

DIGIVEX DRIVE D μ D/DLD

2 to 7.5A

D μ D and DLD are specifically developed for low power applications where optimum quality of control and very compact design are needed.

Associated to NX servo motors, they offer a powerful and economical servo system solution.



DIRECT 230 VAC POWER SUPPLY

INTEGRATED EMC FILTER

INTEGRATED BRAKING RESISTOR

HIGH COMPACTY

7-SEG LCD DISPLAY

**EASY PARAMETER SETTING WITH
PARVEX MOTION EXPLORER**

TECHNICAL SPECIFICATIONS

Power supply - 230Vac \pm 10%, single or three phase ; 50/60Hz

Ambient - 0-40°C (derate 20%/10°C up to 60°C max)
Up to 1000m ASL (derate 1%/100m up to 4000m max)

Braking - Integrated resistor, connection of DC bus voltage in multi D μ D/DLD applications for higher braking capacity.

D μ D

NX1, NX2 and NX3 servo motor control

Input/Output

2- Analog input (14 bits and 10 bits ; \pm 10V diff.)

1- Analog output (\pm 5V), free assignment

3- Opto-isolated digital input

2- Opto-isolated digital output

Resolver input

Incremental encoder emulation output

DLD

Input/Output

2- Analog input (14 bits and 10 bits ; \pm 10V diff.)

2- Analog output (\pm 10V), free assignment

5- Opto-isolated digital input

3- Opto-isolated digital output

Resolver input

230Vac auxiliary input

Incremental encoder emulation output

Type	Output current continuous (A)	Output current peak (A)	Mechanical power (W)
DμD 230V single phase 50/60 Hz			
DUD13M02R	2	4	375
DLD			
230V single phase 50/60 Hz			
DLD13M02R	2	4	375
DLD13M04R	4	8	750
230V three phase 50/60 Hz			
DLD13002R	2	4	375
DLD13004R	4	8	750
DLD13007R	7.5	15	1500

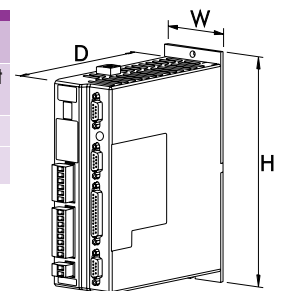
DIMENSIONS

Type	H (mm)	W (mm)	D (mm)	Weight (kg)
D μ D	195	40	153	0.6
DLD	195	60	161	1.3

STANDARDS

CE marked

UL and cUL (DLD)



DIGIVEX DRIVE DSD/DMD/DPD 2 to 300A

TECHNICAL SPECIFICATIONS

Power supply - 230Vac $\pm 10\%$, single or three phase, 400Vac $\pm 10\%$, three phase; 50/60Hz

Ambient - 0-40°C (derate 20%/10°C up to 60°C max)

Up to 1000m ASL (derate 1%/100m up to 4000m max)

Braking -

DSD : Integrated or external resistor

DMD : Integrated or external resistor or regenerative

DPD : Regenerative

Input/Output

2- Analog input (16 bits and 10 bits ; $\pm 10V$ diff.)

2- Analog output ($\pm 10V$), free assignment

4- Opto-isolated digital input

3- Opto-isolated digital output

Resolver input

Incremental encoder emulation output ; SSI ; SinCos

230Vac or 400Vac auxiliary input

Characteristics

Please refer to page 11

STANDARDS

CE marked

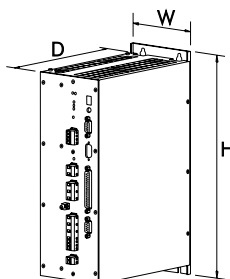
DIGIVEX Drive are available for power range from 0.37kW to 120kW and for 230V and 400V power supply.

Dedicated to the torque or speed control of axis or spindle brushless motors, DIGIVEX Drive can be delivered in single-axis or multi-axis format.

