

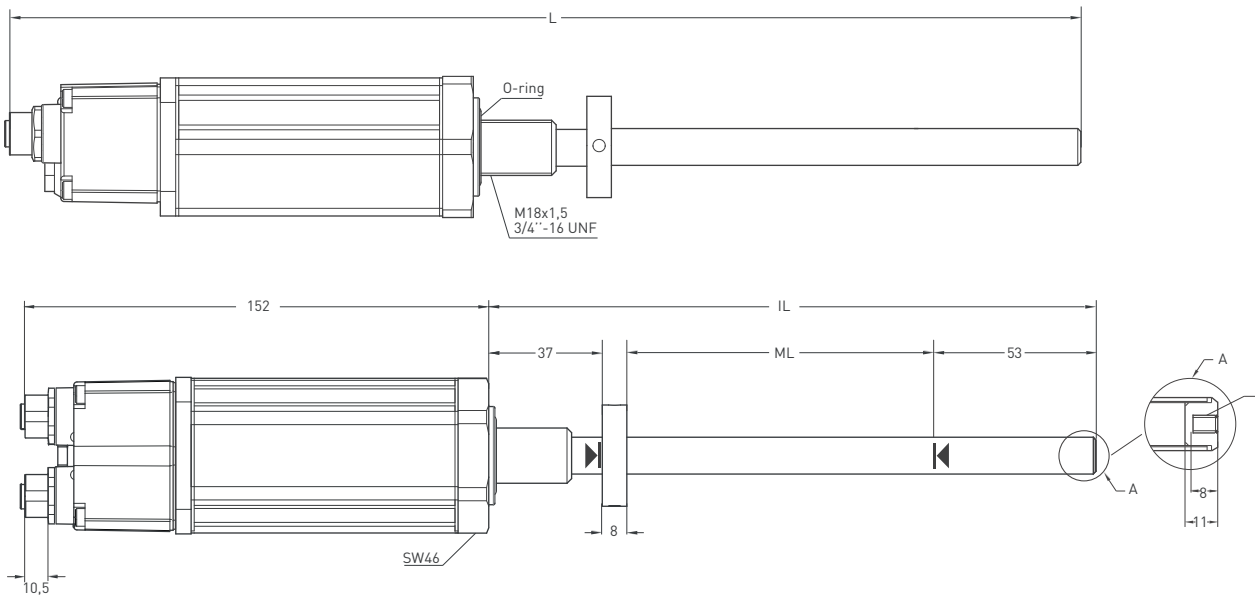
**CANbus**



- Measuring length 100 - 5000 mm
- CANbus protocol
- 24 VDC power supply

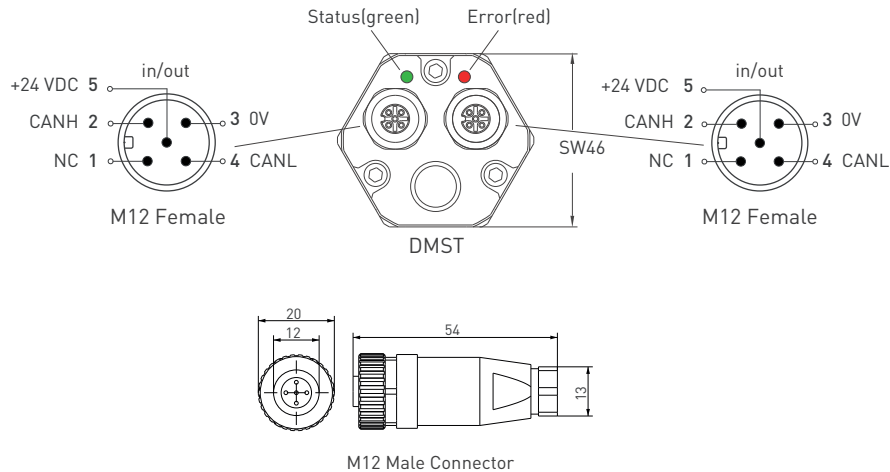
Technical Specifications	
Measurement stroke	100 - 5000 mm
Resolution	25µm (100mm-400mm), 50µm (450mm-3000mm), 100µm (4000mm-5000mm)
Repeatability	100 µm
Output	CANbus
Power supply	24 VDC ±10%
Displacement speed	max. <5 m/s
Max. consumption	<100 mA (depending on stroke length)
Linearity	100 mm < %1, 100-300 mm < %0.2, 300-500 mm < %0.1, 500-5000 mm > %0.05
Reverse polarity protection	Up to -30 VDC
Overvoltage protection	Up to +30 VDC
Update time	10 ms (at 500 Kbit/s)
Interface	CAN
Protocol	CANbus
Data-length	16 bit
Communication profile	CiA 301
Diagnostic LEDs	Green LED : Power on, CAN communication active Red LED : Error, Stop mode
Protection level	IP 65
Operating temperature	-20°C ... +80°C
Storage temperature	-30°C ... +90°C
Sensor address (Default Node ID)	20 (ID programmable by software)
Baud rate (Default :500Kbit/s)	max. :1Mbit/s (programmable by software)

**Mechanical Specifications**

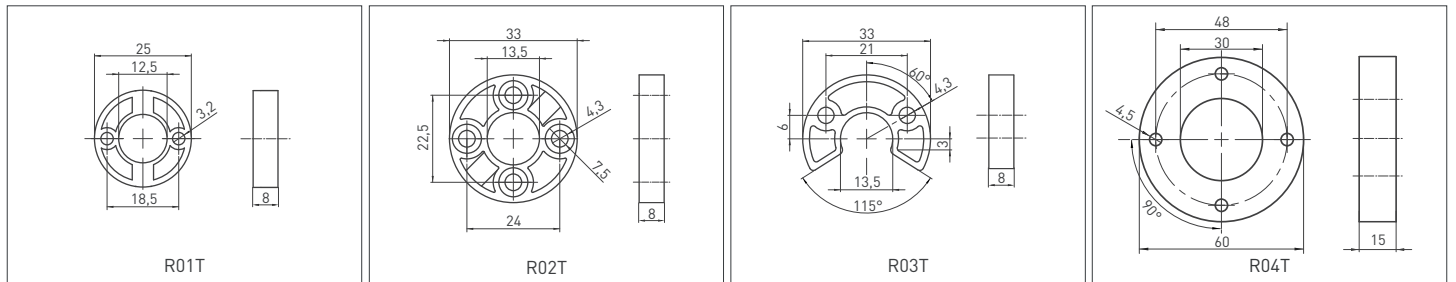


DMST (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400	1500	1750	2000	2250	2500	3000	4000	5000							
ML (Measuring Length)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400	1500	1750	2000	2250	2500	3000	4000	5000							
IL (Installation Length)	198	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1098	1198	1298	1398	1498	1598	1848	2211	2461	2711	3211	4211	5211							
L (Total Length)	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1250	1350	1450	1550	1650	1750	2000	2350	2600	2850	3350	4350	5350							
Dead Zone Calculation																	37/53 mm																				

## Connection



## Cursor



## Ordering Procedure

Model	Measurement stroke	Rod & Thread	Sealing surface	Protocol	Baud rate	Termination	Cursor	Dead zone
DMST	150	E12	S	CAB	6BR	1S0	1R02T	37/53
DMST	100 - 5000 mm	E10 : Ø10, M18x1,5 E12 : Ø12, M18x1,5 U10 : Ø10, 3/4"-16 UNF U12 : Ø12, 3/4"-16 UNF	S: O-ring F: Flat	CAB:CANbus	0BR:10 kbit/s 1BR:20 kbit/s 2BR:50 kbit/s 3BR:100 kbit/s 4BR:125 kbit/s 5BR:250 kbit/s 6BR:500 kbit/s 7BR:800 kbit/s 8BR:1 Mbit	1S0: Off 1S1: On	1R01T: 25 mm 1R02T: 33 mm 1R03T: 33 mm 1R04T: 60 mm  1R01T: 1 cursor 2R01T: 2 cursors	≤ 2000 mm 30/53 37/53 47/53 57/53 67/53 77/53 30/60 51/63 > 2000-3000 mm 130/53 > 3000-5000 mm 150/53

\* T-coded sensors are used with T-coded cursors.

