Honeywell

ST 3000 Meter Conversion Kit Instruction

34-ST-33-20B
4/5/95

Meter Conversion Kit Instruction

Overview

Summary of kit components

The kits listed in Table 1 include the components you need to add an integrally mounted, local analog, digital (DE), or smart (analog/digital) indicating meter to your Series 100e, 100, 600, or 900 ST 3000 pressure transmitter.

Table 1 Summary of Meter Conversion Kits

Kit Part Number	Meter Type	ST 3000 Transmitter Series	Reference Procedure
30756168-001	Analog	100	A
30756168-002	Digital	100	B
30756168-003	Analog	600	A
30756168-004	Digital	600	B
30756168-005	Smart	100	C
30756168-006	Smart	600	C
30756168-007	Analog	900	A
30756168-008	Smart	900	C
30756168-009	Analog	100e	A
30756168-010	Smart	100e	C

Check your kit number with the data in Table 1 to be sure you have the correct kit for your given transmitter. Refer to the procedure listed in the table to install the kit components.

CAUTION

These replacement kits have not been certified by Factory Mutual or Canadian Standards Association for installation in the field. Installing a kit on a transmitter that has either of these certifications will **VOID** the approval.

Tools required

6-inch, straight-slot screwdriver

Procedure A — Installing an Analog Meter Kit

Procedure for Series 100 and 600

The following procedure for installing an analog meter kit applies only to Series 100 and Series 600.

1	Remove power from transmitter.
2	Loosen end cap lock and remove shorter end cap from electronics housing to expose terminal block connections.
3	Remove metal jumper strap from between METER terminals on terminal block.
4	Connect yellow lead from meter to – METER terminal and red lead to + METER terminal. **ATTENTION** Check the connections you just made to be sure that the polarity is correct and the terminal screws are tight.
5	Orient meter so that the meter scale is properly positioned for correct viewing and press three plastic legs on meter into corresponding holes in terminal block. Note that the fourth (or upper leg) will not seat in terminal block.
6	Replace original end cap removed in step 2 with meter end cap from kit. Screw end cap onto electronics housing and tighten end cap lock.
7	Reapply power and check that meter indicates proper output signal level.

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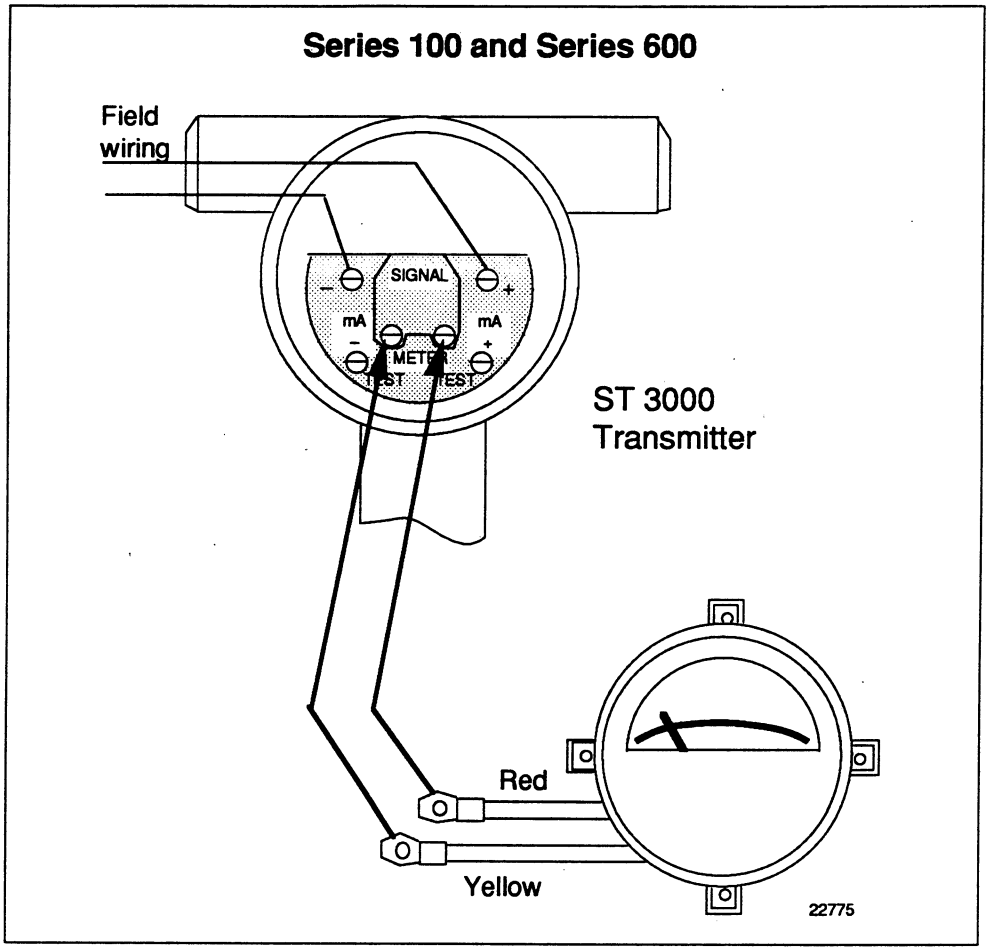
Illustration of analog meter connection for Series 100 and 600