RANGE			
Type	Output current	Structure	Control
DSD	2 to 60A	single-axis	Speed
DMD	2 to 32A	multi-axis	Speed
DPD	50 to 300A	single-axis	Speed



DIMENSIONS			
Type	H (mm)	W (mm)	D (mm)
DSD			
Rating			
2, 4 and 7.5 A	328	78	222
8 and 15 A	328	109.5	222
16 A	328	133	222
30 A	328	133	226
32 A	328	168	226
60 A	328	168	235
DMD			
Rack			
DRA3165 - 3 axis	303	315	270
DRA3168 - 6 axis	303	483	270
DRA3128 - 13 axis	597	483	271
DPD			
Rating			
50 A	438	202	244
100 and 150 A	474	483	343
200 A and 300 A	878	540	343



**DIRECT 230VAC AND 400VAC
POWER SUPPLY**

**SINGLE-AXIS OR
MULTI-AXIS VERSION**

**INTEGRATED RESISTOR
OR REGENERATIVE BRAKING**

**HIGH RESOLUTION
ANALOG INPUT**

**INTEGRATED FILTERS AND
FEED FORWARD**

**COMPLETE INTEGRATED
MONITORING WITH
PARVEX MOTION EXPLORER**

DIGIVEX Motion DSM/DMM/DPM

2 to 300A

The DIGIVEX Motion servo drives integrate in one compact unit the functions of speed controller, motion controller and PLC as well as powerful CANopen or PROFIBUS network possibilities.

The DIGIVEX Motion have the same electrical characteristics as the DIGIVEX Drive and are available in single or multi axis version.

RANGE			
Type	Output current	Structure	Control
DSM	2 to 60A	single-axis	Position
DMM	2 to 32A	multi-axis	Position
DPM	50 to 300A	single-axis	Position



COMPLETE POSITIONING DRIVE

**INTEGRATED PLC AND
MOTION PROGRAM**

**REAL TIME MULTI-TASKING
STRUCTURE**

**DIRECT 230VAC AND 400VAC
POWER SUPPLY**

SINGLE AND MULTI-AXIS VERSION

**INTEGRATED OR
REGENERATIVE BRAKING**

CANOPEN AND PROFIBUS

TECHNICAL SPECIFICATIONS

Power Supply - 230Vac $\pm 10\%$, single or three phase, 400Vac $\pm 10\%$, three phase ; 50/60Hz

Ambient - 0-40°C (derate 20%/10°C up to 60°C max)
Up to 1000m ASL (derate 1%/100m up to 4000m max)

Braking -

DSM : Integrated or external resistor

DMM : Integrated or external resistor or regenerative

DPM : Regenerative

Input/Output

1- Analog input (14 bits ; $\pm 10V$ diff.)

1- Analog output ($\pm 10V$), free assignment

16- Opto-isolated digital input (from which 4 interruptive inputs), free assignment

8- Opto-isolated digital output, free assignment

Resolver input

Incremental encoder input ; SinCos

Incremental encoder emulation output

230Vac or 400Vac auxiliary supply

Field bus

CANopen (DS 301 and DSP 402)

PROFIBUS (DP-V0 and DP-V1 ; PROFIdrive V2.0 and PROFIdrive V3.0 Class 3 and 4)

Characteristics

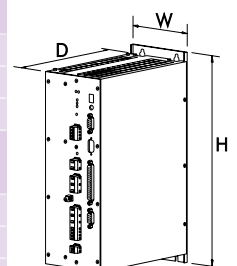
Please refer to page 11

STANDARDS

CE marked

DIMENSIONS

Type	H (mm)	W (mm)	D (mm)
DSM			
Rating			
2, 4 and 7.5 A	328	78	222
8 and 15 A	328	109.5	222
16 A	328	133	222
30 A	328	133	226
32 A	328	168	226
60 A	328	168	235
DMM			
Rack			
DRA3165 - 3 axis	303	315	270
DRA3168 - 6 axis	303	483	270
DRA3128 - 13 axis	597	483	271
DPM			
Rating			
50 A	438	202	244
100 and 150 A	474	483	343
200 A and 300 A	878	540	343



DIGIVEX characteristics

Single-axis DSD / DSM

Type	Output current continuous (A)	Output current peak (A)	Mechanical power (W)
230V single phase 50/60 Hz			
DSD13M02 / DSM13M02	2	4	375
DSD13M04 / DSM13M04	4	8	750
DSD13M07 / DSM13M07	7.5	15	1500
230V three phase 50/60 Hz			
DSD13004 / DSM13004	4	8	750
DSD13007 / DSM13007	7.5	15	1500
DSD13015 / DSM13015	15	30	3000
DSD13030 / DSM13030	30	60	6000
DSD13060 / DSM13060	60	100	12000
400V three phase 50/60 Hz			
DSD16002 / DSM16002	2	4	750
DSD16004 / DSM16004	4	8	1500
DSD16008 / DSM16008	8	16	3000
DSD16016 / DSM16016	16	32	6000
DSD16032 / DSM16032	32	64	12000