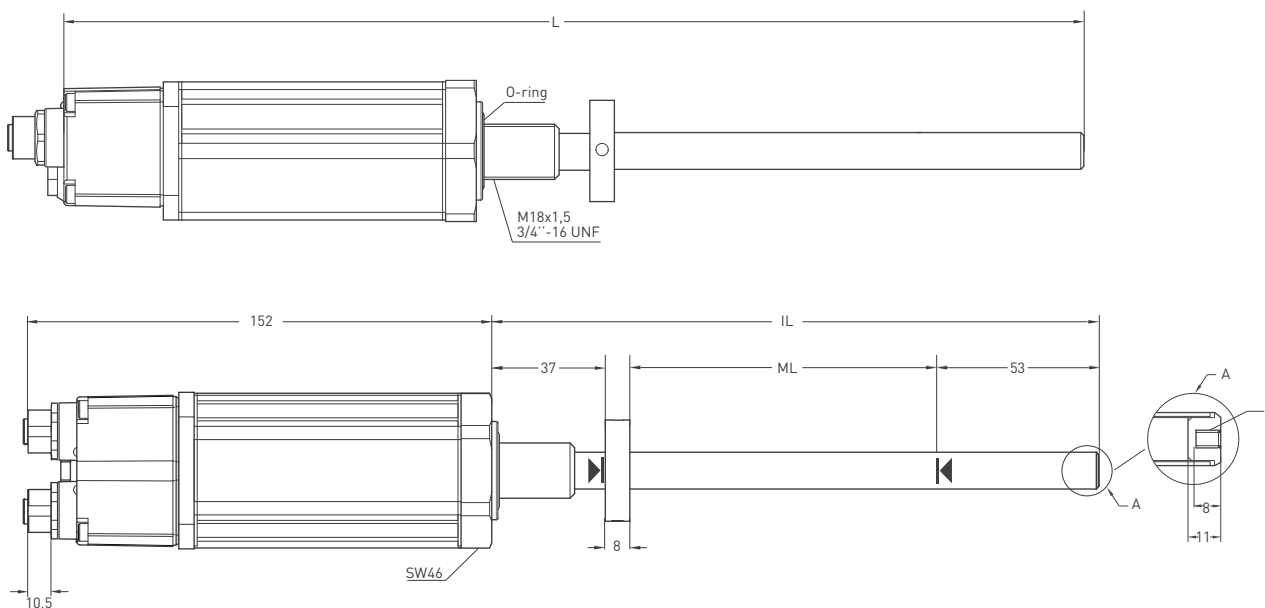
**CANopen®**



- Measuring length 100 - 5000 mm
- CANopen protocol
- 24 VDC power supply

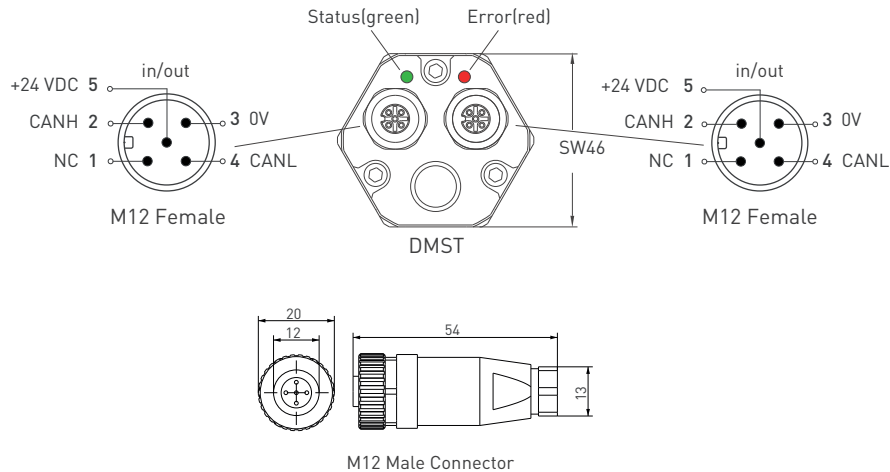
Technical Specifications	
Measurement stroke	100 - 5000 mm
Resolution	25µm (100mm-400mm), 50µm (450mm-3000mm), 100µm (4000mm-5000mm)
Repeatability	100 µm
Output	CANbus
Power supply	24 VDC ±10%
Displacement speed	max. <5 m/s
Max. consumption	<100 mA (depending on stroke length)
Linearity	100 mm < %1, 100-300 mm < %0.2, 300-500 mm < %0.1, 500-5000 mm > %0.05
Reverse polarity protection	Up to -30 VDC
Overvoltage protection	Up to +30 VDC
Update time	1 ms (at 500 Kbit/s)
Interface	CAN
Protocol	CANbus
Data-length	16 bit
Communication profile	CiA 301, CiA 406 V 3.2
Diagnostic LEDs	Green LED : Power on, CAN communication active Red LED : Error, Stop mode
Protection level	IP 65
Operating temperature	-20°C ... +80°C
Storage temperature	-30°C ... +90°C
Sensor address (Default Node ID)	20 (ID programmable by software)
Baud rate (Default :500Kbit/s)	max. :1Mbit/s (programmable by software)

**Mechanical Specifications**

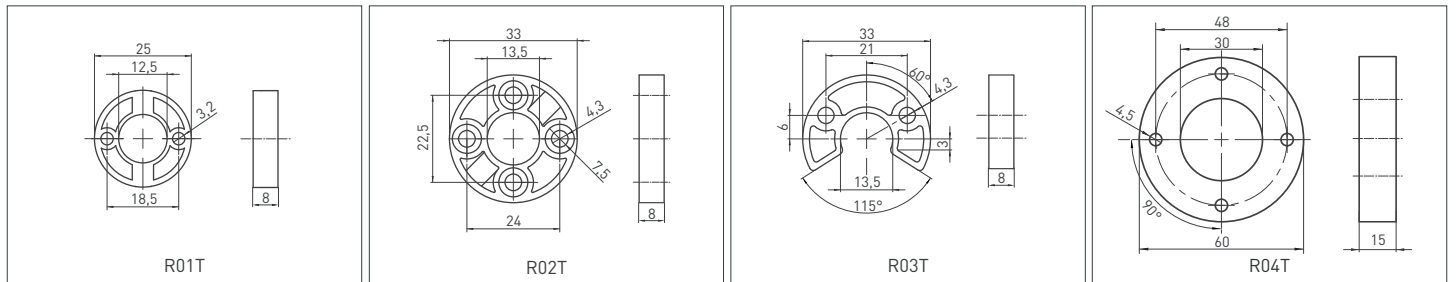


DMST (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400	1500	1750	2000	2250	2500	3000	4000	5000
ML (Measuring Length)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400	1500	1750	2000	2250	2500	3000	4000	5000
IL (Installation Length)	198	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1098	1198	1298	1398	1498	1598	1848	2211	2461	2711	3211	4211	5211
L (Total Length)	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1250	1350	1450	1550	1650	1750	2000	2350	2600	2850	3350	4350	5350
Dead Zone Calculation	37/53 mm																													

