



Mechanics for mounting encoders

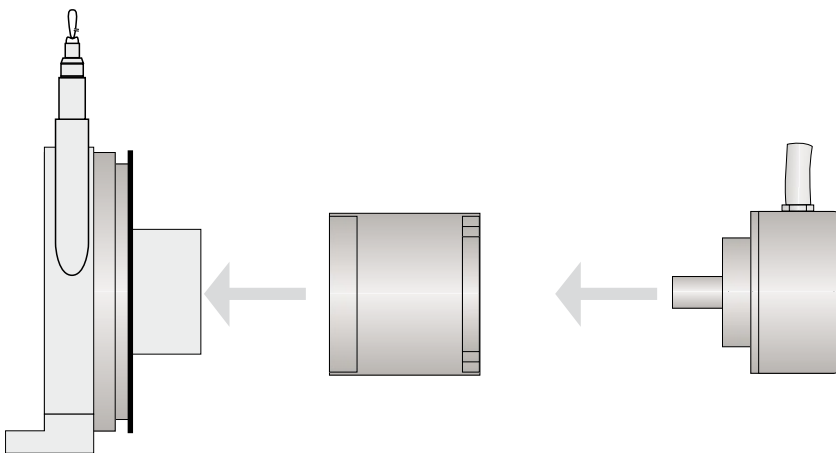
Draw-wire sensor

- Use almost any encoder
- Robust aluminium profile housing
- High quality sensor components

Rugged draw-wire mechanics for encoder mounting. The draw wire sensor mechanics of the FDZ60, FD96, FDP115 and FD200 series are designed for easy mounting of an incremental or absolute encoder. The selection of the interface, resolution and type of connection can therefore be individually configured. Optimum matching to the signal conditioning system is ensured. High precision components and a rugged housing offer high operational reliability and a long life time even under harsh industrial conditions.



A complete measurement unit always consists of the basic draw-wire mechanism and the adapter for the customer-specific encoder. The adapter contains all the necessary mounting accessories for fitting the encoder and is included in delivery of the FD96, FD115 and FD200 series.



take up spool (mechanics)

adapter

customer-specific encoder

For the customer-specific encoder or potentiometer various draw-wire mechanics are available with measuring range up to 50m.

■ Technical data

Model	FDZ60-M - 1500	FD96-M - 3000	FD115-M - 5000	FD115-M - 7500	FD115-M - 10000	FD115-M - 15000	FD200-M - 30000	FD200-M - 40000	FD200-M - 50000	
Measuring range	1500mm	3000mm	5000mm	7500mm	10000mm	15000mm	30000mm	40000mm	50000mm	
Output	dependent upon encoder									
Linearity	±0.01%FSO	-	-	-	-	1mm	1.5mm	3mm	4mm	5mm
	±0.02%FSO	0.3mm	0.6mm	1mm	1.5mm	-	-	-	-	-
Resolution	dependent upon encoder									
Travel per encoder revolution	150mm	260.09mm	315.07mm				500mm			
Suitable encoder- adapter-flange	FD-EAC 1	not available								
		for clamping flange								
	FD-EAS 1	included in delivery								
		for synchro flange								
Temperature range	operation	-20...+80°C								
	storage	-40...+80°C								
housing	aluminium									
Material		coated polyamid stainless steel								
	wire	ø 0.45mm	ø 0.8mm	ø 1.0mm			0.8mm			
Wire mounting	wire clip	thread M4	eyelet							
Sensor mounting	2 mounting holes	slot nuts								
Wire acceleration	10g	7g	5g	6g	3g	3g				
Wire retraction force (min)	3.5N	5N	4N	8N	8N	8N	12N	11N	11N	
Wire extension force (max)	5.5N	10N	16N	24N	21N	25N	22N	22N	24N	
Protection class	dependent upon encoder									
Vibration	20g, 20Hz...2kHz									
Mechanical shock	50g, 10ms									
Weight	0.3kg	1.1kg	1.4kg	1.9kg	2.8kg	3.2kg	9.5kg	10kg	11kg	