Multi-axis DMD / DMM 400V three phase 50/60 Hz

Module	Output current continuous (A)	Output current peak (A)	Width (E*)
DMD06002 / DMM06002	2	4	Simple 11E
DMD06004 / DMM06004	4	8	Simple 11E
DMD06008 / DMM06008	8	16	Simple 11E
DMD06016 / DMM06016	16	32	Double 22E
DMD06032 / DMM06032	32	64	Triple 33E
Power supply	Power (kW)	Braking	Width (E*)
DPS0612	12	internal	18E
DPS0625	25	internal / external	18E
DPS0615	15	regenerative	18E

*1E=5.08mm - example : 1x13 axis rack (DRA 3128) will integrate 1 power supply and 13 simple modules.



Power single axis (regenerative) DPD / DPM 400V three phase 50/60 Hz

Type	Output current continuous (A)	Output current peak (A)	Mechanical power (kW)
DPD27050 / DPM27050	50	80	20
DPD17100 / DPM17100	100	120	40
DPD17150 / DPM17150	150	150	60
DPD17200 / DPM17200	200	200	80
DPD17300 / DPM17300	300	300	120



DIGIVEX

Accessories

DIGIVEX Drive and DIGIVEX Motion accessories

CABLES

Power cable with connectors*

Power cable with Molex motor connector for NX1, NX2 and I < 8Å	220154R12xx
Power cable with motor connector for NX1, NX2 and I < 8Å	220154R32xx
Power cable with motor connector for NX2, NX3, NX4, NX6 and I < 4Å	220049R49xx
Power cable with motor connector for NX3, NX4, NX6 and I < 8Å	220049R42xx
Power cable with motor connector for NX4, NX6, NX8 and I < 32Å	220049R43xx

Resolver cable with connectors*

Resolver cable with Molex motor connector and Sub-D for NX1, NX2	220154R21xx
Resolver cable with motor connector and Sub-D for NX	220049R61xx

Input/Output cables and communication cables

Encoder emulation cable (except DμD) 1 Sub-D	DIG04546R2xx
Input/Output cable 1 Sub-D	DIG04544R2xx
RS232C equipped cable for DLD, DSD, DMD and DPD 2 Sub-D	CB 90001
RS232C equipped cable for DμD 1 Sub-D and 1 RJ9	CB 90002
CANopen cable for DIGIVEX Motion 2 Sub-D	DIG05982R1xx
120 ohms CAN terminator plug	DIG05984R100
PROFIBUS cable for DIGIVEX Motion	CB 08320
PROFIBUS 90° plug	AC 62001
PROFIBUS 180° plug	AC 62002
USB cable for PC - USBPRO interface connection	CB 90003

EMC FILTERS FOR DIGIVEX (except DμD and DLD)

EMC filter 1Ph xx A (xx = 06 or 16)	FR 010xx
EMC filter 3Ph xx A (xx = 16, 36 or 64)	FR 030xx
EMC filter 3Ph book-sized xxA (xx = 08, 16 or 36)	FR 036xx
EMC filter 3Ph xxx A (xxx = 100 or 200)	FR 03xxx

EXTERNAL BRAKING RESISTOR FOR DIGIVEX

2kW 27ohms external resistor	RE 91001
4.5kW 12ohms external resistor	RE 91002

BOARD AND ACCESSORIES FOR DIGIVEX Drive (except DμD and DLD)

Encoder emulation board	SC 6631
SSI encoder board	SC 6637
Indexing board	SH 6601
Indexing + SinCos encoder emulation board	SC 6643
7-seg display	SS 6611
Dialog terminal	DTP001

BOARD AND COMMUNICATION INTERFACE FOR DIGIVEX Motion

Encoder input board	SC 6638
Encoder emulation board	SC 6639
SinCos input board	SC6645
RS232C - CAN interface	CRS232B
RS232C - CAN interface (DIN mounting)	CIM03B
RS232-CAN adaptor	RS232CAN
USB - PROFIBUS interface	USBPRO
PCI board for PC PCI - PROFIBUS interface	PCIPRO
PCMCIA board for PC PCMCIA - PROFIBUS interface	PCMCIAPRO
RS232-PROFIBUS adaptor	RS232PRO