Figure 1 shows how to connect the analog meter across the METER terminals for the Series 100 and Series 600.

Figure 1 Connect analog meter across METER terminals — Series 100 and Series 600



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Procedure for Series 100e / 900

The following procedure for installing an analog meter kit applies to Series 100e and Series 900.

1	Remove power from transmitter.
2	Loosen end cap lock set screw and remove terminal end cap from electronics housing to expose terminal block connections.
3	Remove metal jumper strap from between METER terminals on terminal block.
4	Connect yellow lead from meter to – METER terminal and red lead to + METER terminal. **ATTENTION** Check the connections you just made to be sure that the polarity is correct and the terminal screws are tight.
5	Orient meter so that the meter scale is properly positioned for correct viewing and snap plastic legs on meter into corresponding slots in the terminal cover.
6	Replace original end cap removed in step 2 with meter end cap from kit. Screw end cap onto electronics housing and tighten end cap lock set screw.
7	Reapply power and check that meter indicates proper output signal level.

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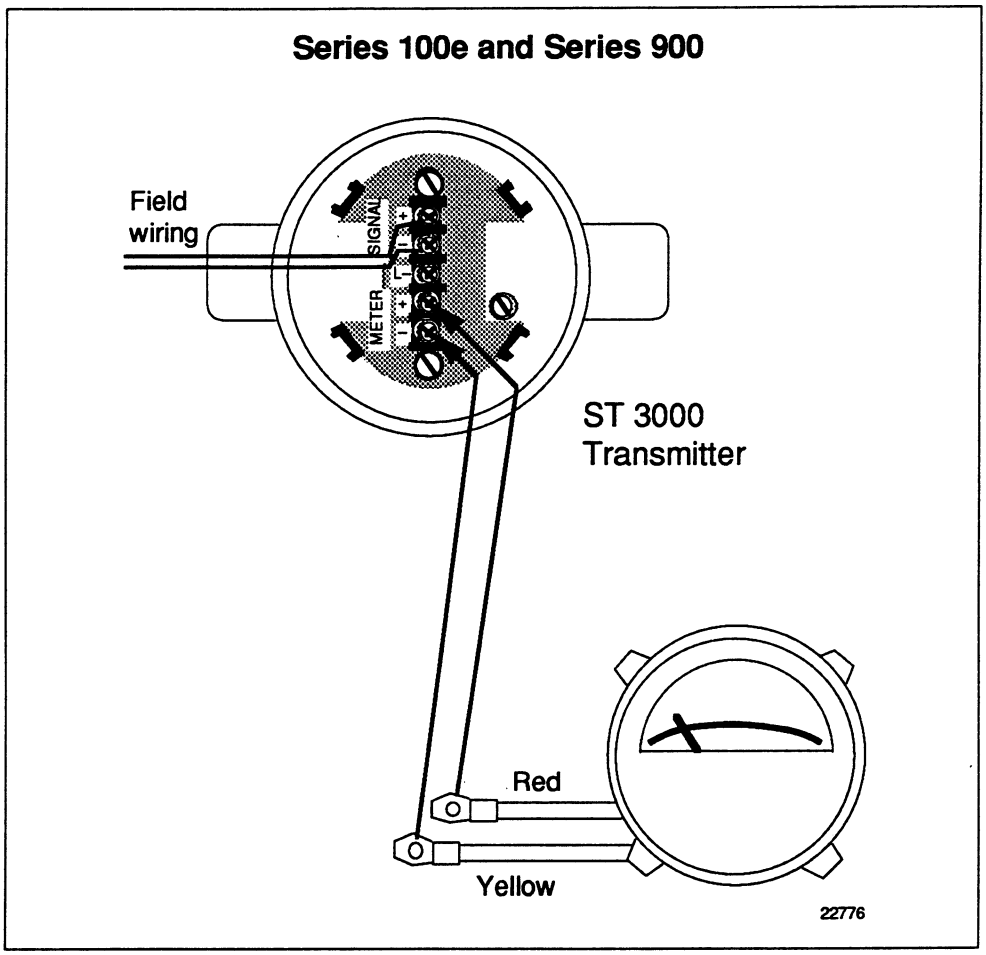
Illustration of analog meter connection for Series 100e / 900

