

Table 4-8 Assignment of the measuring system terminal X411-X416

X411-X416					
Pin	Name	Type	Pin	Name	Type
1	PENC1/2	VO	14	PENC1/2	VO
2	M (GND)	V	15	ENCDAT _i	B
3	AP _i	I	16	M (GND)	V
4	AN _i	I	17	RP _i	I
5	M (GND)	V	18	RN _i	I
6	BP _i	I	19	CP _i	I
7	BN _i	I	20	CN _i	I
8	M (GND)	V	21	DP _i	I
9	Not assigned	–	22	DN _i	I
10	ENCCLK	O	23	XENCDAT _i	B
11	Not assigned	–	24	M (GND)	V
12	XENCCLK	O	25	THMOTCOM	I
13	THMOT _i	I			

Signals with a gray background are not assigned when connecting direct measuring systems.

Signal names

<Signal name>_i means signal of the measuring system *i* with *i* = 1, ..., 6

PENC1/2	Encoder power supply (PENC1: X411-X413, PENC2: X414-X416)			
AP _i	Incremental signal A	BP _i	Incremental signal B	
AN _i	Incremental signal $\bar{A}$	BN _i	Incremental signal $\bar{B}$	
ENCCLK	BMI clock signal	RP _i	Incremental signal R	
XENCCLK	BMI clock signal	RN _i	Incremental signal $\bar{R}$	
THMOT _i	Motor temperature	CP _i	Incremental signal C	
ENCDAT _i	BMI data signal	CN _i	Incremental signal $\bar{C}$	
XENCDAT _i	BMI data signal			
DP _i	Incremental signal D			
DN _i	Incremental signal $\bar{D}$ (not for direct meas. system)			
XBMI DAT	BMI data signal			
THMOTCOM	Motor temperature			

Note

The encoder power supply is not stabilized; that means: no remote/sense operation. This limits the encoder cable length.

- EQN 1325: ≤ 18 m
- ERN 1387: ≤ 25 m
- Non-Siemens encoder with power consumption ≤ 300 mA: ≤ 18 m