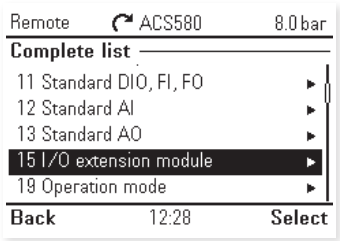
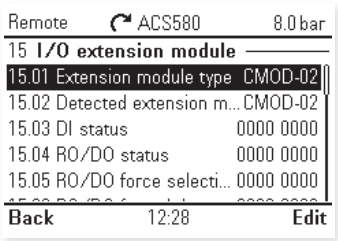
Monitoring temperature using the CMOD-02 module

1a) If the CMOD-02 module is used to measure the temperature, first “Parameters” and then “Complete list”. Find parameter group 15 I”/O extension module” and...
1b) ... make sure that the values of parameters 15.02 and 15.01 are both set to “CMOD-02”.

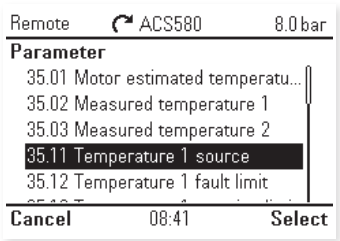


1a)



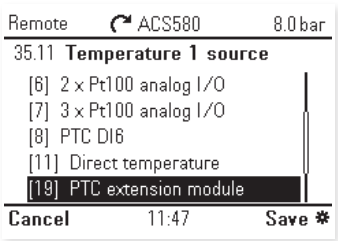
1b)

2) In parameter group 35, the user can define the source for the monitored temperature and set fault limits for the temperature.
To define the source select either “Temperature 1 source” or “Temperature 2 source”.



2)

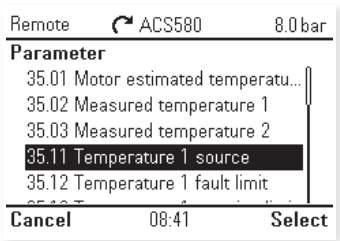
3) Having selected the source, go down the list and select “PTC extension module” and click “Save”.



3)

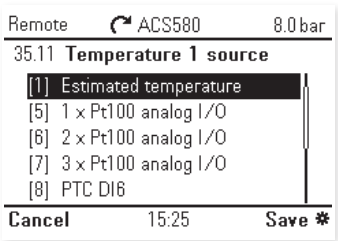
Monitoring temperature using a direct connection to the control terminals

4) If the temperature monitoring sensors are connected directly to the control terminals, select the source for the measured temperature, for example “Temperature 1” or “Temperature 2”, in parameter group 35.



4)

5) After selecting either Temperature 1 or Temperature 2, define the kind of sensor/(s) to be used and click “Save”.



5)

How do I use the ACS580's features and customer benefits?

Activating the temperature monitoring graph

1) To monitor the temperature in real time click, the right arrow twice on the Home view and then select "Options".

2a) Select "Edit home view" and...
2b) ... then "Edit".

3) Edit "Parameter" to select which parameter is monitored.

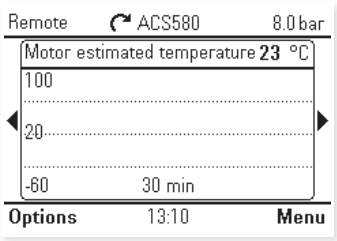
4) Select "Other" and then select the desired parameter.

5a) In the case of the motor temperature monitoring, go to parameter group 35 and select, for example, ...
5b) ... "Motor estimated temperature" or "Measured temperature 1".

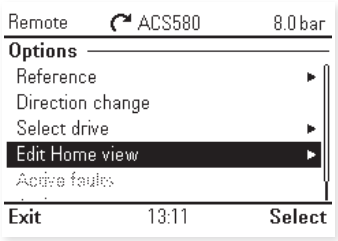
6) In the Display slot, the user can select the display style, and minimum and maximum values for the graph as well as scale the value range.

7) In the case of the measured temperature, ensure that you have defined the source for the temperature. To define the source, select "Parameters" from the main menu and then "Complete list". Go to parameter group 35 and define the source, for example, in parameter 35.11 "Temperature 1 source".