Figure 2 shows how to connect the analog meter across the METER terminals for the Series 100e and Series 900.

Figure 2 Connect analog meter across METER terminals — Series 100e and Series 900



Procedure B — Installing a Digital (DE) Meter Kit

Procedure

The following procedure for installing a digital (DE) meter kit applies to Series 100 and Series 600.

1	Remove power from transmitter.
2	Loosen end cap lock and remove shorter end cap from electronics housing to expose terminal block connections.
3	Be sure metal jumper strap is in place between METER terminals on terminal block. This jumper must remain in place.
4	Connect yellow lead from DE meter to – SIGNAL terminal and red lead to + SIGNAL terminal. Never connect DE meter leads to terminals marked METER on terminal block. **ATTENTION** Check the connections you just made to be sure that the polarity is correct and the terminal screws are tight.
5	Orient meter so that the meter scale is properly positioned for correct viewing and press three plastic legs on meter into corresponding holes in terminal block. Note that the fourth (or upper leg) will not seat in terminal block.
6	Replace original end cap removed in step 2 with meter end cap from kit. Screw end cap onto electronics housing and tighten end cap lock.
7	Reapply power and check that meter indicates proper output signal level. **WARNING** **If the transmitter is being calibrated or used in the analog mode, you must disconnect the DE meter or it will cause a 5% transmitter error.**

