

MC 40/60

UPE 25-40, UPE 25-40 A, UPE 25-60,
UPE 25-60 A, UPE 32-40, UPE 32-60

- Ⓜ Fitting instructions
- Ⓝ Montageanleitung
- ⓕ Notice de montage
- Ⓡ Istruzioni di montaggio
- ⓔ Instrucciones de montaje
- Ⓟ Instruções de montagem
- Ⓜ Οδηγίες τοποθέτησης
- Ⓝ Installatie instructies
- Ⓢ Monteringsanvisning
- ⓕ Asennusohje
- Ⓝ Monteringsvejledning



Declaration of Conformity

We **GRUNDFOS** declare under our sole responsibility that the products **MC 40/60**, to which this declaration relates, are in conformity with the Council Directives on the approximation of the laws of the EEC Member States relating to

- Electromagnetic compatibility (89/336/EEC).
Standards used: EN 61 000-6-2 and EN 61 000-6-3.
 - Electrical equipment designed for use within certain voltage limits (73/23/EEC).
Standard used: EN 60 335-1.
-

Konformitätserklärung

Wir **GRUNDFOS** erklären in alleiniger Verantwortung, daß die Produkte **MC 40/60**, auf die sich diese Erklärung bezieht, mit den folgenden Richtlinien des Rates zur Angleichung der Rechtsvorschriften der EG-Mitgliedstaaten übereinstimmen:

- Elektromagnetische Verträglichkeit (89/336/EWG).
Normen, die verwendet wurden: EN 61 000-6-2 und EN 61 000-6-3.
 - Elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen (73/23/EWG).
Norm, die verwendet wurde: EN 60 335-1.
-

Déclaration de Conformité

Nous **GRUNDFOS** déclarons sous notre seule responsabilité que les produits **MC 40/60** auxquels se réfère cette déclaration sont conformes aux Directives du Conseil concernant le rapprochement des législations des Etats membres CEE relatives à

- Compatibilité électromagnétique (89/336/CEE).
Standards utilisés: EN 61 000-6-2 et EN 61 000-6-3.
 - Matériel électrique destiné à employer dans certaines limites de tension (73/23/CEE).
Standard utilisé: EN 60 335-1.
-

Dichiarazione di Conformità

Noi **GRUNDFOS** dichiariamo sotto la nostra esclusiva responsabilità che i prodotti **MC 40/60** ai quali questa dichiarazione si riferisce sono conformi alle Direttive del Consiglio concernente il ravvicinamento delle legislazioni degli Stati membri CEE relative a

- Compatibilità elettromagnetica (89/336/CEE).
Standard usati: EN 61 000-6-2 e EN 61 000-6-3.
 - Materiale elettrico destinato ad essere utilizzato entro certi limiti di tensione (73/23/CEE).
Standard usato: EN 60 335-1.
-

Declaración de Conformidad

Nosotros **GRUNDFOS** declaramos bajo nuestra única responsabilidad que los productos **MC 40/60** a los cuales se refiere esta declaración son conformes con las Directivas del Consejo relativas a la aproximación de las legislaciones de los Estados Miembros de la CEE sobre

- Compatibilidad electromagnética (89/336/CEE).
Normas aplicadas: EN 61 000-6-2 y EN 61 000-6-3.
 - Material eléctrico destinado a utilizarse con determinadas límites de tensión (73/23/CEE).
Norma aplicada: EN 60 335-1.
-

Declaração de Conformidade

Nós **GRUNDFOS** declaramos sob nossa única responsabilidade que os produtos **MC 40/60** aos quais se refere esta declaração estão em conformidade com as Directivas do Conselho das Comunidades Europeias relativas à aproximação das legislações dos Estados Membros respeitantes à

- Compatibilidade electromagnética (89/336/CEE).
Normas utilizadas: EN 61 000-6-2 e EN 61 000-6-3.
 - Material eléctrico destinado a ser utilizado dentro de certos limites de tensão (73/23/CEE).
Norma utilizada: EN 60 335-1.
-