## Connection



## Cursor



## Ordering Procedure

Model	Measurement stroke	Rod & Thread	Sealing surface	Protocol	Baud rate	Termination	Cursor	Dead zone
DMST	150	E12	S	COB	6BR	1S0	1R02T	37/53
DMST	100 - 5000 mm	E10 : Ø10, M18x1,5 E12 : Ø12, M18x1,5 U10 : Ø10, 3/4"-16 UNF U12 : Ø12, 3/4"-16 UNF	S: O-ring F: Flat	COB: CANbus	0BR:10 kbit/s 1BR:20 kbit/s 2BR:50 kbit/s 3BR:100 kbit/s 4BR:125 kbit/s 5BR:250 kbit/s 6BR:500 kbit/s 7BR:800 kbit/s 8BR:1 Mbit	1S0: Off 1S1: On	1R01T: 25 mm 1R02T: 33 mm 1R03T: 33 mm 1R04T: 60 mm  1R01T: 1 cursor 2R01T: 2 cursors	≤ 2000 mm 30/53 37/53 47/53 57/53 67/53 77/53 30/60 51/63 > 2000-3000 mm 130/53 > 3000-5000 mm 150/53

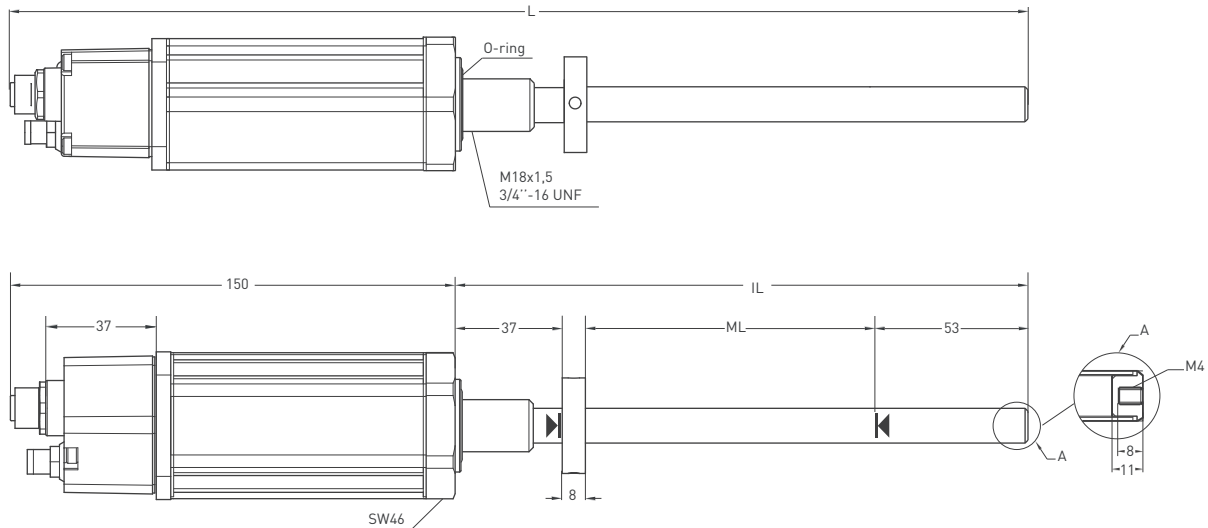
\* T-coded sensors are used with T-coded cursors.

- Measuring length 100 - 5000 mm
- EtherCAT protocol
- 24 VDC power supply



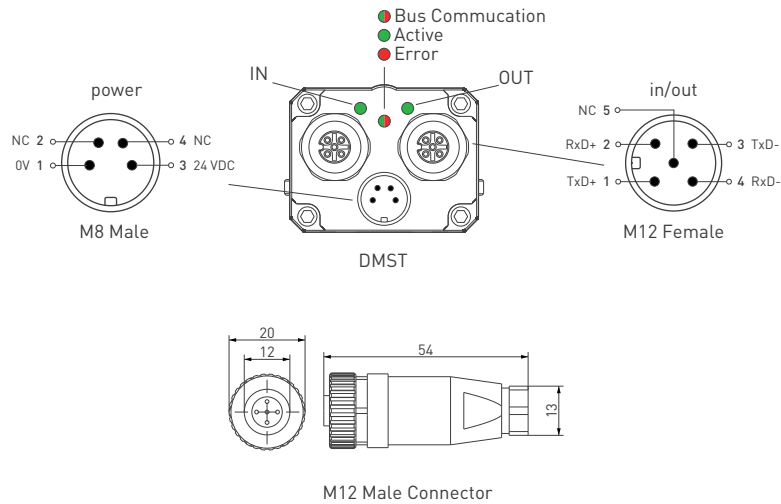
Technical Specifications	
Measurement stroke	100 - 5000 mm
Resolution	25µm (100mm-400mm), 50µm (450mm-3000mm), 100µm (4000mm-5000mm)
Repeatability	100 µm
Output	EtherCAT
Power supply	24 VDC ±10%
Displacement speed	max. <5 m/s
Max. consumption	<100 mA (depending on stroke length)
Linearity	100 mm < %1, 100-300 mm < %0.2, 300-500 mm < %0.1, 500-5000 mm > %0.05
Reverse polarity protection	Up to -30 VDC
Overvoltage protection	Up to +30 VDC
Update time	0,5 ms up to 1000 mm 0,8 ms up to 2000 mm
Interface	EtherCAT Ethernet Control Automation Technology
Protocol	EtherCAT 100 Base-Tx Fast Ethernet
Data-length	16 bit
Data transmission rate	100 Mbit/s max.
PDO(Process data object)	1A00 TxPDO mapping PDO content 0x600:01 position value
Diagnostic LEDs	Green led: Power on, Bus communication active Red led: Error, stop mode
Protection level	IP 65
Operating temperature	-20°C ... +80°C
Storage temperature	-30°C ... +90°C

