

IBD60

Brushless
integrated
drives

Brushless integrated
drives



• IBD size 60 mm

- Decentralized architecture with reduced wiring
- Programmable according to the standard IEC61131
- Maximum power concentration in a small size
- Architettura decentrata con cablaggio ridotto
- Programmabile secondo lo standard IEC61131
- Massima concentrazione di potenza in poco spazio

HARDWARE FEATURES

Power supply

275 ÷ 730 Vdc (560 Vdc nominal)

Control supply

24Vdc

Continuous torque

M0=1,22 Nm

Rated speed

Vn=3000 rpm

Feedback

HIPERFACE absolute encoder single or multiturn

On board inputs

3 digital inputs PNP 24V

2 digital outputs PNP 24V

1 programmable input/output PNP 24V

Interface

EtherCAT, CANopen, PROFINET RT

Safety

STO 2 channels, SIL3 (pending)

Protection

IP65

Certifications: CE, UL (Drive UL+Motor UL)

FUNCTIONAL FEATURES

Stand alone programmability

according to the standard IEC61131,

Integrated movement features

device profile DS402, interpolated mode, positioning, extended gearing function, homing, capture

Capture input

PC parametrization tool

Protection

I2t, Overload, Short circuit, Overtemperature, Overvoltage



NEW
Profinet
2020

fieldbus available
on IBD size 60

EtherCAT®

CANopen®

PROFI
NET®

IBD80 IBD100 IBD142 IBD190

Brushless
integrated
drives

Brushless integrated
drives



- IBD SIZE 80, 100, 142, 190 mm

HARDWARE FEATURES

Power supply

Nominal 560Vdc (min 275Vdc max 740Vdc)

Control supply

24Vdc

Continuous torque

M0 3 Nm, 6 Nm, 15 Nm, 30 Nm

Rated speed

Vn=3000 rpm

Feedback

HIPERFACE absolute encoder single or multiturn

On board I/O's

6 digital IN 24Vdc general purpose, configurable as:

PSTOP, NSTOP, Enable, Home, Capture, Step/Direction

3 digital OUT 24Vdc 250mA, general purpose

1 digital IN/OUT 24Vdc with configurable function

3 differential I/O's configurable as master incremental encoder

1 Analogue IN +/-10V

Interface

EtherCAT, CANopen

Safety

STO 2 channels, SIL3 (pending)

Protection

IP65

Option

Motor brake

Certifications: CE



FUNCTIONAL FEATURES

Stand alone programmability

according to the standard IEC61131,

Integrated movement features:

