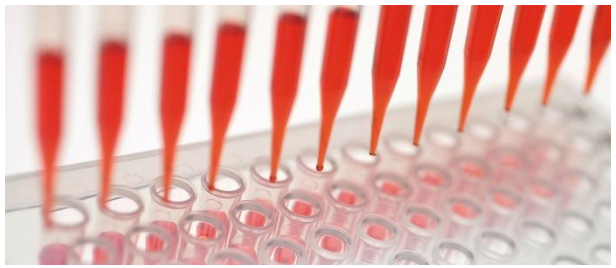
KENDRION

KENDRION KUHNKE AUTOMATION ICS

OVERVIEW OF OPTICAL SHUTTERS





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Update January 2021 / Setijoso

SOLENOID TECHNOLOGY / OPTICAL SHUTTERS

Electromechanical Rotary Solenoids

Standard rotary solenoids

Type D1-D9 / Type E3-E9 / Type CDR

Basic Optical Shutters

Standard optical shutters

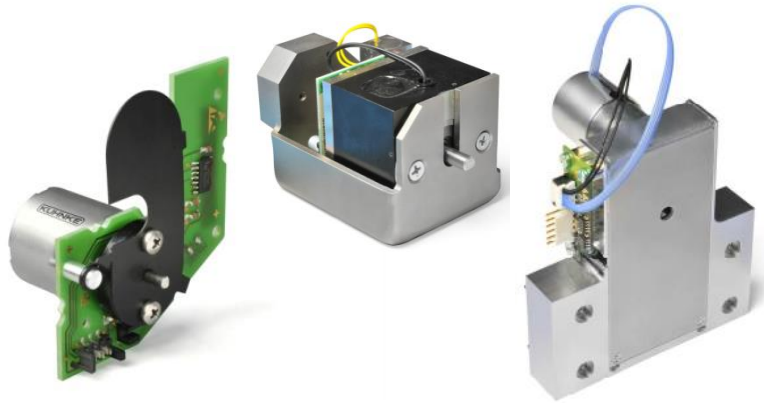
Type D16 DS1002 (monostable)

Type D23 DS20053 w/ positioning sensor (monostable)

Type D23 DS20054 w/o positioning sensor (monostable)

NEW: Type CDR030 (bi-stable)

Advanced Optical Shutters



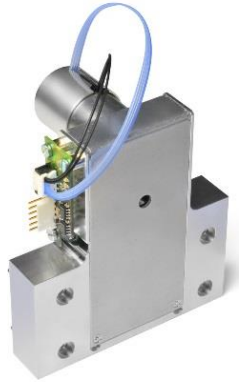
Customized optical shutters with features:

Positioning sensors,

shock dampers, laser beam trap,

water cooling

SOLENOID TECHNOLOGY / OVERVIEW OF PREFERRED OPTICAL SHUTTERS



Product name	D16 DS1002	D23 DS20053[1] / DS20054[2]	CDR030 **(NEW)**	DS200X8
Monostable / bistable	monostable	monostable	bi-stable	monostable
Rotary angle	65°	35°	60°, 90°	35°
Blade / reflector	Blade	Blade	Blade	reflector
Position sensor	-	available[1] / not available[2]	-	available
Shock damper	-	available	-	available
Temperature monitoring	-	-	-	available
Laser beam trap	-	-	-	available
Cooling	-	-	-	available
Availability	in stock	in stock	planned in stock	on request

