



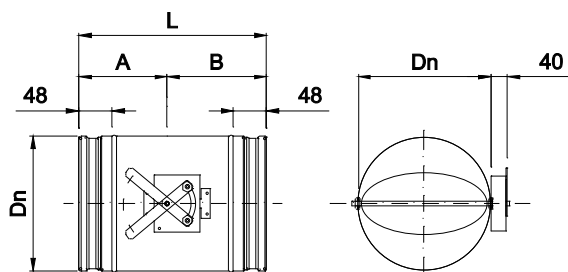
## SCC serrande di regolazione per condotti circolari



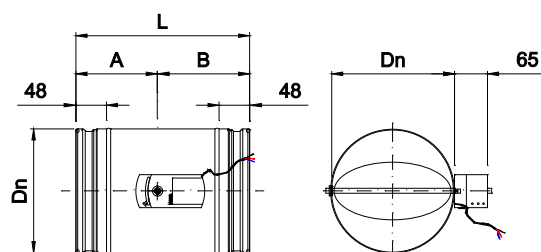
MADEL®

Le serrande della serie **SCC** sono progettate per la regolazione della portata aria e della pressione, in impianti di aria condizionata, ventilazione e riscaldamento.  
Serrande di regolazione a tenuta, predisposte per il montaggio a canale circolare.

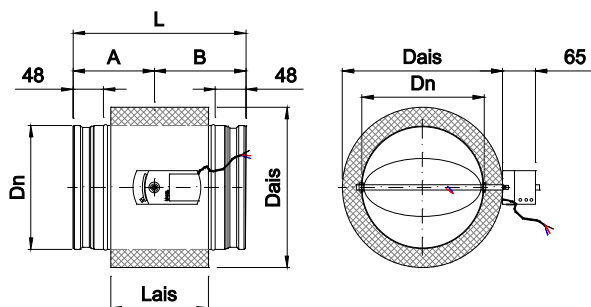
### SCC-MA



### SCC-MO



### SCC-.../AIS/



| D   | Dn  | Dais | L   | Lais | A   | B   |
|-----|-----|------|-----|------|-----|-----|
| 100 | 98  | 178  | 265 | 150  | 105 | 160 |
| 125 | 123 | 203  | 265 | 150  | 105 | 160 |
| 150 | 148 | 228  | 265 | 150  | 105 | 160 |
| 160 | 158 | 238  | 265 | 150  | 105 | 160 |
| 200 | 198 | 278  | 295 | 180  | 130 | 165 |
| 250 | 248 | 328  | 335 | 220  | 145 | 190 |
| 315 | 313 | 393  | 345 | 230  | 155 | 190 |
| 355 | 353 | 433  | 400 | 285  | 180 | 220 |
| 400 | 398 | 433  | 420 | 305  | 190 | 230 |

## CLASSIFICAZIONE

**SCC-R** Serranda circolare di regolazione dell'aria con connessione a canale secondo norma EN-1506.

Guarnizione in gomma ad entrambe le estremità per migliorare la tenuta della connessione. Cassa a tenuta in conformità norma EN-1751.

100 < D(Ø) < 400 EN-1751 Cassa Classe C

**SCC-E** Serranda circolare di regolazione dell'aria con connessione a canale secondo norma EN-1506.

Guarnizione in gomma su entrambe le estremità per migliorare la tenuta della connessione. Cassa e pala a tenuta in conformità norma EN-1751.

100 < D(Ø) < 125

EN-1751 Cassa Classe C, Pala 3

150 < D(Ø) < 400

EN-1751 Cassa Classe C, Pala 4

**.../MA/** Comando manuale.

**.../MO/** Predisposizione alla motorizzazione.

**.../SJ/** Senza guarnizione in gomma per la connessione.

**.../AIS/** Isolamento termo-acustico.

## MATERIALE

Cassa e pala costruite in acciaio zincato e cuscinetti in gomma. Guarnizione in EPDM.