device profile DS402, interpolated mode,

positioning, extended gearing function,

homing, capture

Capture input

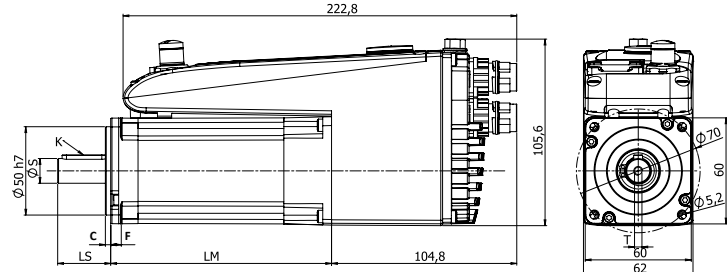
PC parametrization tool

Protection

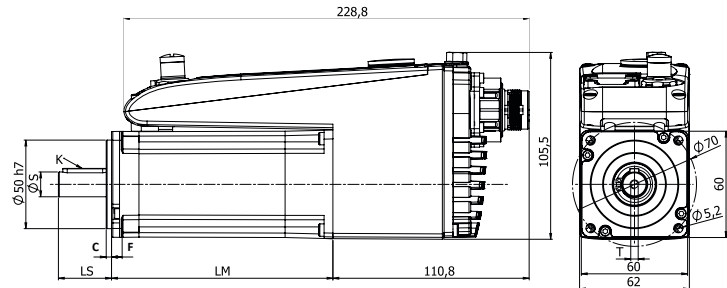
I2t, Overload, Short circuit,

Overtemperature, Overvoltage

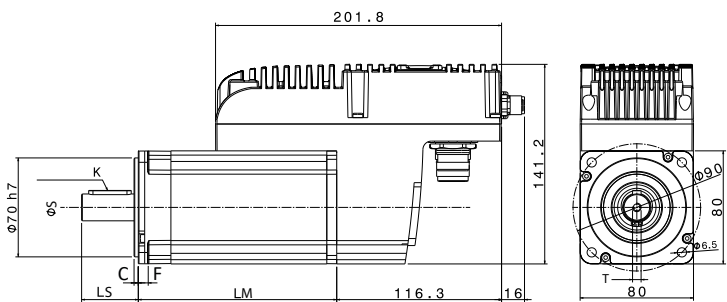
**IBD Flange 60 mm
daisy chain version**



**IBD Flange 60 mm
star version**



IBD Flange 80 mm



• OVERALL DIMENSIONS

Type	IBD5670xyy/xxx.z03x0 1.22 Nm	IBD56H0xyy/xxx.z0000 3 Nm
Flange (mm)	60	80
Lenght LM without brake (mm)	122	110
Lenght LM with brake (mm)	161	157
Shaft lenght LS (mm)	30	40
Shaft diameter (ØS)	14h6	19h6
Thread (T)	M5	M6
Key dimensions (K)	5x5x20	6x6x30
C	2,5	3
F	10	13
Weight (kg)	1,8	4,1
Weight with brake (Kg)	2	4,8

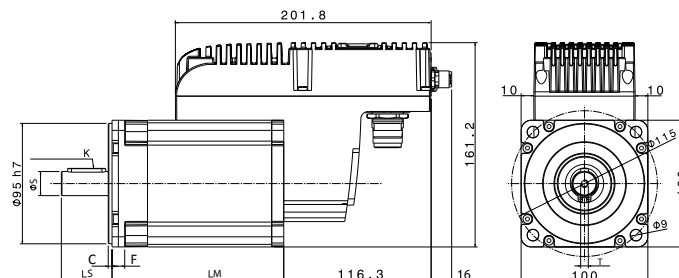
Power consumption in continuous operation

• TECHNICAL FEATURES

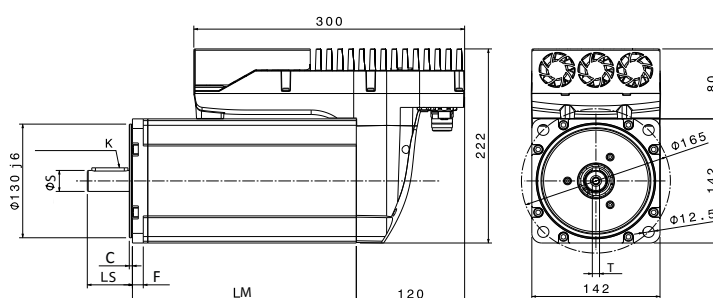
Type	M0 Stall torque (Nm)	Mn Rated torque (Nm)	Mpeak Peak Torque (Nm)	Power Watt* (W)	Jm Rotor Inertia (kgcm ²)	Vn Rated Speed (rpm)
IBD5670	1,22	1,15	3,66	420	0,16	3000
IBD56H0	3	2,6	9	970	0,616	3000

