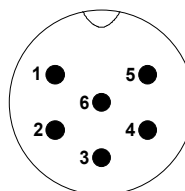


Operating manual for: **Px-x-xxxxM-Pxx-1-C207**
Px-x-xxxxM-D6x-1-C207
Rx-x-xxxxM-Pxx-1-C207
Rx-x-xxxxM-D6x-1-C207

Release: 06/98

Connecting diagram:

- 1 – gray: CAN_L (dominant low)
- 2 – pink: CAN_H (dominant high)
- 5 – brown: +24V DC
- 6 – white: 0V



List of Commands, Data Length Codes and Dataformats

Parameter	Function	COB-Id	DLC	Command/Data
Nodeidentifier	request	2021 (7E5)	5	01, SS, SS, SS, SS
	program	2021 (7E5)	6	02, SS, SS, SS, SS, XX
Positionidentifier	request	2026 (7EA)	2	NId, 01
	program	2026 (7EA)	4	NId, 02, XX, XX
Statusidentifier	request	2026 (7EA)	2	NId, 03
	program	2026 (7EA)	4	NId, 04, XX, XX
Number of magnets	request	2026 (7EA)	2	NId, 05
	program	2026 (7EA)	3	NId, 06, XX

SS, SS, SS, SS - Serialnumber;

NId - Nodeidentifier;

XX - Userdata

Explanation of Programming

During the installation or the programming of new data the transducer works as a slave. After each programming instruction the transducer answers with a recognition string so that the PLC can verify if the transducer gets the right information.

During the normal operating the parameter needn't to be programmed after the power up, because the parameter are stored in an EEPROM.

The position- and statusinformation must be polled from the PLC using *Remoteframes* on the positionidentifier or statusidentifier.

Nodeidentifier

The nodeidentifier is used for the fast and easy response of the CAN clients. Each CAN client gets his own nodeidentifier. This identifier is programmed during installation by using the serial number of the transducer (printed on transducer label). The serial number must be send in the following way:

serial number on transducer label: i.e. FNr.: 97020235

serial number for communication protocol: 97 02 02 35

Example of requesting the nodeidentifier (SN = 97020235; NId = 03)

Source	COB-ID	Data	Destination
Controler	2021	01; 97; 02; 02; 35	Transducer
Transducer	2020	01; 97; 02; 02; 35; 03	Controler

Example of programming the nodeidentifier (SN = 97020235; NId = 04)

Source	COB-ID	Data	Destination
Controler	2021	02; 97; 02; 02; 35; 04	Transducer
Transducer	2020	02; 97; 02; 02; 35; 04	Controler

Positionidentifier

The positionidentifier is the identifier with which the transducer sends his position data on the CAN bus. The position data must be read by using a *remote frame* on the position identifier. The positionidentifier determines the priority of the message. A message with a low identifier has higher priority than a message with a high identifier.

After receiving the Position Remote the transducer will send back the whole position package as a fragmented protocol.

Example of requesting the positionidentifier (NId = 04; PosId = 1E5)

Source	COB-ID	Data	Destination
Controler	2026	04; 01	Transducer
Transducer	2025	04; 01; 01; E5	Controler

Example of programming the positionidentifier (NId = 04; PosId = 13F)

Source	COB-ID	Data	Destination
Controler	2026	04; 02; 01; 3F	Transducer
Transducer	2025	04; 02; 01; 3F	Controler

Statusidentifier

The statusidentifier is the identifier with which the transducer sends his status information, as for example transducer fault or wrong number of magnets. The status information must be read by using a *remote frame* on the status identifier. The statusidentifier determines the priority of the message. A message with a low identifier has higher priority than a message with a high identifier.

Example of requesting the statusidentifier (NId = 03; StatId = 200)

Source	COB-ID	Data	Destination
Controler	2026	03; 03	Transducer
Transducer	2025	03; 03; 02; 00	Controler

Example of programming the statusidentifier (NId = 03; StatId = 200)

Source	COB-ID	Data	Destination
Controler	2026	03; 04; 02; 00	Transducer
Transducer	2025	03; 04; 02; 00	Controler

Number of magnets

It is possible to program the number of magnets which should be on the transducer. If the number of programmed magnets is not equal to the real number of magnets on the transducer, to bits in the status message will show this.

As more magnets are be programmed,as more message blocks will be send.

Example of requesting the number of magnets (NId = 04; number = 10)

Source	COB-ID	Data	Destination
Controler	2026	04; 05	Transducer
Transducer	2025	04; 05; 0A	Controler

Example of programming the number of magnets (NId = 04; number = 11)

Source	COB-ID	Data	Destination
Controler	2026	04; 06; 0B	Transducer
Transducer	2025	04; 06; 0B	Controler

Statusinformation

The statusinformation must be polled from the PLC by using a *Remoteframe* on the statusidentifier.

The statusinformation looks like follows:

B7	B6	B5	B4	B3	B2	B1	B0
x	x	M+	M-	x	x	SE	SW

SW: Status Transducer
0 = transducer ok
1 = transducer fault

SE: Status EEPROM
0 = checksumm ok
1 = checksummm fault

M+ und M-: Number of magnets
0 = Number of magnets on the transducer ok
1 = less magnets than programmed
2 = more magnets than programmed

Position message format

The position information are send as a messageblock, with x different blocks. The number of messageblocks results from the programmed number of magnets.

The blocks will be send as:

Block 1 of x, block 2 of x, ... , block x of x

Function	Direction	COB	DLC	Data
Position magnet 1 + 2	Tr->PLC	PosId	8	01,0F,M1,M1,M1,M2,M2,M2
Position magnet 3 + 4	Tr->PLC	PosId	8	02,0F,magnet 3, magnet 4
Position magnet 5 + 6	Tr->PLC	PosId	8	03,0F,magnet 5, magnet 6
Position magnet 7 + 8	Tr->PLC	PosId	8	04,0F,magnet 7, magnet 8
:				
Position magnet 29 + 30	Tr->PLC	PosId	8	0F,0F,magnet 29, magnet 30



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