FSO = Full Scale Output

■ Ordering code

FD115 - 5000 - M - SO

Wire stripper (only FD115/FD200)

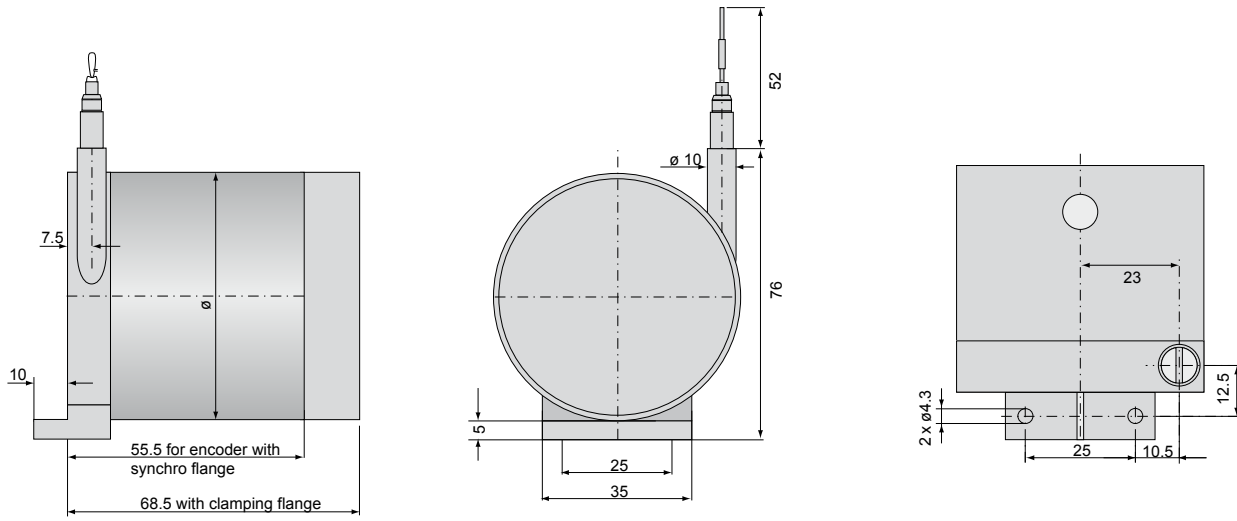
Mechanic

Measuring range in mm

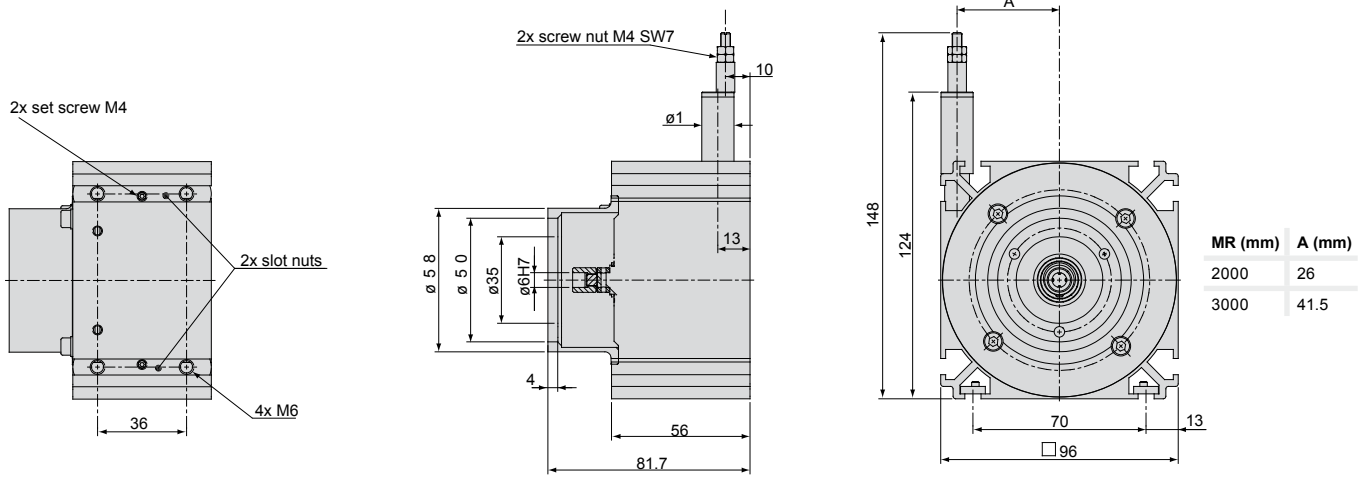
Model FDZ60, FD96, FD115, FD200