*Power consumption in continuous operation

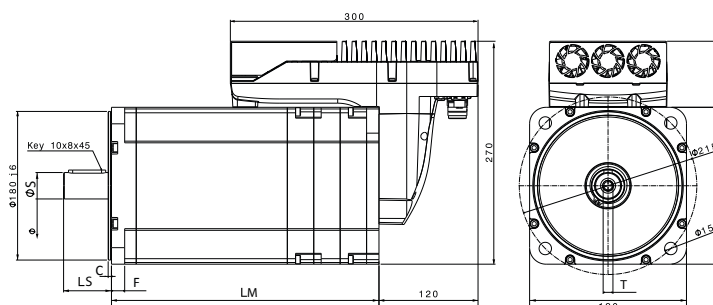
IBD Flange 100 mm



IBD Flange 142 mm



IBD Flange 190 mm



• OVERALL DIMENSIONS

Type	IBD5610xyy/xxx.z0000 6 Nm	IBD56F0xyy/xxx.z0030 15 Nm	IBD56G0xYY/CAN.z0030 30 Nm
Flange (mm)	98	142	190
Lenght LM without brake (mm)	185	243	303,5
Lenght LM with brake (mm)	236	268	333,5
Shaft lenght LS (mm)	40	50	58
Shaft diameter (ϕS)	19h6	24k6	32k6
Thread (T)	M6	M8	M12
Key dimensions (K)	6x6x30	8x7x40	10x8x45
C	3	3,5	4
F	14	12	16
Weight (kg)	8	17	38
Weight with brake (Kg)	9,2	18,5	43

• TECHNICAL FEATURES

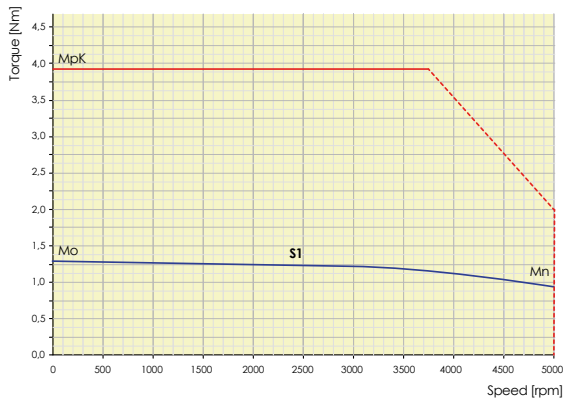
Type	M0 Stall torque (Nm)	Mn Rated torque (Nm)	Mpeak Peak Torque (Nm)	Power Watt* (W)	Jm Rotor Inertia (kgcm ²)	Vn Rated Speed (rpm)
IBD56I0	6	5	22	1850	5,501	3000
IBD56F0	15	11,7	45	4300	11,5	3000
IBD56G0	30	25	70	9200	74	3000

*Power consumption in continuous operation

• TORQUE CURVES

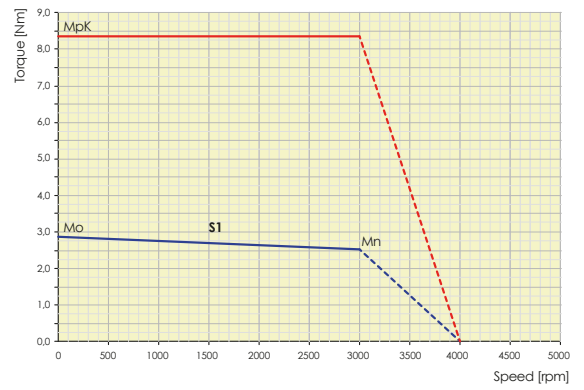
IBD5670 Flange 60 - 1,22 Nm [M0]

Speed/torque curve at 560Vdc - Te: 40°C



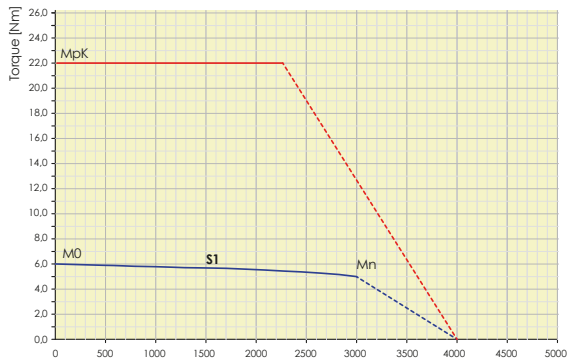
IBD56H0 Flange 80 - 3 Nm [M0]

