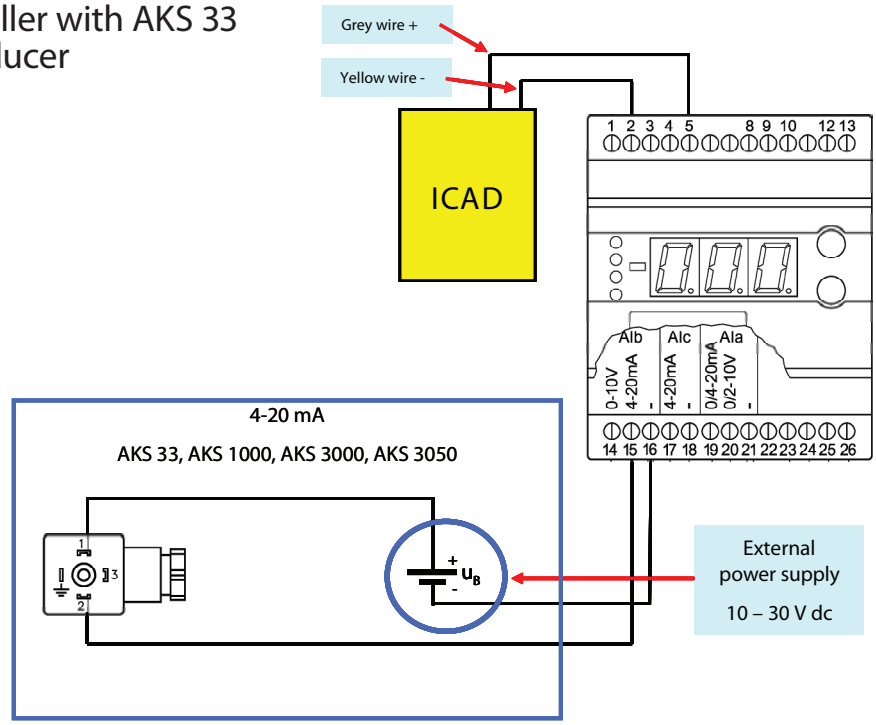
ICM/T valve with ICAD motor control using a pressure input signal

Several times recently I have been asked to supply an ICM/T valve with ICAD motor used as a pressure regulator. In 2 instances customers had already purchased an EKC 361 thinking that is what was required.
The EKC 361 can only regulate against a PT 1000 Temperature signal, and therefore is not suitable for pressure regulation.
For this type of application the EKC 347 controller can be used. The EKC 347 controller can take a 4-20mA signal which is normally supplied via the AKS 41 Capacitive Rod. However, by using a pressure transducer such as an AKS 33, in place of a rod, the controller will then drive the ICM under the dictates of the pressure transducer. The EKC 347 set point setting ranges from 0 – 100% which spans the range of the fitted AKS transducer. ie A transducer with the range of 0 – 25 Bar will then give a signal of 4 mA at 0 Bar and 20mA at 25 Bar. For a control set point of say 10 Bar the set point on the EKC 347 would be 40% and so on. Also with the EKC 347 you have the opportunity of modulating the valve either on a rise in pressure or a fall in pressure depending if the EKC 347 is set for HP or LP Function (Parameter n35) i.e. if set to HP control the valve will open on a pressure increase.
In the current loop between the EKC 347 and the AKS 33 Transducer an external dc power supply of 15 -30 volt must be inserted, to give the transducer power to be able to give its current out put signal. When connecting the power supply and the transducer to the EKC the voltage polarity must be observed and adhered too. Fine adjustment of both the EKC 347 and the ICAD parameters may be required to gain the control stability required.

EKC 347 Controller with AKS 33 Pressure Transducer



'Field Service Notes' are produced by Glenn K Moore
Field Support Manager, Danfoss Ltd.
E-mail glenn.moore@danfoss.com