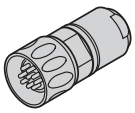
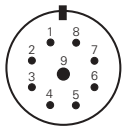
Interfaces
– Encoders

The ND and POSITIP readouts feature universal interfaces for connecting encoders from HEIDENHAIN.

Pin layout for ND 200 series ∿ 11 µA$_{PP}$

Mating connector:
9-pin M23 **connector (male)**



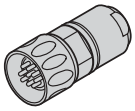


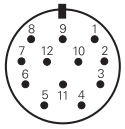
	Power supply				Incremental signals					
	3	**4**	**Housing**	**9**	**1**	**2**	**5**	**6**	**7**	**8**
	U_P	**0 V**	**External shield**	**Inside shield**	**I_{1+}**	**I_{1-}**	**I_{2+}**	**I_{2-}**	**I_{0+}**	**I_{0-}**

Shield on housing; **U_P** = power supply voltage
Vacant pins or wires must not be used!

Pin layout for ND 281 ∿ 1 V$_{PP}$

Mating connector:
12-pin M23 **connector (male)**



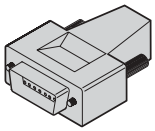


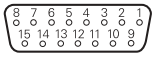
	Power supply				Incremental signals						Other signals	
	12	**2**	**10**	**11**	**5**	**6**	**8**	**1**	**3**	**4**	**9**	**7**
	U_P	**Sensor** U_P	**0 V**	**Sensor** 0 V	**A+**	**A–**	**B+**	**B–**	**R+**	**R–**	**Vacant**	**Vacant**

Shield on housing; **U_P** = power supply voltage
Sensor: The sensor line is connected in the encoder with the corresponding power line

Pin layout for ND 780 and PT 880 ∿ 1 V$_{PP}$/∿ 11 µA$_{PP}$/EnDat 2.1

Mating connector:
15-pin D-sub connector (female)





	Power supply					Incremental signals						Absolute position values			
	1	**9**	**2**	**11**	**13**	**3**	**4**	**6**	**7**	**10**	**12**	**5**	**8**	**14**	**15**
∿ **1 V$_{PP}$**	**U_P**	**Sensor** U_P	**0 V**	**Sensor** 0 V	**–**	**A+**	**A–**	**B+**	**B–**	**R+**	**R–**	**–**	**–**	**–**	**–**
∿ **11 µA$_{PP}$**					**Inside shield**	**I_{1+}**	**I_{1-}**	**I_{2+}**	**I_{2-}**	**I_{0+}**	**I_{0-}**	**–**	**–**	**–**	**–**
EnDat					**Inside shield**	**A+**	**A–**	**B+**	**B–**	**–**	**–**	**DATA**	**$\overline{\text{DATA}}$**	**CLOCK**	**$\overline{\text{CLOCK}}$**

Shield on housing; **U_P** = power supply voltage
Sensor: The sensor line is connected in the encoder with the corresponding power line