Speed/torque curve at 560Vdc - Te: 40°C



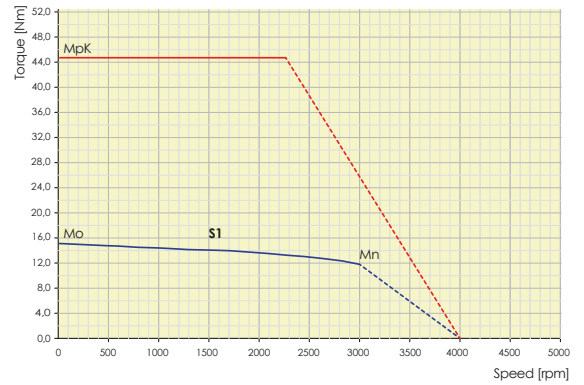
IBD56I0 Flange 100 - 6 Nm [M0]

Speed/torque curve at 560Vdc - Te: 40°C



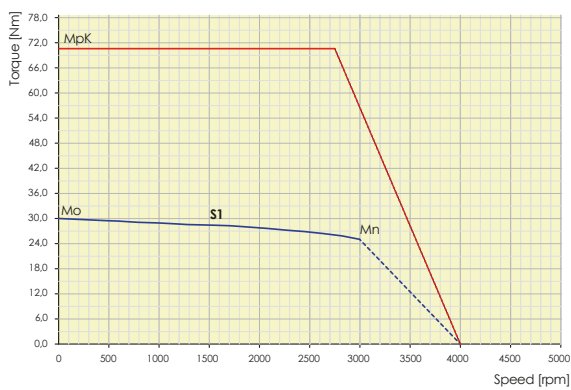
IBD56F0 Flange 142 - 15,4 Nm [M0]

Speed/torque curve at 560Vdc - Te: 40°C



IBD56G0 Flange 190 - 30 Nm [M0]

Speed/torque curve at 560Vdc - Te: 40°C





• BDPOW POWER SUPPLY

AC/DC power supply unit

From 20A to 40A with the possibility of online diagnostics and parametrization via serial connection and PC interface (SD Setup)

Power supply

Three phase rated voltage: 180 ÷ 520Vac 50/60Hz

Main filter

Integrated

Internal Braking Resistor

Resistance: 33Ω

Power rating: 180W

Pulse power rating: 20kW (0,3 sec)

Certifications: UL/CE

Alimentatore AC/DC

Da 20A o 40A con possibilità di diagnostica e parametrizzazione online tramite connessione seriale e interfaccia su PC (SD Setup)