**Mechanical Specifications**

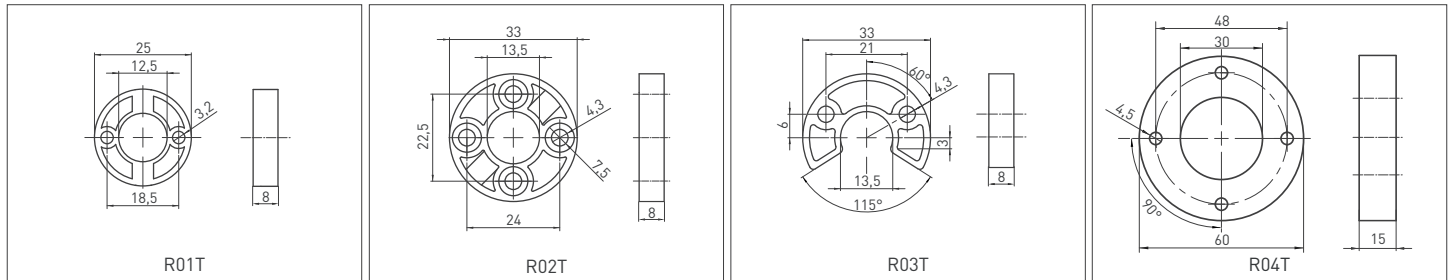


DMST (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400	1500	1750	2000	2250	2500	3000	4000	5000							
ML (Measuring Length)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400	1500	1750	2000	2250	2500	3000	4000	5000							
IL (Installation Length)	198	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1098	1198	1298	1398	1498	1598	1848	2211	2461	2711	3211	4211	5211							
L (Total Length)	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1248	1348	1448	1548	1648	1748	1998	2333	2583	2833	3333	4333	5333							
Dead Zone Calculation																	37/53 mm																				

## Connection



## Cursor



## Ordering Procedure

Model	Measurement stroke	Rod & Thread	Sealing surface	Protocol	Cursor	Dead zone
DMST	150	E12	S	ETN	1R02T	37/53
DMST	100 - 5000 mm	E10: Ø10, M18x1,5 E12: Ø12, M18x1,5 U10: Ø10, 3/4"-16 UNF U12: Ø12, 3/4"-16 UNF	S: O-ring F: Flat	ETN: EtherCAT	1R01T: 25 mm 1R02T: 33 mm 1R03T: 33 mm 1R04T: 60 mm	≤ 2000 mm 30/53 37/53 47/53 57/53 67/53 77/53 30/60 51/63 > 2000-3000 mm 130/53 > 3000-5000 mm 150/53

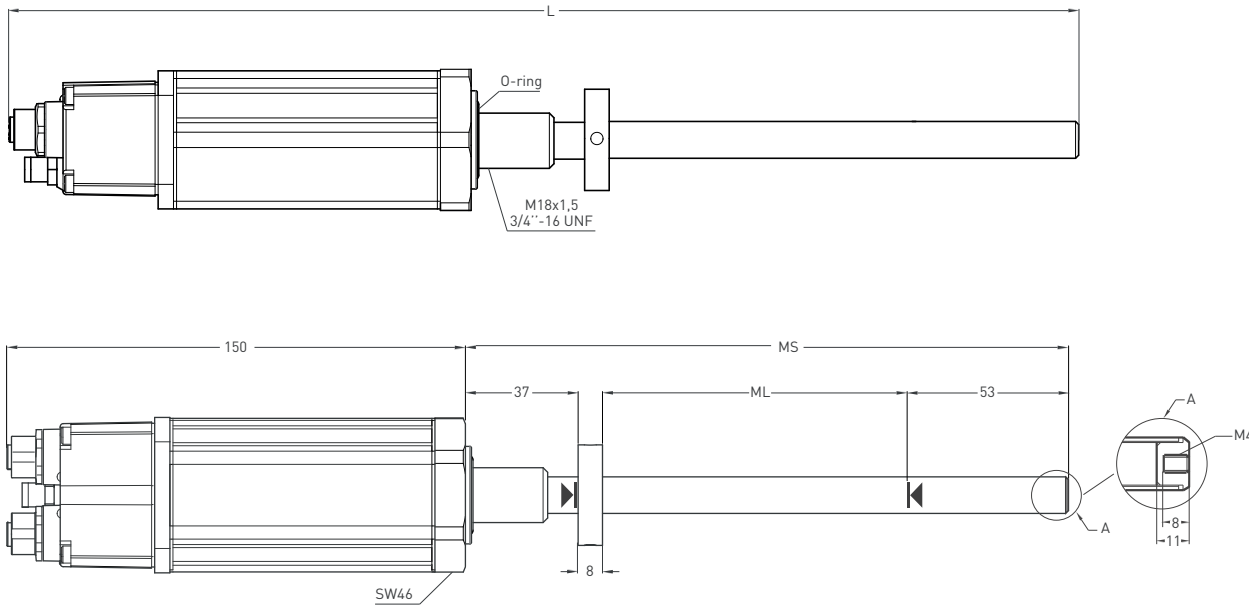
\* T-coded sensors are used with T-coded cursors.



- Measuring range 100 - 5000 mm
- Modbus protocol
- 24 VDC power supply

Technical Specifications	
Measurement stroke	100 - 5000 mm
Resolution	25µm (100mm-400mm), 50µm (450mm-3000mm), 100µm (4000mm-5000mm)
Repeatability	100 µm
Output	Modbus
Power supply	24 VDC ±10%
Displacement speed	max. < 5 m/s
Max. consumption	<100 mA (depending on stroke length)
Linearity	100 mm < %1, 100-300 mm < %0.2, 300-500 mm < %0.1, 500-5000 mm > %0.05
Reverse polarity protection	Up to -30 VDC
Overvoltage protection	Up to +30 VDC
Update time	10 ms (at 115200 bit/s)
Interface	RS422 / RS485
	Modbus
Baud rate	Max. 115200 bit/s
Diagnostic LEDs	Green led : Power on, BUS communication active Red led : Error, Stop mode
Protection level	IP 65
Operating temperature	-10°C ... +70°C
Storage temperature	-30°C ... +90°C