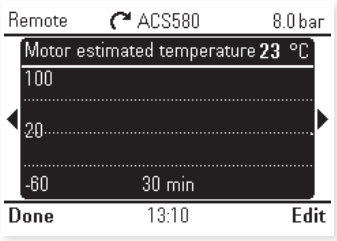
8) Select the source parameter and choose the correct description for the source from the list and finally click "Save".



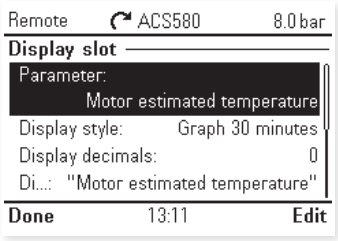
1)



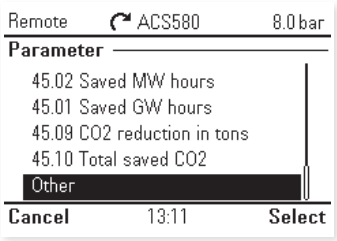
2a)



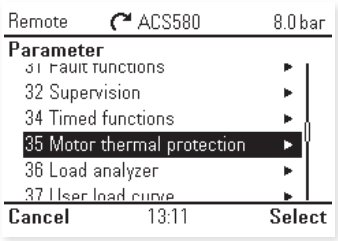
2b)



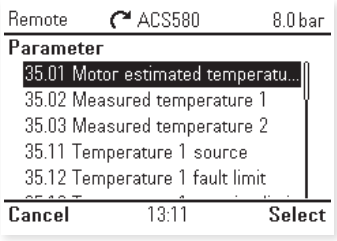
3)



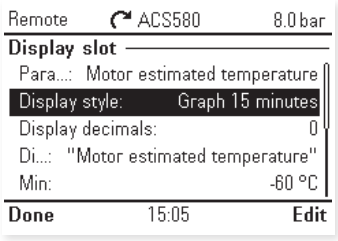
4)



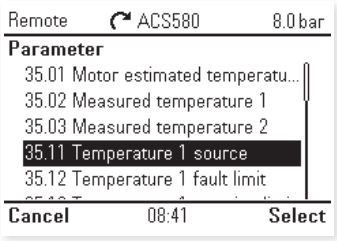
5a)



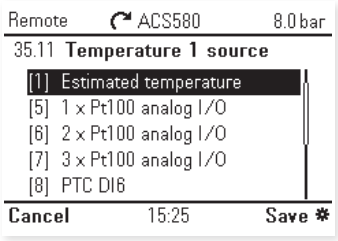
5b)



6)



7)



8)

ATEX-approved module for monitoring temperature in potentially explosive environments
The ACS580 general purpose drives can be ordered with an ATEX-approved temperature monitoring module, called the CPTC-02 module, if the motor is being run in a potentially explosive environment. In these circumstances, if the motor temperature rises above the PTC sensor limit temperature, the sensor resistance increases very sharply, which indicates overheating to the CPTC-02 module. The module switches the safe torque off (STO) circuit off, which activates the STO function. The STO function disables the control voltage in the power semiconductors of the drive output stage. This prevents the drive from generating the torque required to rotate the motor.

The module has reinforced insulation between the motor thermistor connection and the other terminals. The insulation forms a reliable protective separation between the main circuit of the motor and the drive control board. Safety function selection and configuration is done with the drive's control panel or with the Drive composer PC tool.

For more information, refer to the user's manual for the CPTC-02 ATEX-certified thermistor protection module, Ex II (2) GD (+L537+Q971).

Did you know?

If motors are used in applications in a potentially explosive environment, ACS580 general purpose drives can be ordered with an ATEX-certified thermistor protection module option. The ATEX-approved CPTC-02 module includes a PTC sensor input that executes the SIL/PL capable safe motor temperature safety function by activating the drive's STO.

CPTC-02



Safety function compliance	Safe motor temperature (SMT) safety function according to EN/IEC 61800-5-2. EN/IEC 61800-5-2, IEC 61508 ed. 2, IEC 61511: SIL 2 capability. EN ISO 13849: PL c (Cat.1). EN 50495:2010.
Product compliance	Machinery Directive 2006/42/EC and ATEX Directive 2014/34/EU
Certificates	TÜV Nord (Functional Safety) VTT expert services Ltd (ATEX)
Ordering codes	+L537 and +Q971 for the ATEX-certified thermistor protection module CPTC-02