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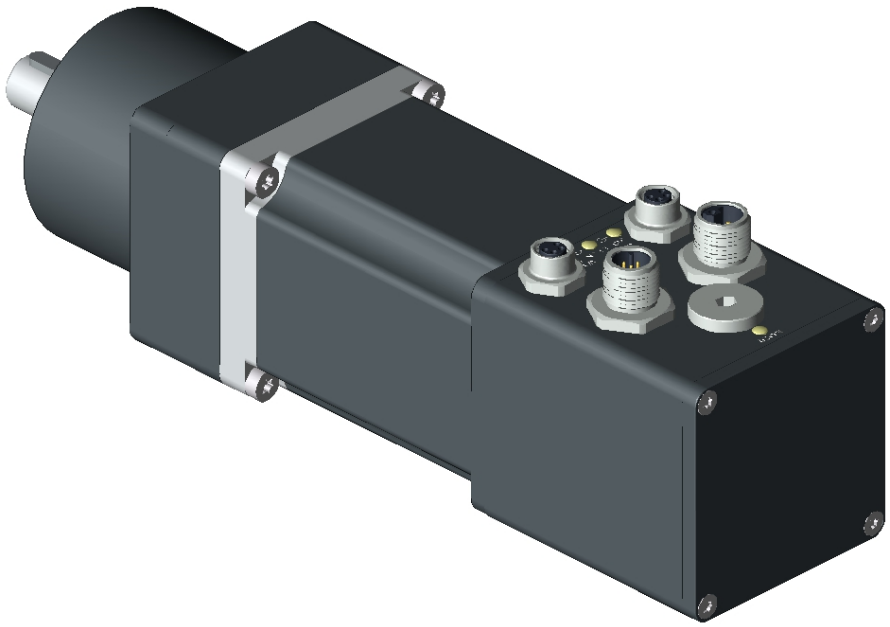
Configured drive

Drive - IDX56M ENC P ET 24V
Sensor - integrated
Gearhead - GPX52 A 6.6:1

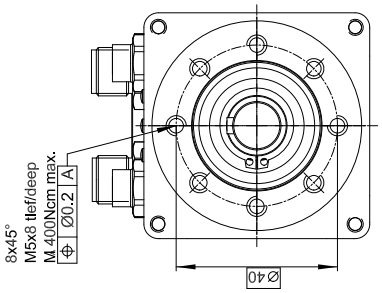
Part number: B7D00C831E8F Revision number 1

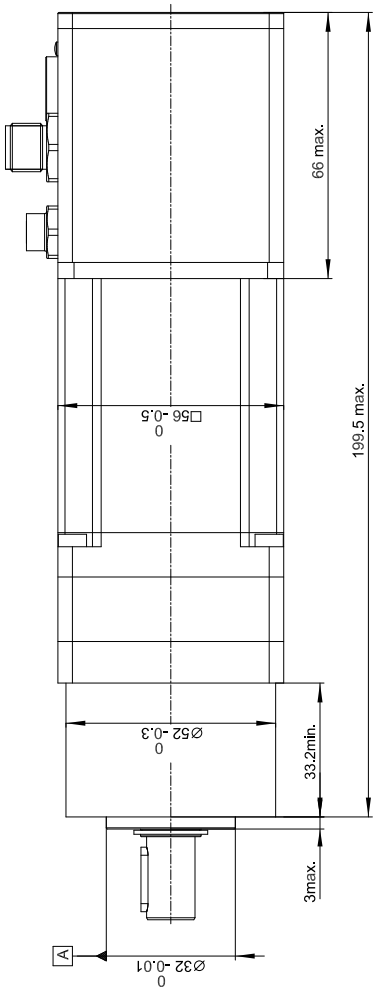


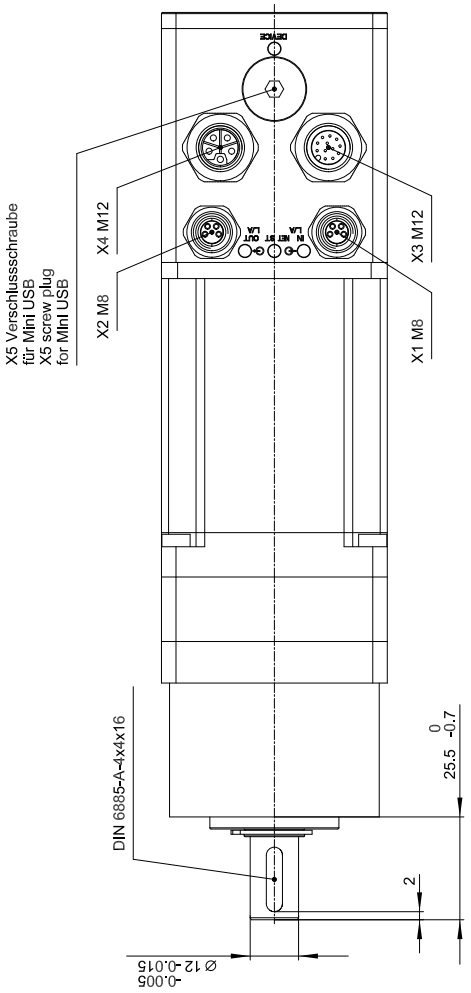
To open the integrated CAD file, please save this document and open it in Acrobat Reader. The STEP file is available after a double-click on the pin icon.

