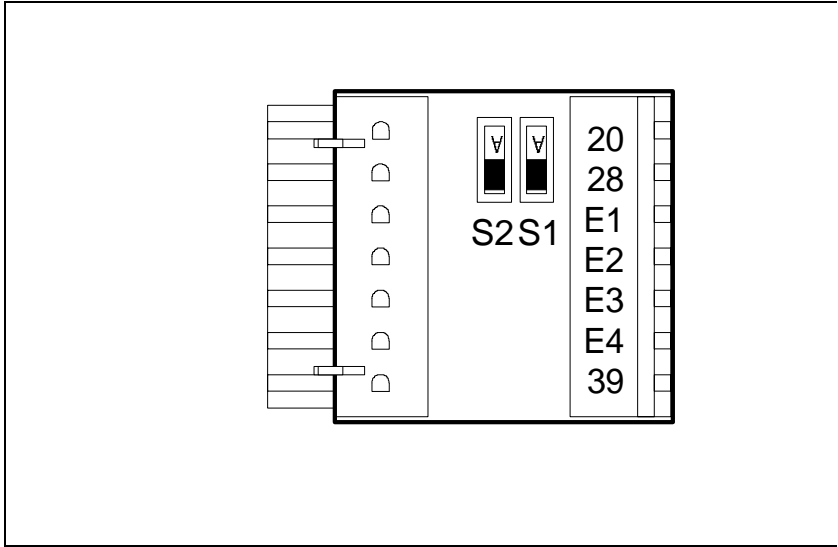


EDB8274UB  
00391883

# Lenze

## *Operating Instructions*



*PTC module*  
*Type 8274IB*



These Operating Instructions are valid for modules with the following nameplate data:

8274IB .0x

combined with the units

8200\_E .xx .xx

8210\_E .xx .xx

Type

Enclosure

Hardware version + index

Software version + index

**Important:**

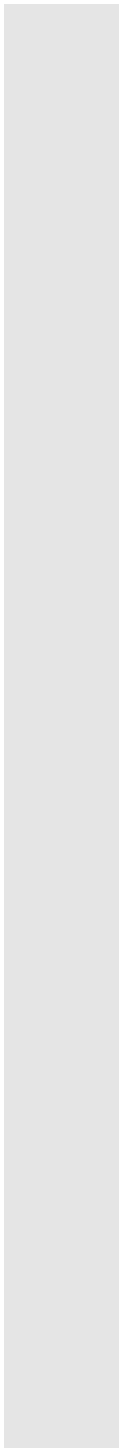
**These Operating Instructions are only valid in connection with the Operating Instructions for the basic units of the 8200, 821x series.**

Corresponds to the German edition of 20/08/1996

Edition of: 22/08/1996

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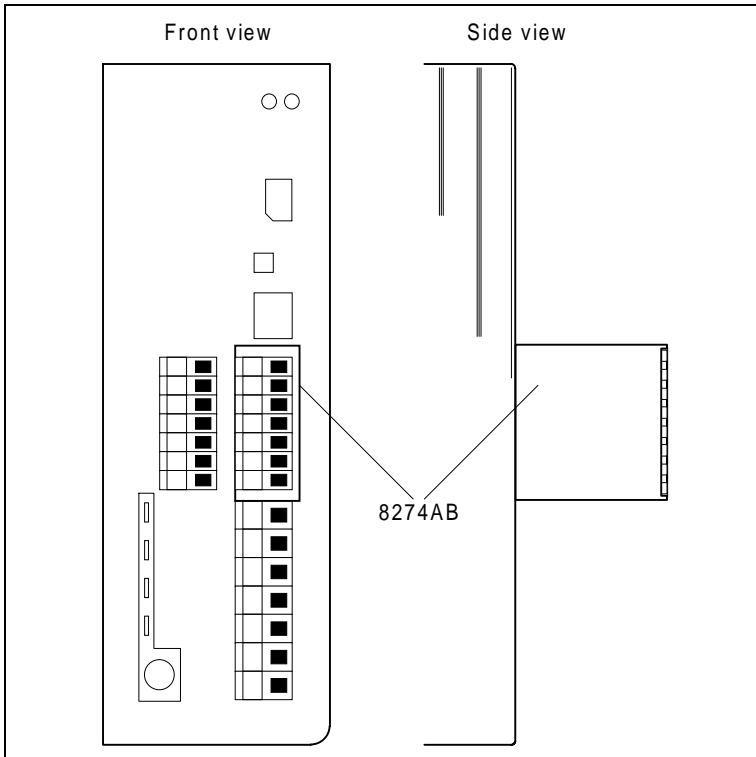
## 1. Features of the 8274AB input module