Alimentazione

Tensione nominale trifase: 180 ÷ 520Vac 50/60Hz

Filtro

Integrato

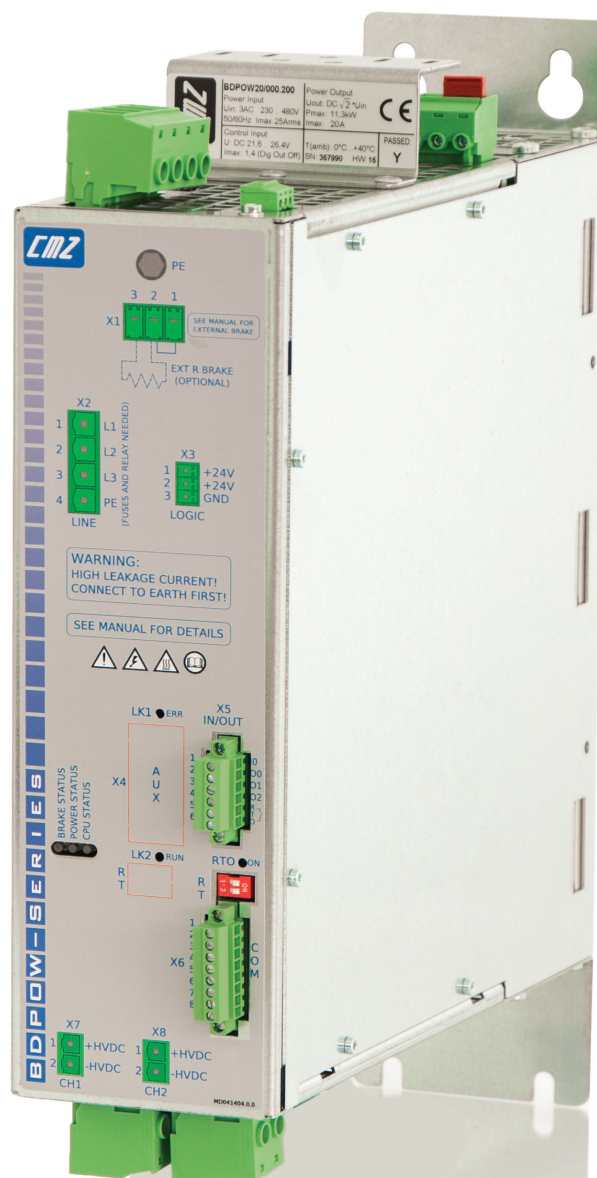
Resistenza di frenatura interna

Resistenza: 33Ω

Potenza nominale: 180W

Potenza istantanea: 20kW (0,3 sec)

Certificazione: UL/CE



• OVERALL DIMENSIONS

Type	BDPOW20	BDPOW40
Standard dimensions (mm) *	H352,5xW82,4xD270,6	
Weight (kg)	5,8	