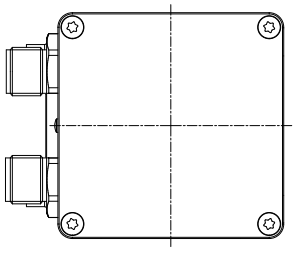
B7D00C831E8F.stp (STP AP 214)

Open configuration: https://www.maxongroup.com/maxon/view/configurator/?ConfigID=B7D00C831E8F

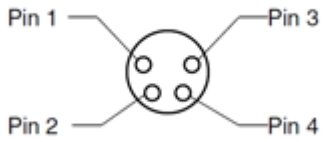


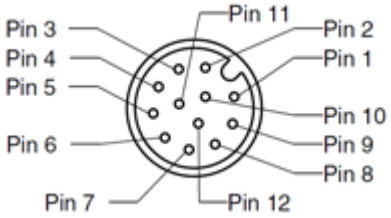






Unit of measure: mm
ISO 5456-1
ISO 1101
ISO 965-1
ISO 2768-m
ISO 8015



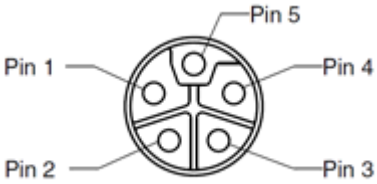


X1 IN / X2 OUT

Pin 1	TX+ (Transmission data +)
Pin 2	RX+ (Receive data +)
Pin 3	RX- (Receive data -)
Pin 4	TX- (Transmission data -)

X3 I/O

Pin 1	AnIN1+ (Analog input 1, positive signal)
Pin 2	GND (Ground)
Pin 3	AnIN1- (Analog input 1, negative signal)
Pin 4	AnIN2+ (Analog input 2, positive signal)
Pin 5	DigIN1 (Digital input 1)
Pin 6	AnIN2- (Analog input 2, negative signal)
Pin 7	DigOUT1 (Digital output 1)
Pin 8	DigIN2 (Digital input 2)
Pin 9	DigIN3 (Digital input 3)
Pin 10	DigOUT2 (Digital output 2)
Pin 11	DigIN4 (Digital input 4)
Pin 12	$+V_{I/O}$ (I/O supply voltage)



X4 Supply

Pin 1	+Vcc (Power supply voltage)
Pin 2	+Vc (Logic supply voltage)
Pin 3	GND (Ground)
Pin 4	$+V_{I/O}$ (I/O supply voltage)
Pin 5	FE (Functional earth)

X5 USB

Pin 1	V_{BUS} (USB bus supply voltage)
Pin 2	USB_D- (USB data-)
Pin 3	USB_D+ (USB data+)
Pin 4	ID (Not connected)
Pin 5	GND (USB ground)

Legend for part designation

A	Standard
AB	Brake attachment (integrated)
CO	Command via CANopen
ENC	Encoder
EMT	Energy-Harvesting Multi Turn Encoder
ET	Command via EtherCAT
GPX	Planetary gearhead
IO	Command via I/O
LN	Reduced noise level
P	Positioning controller
S/M/L	Short/medium/long
ST	Number of stages
UP	Ultra Performance

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IDX56M ENC P ET 24V

	Product specification	
Drive data		
	Nominal power supply voltage	24 V
	Nominal speed	4500 min^{-1}
	Nominal torque at 25 °C (max. continuous torque)	424 mNm
	Nominal torque at 40 °C (max. continuous torque)	376 mNm
	Max speed at nominal voltag	5105 min^{-1}
	Max. permissible drive speed	6000 min^{-1}
	Max. torque (short-term)	948 Nm
	Max. supply current (short-term)	24 A
	Rotor inertia of the drive	170.09 gcm^2
	Nominal operating voltage +Vcc	12...48 V
	Ramp-up time to max. speed	10.24 ms
	IP protection class	IP 65
	Power rating	233 W
	Torque constant	39.5 mNm A^{-1}
	Max. motor voltage	0.9 x (+Vcc)
	Speed constant	242 $m^{-1}V^{-1}$
	Motor controller	Positioning-Control
	Command	EtherCAT
	Encoder: Resolution (bit single turn)	12 bit
	Encoder: Position resolution	0.08789063 °
Thermal data		
	Thermal resistance housing-ambient	2.47 KW^{-1}
	Thermal resistance winding-housing	1.16 KW^{-1}
	Thermal time constant of the winding	40 s
	Therm. time constant of drive	1320 s
	Ambient temperature	-20…85 °C
	Max. housing temperature	100 °C
	Temperature sensor on the electronics	integriert
	Temperature sensor on the winding	integriert
Mechanical data		
	Axial play	0.14 mm
	Preload	15 N
	Direction of force	Pull
	Radial backlash	
	Max. axial load (dynamic)	12 N
	Max. radial load 12.5 mm from flange	110 N
Further specifications		
	Weight of the drive	1610 g

Information about motor data. https://www.maxongroup.com/medias/CMS_Downloads/DIVERSES/20_312_IDX_EN.pdf

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GPX52 A 6.6:1

	Product specification	
Gearhead data		
	Reduction	6.6:1
	Absolute reduction	132/20
	Number of stages	1
	Max. continuous torque	5.00 Nm
	Max. intermittent torque	7 Nm
	Direction of rotation, drive to output	=
	Max. efficiency	95 %
	Average backlash no-load	0.5 °
	Mass inertia	20.2 gcm^2
	Max. transmittable power (continuous)	400 W
	Max. short-time transferable output	500 W
Technical data		
	Output shaft bearing	Wälzlager
	Max. radial play, 12 mm from flange	max. 0.06 mm
	Axial play	0…0.6 mm
	Max. permissible radial load, 12 mm from flange	420 N
	Max. permissible axial load	200 N
	Max. permissible force for press fits	500 N
	Max. continuous input speed	6000 min^{-1}
	Max. intermittent input speed	7500 min^{-1}
	Recommended temperature range	-40..100 °C

Information about gearhead data: https://www.maxongroup.com/medias/CMS_Downloads/DIVERSES/12_203_EN.pdf