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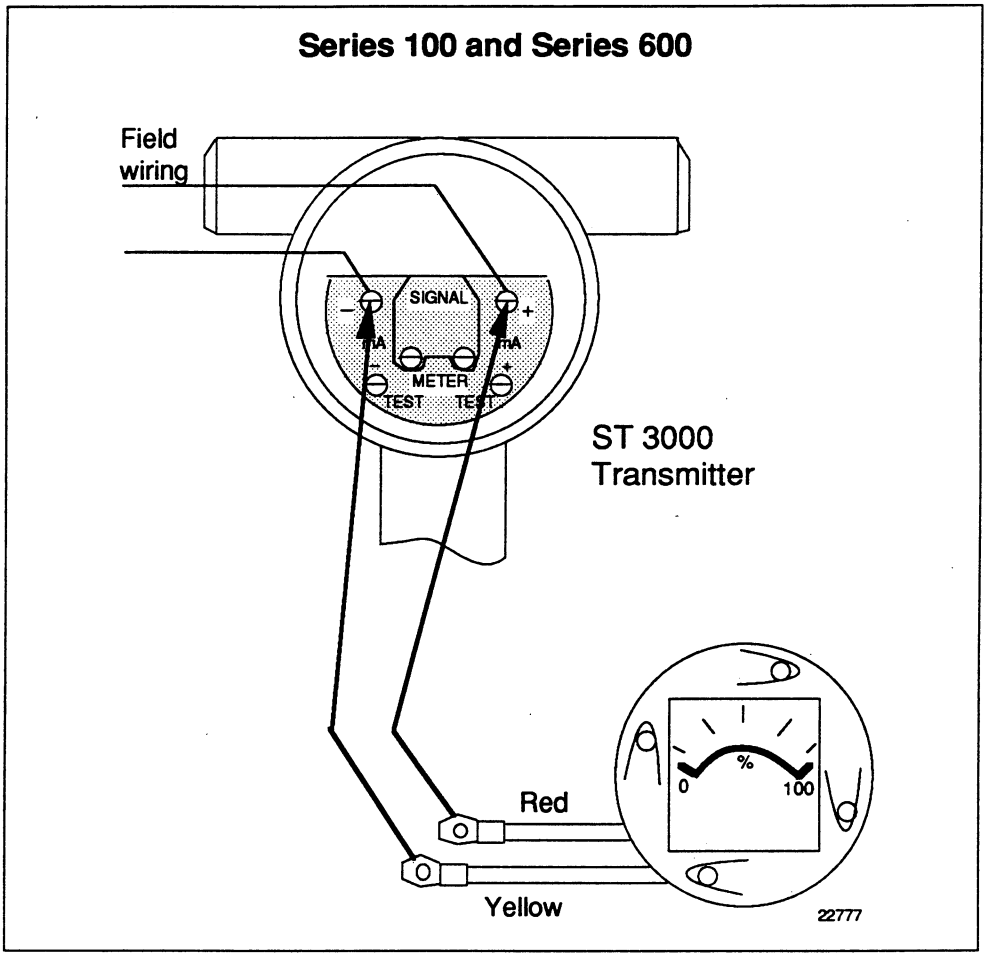
Illustration of digital meter connection

Figure 3 shows how to connect the digital meter across the SIGNAL terminals for Series 100 and Series 600 ST 3000 Transmitters.

Figure 3 Connect DE meter across SIGNAL terminals — Series 100 and Series 600



Procedure C — Installing a Smart Meter Kit

Two Procedures

Procedure C includes these two procedures:

- Procedure 1 for Series 100/600 ST 3000 Smart Transmitter
- Procedure 2 for Series 100e/900 ST 3000 Smart Transmitter

Choose the procedure that is right for your ST 3000 Series.

Procedure 1

Use the steps in this procedure to install a smart meter kit on a Series 100/600 ST 3000 transmitter.

1	Remove power from transmitter.
2	Loosen end cap lock and remove shorter end cap from electronics housing to expose terminal block connections.
3	Be sure metal jumper strap is in place between METER terminals on terminal block. This jumper must remain in place.
4	Remove field wiring connection from – (negative) terminal and connect it to screw terminal on back of smart meter.
5	Connect yellow lead from smart meter to – SIGNAL terminal and red lead to + SIGNAL terminal. Never connect smart meter leads to terminals marked METER on terminal block. **ATTENTION** Check the connections you just made to be sure that the polarity is correct and the terminal screws are tight.
6	Orient meter so that the meter scale is properly positioned for correct viewing and press three plastic legs on meter into corresponding holes in terminal block. Note that the fourth (or upper leg) will not seat in terminal block.
7	Replace original end cap removed in step 2 with meter end cap from kit. Screw end cap onto electronics housing and tighten end cap lock.
8	Reapply power and check that meter indicates proper output signal level.