Δήλωση Συμμόρφωσης

Εμείς η **GRUNDFOS** δηλώνουμε με αποκλειστικά δική μας ευθύνη ότι τα προϊόντα **MC 40/60** συμμορφώνονται με την Οδηγία του Συμβουλίου επί της σύγκλισης των νόμων των Κρατών Μελών της Ευρωπαϊκής Ένωσης σε σχέση με τα

- Ηλεκτρομαγνητική συμβατότητα (89/336/EEC).
Πρότυπα που χρησιμοποιήθηκαν: EN 61 000-6-2 και EN 61 000-6-3.
- Ηλεκτρικές συσκευές σχεδιασμένες για χρήση εντός ορισμένων ορίων ηλεκτρικής τάσης (73/23/EEC).
Πρότυπο που χρησιμοποιήθηκε: EN 60 335-1.

Overeenkomstigheidsverklaring

Wij **GRUNDFOS** verklaren geheel onder eigen verantwoordelijkheid dat de produkten **MC 40/60** waarop deze verklaring betrekking heeft in overeenstemming zijn met de Richtlijnen van de Raad inzake de onderlinge aanpassing van de wetgevingen van de Lid-Staten betreffende

- Elektromagnetische compatibiliteit (89/336/EEG).
Normen: EN 61 000-6-2 en EN 61 000-6-3.
- Elektrisch materiaal bestemd voor gebruik binnen bepaalde spanningsgrenzen (73/23/EEG).
Norm: EN 60 335-1.

Försäkran om överensstämmelse

Vi **GRUNDFOS** försäkrar under ansvar, att produkterna **MC 40/60**, som omfattas av denna försäkran, är i överensstämmelse med Rådets Direktiv om inbördes närmande till EU-medlemsstaternas lagstiftning, avseende

- Elektromagnetisk kompatibilitet (89/336/EC).
Använda standarder: EN 61 000-6-2 och EN 61 000-6-3.
- Elektrisk material avsedd för användning inom vissa spänningsgränser (73/23/EC).
Använd standard: EN 60 335-1.

Vastaavuuksvakuutus

Me **GRUNDFOS** vakuutamme yksin vastuullisesti, että tuotteet **MC 40/60**, jota tämä vakuutus koskee, noudattavat direktiivejä jotka käsittelevät EY:n jäsenvaltioiden koneellisia laitteita koskevien lakien yhdenmukaisuutta seur.

- Elektromagneettinen vastaavuus (89/336/EY).
Käytetyt standardit: EN 61 000-6-2 ja EN 61 000-6-3.
- Määrättyjen jänniterajoitusten puitteissa käytettävät sähköiset laitteet (73/23/EY).
Käytetty standardi: EN 60 335-1.

Overensstemmelseserklæring

Vi **GRUNDFOS** erklærer under ansvar, at produkterne **MC 40/60**, som denne erklæring omhandler, er i overensstemmelse med Rådets direktiver om indbyrdes tilnærmelse til EF medlemsstaternes lovgivning om












- Elektromagnetisk kompatibilitet (89/336/EØF).
Anvendte standarder: EN 61 000-6-2 og EN 61 000-6-3.
- Elektrisk materiel bestemt til anvendelse inden for visse spændingsgrænser (73/23/EØF).
Anvendt standard: EN 60 335-1.

Bjerringbro, 1st December 2001


Svend Aage Kaee
Technical Manager

MC 40/60

UPE 25-40, UPE 25-40 A, UPE 25-60,
UPE 25-60 A, UPE 32-40, UPE 32-60

Fitting instructions	Page	6	
Montageanleitung	Seite	10	
Notice de montage	Page	14	
Istruzioni di montaggio	Pag.	18	
Instrucciones de montaje	Pág.	22	
Instruções de montagem	Pág.	26	
Οδηγίες τοποθέτησης	Σελίδα	30	
Installatie instructies	Pag.	34	
Monteringsanvisning	Sida	38	
Asennusohje	Sivu	42	
Monteringsvejledning	Side	46	



Before fitting the module, these fitting instructions should be studied carefully. The installation and operation should also be in accordance with local regulations and accepted codes of good practice.

For further information, see installation and operating instructions for the pump UPE Series 2000.