SOFTWARE

Parvex Motion Explorer software	PMEMCD
CAM function license	DMLCAM
Position control with interpolation license	DMLPI

CANopen OPERATOR TERMINAL AND CABLE

2X16 characters terminal	DTP002
4x20 characters terminal (VT150)	DVT150C
5.7" graphic touch screen terminal (VT505)	DVT505C
VT Programming software, accessories and documentation	DVTWINTKITF
CANopen connecting cable 1Sub-D 9pts	DIG06755R1xx



* Cables and connectors are described on page 29 "Brushless - Accessories"

** xx cable length in m ; standard xx= 01, 02, 05, 10 meters

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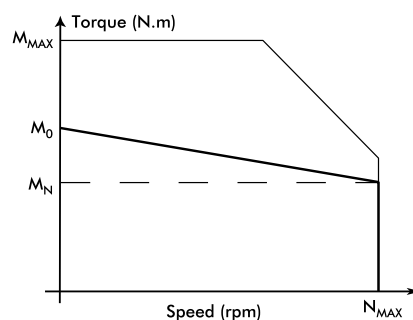
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NX - DIGIVEX & EX - DIGIVEX ASSOCIATIONS

For all kind of servo applications, DIGIVEX servo drives offer the perfect control of NX or EX brushless servo motors and allow servo system to reach optimum performances. (For NX and EX description, please refer to page 14 and 20).



230V AND 400V POWER SUPPLY
LARGE CHOICE OF TORQUE AND SPEED

ADAPTED CONNECTION

NX and EX Associations - DIGIVEX / 230V

Motor	M ₀ (N.m)	I ₀ (A)	M _N (N.m)	I _N (A)	N _{MAX} (tr/min)	M _{MAX} (N.m)	I _{MAX} (A)	DIGIVEX rating
NX SERVO MOTORS								
NX110EAP	0.45	1.4	0.33	1.0	6000	1.1	3.5	2/4
NX205EAV	0.45	1.4	0.37	1.2	5000	0.9	2.8	2/4
NX205EAS	0.45	1.9	0.29	1.3	7500	0.9	4	2/4
NX210EAT	1	1.9	0.80	1.5	4000	2.1	4.0	2/4
NX210EAP	1	2.8	0.61	1.8	6000	2.4	7.0	4/8
NX310EAP	2	2.0	1.9	1.9	2300	3.9	4.0	2/4
NX310EAK	2	3.5	1.7	2.9	4000	4.3	8.0	4/8
NX420EAP	4	4.0	3.8	3.8	2300	7.7	8.0	4/8
NX420EAJ	4	6.9	3.4	5.8	4000	8.2	15.0	7.5/15
NX430EAJ	5.5	7.4	4.7	6.3	3200	10.7	15.0	7.5/15
NX430EAF	5.5	9.4	4.3	7.4	4000	15.0	28.3	15/30
NX620EAR	8	7.5	7.4	7.0	2200	15.9	15.0	7.5/15
NX620EAJ	8	13.9	6.1	10.8	4000	16.9	30.0	15/30
NX630EAR	12	8.0	11.5	7.8	1450	22.6	15.0	7.5/15
NX630EAK	12	15.0	10.2	12.9	2800	23.9	30.0	15/30
NX630EAG	12	21.1	8.3	15.1	4000	28.8	53.1	30/60
NX820EAL	16	24.8	13.2	20.9	3600	35.3	60.0	30/60
NX840EAJ	28	26.7	22.9	22.2	2200	59.7	60.0	30/60
NX860EAD	41	46.7	27.4	32.1	2600	84.8	100.0	60/100
NX860VAG ⁽¹⁾	64	55.4	54.4	47.1	2000	107	100.0	60/100