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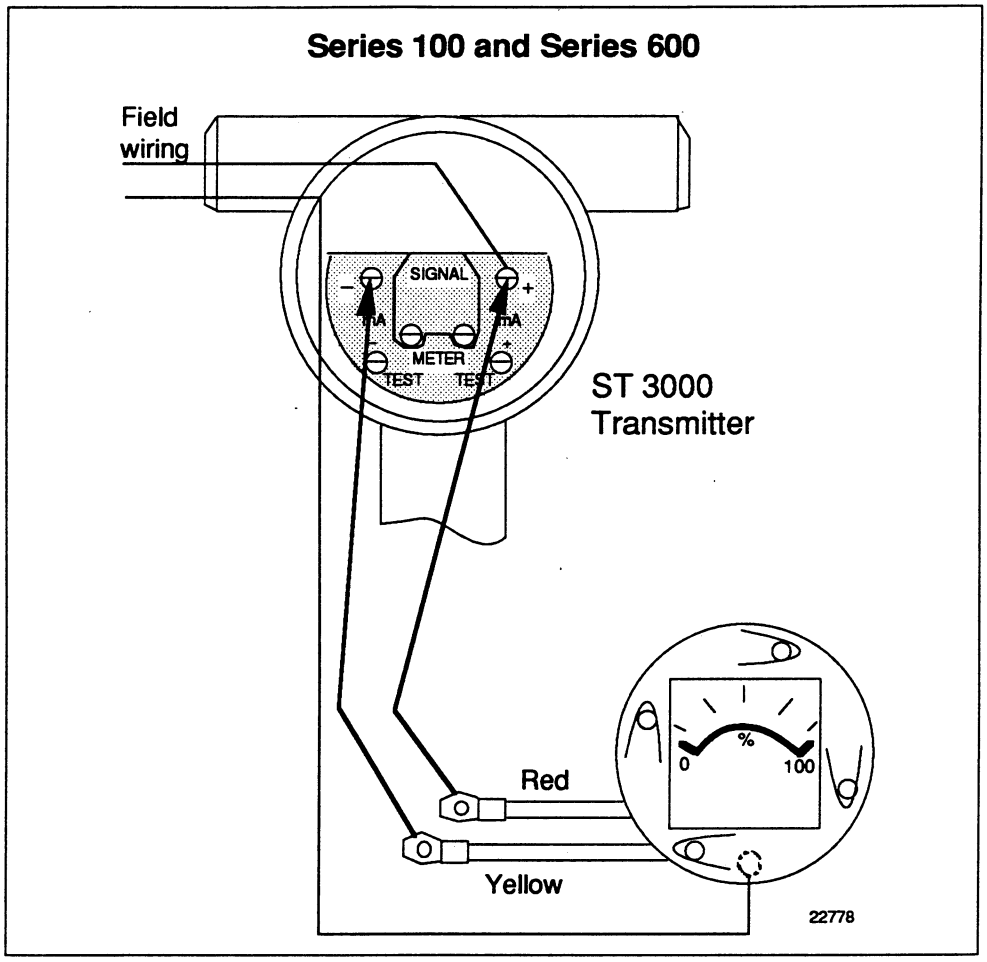
Illustration of smart meter connection for procedure 1

Figure 4 shows how to connect the smart meter across the SIGNAL terminals and to the negative side of the current loop for Series 100/600 ST 3000 transmitters.

Figure 4 Connect smart meter across SIGNAL terminals and to negative side of current loop for Series 100/600 ST 3000



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Procedure 2

Use the steps in this procedure to install a smart meter kit on a Series 100e/900 ST 3000 transmitter.

1	Remove power from transmitter.
2	Loosen end cap lock set screw and remove terminal end cap from electronics housing to expose terminal block connections.
3	Be sure metal jumper strap is in place between METER terminals on terminal block. This jumper must remain in place.
4	Remove field wiring connection from – (negative) terminal and connect it to L– terminal on transmitter's terminal block.
5	Connect blue lead from Smart Meter to L– terminal on transmitter's terminal block.
6	Connect yellow lead from smart meter to – SIGNAL terminal and red lead to + SIGNAL terminal. Never connect smart meter leads to terminals marked METER on terminal block. **ATTENTION** Check the connections you just made to be sure that the polarity is correct and the terminal screws are tight.
7	Orient meter so that the meter scale is properly positioned for correct viewing and snap plastic legs on meter into corresponding guides in terminal cover.
8	Replace original end cap removed in step 2 with meter end cap from kit. Screw end cap onto electronics housing and tighten end cap lock set screw.
9	Reapply power and check that meter indicates proper output signal level.