■ Mechanics

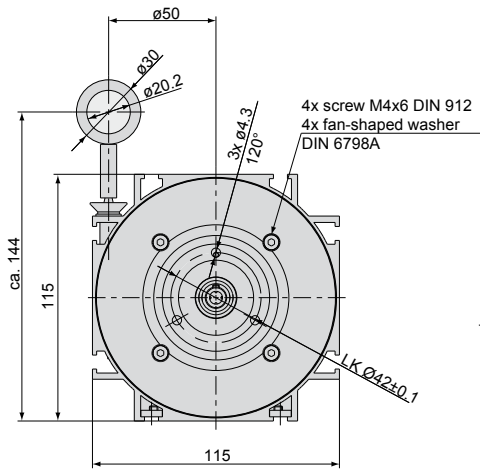
FDZ60



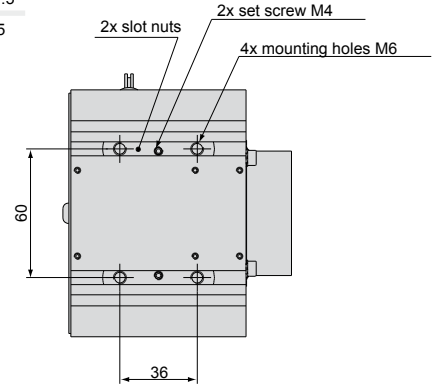
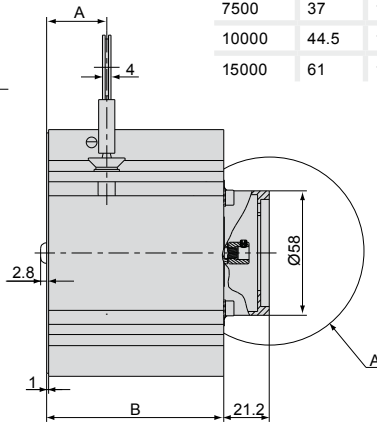
FD96



FD115

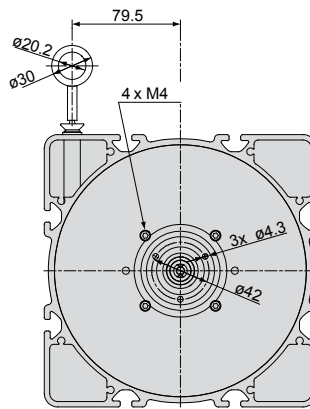
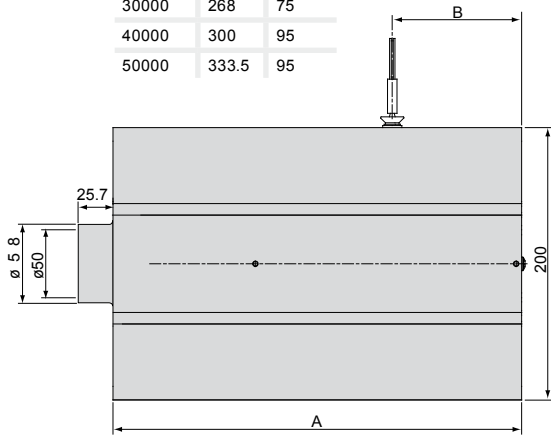


