiento de download y upload de parámetros
- archivación de los archivos de salida
- procedimiento de programación guiada para la puesta en servicio por medio de la función de asistente, “Wizard”
- visualización gráfica de las variables a través de funciones de osciloscopio “Trend recorder”
- gestión en red multidrop de hasta 32 inverters

Drive Type Designation



Making applications accessible

Based on the advanced technology integrated on the APC100y application card, the AVy inverter is capable of meeting the most advanced application requirements associated with state-of-the-art automation systems.

The APC100y card comes with a range of predefined libraries or is completely programmable in an IEC1131 environment, which means it can be used to implement advanced control architectures requiring complex management of system variables, along with a high processing capacity.

Standard specialized applications:

- ELS Standard Electronic Line Shaft control
- TL Standard Winding/Un-Winding control
 - torque control in open-loop or closed-loop with load cell
- SD Standard Winder/Un-Winder control
 - speed regulation with dancer position feedback
- PosMono Single axis Standard Positioning
 - up to 64 preset registers
 - Absolute encoder management

The experience SIEI has acquired in the major application sectors has also produced an extensive range of specific and/or custom solutions for managing the most complex configurations in machines such as hoisting equipment, sheet metal working machinery, multi-axis positioning devices, etc...

La aplicación al alcance de la mano

La evolucionada tecnología utilizada en la tarjeta de aplicación APC100y, permite al AVy satisfacer las exigencias más sofisticadas de los modernos sistemas de automatización.

Provista de una serie de librerías predefinidas o completamente programables en entorno IEC1131, la tarjeta APC100y permite la realización de arquitecturas de control avanzado, en las que sea necesaria la gestión compleja de las variables del sistema así como una elevada capacidad de cálculo.

Aplicaciones dedicadas estándar:

- ELS Control del eje eléctrico estándar
- TL Control de enrollado / desenrollado estándar
 - control de par en anillo abierto o con retroacción de celda de carga.
- SD Control de enrollado / desenrollado estándar
 - control de velocidad con retroacción de rodillo.
- PosMono Posicionador mono eje estándar
 - 64 posiciones predefinidas
 - Gestión encoder absoluto

La experiencia SIEI en los más importantes sectores de aplicación, pone además a disposición una amplia gama de soluciones específicas y/o personalizadas, para la gestión de las configuraciones más complejas de máquinas como: instalaciones de elevación, fabricación de chapa, posicionadores multiejes, etc...



A single technology offering countless solutions

The benefit of capitalizing on the experience and flexibility offered by SIEL is crucial when the application involved is the issue. ARTDrive AVy can meet any machine installation requirement, offering a huge range of specialized solutions.

• STANDARD VERSIONS

AVy and AVy...-4A

- Power supply: 3 x 230V -15%...480V +10% 50/60Hz \pm 5%
- Motor powers from 0.75kW (0.75Hp) up to 315kW (450Hp)

AVy...-5

- Power supply: 3 x 575V \pm 10% 50/60Hz \pm 5%
- Motor powers from 2Hp up to 200Hp

• CABINET VERSIONS

AVy Cabinet

- Power supply: 3 x 400V -15%...480V +10% 50/60Hz \pm 5%
- Motor powers from 250kW (300Hp) up to 630kW (700Hp)
- Standard IP23 protection degree (higher on request)

• DC BUS POWER SUPPLY VERSIONS

AVy...DC

- DC power supply for straighten AC voltage up to 480V+10% 50/60Hz \pm 5%
- Motor powers from 22kW (25Hp) a 630kW (700Hp)

• VERSIONS WITH EXTERNAL HEATSINK ASSEMBLY

AVy...EH

- Power supply: 3 x 230V -15%...480V +10% 50/60Hz \pm 5%
- Motor powers from 22kW (25Hp) up to 55kW (60Hp)

• LIQUID COOLING VERSIONS

AVy...WH

- Power supply: 3 x 230V -15%...480V +10% 50/60Hz \pm 5%
- Motor powers from 11kW (15Hp) up to 132kW (150Hp)

Tecnología única para soluciones ilimitadas

Las ventajas de contar con la experiencia y la flexibilidad de SIEL resultan importantes cuando el problema es la aplicación. ARTDrive - AVy resuelve cualquier exigencia de instalación en máquina, ofreciendo una amplia gama de soluciones dedicadas.

• VERSIONES ESTÁNDAR

AVy y AVy...-4A

- Alimentación trifásica 230V -15%...480V +10% 50/60Hz \pm 5%
- Potencias de motores desde 0,75kW (0.75Hp) hasta 315kW (420Hp)

AVy...-5

- Alimentación trifásica 575V \pm 10% 50/60Hz \pm 5%
- Potencias de motores desde 2Hp hasta 200Hp

• VERSIONES EN ARMARIO

AVy Cabinet

- Alimentación trifásica 400V -15%...480V +10% 50/60Hz \pm 5%
- Potencias de motores desde 250kW (300Hp) hasta 630kW (700Hp)
- Grado de protección estándar IP23 (superior bajo pedido)

• VERSIONES PARA ALIMENTACIÓN DEL DC BUS

AVy...DC

- Alimentación de tensiones rectificadas hasta 480V +10% 50/60Hz \pm 5%
- Potencias de motores desde 22kW (25Hp) hasta 630kW (700Hp)

• VERSIONES CON MONTAJE DE DISIPADOR EXTERNO

AVy...EH

- Alimentación trifásica 230V -15%...480V +10% 50/60Hz \pm 5%
- Potencias de motores desde 22kW (25Hp) hasta 55kW (60Hp)

• VERSIONES CON REFRIGERACIÓN LÍQUIDA

AVy...WH

- Alimentación trifásica 230V -15%...480V +10% 50/60Hz \pm 5%
- Potencias de motores desde 11kW (15Hp) hasta 132kW (150Hp)