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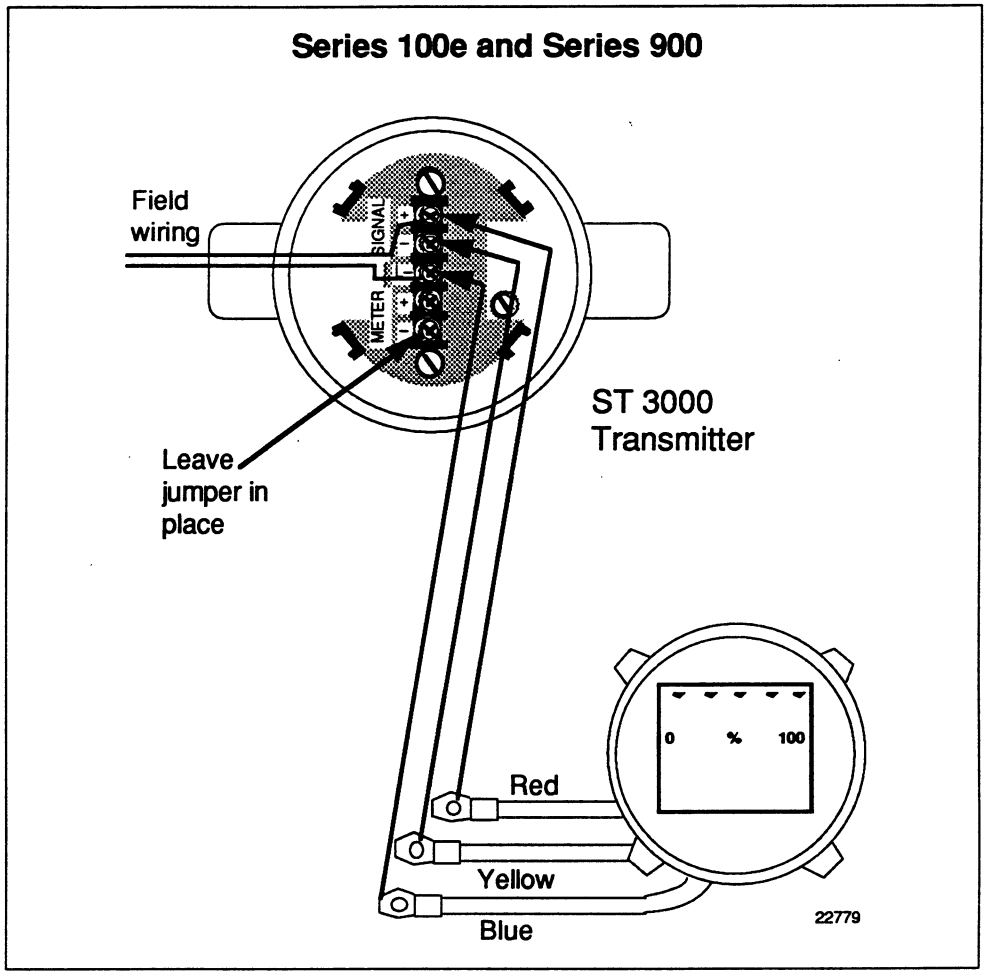
Illustration of smart meter connection for procedure 2

Figure 5 shows how to connect the smart meter across the SIGNAL terminals and to the negative side of the current loop for Series 100e/900 ST 3000 transmitters.

Figure 5 Connect smart meter across SIGNAL terminals and to negative side of current loop for Series 100e/900 ST 3000



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