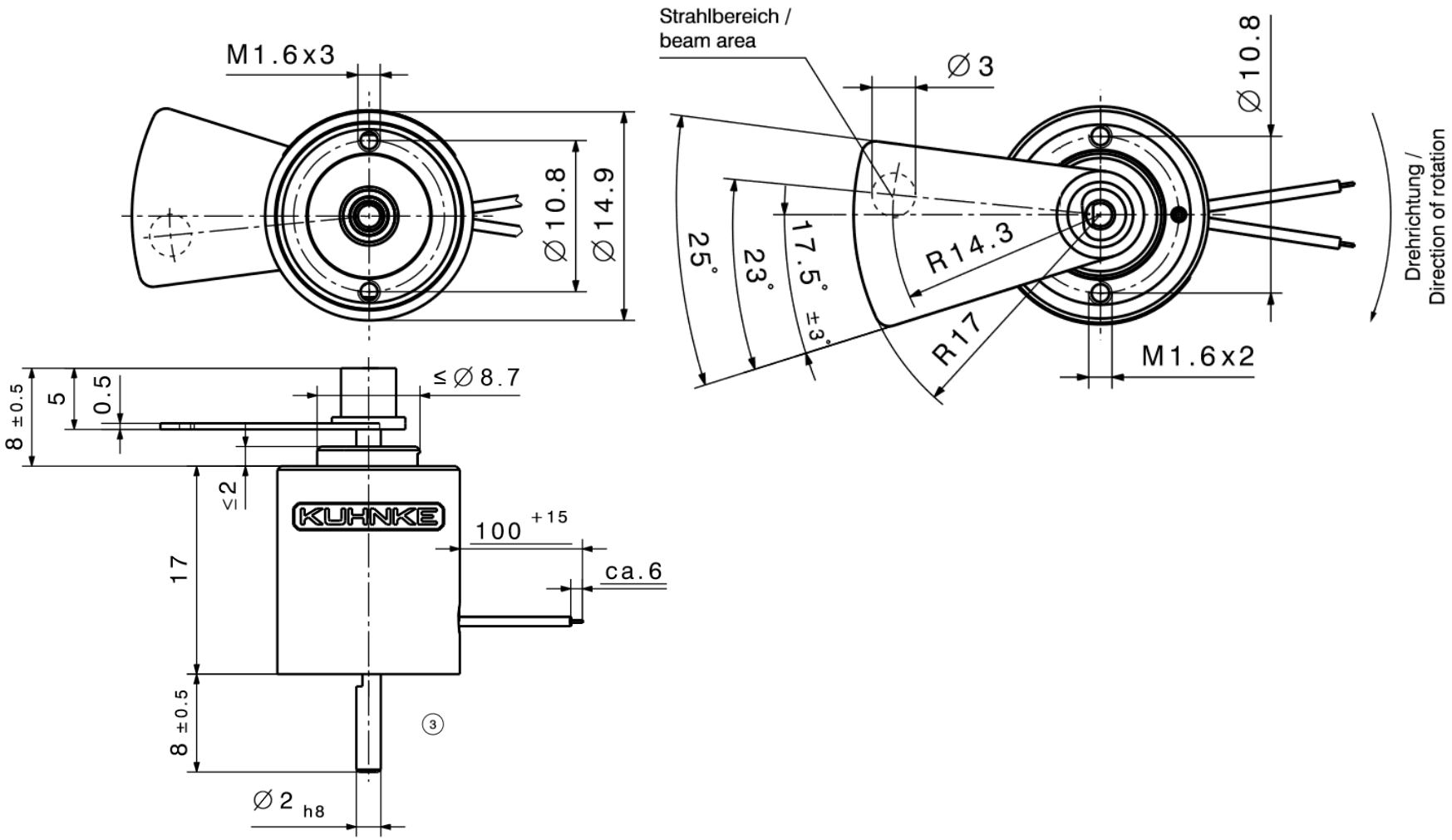
SOLENOID TECHNOLOGY / BASIC OPTICAL SHUTTER D16 DS1002

Shutter D16 DS1002
ID-No. 188466

Technical data	
Type / design	**Kuhnke Shutter D16 DS1002 / self-restoring**
Power supply	12 V DC (other voltages on request)
Rotary angle	65° (other angles 25°, 35°, 45° und 95° on request)
Closing time	≤ 20 ms
Switching frequency	up to 5 Hz
Mechanical durability	10 mio. switching cycles
Operating temperature	-5 °C… +35 °C
Blade material	Polyamid (other on request)
Mounting	Mounting holes