MR (mm)	A (mm)	B (mm)
5000	28	82.5
7500	37	105.5
10000	44.5	1148.5
15000	61	180.5



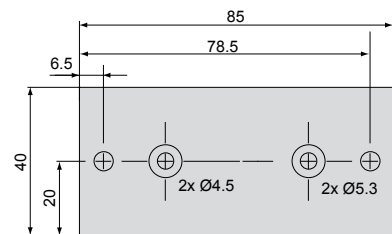
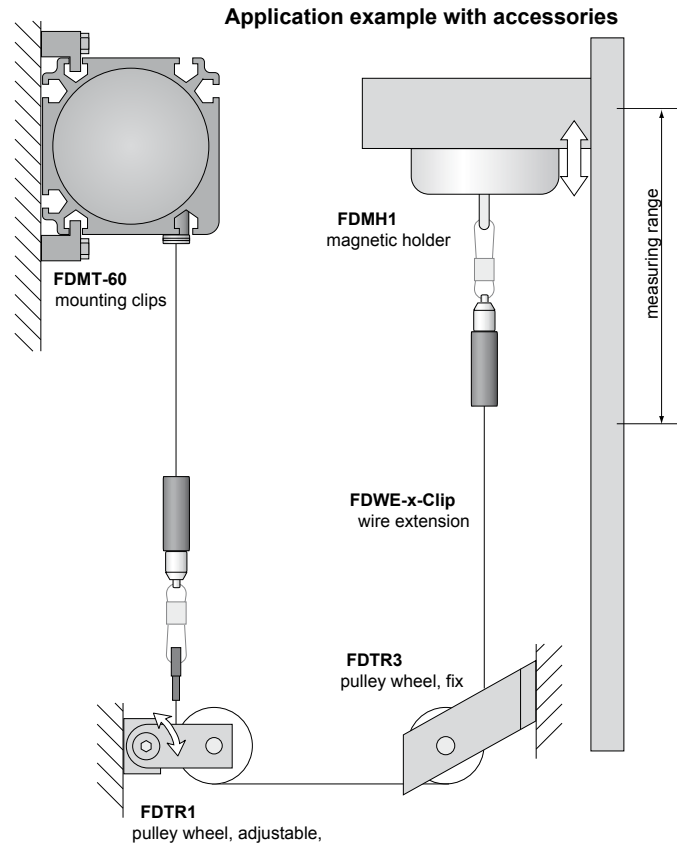
FD200

MR (mm)	A (mm)	B (mm)
30000	268	75
40000	300	95
50000	333.5	95



■ Accessories and mounting

FDWE-x-M4, FDWE-x-Clip	Wire extension x=length
FDTR1	Pulley wheel, adjustable
FDTR3	Pulley wheel, fixed
FDGK1	Attachment head for M4
FDMH1	Magnetic holder for wire mounting
FDMH2	Magnetic holder for sensor mounting
FDMT-60	Mounting clamp for FD60
FDFC8	Female connector for strain gauge sensor, 8-pin
FDFC8/90	Female connector 90° for strain gauge sensor
FDPC 3/8	Sensor cable, length 3 m
FDPS 2010	Power supply (chassis mounting 35 x 7.5 mm); input 120/230 VAC; output 24 VDC/2.5 A; L/B/H 120 x 20 x 40 mm
FDMP60	Mounting plate for FD60 sensors



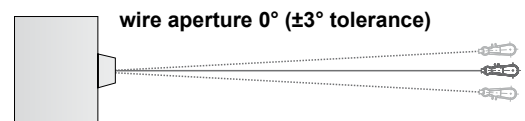
Mounting plate FDMP60

Installation information:

Wire attachment: The free return of the measurement wire is not permissible and it is essential that this is avoided during installation.

Wire exit angle:

When mounting a draw-wire displacement sensor, a straight wire exit ($\pm 3^\circ$ tolerance) must be taken into account. If this tolerance is exceeded, increased material wear on the wire and at the wire aperture must be expected.



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