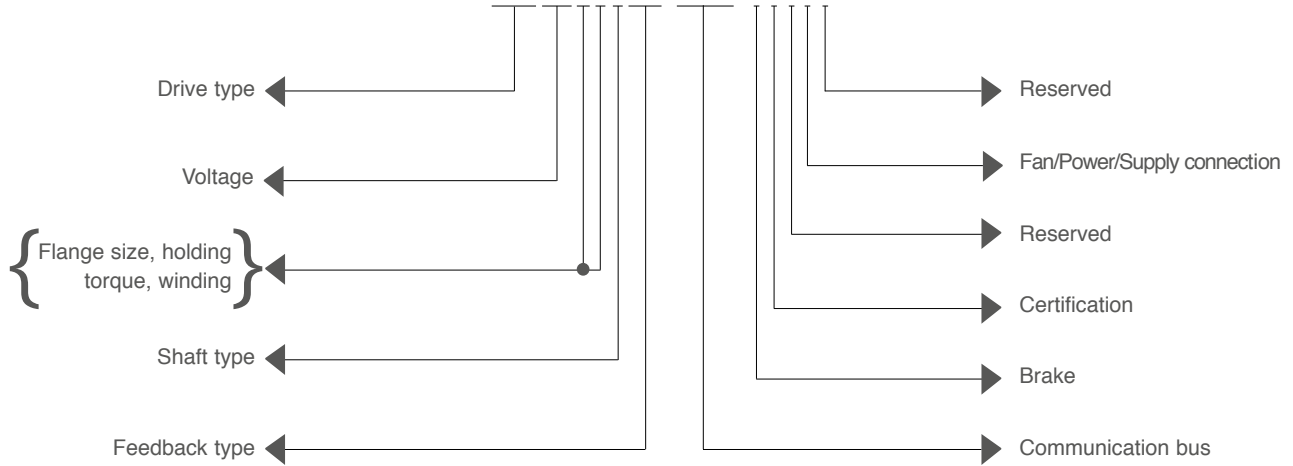
*maximum overall dimensions

IBD

Ordering codes

• ORDER CODE EXAMPLE

IBD56H00A3/CAN.00000



• ORDERING CODES

Ordering codes with options:		IBD56 a b c/d .e f g h i									
Options	IBD	56	a	b	c	/d	.e	f	g	h	i
a	Flange 60 mm - 1,22 mm (8 poles) 560 Vdc/5000 rpm		70								
	Flange 80 mm - 3 Nm (8 poles) 560 Vdc/3000 rpm		H0								
	Flange 100 mm - 6 Nm (10 poles) 560 Vdc/3000 rpm		I0								
	Flange 142 mm - 15 Nm (8 poles) 560 Vdc/3000 rpm		F0								
	Flange 190 mm - 30 Nm (10 poles) 560 Vdc/3000 rpm		G0								
b	Keyed shaft*			0*							
	Smooth shaft			1							
c	Mutiturn absolute encoder (128 sin/cos), 4096 turns				A0						
	Singleturn absolute encoder (16 sin/cos)*				A3*						
d	CAN communication					CAN					
	Ethercat communicatio					ETC					
e	No brake						0				
	With brake						1				
f	Reserved							0			
g	No UL								0		
	UL**									3 only for FL60 5 only for FL80/100 (not yet available)	
h	With fan									3 only for FL142/190	
	Without fan									0 only for FL142/190	
	Star connection									0 only for FL60	
	Daisy chain connection									1 only for FL 60	
	Reserved									0 only for FL 80/100	
i	Reserved										0

*Standard **Drive UL+Motor UL

Ordering codes

• CABLES FOR IBD

Straight connectors - xxxx = cm

Type	Description
CIBR.CFCG.IIPS.B.xxxx	Power cable for IBD - dynamic laying - star version (size 60-80-100-142-190)
CIBR.IIPS.CFCH.H.xxxx	Power cable to first IBD - dynamic laying - DAISY CHAIN version (size 60)
CIBR.CMCG.CFCG.H.xxxx	Power cable from second IBD to other IBD - dynamic laying - DAISY CHAIN version (size 60)
CMUL.CFCG.IIPS.C.xxxx	I/O cable for IBD - fixed laying (size 80-100-142-190)
CMUL.CMCP.IIPS.E.xxxx	I/O cable for IBD - dynamic laying (size 60)
CCAN.DFCS.CF1S.E.xxxx	CAN cable from CMZ master FCT200 (Dsub 9p) to IBD (M12) - dynamic laying
CCAN.RMCS.CF1S.B.xxxx	CAN cable from CMZ master FCT640/FCT300 (RJ45) to IBD (M12) - fixed laying
CCAN.CM1S.CF1S.E.xxxx	CAN cable from IBD (M12) to IBD (M12) - dynamic laying
CETC.RMCS.CMCS.M.xxxx	EtherCAT cable from CMZ master FCT300/FCT640 (RJ45) to IBD (M12) - dynamic installation
CETC.CMCS.CMCS.M.xxxx	EtherCAT cable from IBD (M12) to IBD (M12) - dynamic installation
C232.DFCS.CMCG.K.xxxx	Serial RS232 interface cable for debugging

For cables with different lengths ask to sale office

• BDPOW

Ordering codes with optional BDPOWXX/000.abc

BDPOW20/000.abc	Three phase power supply with output rated current 20A (10kWatt) Alimentatore trifase con corrente nominale fornibile in uscita 20A	
a	1	one male output - (ONLY FOR SPARE)
	2	two female outputs
b	0	CE certification
	1	UL certification
c	0	Reserved
BDPOW40/000.abc	Three phase power supply with output rated current 40A (20kWatt) Alimentatore trifase con corrente nominale fornibile in uscita 40A	
a	1	one male output - (ONLY FOR SPARE)
	2	two female outputs
b	0	CE certification
	1	UL certification
c	0	Reserved