1. General description

The fault signal module MC 40/60 is an expansion module for UPE 25-40, UPE 25-40 A, UPE 25-60, UPE 25-60 A, UPE 32-40 and UPE 32-60.

Via an internal relay, the fault signal module gives access to a potential-free fault signal.

In addition to this fault signal output, the module has four inputs for external signals for the forced-control functions:

- Start/stop of pump.
- Max. curve duty.
- Min. curve duty (night-time duty).
- External analog control of head or speed from an external 0-10 V signal transmitter.

2. Electrical connection

The electrical connection and protection should be carried out in accordance with local regulations.



Never make any connections in the pump terminal box unless the electricity supply has been switched off for at least 5 minutes.

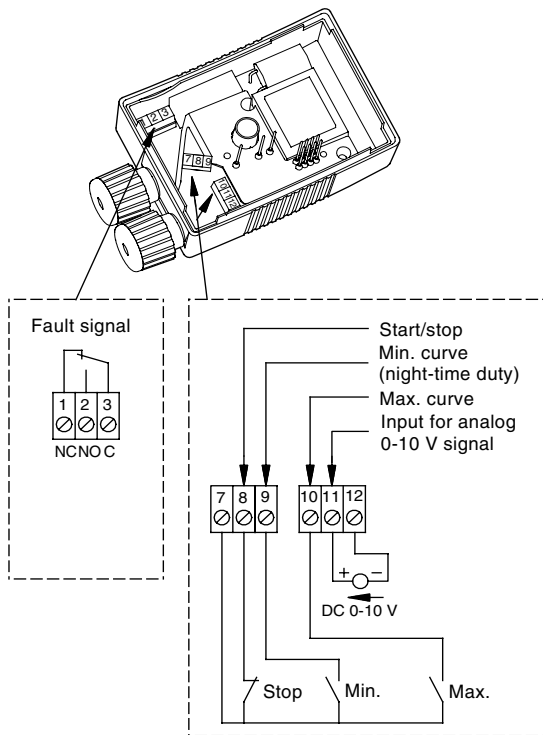
Carry out the mains connection as shown in fig. 1.

Note: If no external on/off switch is connected, the connection across terminals 7 and 8 should be maintained.

- Wires connected to
 - outputs 1 to 3,
 - inputs 4 to 12 and
 - supply terminalsmust be separated from each other by reinforced insulation.
- All leads connected to a terminal block must be tied up at the terminals.



Fig. 1



TM01 1082 4401

Note: If the 0-10 V input is used (terminals 11 and 12), there must be a connection across terminals 7 and 9 (the input for the min. curve must be closed).

3. External analog 0-10 V controller

The MC 40/60 has an input for an external 0-10 VDC analog signal transmitter (terminals 11 and 12). Via this input, the pump can be controlled by an external controller if the pump has been set to one of the following control modes:

- **Constant curve.**

The external analog signal will set the pump curve within the range from the min. curve to the constant curve selected according to the characteristic in fig. 2.

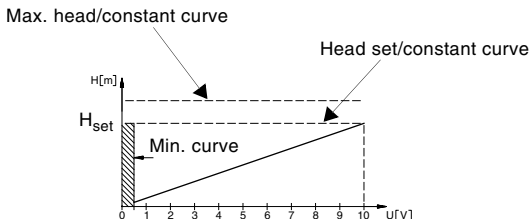
- **Constant or proportional pressure control.**

The external analog signal will control the setpoint for the pump head between the setpoint corresponding to the min. curve and the setpoint selected according to the characteristic in fig. 2.

At an input voltage lower than 0.5 V, the pump will operate according to the min. curve. The setpoint cannot be changed.

The setpoint can only be changed when the input voltage is higher than 0.5 V.

Fig. 2



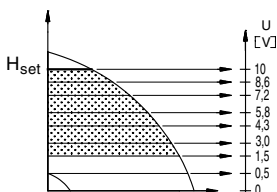
TM00 5550 4596

Note:

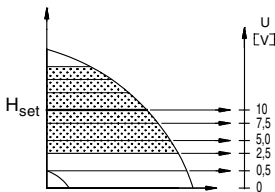
- The max. curve input, terminals 7 and 10, must be open.
- The min. curve input, terminals 7 and 9, must be closed.