EX SERVO MOTORS FOR EXPLOSIVE ATMOSPHERE

EX310EAP	1.7	1.7	1.7	1.7	2300	3.9	4	2/4
EX310EAK	1.7	3.1	1.6	2.8	4000	3.5	8	4/8
EX420EAP ⁽²⁾	3.5	3.5	3.2	3.2	2300	7.8	8	4/8
EX420EAJ ⁽²⁾	3.5	6.0	2.7	4.7	4000	8.3	15	7.5/15
EX430EAJ ⁽²⁾	4.8	6.5	3.7	5.1	3200	10.8	15	7.5/15
EX430EAF ⁽²⁾	4.8	8.2	3.3	5.7	4000	11.6	20.5	15/30
EX620EAO	7	7.4	5.5	6.3	2500	13.9	15	7.5/15
EX630EAI	10.4	14.2	7.2	10.3	3000	22.5	30	15/30
EX820EAR ⁽²⁾	14	13.5	11.5	11.3	2200	29.5	30	15/30
EX820EAL ⁽²⁾	14	21.7	8.6	13.8	3600	32.5	54	30/60
EX840EAJ ⁽²⁾	24.5	23.4	15.2	15	2200	58.4	59	30/60
EX860EAD ⁽²⁾	35	39.9	12	14.9	2600	84.5	100	60/100

NX and EX Associations - DIGIVEX / 400V

Motor	M ₀ (N.m)	I ₀ (A)	M _N (N.m)	I _N (A)	N _{MAX} (tr/min)	M _{MAX} (N.m)	I _{MAX} (A)	DIGIVEX rating
NX SERVO MOTORS								
NX205EAV	0.45	1.4	0.29	1.0	7500	1	3.2	2/4
NX210EAT	1	1.9	0.61	1.2	6000	2.1	4.0	2/4
NX310EAP	2	2.0	1.7	1.7	4000	3.9	4.0	2/4
NX420EAV	4	2.0	3.8	1.9	2000	7.7	4.0	2/4
NX420EAP	4	4.0	3.4	3.4	4000	7.7	8.0	4/8
NX430EAV	5.5	2.0	5.4	2.0	1000	10.6	4.0	2/4
NX430EAP	5.5	4.0	4.8	3.5	3000	10.6	8.0	4/8
NX430EAL	5.5	5.4	4.3	4.2	4000	15	16.0	8/16
NX620EAV	8	4.0	7.5	3.8	2000	16	8.0	4/8
NX620EAR	8	7.5	6.2	5.9	3900	16.9	16.0	8/16
NX620EAJ	8	13.9	5.6	7.2	4500	17.9	32.0	16/32
NX630EAV	12	4.0	11.6	2.7	1350	24.1	8.0	4/8
NX630EAR	12	8.0	10.3	7.0	2700	23.9	16.0	8/16
NX630EAN	12	12.0	8.3	8.6	4000	28.8	30.2	16/32
NX820EAX	16	7.3	14.7	6.8	1900	32.7	16.0	8/16
NX820EAR	16	15.5	12.9	12.8	3900	31.1	32.0	16/32
NX840EAQ	28	14.3	23.2	12.0	2100	59.7	32.0	16/32
NX840EAK	28	23.8	18.5	16.3	3500	65.3	59.4	32/64
NX860EAJ	41	26.3	27.4	18.1	2600	94.4	64.0	32/64
NX860VAJ ⁽¹⁾	64	41.5	50.5	32.8	2600	113	80.0	50/80

EX SERVO MOTORS FOR EXPLOSIVE ATMOSPHERE

EX310EAP	1.7	1.7	1.5	1.6	4000	3.9	4	2/4
EX420EAV ⁽²⁾	3.5	1.75	3.2	1.6	2000	7.7	4	2/4
EX420EAP ⁽²⁾	3.5	3.5	2.7	2.7	4000	7.8	8	4/8
EX430EAP ⁽²⁾	4.8	3.5	3.9	2.8	3000	10.7	8	4/8
EX430EAL ⁽²⁾	4.8	4.7	3.3	3.3	4000	11.6	11.7	8/16
EX620EAO	7	7.8	3.1	3.9	4300	14.7	16	8/16
EX630EAY	10.4	7.8	7.4	5.8	2900	21.8	16	8/16
EX630EAN	10.4	10.6	5.2	5.8	4000	26.0	26.5	16/32
EX820EAW ⁽²⁾	14	7.9	11.5	6.6	2200	27.3	16	8/16
EX820EAR ⁽²⁾	14	13.5	8.6	8.6	3600	31.1	32	16/32
EX840EAQ ⁽²⁾	24.5	12.5	15.9	8.3	2100	58.4	31.2	16/32
EX840EAK ⁽²⁾	24.5	20.8	5	4.9	3300	58.4	52	32/64
EX860EAJ ⁽²⁾	35	22.4	12	8.4	2600	84.5	56.1	32/64

⁽¹⁾ Ventilated motor - ⁽²⁾ To be released soon