SOLENOID TECHNOLOGY / DIMENSION OF D16 DS1002

Shutter D16 DS1002
ID-No. 188466



SOLENOID TECHNOLOGY / BASIC OPTICAL SHUTTER D23

Shutter D23 DS20053
ID-No. 194088

Blade for D23
ID-No. 193978

Features:
position sensors
shock dampers

Shutter D23 DS20054
ID-No. 195974

Blade for D23
ID-No. 193978

Features:
shock dampers

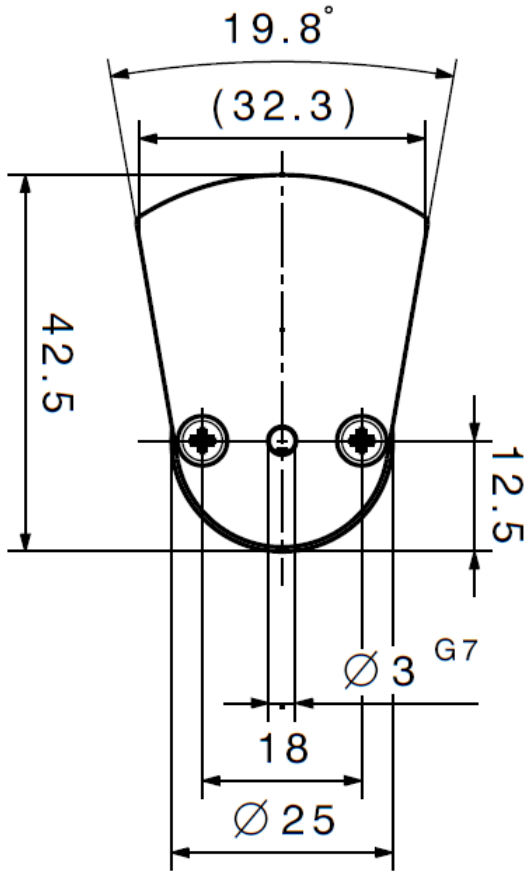
SOLENOID TECHNOLOGY / BASIC OPTICAL SHUTTER D23

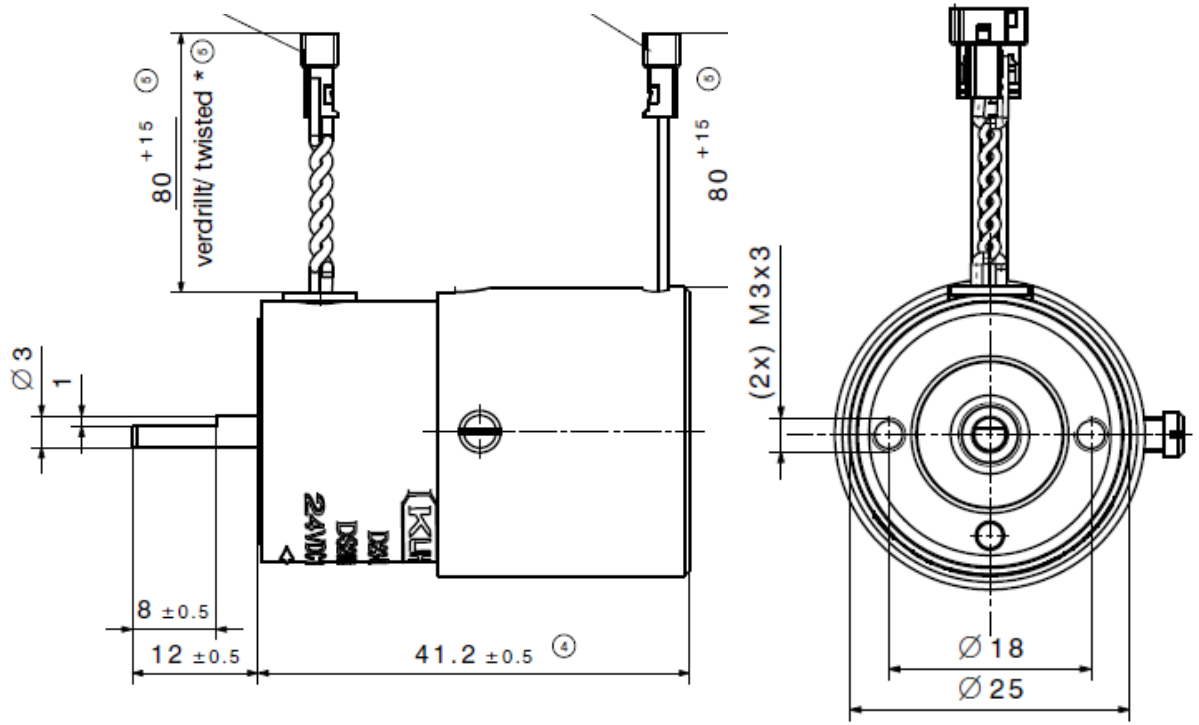
Shutter D23

Technical data (temporary)	
Type / design	**Shutter D23 DS20053 & DS20054 / self-restoring**
Power supply	24 VDC (other voltages on request)
Rotary angle	30° (other angles 20°, 40° and 90° on request)
Closing time	≤ 15 ms
Switching frequency	Up to 5 Hz
Mechanical durability	10 mio. switching cycles
Operating temperature	-5 °C… +35 °C
Blade material	Black anodized aluminum
Mounting	Mounting holes

SOLENOID TECHNOLOGY / DIMENSION OF D23 OPTICAL SHUTTER

Shutter D23





SOLENOID TECHNOLOGY / BASIC OPTICAL SHUTTER CDR

Shutter CDR

Technical data (temporary)	
Type / design	**Shutter CDR / bi-stable**
Power supply	12 and 24 VDC (other voltages on request)
Rotary angle	60°, 90° (other angles on request)
Closing time	≤ 20 ms
Switching frequency	Up to 30 Hz
Mechanical durability	20 mio. switching cycles
Operating temperature	-5 °C… +35 °C
Blade material	Black anodized aluminum
Mounting	Clamp, flanges (detail information available)

SOLENOID TECHNOLOGY / OPTICAL SHUTTERS

Benefits

- Long lifetime
- Short response time
- High reliability
- Low outgasing (D1, D2 and DS200X8)
- High flexibility for miscellaneous customisation
- Simple on/off switching

Main application fields

- Aircraft instruments
- Medical, analytical and chirurgical instruments
- Airborne instruments
- Fiber optics
- Military
- Engraving and marking systems

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