Using the PTC input module, it is possible to connect a PTC (to DIN 44081 or DIN 44082) or a thermostat for motor-temperature monitoring directly to the frequency inverter. If the permissible motor temperature is exceeded, the frequency inverter will be set to "EER" (external trip) and electronically inhibited.

The fault is displayed as EER via the 8201BB operating keypad and indicated by the flashing of the red LED in the frequency inverter. The TRIP relay of the frequency inverter will be activated if this fault is indicated.

This fault can be reset by inhibiting the controller enable at terminal 28 for a short time or by pressing the STP key of the 8201BB operating keypad. The auto-TRIP-reset function does not have any effect if this fault occurs.

### 1.1 View



## 2. Unit data

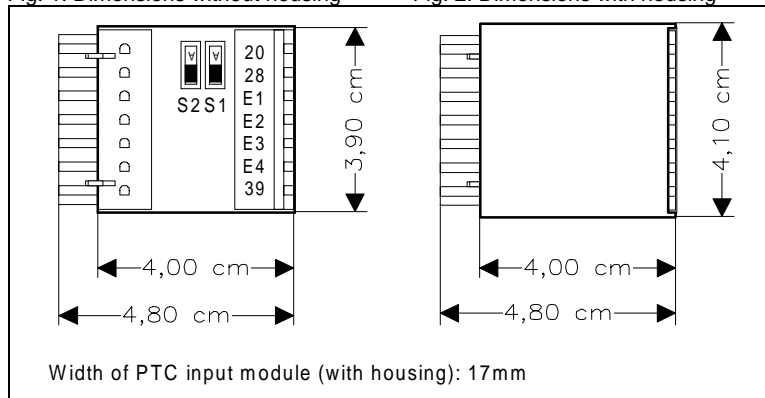
### 2.1 General data

Temperature range:	0 ... 50 °C during operation -25 ... 50 °C during storage -25 ... 70 °C during transport
External supply	VDC = 15 - 30 V DC $\pm$ 0 %
Noise immunity:	prEN 50082-2 IEC 801-2, severity 3 IEC 801-4, severity 4
Radio interference suppression:	prEN50081-2
Permissible moisture:	relative humidity 80 % no condensations
Permissible pollution:	Pollutions level 2 to VDE 0110, part 2
Permissible installation height:	up to 4000 m amsl
Immunity to vibrations:	Germanischer Lloyd, vibration test
Insulation voltage	270 V AC for control electronics / power stage with 8200 units, the potential of the digital and analog input and output terminals is connected to the inputs of the PTC input module.