The examples below illustrate the use of an analog control voltage in connection with a pump in constant-pressure control mode:

Fig. 3



TM01 1384 4497



TM01 1385 4497

Note: As will appear from the above figure, the number of curves that can be selected via the external analog signal will depend on the setpoint of the pump, H_{set} .

4. Fitting the module



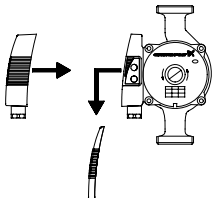
Never make any connections in the pump terminal box unless the electricity supply has been switched off for at least 5 minutes.

To fit a module, remove the existing terminal box cover and fit the new cover incorporating the module. Do not forget to remove the label.

The new cover increases the height of the terminal box by approx. 27 mm.

See fig. 4 and the figure at the end of these instructions.

Fig. 4

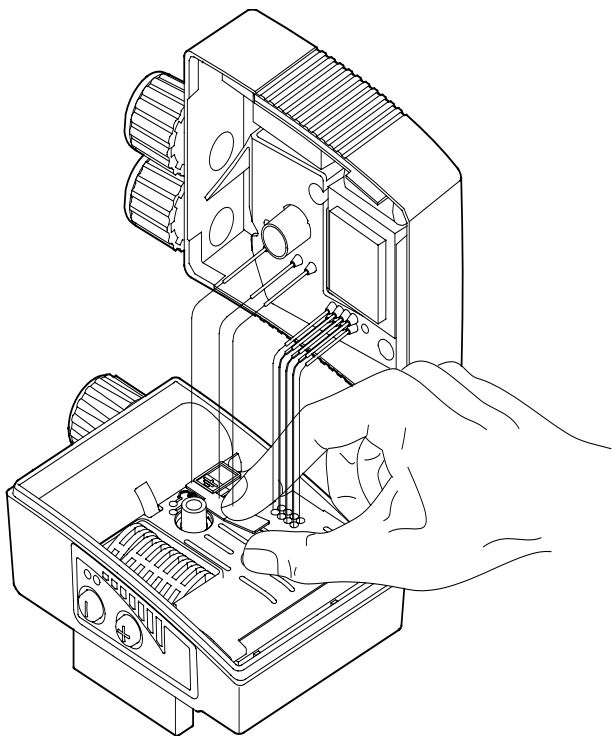


TM00 6260 4401

5. Technical data

Start/stop input	External potential-free switch. Contact load: 5 VDC, 0.1 mA.
Max. curve input	Screened cable. Loop resistance: Maximum 130 Ω /km.
Min. curve input	Logical levels: Logical zero: $U < 1.5$ V. Logical one: $U > 4.0$ V.
Fault signal output	Internal potential-free changeover contact. Maximum load: 250 V, 2 A, AC1. Minimum load: 5 VDC, 1 mA. Screened cable.
Input for analog 0-10 V signal	External signal: 0-10 VDC. Maximum load: 0.1 mA. Screened cable.

Subject to alterations.



TM00 4644 4401

Denmark

GRUNDFOS DK A/S
Poul Due Jensen Vej 7A
DK-8850 Bjerringbro
Tlf.: +45-87 50 50 50
Telefax: +45-87 50 51 51

Argentina

Bombas GRUNDFOS de Argentina S.A.

Ruta Panamericana km. 37.500
Lote 34A

1619 - Garin
Pcia. de Buenos Aires
Phone: +54-3327 414 444
Telefax: +54-3327 411 111

Australia

GRUNDFOS Pumps Pty. Ltd.
P.O. Box 2040
Regency Park
South Australia 5942
Phone: +61-8-8461-4611
Telefax: +61-8-8340 0155

Austria

GRUNDFOS Pumpen Vertrieb
Ges.m.b.H.
Grundfosstraße 2
A-5082 Gröding/Salzburg
Tel.: +43-6246-883-0
Telefax: +43-6246-883-30

