

Profibus-DP Interface



Descriptions:

Complying with Profibus-DP (EN50170) agreement. The sensor transmitted absolute positioning data to the controller by RS-485 SSI, the max. speed of which is 12 Mbps. The Profibus interface includes Siemens bus controller SPC3.

Features:

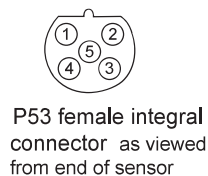
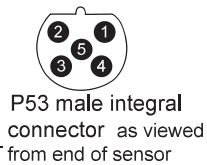
- High resolution Profibus-DP interface
- CE Certification
- Bear 340bar absolute pressure

Technical Parameters:

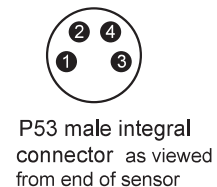
| | |
|-------------------|---|
| Type | EL...M-R.10-M.-P53-P.. |
| Output | Profibus-DP |
| Measuring Range | 50...3000mm |
| Repeatability | ±0.002%FS or as same as resolution |
| Resolution | 5µm or set in GSD file |
| Work Temperature | |
| Head Part | -40°C to +85°C |
| Pole Part | -40°C to +100°C |
| Null Zone | 50.8mm (rod style), 28mm (profile style) |
| Dead Zone | 63.5mm (rod style), 66mm (profile style) |
| Work Voltage | 24VDC (-15%~+20%) |
| Work Current | < 90mA (according to the range) |
| Protection Degree | IP65/67 |
| Response Time | Generally ≤2ms, according to the range |
| Head | Hexagon, 70mm long, Face to face distance 46mm |
| Non-linearity | ±0.025%FS Or ±0.07mm (whichever larger) |
| Lag | <10 µm (mechanical driving clearance not considered) |
| Store Temperature | -40°C to +120°C |
| Pressure | 340bar |
| Profile Style | Electronic head: Aluminium Rod: Aluminium housing Magnet type: Open-ring magnet |
| Rod Style | Electronic head: Aluminium Rod: Stainless steel 304L Magnet type: Ring magnet |
| Connection | Cable or connector |
| Connector | 5-pin Profibus-DP connectors |

Wiring:

| Pin No. | Cable Color | Function |
|---------|-------------|------------------------|
| 1 | - | VP+5N (Bus terminal) * |
| 2 | Green | RxD/TxD-N (Bus) |
| 3 | - | DGnd (Bus terminal) |
| 4 | Red | RxD/TxD-P (Bus) |
| 5 | Shield | Shield |



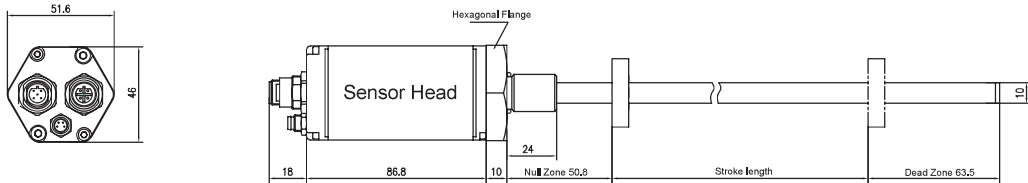
| Pin No. | Cable Color | Function |
|---------|-------------|-------------------|
| 1 | Brown | +24Vdc (-15/+20%) |
| 2 | White | n.c. |
| 3 | Blue | 0 VDC (DC ground) |
| 4 | Black | n.c. |



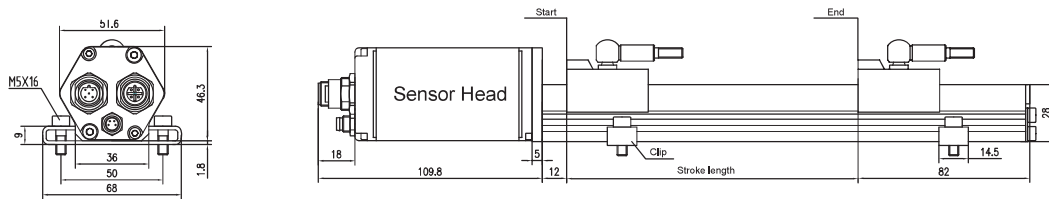
Profibus-DP Interface

Dimension:

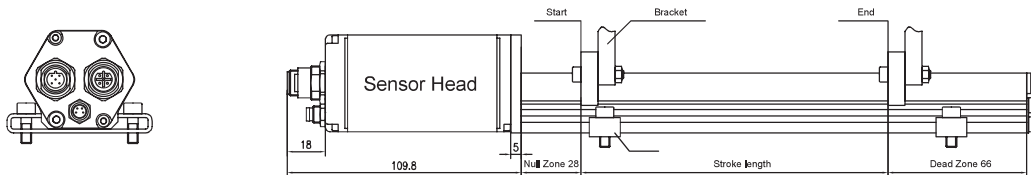
Profibus-DP Interface (RH Rod style, connector)



Profibus-DP Interface (RP Profile style Captive-sliding magnet)



Profibus-DP Interface (RP Profile style Float magnet)



Profibus-DP Interface

Profibus-DP Interface Type Ordering Code:

EL 0000 M - R H 10 - M1 - P 53 - P00 *

RANGE
4 digits, supplementing zero on the left in case of less than 4 digits
M=mm

TYPE OF SENSOR
EL=ELCO linear position sensor

SHAPE
RP= Profile style, aluminium housing
RH= Hard Measuring Rod
RF= Flexible Measuring Rod

DIAMETER OF ROD
Dia. in mm

CONNECT TYPE
P53= connectors, 4 pins-male for power supply, 5 pins-male for data, 5 pins-female for data

OUTPUT
Profibus-DP
P=Profibus-DP
00=number of cursors, 2 digits, 01-03
Interface: Profibus-DP, ISO74498
Data format: Profibus-DP (EN-50 170)
Transmission speed: Max. 12Mbit/s
Update time: 0.5ms(stroke < 1000mm)
1.0ms(stroke < 2000mm)
2.0ms(stroke < 3000mm)

ADDITIONAL CODE (FOR SPARE PARTS)
vacancy (default)= completed non-magnet spacer and ring magnet
*= without magnet spacer and ring magnet

HOUSING STYLE
For RH Rod Style only: M1= metric thread M18x1.5
M2= metric thread M20x1.5
S1 = inch thread 3/4"-16UNF-3A(flat-bottomed flange)
T1 = inch thread 3/4"-16UNF-3A (stepped flange)
For RP Profile Style only: M0 = Profile style float magnet
S0 = Captive-sliding magnet