### 2.2 Dimensions

Fig. 1: Dimensions without housing

Fig. 2: Dimensions with housing

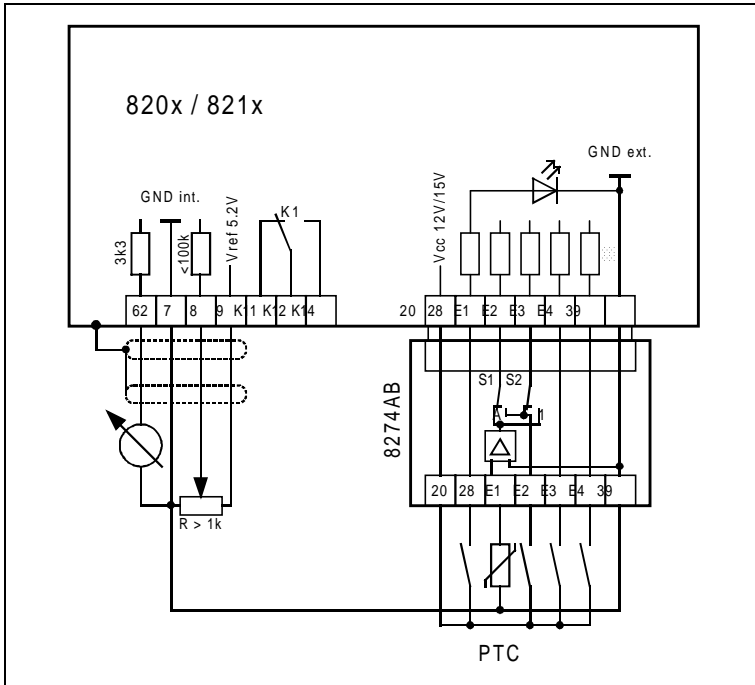


### 2.3 Assembly and installation

- Plug the PTC input module into the right terminal strip of the signal terminals (terminals 20 ... 39), For this purpose, remove the socket connector, if attached, and plug it into the terminal strip of the PTC input module. The PTC input module is to be used as an adapter for installation.
- Connect the PTC resistor between the terminals E1 and 39 to the socket connector of the PTC input module.
- The installation depth of the 820x / 821x units increases by 40 mm.

### 3. Unit connection

#### 3.1 Supply with internal control voltage



With this type of wiring, two or more wires may have to be connected to one terminal. If this is the case, it might be useful to provide an external terminal connection.

#### Caution:

Mains isolation / protection against contact

The control inputs and outputs of all unit types are free of potential. For protection against contact please observe the following:

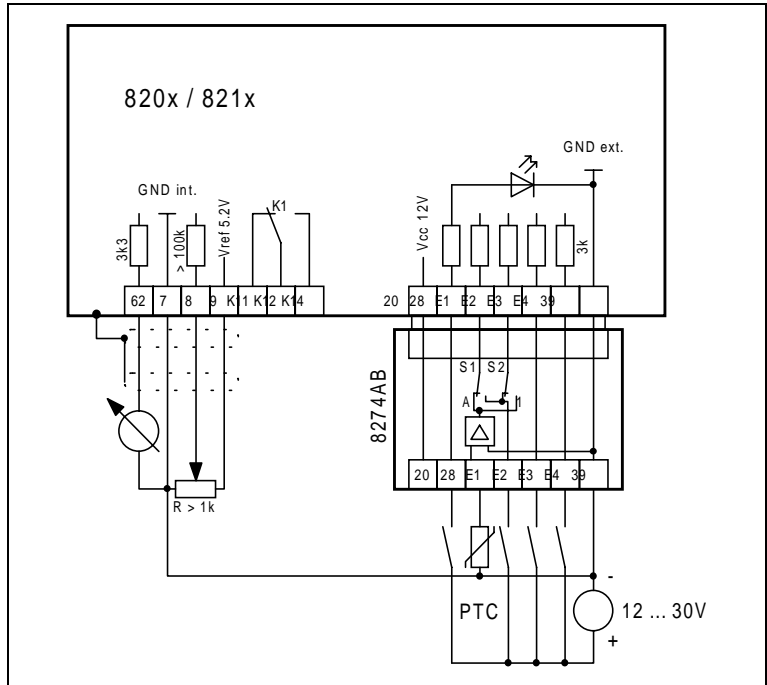
#### 820x and 821x units

The control connections have a basic isolation (single insulating distances)

To ensure protection against contact

- a double insulation is required.
- the components to be connected must have the second insulating distance.