Belgium

N. V. GRUNDFOS Bellux S.A.
Boomsesteenweg 81-83
B-2630 Aartselaar
Tél.: +32-3-870 7300
Télécopie: +32-3-870 7301

Brazil

GRUNDFOS do Brasil Ltda.
Rua Tomazina 106
CEP 83325 - 040
Pinhais - PR
Phone: +55-41 668 3555
Telefax: +55-41 668 3554

Canada

GRUNDFOS Canada Inc.
2941 Brighton Road
Oakville, Ontario
L6H 6C9
Phone: +1-905 829 9533
Telefax: +1-905 829 9512

China

GRUNDFOS Pumps (Shanghai) Co. Ltd.
22 Floor, Xin Hua Lian Building
755-775 Huai Hai Rd. (M)
Shanghai 200020
PRC
Phone: +86-512-67 61 11 80
Telefax: +86-512-67 61 81 67

Czech Republic

GRUNDFOS s.r.o.
Cajkovského 21
779 00 Olomouc
Phone: +420-68-5716 111
Telefax: +420-68-543 8908

Finland

OY GRUNDFOS Pumput AB
Mestarintie 11
Piispankylä
FIN-01730 Vantaa (Helsinki)
Phone: +358-9 878 9150
Telefax: +358-9 878 91550

France

Pompes GRUNDFOS Distribution S.A.
Parc d'Activités de Chesnes
57, rue de Malacombé
F-38290 St. Quentin Fallavier
(Lyon)
Tél.: +33-4 74 82 15 15
Télécopie: +33-4 74 94 10 51

Germany

GRUNDFOS GMBH
Schlüterstr. 33
40699 Erkrath
Tel.: +49-(0) 211 929 69-0
Telefax: +49-(0) 211 929 69-3799

e-mail: infoservice@grundfos.de
Service in Deutschland:

e-mail: kundendienst@grundfos.de

Greece

GRUNDFOS Hellas A.E.B.E.
20th km. Athinon-Markopoulou Av.
P.O. Box 71
GR-19002 Peania
Phone: +30-10-66 83 400
Telefax: +30-10-66 46 273

Hong Kong

GRUNDFOS Pumps (Hong Kong) Ltd.
Unit 1, Ground floor
Siu Wai Industrial Centre
29-33 Wing Hong Street &
68 King Lam Street, Cheung Sha Wan
Kowloon
Phone: +852-27861706/
27861741
Telefax: +852-27858664

Hungary

GRUNDFOS Hungária Kft.
Park u. 8
H-2045 Törökbalint,
Phone: +36-34 520 100
Telefax: +36-34 520 200

India

GRUNDFOS Pumps India Private Limited
Flat A, Ground Floor
61/62 Chamiers Aptmt
Chamiers Road
Chennai 600 028
Phone: +91-44 432 3487
Telefax: +91-44 432 3489

Indonesia

PT GRUNDFOS Pompa
Jl. Rawa Sumur III, Blok III / CC-1
Kawasan Industri, Pulogadung
Jakarta 13930
Phone: +62-21-460 6909
Telefax: +62-21-460 6910/460 6901

Ireland

GRUNDFOS (Ireland) Ltd.
Unit 34, Stillorgan Industrial Park
Blackrock
County Dublin
Phone: +353-1-2954926
Telefax: +353-1-2954739

Italy

GRUNDFOS Pompe Italia S.r.l.
Via Gran Sasso 4
I-20060 Truccazzano (Milano)
Tel.: +39-02-95838112/
95838212
Telefax: +39-02-9530929/
95838461

Japan

GRUNDFOS Pumps K.K.
1-2-3, Shin Miyakoda
Hamamatsu City
Shizuoka pref. 431-21
Phone: +81-53-428 4760
Telefax: +81-53-484 1014

Korea

GRUNDFOS Pumps Korea Ltd.
2nd Fl., Dong Shin Building
994-3 Daechi-dong, Kangnam-Ku
Seoul 135-280
Phone: +82-2-5317 600
Telefax: +82-2-5633 725

