

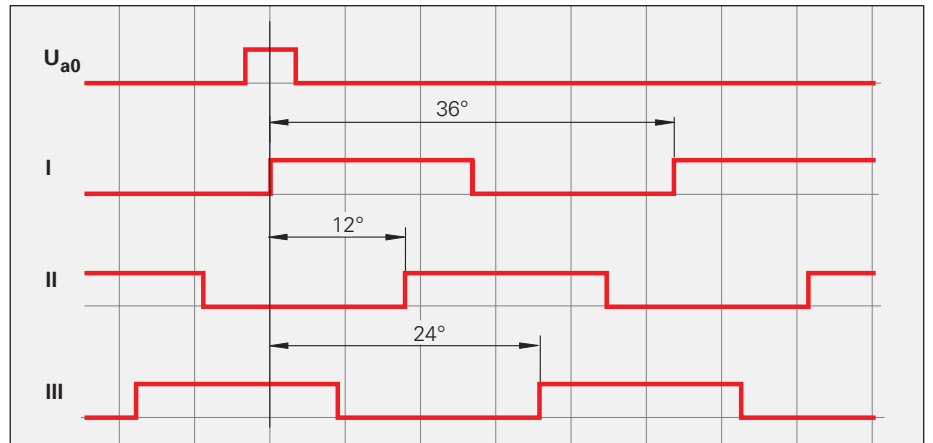
Commutation Signals for Block Commutation

The **block commutation signals I, II and III** are derived from three separate absolute tracks. They are transmitted as square-wave signals in TTL levels.

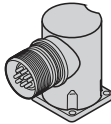

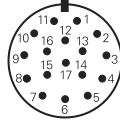

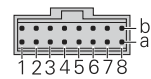



The **ERN 1326** is a rotary encoder with output signals for block commutation.




Interface	Square-wave signals \square TTL
Commutation signals	Three square-wave signals I, II, III and their inverse signals \bar{I} , \bar{II} , \bar{III}
Width	120° mech. or 90° mech. (other versions upon request)
Signal level	See <i>Incremental Signals</i> \square TTL
Incremental signals	See <i>Incremental Signals</i> \square TTL
Connecting cable	HEIDENHAIN cable with shielding PUR [4(2 x 0.14 mm ²) + 4(2 x 0.14 mm ²) + (4 x 0.5 mm ²)]
Cable length	Max. 100 m
Propagation time	6 ns/m

Example of a signal sequence for block commutation



Pin layout

17-pin flange socket M23   	16-pin PCB connector  									
					Power supply		Incremental signals			
	7	1	10	11	15	16	12	13	3	2
	1b	2b	1a	/	5b	5a	4b	4a	3b	3a
	U _P	Sensor U _P	0V	Inside shield	U _{a1}	\bar{U}_{a1}	U _{a2}	\bar{U}_{a2}	U _{a0}	\bar{U}_{a0}
	Brown/ Green	Blue	White/ Green	/	Green/ Black	Yellow/ Black	Blue/ Black	Red/ Black	Red	Black

	Other signals						
	4	5	6	14	17	9	8
	2a	8b	8a	6b	6a	7b	7a
	\bar{U}_{aS}	I	\bar{I}	II	\bar{II}	III	\bar{III}
	White	Green	Brown	Yellow	Violet	Gray	Pink

Cable shield connected to housing;
U_P = power supply voltage
Sensor: The sensor line is connected internally with the corresponding power line.
 Vacant pins or wires must not be used!