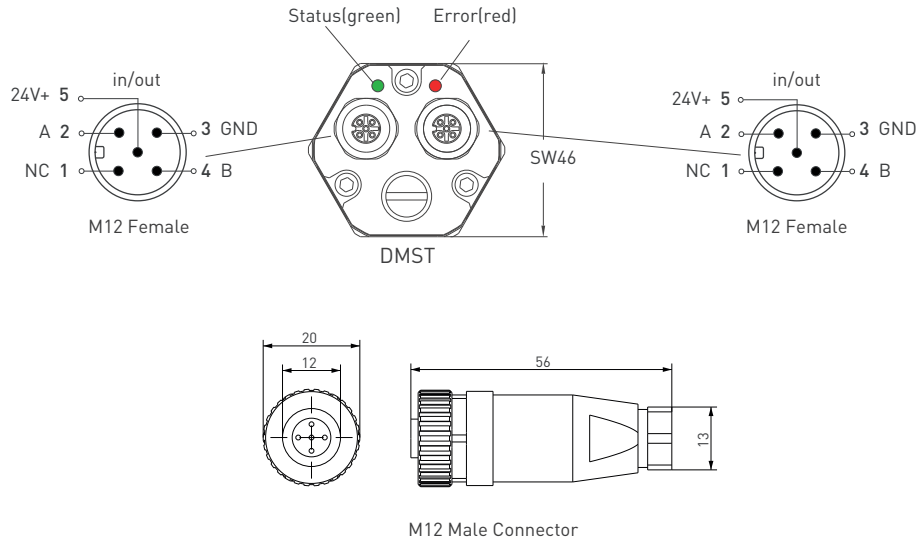
**Mechanical Specifications**



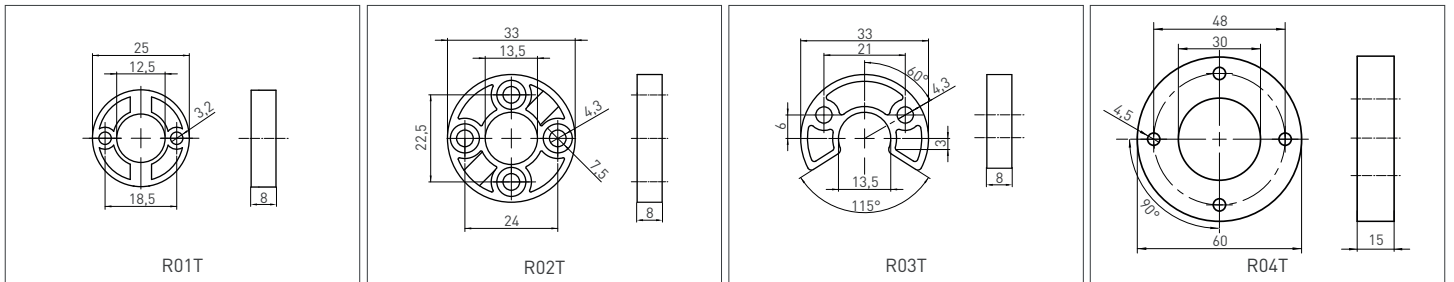
DMST (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400	1500	1750	2000	2250	2500	3000	4000	5000			
ML (Usefull Stroke)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400	1500	1750	2000	2250	2500	3000	4000	5000			
IL (Installation Length)	198	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1098	1198	1298	1398	1498	1598	1848	2211	2461	2711	3211	4211	5211			
L (Total Length)	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1248	1348	1448	1548	1648	1748	1998	2341	2591	2841	3361	4361	5361			
Dead Zone Calculation	37/53																																

Please note: The specifications and information in this datasheet may not cover all special demands arising from specific applications. Therefore, they do not constitute a comprehensive description of the product properties. OPKON accepts no responsibility for damages resulting from the improper application of our products. The user is responsible for ensuring that the products used are suitable for their own application.

## Connection



## Cursor



## Ordering Procedure

Model	Measurement stroke	Rod & Thread	Sealing Surface	Protocol	Baud rate	Termination	Cursor	Dead zone
DMST	150	E12	S	MDB	04	1S0	1R02T	37/53
DMST	100 - 5000 mm	E10 : Ø10, M18x1,5 E12 : Ø12, M18x1,5 U10 : Ø10, 3/4"-16 UNF U12 : Ø12, 3/4"-16 UNF	S: O-ring F: Flat	MDB:Modbus	01:9600 bits/s 02:19200 bits/s 03:38400 bits/s 04:57600 bits/s 05:115200 bits/s	1S0: off 1S1: on	1F01T 1R01T 1F02T 1R02T 1F03T 1R03T 1R04T	≤ 2000 mm 30/53 37/53 47/53 57/53 67/53 77/53 30/60 51/63 > 2000-3000 mm 130/53 > 3000-5000 mm 150/53

\* T-coded sensors are used with T-coded cursors.



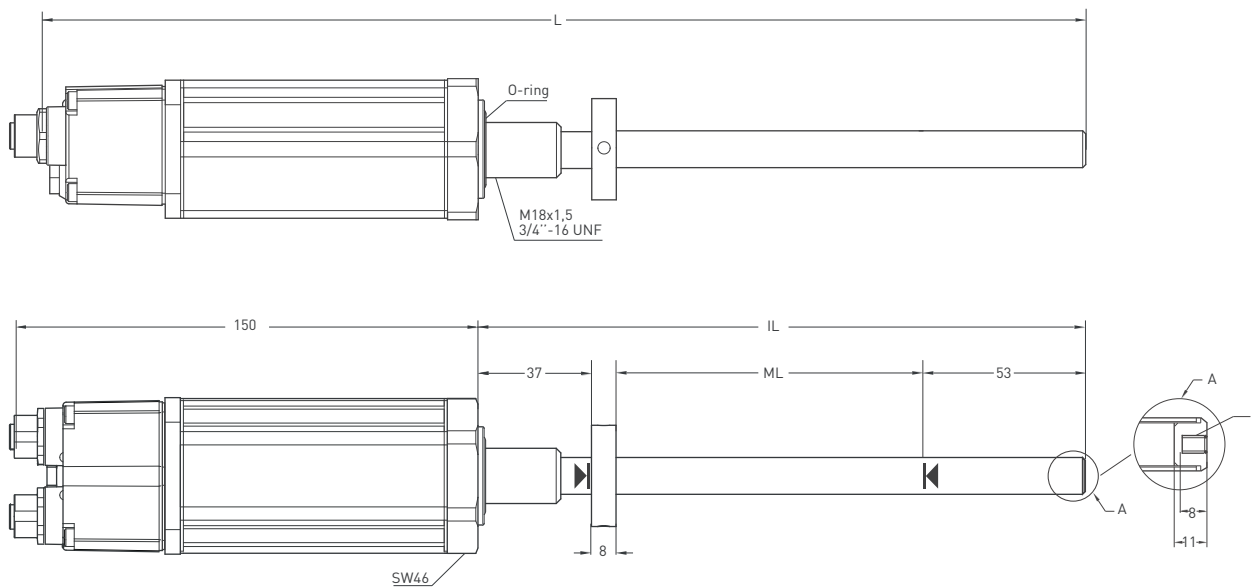
**Non-Contact  
Magnetostrictive Position Sensor**



- Measuring length 100 - 5000 mm
- PROFIBUS protocol
- 24 VDC power supply

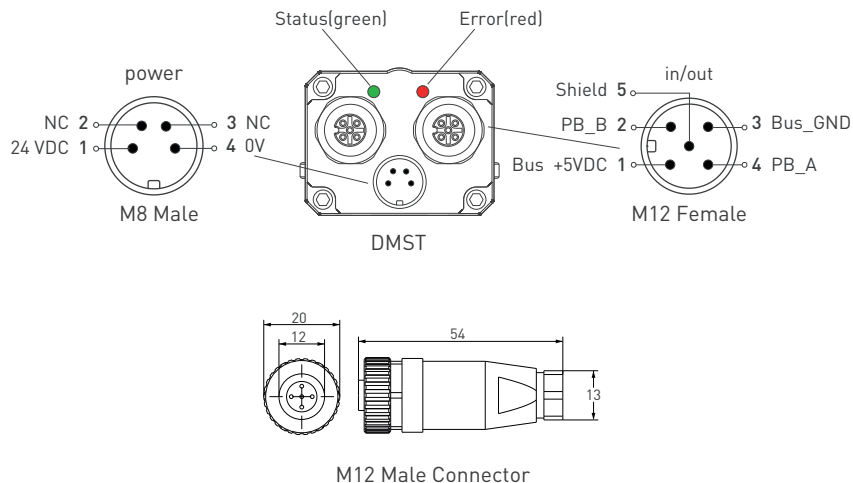
Technical Specifications	
Measurement stroke	100 - 5000 mm
Resolution	25µm (50mm-400mm), 50µm (450mm-3000mm), 100µm (4000mm-5000mm)
Repeatability	100 µm
Output	PROFIBUS
Power supply	24 VDC ±10%
Displacement speed	max. < 5 m/s
Max. consumption	<100 mA (depending on stroke length)
Linearity	100 mm < %1, 100-300 mm < %0.2, 300-500 mm < %0.1, 500-5000 mm > %0.05
Reverse polarity protection	Up to -30 VDC
Overvoltage protection	Up to +30 VDC
Uptime time	1 ms (at 1 Mbit/s)
Interface	RS422 / RS485
Data-length	16 bit
Baud rate	max. 12 Mbit / sec. (auto dedection)
Diagnostic LEDs	Green led : Power on, BUS communication active Red led : Error, Stop mode
Linedriver	Galvanic isolated
Communication	PROFIBUS
Protocol	PROFIBUS V0 / V1 / V2
Protection level	IP 65
Operating temperature	-10°C ... +70°C
Storage temperature	-30°C ... +90°C
Sensor adress (Default Node ID)	20