Malaysia

GRUNDFOS Pumps Sdn. Bhd.
7 Jalan Peguam U1/25
Glenmarie Industrial Park
40150 Shah Alam
Selangor
Phone: +60-3-5569 2922
Telefax: +60-3-5569 2866

Mexico

Bombas GRUNDFOS de Mexico S.A. de C.V.
Boulevard TLC No. 15
Parque Industrial Stiva Aeroportuero
Apodaca, N.L. 66600
Mexico
Phone: +52-81-8144 4000
Telefax: +52-81-8144 4010

Netherlands

GRUNDFOS Nederland B.V.
Postbus 104
NL-1380 AC Weesp
Tel.: +31-294-492 211
Telefax: +31-294-492244/
492299

New Zealand

GRUNDFOS Pumps NZ Ltd.
17 Beatrice Tinsley Crescent
North Harbour Industrial Estate
Albany, Auckland
Phone: +64-9-415 3240
Telefax: +64-9-415 3250

Norway

GRUNDFOS Pumper A/S
Strømsveien 344
Postboks 235, Leirdal
N-1011 Oslo
Tlf.: +47-22 90 47 00
Telefax: +47-22 32 21 50

Poland

GRUNDFOS Pompy Sp. z o.o.
ul. Klonowa 23
Baranowo k. Poznania
PL-62-081 Przemierowo
Phone: +48-61-650 13 00
Telefax: +48-61-650 13 50

Portugal

Bombas GRUNDFOS Portugal, S.A.
Rua Calvet de Magalhães, 241
Apartado 1079
P-2780 Paço de Arcos
Tel.: +351-21-440 76 00
Telefax: +351-21-440 76 90

Russia

OOO GRUNDFOS
Shkolnaya, ul., 39
RUS-109544 Moscow
Phone: +7-095 564 8800, 737 3000
Telefax: +7-095 564 8811, 737 7536

Singapore

GRUNDFOS (Singapore) Pte. Ltd.
24 Tuas West Road
Jurong Town
Singapore 638381
Phone: +65-6865 1222
Telefax: +65-6861 8402

Spain

Bombas GRUNDFOS España S.A.
Camino de la Fuentecilla, s/n
E-28110 Algete (Madrid)
Tel.: +34-91-848 8800
Telefax: +34-91-628 0465

Sweden

GRUNDFOS AB
Box 63, Angeredsvinkeln 9
S-424 22 Angered
Tel.: +46-771-32 23 00
Telefax: +46-31 331 94 60

Switzerland

GRUNDFOS Pumpen AG
Bruggacherstrasse 10
CH-8117 Fällanden/ZH
Tel.: +41-1-806 8111
Telefax: +41-1-806 8115

Taiwan

GRUNDFOS Pumps (Taiwan) Ltd.
14, Min-Yu Road
Tunglo Industrial Park
Tunglo, Miao-Li County
Taiwan, R.O.C.
Phone: +886-37-98 05 57
Telefax: +886-37-98 05 70

Thailand

GRUNDFOS (Thailand) Ltd.
947/168 Moo 12, Bangna-Trad Rd., K.M. 3,
Bangna, Phrakhanong
Bangkok 10260
Phone: +66-2-744 1785 ... 91
Telefax: +66-2-744 1775 ... 6

Turkey

GRUNDFOS POMPA SAN. ve TIC. LTD. STI
Bulgurlu Caddesi no. 32
TR-81190 Üsküdar Istanbul
Phone: +90 - 216-4280 306
Telefax: +90 - 216-3279 988

United Arab Emirates

GRUNDFOS Gulf Distribution
P.O. Box 16768
Jebel Ali Free Zone
Dubai
Phone: +971-4- 8815 166
Telefax: +971-4-8815 136

United Kingdom

GRUNDFOS Pumps Ltd.
Grovebury Road
Leighton Buzzard/Beds. LU7 8TL
Phone: +44-1525-850000
Telefax: +44-1525-850011

U.S.A.

GRUNDFOS Pumps Corporation
17100 West 118th Terrace
Olathe, Kansas 66061
Phone: +1-913-227-3400
Telefax: +1-913-227-3500

60 12 45 0502	30
Repl. 60 12 45 0102	