### 3.2 Supply with external control voltage (12 ... 30 V)



With this type of wiring, two or more wires have to be connected to one terminal. If this is the case, it might be useful to provide an external terminal connection.

#### Caution:

Mains isolation / protection against contact

The control inputs and outputs of all unit types are free of potential. For protection against contact please observe the following:

#### 820x and 821x units

The control connections have a basic insulation (single insulating distances)

To ensure protection against contact









- a double insulation is required.
- the components to be connected must have the second insulating distance.



## 4. Terminal assignment

Configure the inputs E1 to E4 via parameter C007 of the frequency inverter and the two program switches of the PTC input module according to the following table. The PTC input cannot be used for other configurations.

Remove the housing of the PTC input module to actuate the program switches.

C007	E4	E3	E2	E1	Switch position S1/S2	Your settings
-5-	CW/ CCW	DC brake	JOG1	PTC		
-6-	CW/ CCW	PAR	JOG1	PTC		
-7-	CW/ CCW	PAR	DC brake	PTC		
-8-	CW/ CCW	QSP	PAR	PTC		
-9-	CW/ CCW	QSP	JOG1	PTC		
-18-	CCW/ QSP	CW/ QSP	PAR	PTC		
-19-	CCW/ QSP	CW/ QSP	DC brake	PTC		
-20-	CCW/ QSP	CW/ QSP	JOG1	PTC		

The PTC input cannot be used for the following values of C007:

**C007 = -0- to -4-/and -10- to -17-/and -24- to -22-**

Factory setting:



## 5. Adaptability to 8200 / 8210 frequency inverters

### 5.1 Function reduction of the frequency inverter

The following functions, described in the Operating Instructions of the basic inverter, are not possible when combining the inverter with the 8274AB PTC input module:

- TRIP set as single function
- Motor-potentiometer function

### 5.2 Function restriction of the frequency inverter

The following function is restricted:

- Only the first JOG value can be accessed.

### 5.3 Combination with other expansion modules

- The other extension modules for the 82xx units can be used without any restriction. When using the 8275IB "I/O module", this function of the PTC input is implemented.
- All 820x / 821x units can be retrofitted with this option.

## 6. Troubleshooting

### The PTC input module sets TRIP in the basic unit

Meaning: PTC monitoring has detected a fault

Check the following fault causes:

#### 1. Terminals E1 and 39 are not connected

Remedy: Connect terminals E1 and 39 to the PTC resistor or thermistor of the motor.

If temperature monitoring is not requested, directly connect terminals E1 and 39.

#### 2. PTC line interrupted

Remedy: Check whether the PTC circuit is interrupted. If the PTC line is disconnected, the typical resistance of the cold motor-PTC is between 0  $\Omega$  and 1.4 k $\Omega$ , with thermostats it is approx. 0  $\Omega$ .

#### 3. Connected motor overheated

Remedy: Check drive selection.

Check motor cooling.

Check parameter setting (motor excitation or voltage characteristic) of inverter.

### **Despite an open PTC input, the PTC input module does not set TRIP in the basic unit**

Meaning: Faulty programming of the basic unit or wrong switch position of the PTC input module.

Check the following fault causes:

1. Faulty parameter setting of the basic unit.  
Remedy: Set the parameters under C007 of the basic unit according to table 4.1.
2. Wrong program-switch position.  
Remedy: Actuate the program switches on the PTC input module according to table 4.1.

### **The function of the digital input E2 does not correspond to the description**

Meaning: Faulty programming of the basic unit or wrong switch position of the PTC input module.

Check the following fault causes:

1. Faulty parameter setting of the basic unit.  
Remedy: Set the parameters under C007 of the basic unit according to table 4.1.
2. Wrong program-switch position.  
Remedy: Actuate the program switches on the PTC input module according to table 4.1.