**Mechanical Specifications**

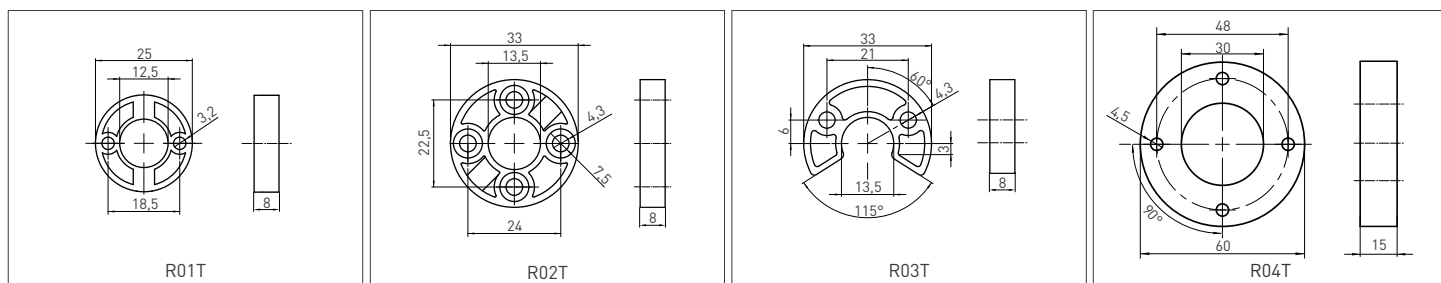


DMST (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400	1500	1750	2000	2250	2500	3000	4000	5000							
ML (Measuring Length)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400	1500	1750	2000	2250	2500	3000	4000	5000							
IL (Installation Length)	198	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1098	1198	1298	1398	1498	1598	1848	2211	2461	2711	3211	4211	5211							
Total Length	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1248	1348	1448	1548	1648	1748	1998	2341	2591	2841	3341	4341	5341							
Dead Zone Calculation																	37/53 mm																				

## Connection



## Cursor



## Ordering Procedure

Model	Measurement stroke	Rod & Thread	Sealing surface	Protocol	Node - ID	Termination	Cursor	Dead zone
DMST	150	E12	S	PFB	20	1S0	1R02T	37/53
DMST	100 - 5000 mm	E10 : Ø10 , M18x1,5 E12 : Ø12 , M18x1,5 U10 : Ø10 , 3/4"-16 UNF U12 : Ø12 , 3/4"-16 UNF	S: O-ring F: Flat	PFB: Profibus	1 - 127	Termination: 1S0: off 1S1: on	1R01T: 25 mm 1R02T: 33 mm 1R03T: 33 mm 1R04T: 60 mm	$\leq 2000$ mm 30/53 37/53 47/53 57/53 67/53 77/53 30/60 51/63 > 2000-3000 mm 130/53 > 3000-5000 mm 150/53

\* T-coded sensors are used with T-coded cursors.

**Non-Contact  
Magnetostrictive Position Sensor**

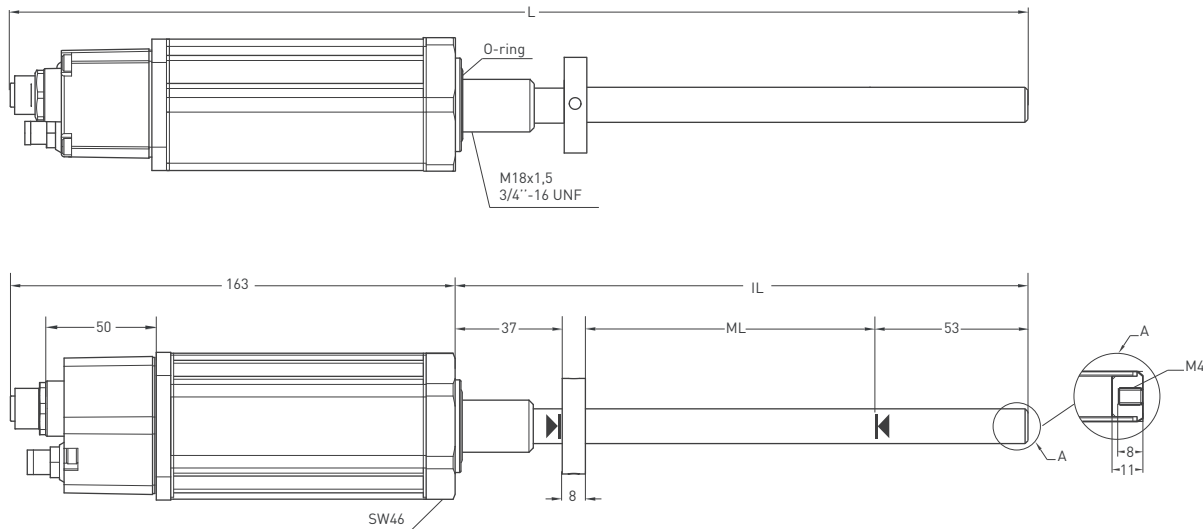


- Measuring length 100 - 5000 mm
- Profinet protocol
- 24 VDC power supply



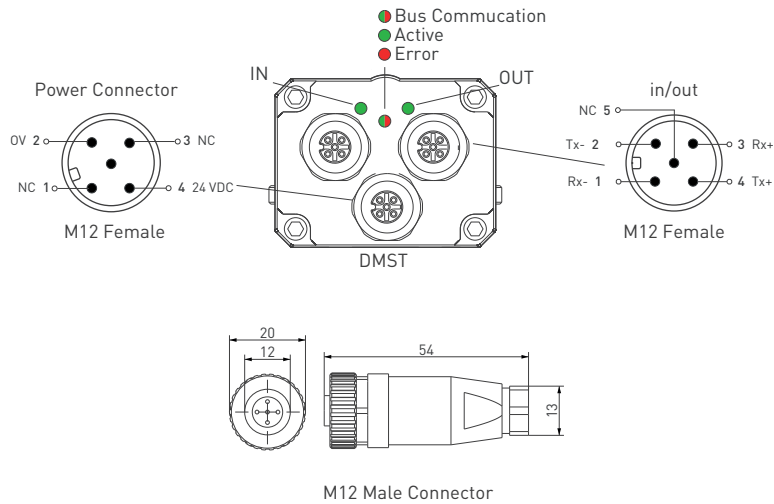
Technical Specifications	
Measurement stroke	100 - 5000 mm
Resolution	25µm (100mm-400mm), 50µm (450mm-3000mm), 100µm (4000mm-5000mm)
Repeatability	100 µm
Output	Profinet
Power supply	24 VDC ±10%
Displacement speed	max. <5 m/s
Max. consumption	<100 mA (depending on stroke length)
Linearity	100 mm < %1, 100-300 mm < %0.2, 300-500 mm < %0.1, 500-5000 mm > %0.05
Reverse polarity protection	Up to -30 VDC
Overvoltage protection	Up to +30 VDC
Response time	1 ms
Interface	Profinet I/O
Protocol	Profinet Ethernet 100 Base-TX to IEEE 802.x
Data-length	16 bit
	Profinet
Data transmission rate	100 Mbit/s max.
Diagnostic LEDs	Green led: Power on, Bus communication active Red led: Error, stop mode
Protection level	IP 65
Operating temperature	-20°C ... +80°C
Storage temperature	-30°C ... +90°C

**Mechanical Specifications**

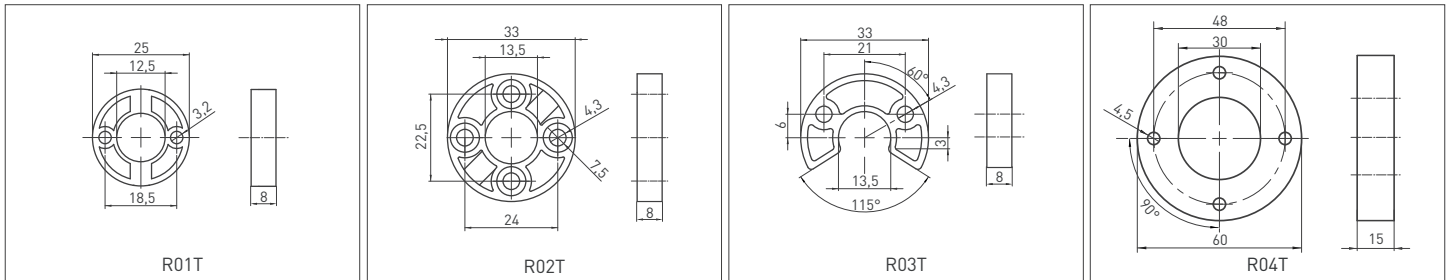


DMST (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400	1500	1750	2000	2250	2500	3000	4000	5000			
ML (Measuring Length)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400	1500	1750	2000	2250	2500	3000	4000	5000			
IL (Installation Length)	198	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1098	1198	1298	1398	1498	1598	1848	2211	2461	2711	3211	4211	5211			
L (Total Length)	361	411	461	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1261	1361	1461	1561	1661	1761	2011	2346	2596	2846	3366	4366	5366			
Dead Zone Calculation	37/53 mm																																

## Connection



## Cursor



## Ordering Procedure

Model	Measurement stroke	Rod & Thread	Sealing surface	Protocol	Cursor	Dead zone
DMST	150	E12	S	PFN	1R02T	37/53
DMST	100 - 5000 mm	E10: Ø10, M18x1,5 E12: Ø12, M18x1,5 U10: Ø10, 3/4"-16 UNF U12: Ø12, 3/4"-16 UNF	S: O-ring F: Flat	PFN: Profinet	1R01T: 25 mm 1R02T: 33 mm 1R03T: 33 mm 1R04T: 60 mm	≤ 2000 mm 30/53 37/53 47/53 57/53 67/53 77/53 30/60 51/63 > 2000-3000 mm 130/53 > 3000-5000 mm 150/53

\* T-coded sensors are used with T-coded cursors.

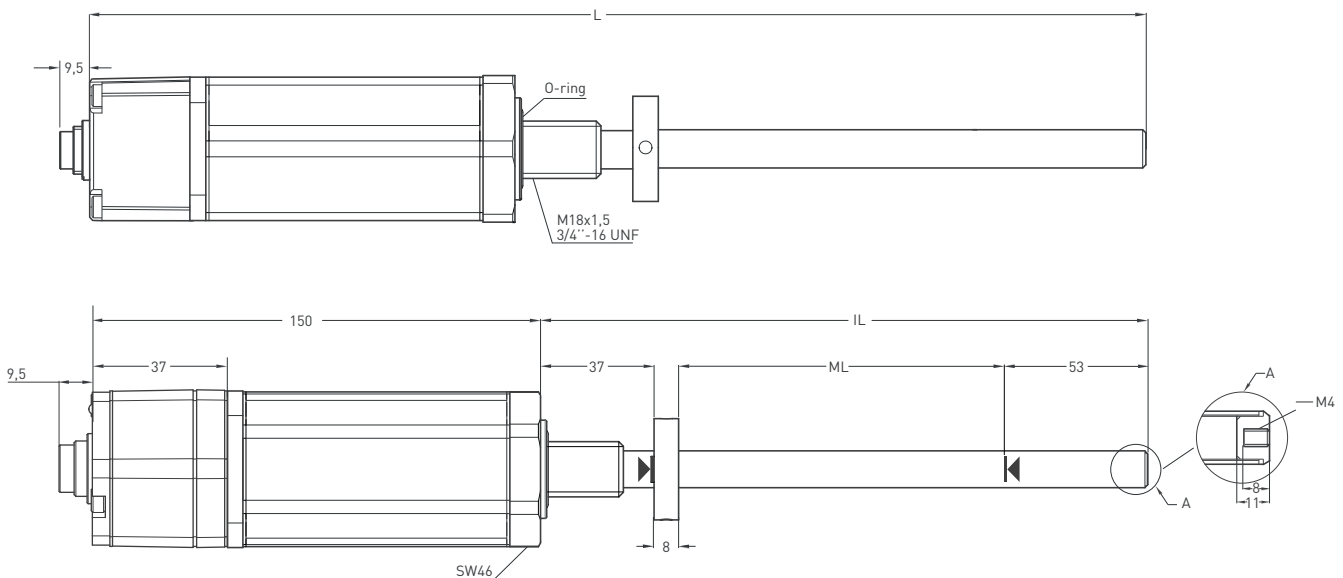


- Measuring length 100 - 5000 mm
- SSI protocol
- 24 VDC power supply
- 25µm (100mm-400mm),  
50µm (450mm-3000mm),  
100µm (4000mm-5000mm)



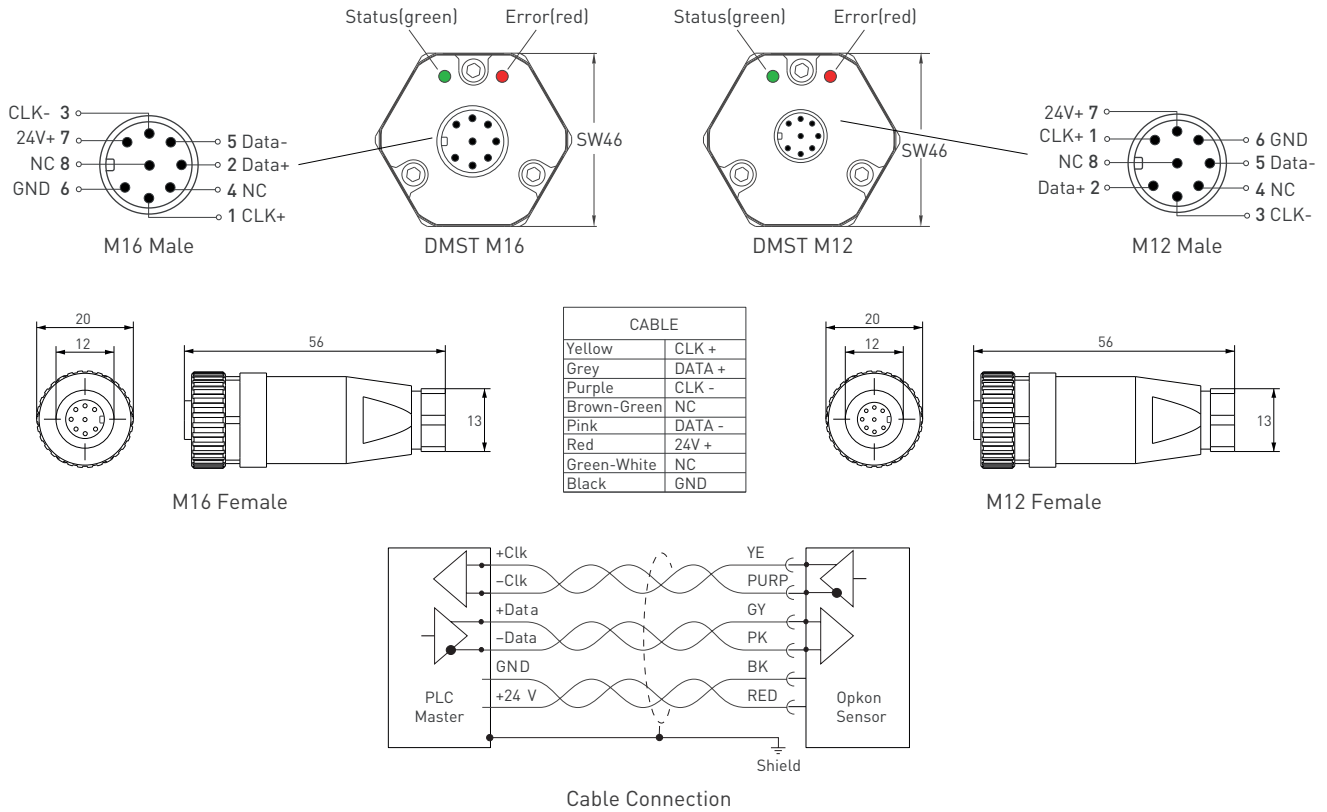
Technical Specifications	
Measurement stroke	100 - 5000 mm
Resolution	25µm (100mm-400mm), 50µm (450mm-3000mm), 100µm (4000mm-5000mm)
Repeatability	100 µm
Output	SSI
Power supply	24 VDC ±10%
Displacement speed	max. < 5 m/s
Sampling rate	Up to 2 KHz (depending on stroke length)
Max. consumption	<100 mA (depending on stroke length)
Linearity	100 mm < %1, 100-300 mm < %0.2, 300-500 mm < %0.1, 500-5000 mm > %0.05
Reverse polarity protection	Up to -30 VDC
Overvoltage protection	Up to +30 VDC
Update time	1 ms (at 1Mb/s)
Interface	RS422 / RS485 SSI - Gray SSI - Binary
Baud rate	max. 1Mbit sec.
Diagnostic LEDs	Green led : Power on, BUS communication active Red led : Error, Stop mode
Protection level	IP 65
Operating temperature	-10°C ... +70°C
Storage temperature	-30°C ... +90°C

**Mechanical Specifications**

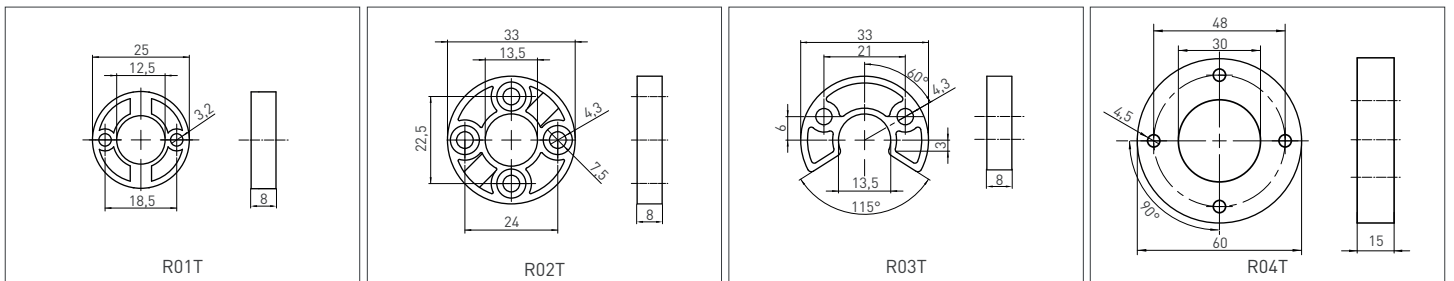


DMST (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400	1500	1750	2000	2250	2500	3000	4000	5000	
ML (Measuring Length)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400	1500	1750	2000	2250	2500	3000	4000	5000	
IL (Installation Length)	198	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1098	1198	1298	1398	1498	1598	1848	2191	2441	2691	3211	4211	5211	
L (Total Length)	348	398	448	498	548	598	648	698	748	798	848	898	948	998	1048	1098	1148	1248	1348	1448	1548	1648	1748	1998	2341	2591	2841	3361	4361	5361	
Dead Zone Calculation	37/53																														

## Connection



## Cursor



## Ordering Procedure

Model	Measurement stroke	Rod & Thread	Sealing Surface	Protokol	CRC-Check	Format	Data-length	Cursor	Connector / Cable	Dead Zone
DMST	150	E12	S	SSI	0	G	16D	1R02T	CN8B	37/53
DMST	100 -5000 mm	E10 : Ø10 , M18x1,5 E12 : Ø12 , M18x1,5 U10 : Ø10 , 3/4"-16 UNF U12 : Ø12 , 3/4"-16 UNF	S: O-ring F: Flat	SSI : SSI	0: No CRC 5: 5 bit CRC 6: 6 bit CRC 16: 16 bit CRC	G: Gray B: Binary	16D : 16 bit 24D : 24 bit 25D : 25 bit 26D : 26 bit	1R01T: 25 mm 1R02T: 33 mm 1R03T: 33 mm 1R04T: 60 mm	1M : 1 meter 2M5 : 2,5 meter 5M : 5 meter CN8A : M12 CN8B : M16	≤ 2000 mm 30/53 37/53 47/53 57/53 67/53 77/53 30/60 51/63 > 2000-3000 mm 130/53 > 3000-5000 mm 150/53

\* T-coded sensors are used with T-coded cursors.