**Siemens GDB/GLB**



**Siemens GMA**



**Belimo LM/NM**



**Belimo LF/NF**



**ACCESSORI - SERVOMOTORE**

**Servomotore ON/OFF**

- GDB141.1E** On/Off 24 VAC/VDC 5N Siemens actuator.
- GDB341.1E** On/Off 100... 230 VAC 5N Siemens actuator.
- LM24A** On/Off 24 VAC/VDC 5N Belimo actuator.
- LM230A** On/Off 230 VAC 5N Belimo actuator.

**Servomotore ON/OFF con fine corsa**

- GDB146.1E** On/Off 24 VAC/VDV 5N 2FC Siemens actuator.
  - GDB346.1E** On/Off 100...230 VAC 5N 2FC Siemens actuator.
  - LM24A-S** On/Off 24 VAC/VDC 5N 1FC Belimo actuator (\*)
  - LM230A-S** On/Off 5N 1FC Belimo actuator (\*)
- \* Attuatori Belimo con 1 fine corsa, per 2 contatti. Per chiedere.*

**Servomotore ON/OFF con ritorno a molla**

- GMA121.1E** On/Off 24 VAC/VDC 7N Siemens actuator.
- GMA321.1E** On/Off 230 VAC 7N Siemens actuator.
- LF-24** On/Off 24 VAC/VDC 4N Belimo actuator.
- LF-230** On/Off 230 VAC 4N Belimo actuator.

**Servomotore Proporzionali**

- GDB161.1E** 24 VAC/VDC 5N Siemens actuator.
- LM24A-SR** 24 VAC/VDC 5N Belimo actuator.
- LM230A-SR** 230 VAC 5N Belimo actuator.

**Communicating actuators**

Consultare modelli di servomotore con protocolli di comunicazione Modbus / KNX / LONWorks e Bacnet..



## CONTROLLO TEMPERATURA

**TF** Termostato a fili a cambio di modo freddo / caldo manuale, per il controllo della temperatura di 1 zona con serrande con servomotore On/Off .

**RDG 400** Controllo di temperatura ambiente proporzionale 0...10 vcc aliment. 24vac con display digitale retroilluminato, selettore confort/eco/spento. Per serranda con attuatore proporzionale.

**CO2-WP** Sonde di CO2 proporzionali (Richiedono attuatore proporzionale). Sonda ambiente a parete 24 vdc-vac. Visualizzazione a LED. Uscite 0-10Vdc. Setpoint 600-800 -1000 ppm. IP30.

**CO2-D** Sonde di CO2 proporzionali (Richiedono attuatore proporzionale). Sonda per canale 24 vdc-vac con un'uscita 0-10Vdc, IP54.

**CO2-WR** Sonde di CO2 con relé (Richiedono attuatore ON/OFF). Sonda ambiente a parete 24 vdc-vac. Visualizzazione a LED. Uscita digitale (relé 5A) Setpoint 800- 1000 -1200 ppm.. IP30.

**OS-360** Sensore di presenza. Sensore di movimento omnidirezionale a soffitto, per il controllo di elementi terminali HVAC. Alimentazione 24 Vac/Vdc. Uscita di contatto pulito parametrizzabile.

## SISTEMI DI FISSAGGIO

1) La cassa della serranda é progettata per essere montata su canali circolari secondo norma EN-1506.

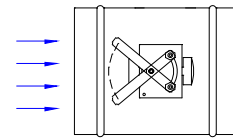
## FINITURE

Acciaio zincato.

## SPECIFICHE PER CAPITOLATO

Fornitura e posa in opera serranda di regolazione della portata aria da installare a canale circolare con a comando manuale serie **SCC-MA diam. 100**, con connessione a canale secondo norma EN-1506. Con guarnizione in gomma ad entrambe le estremità per migliorare la tenuta della connessione.

Serranda a tenuta in conformità norma EN-1751. Cassa Classe C, Pala 3. Costruita in acciaio zincato e bocche in nylon. Marca **MADEL**.



VELOCITÀ NEL COLLO, PERDITA DI CARICO E POTENZA SONORA.

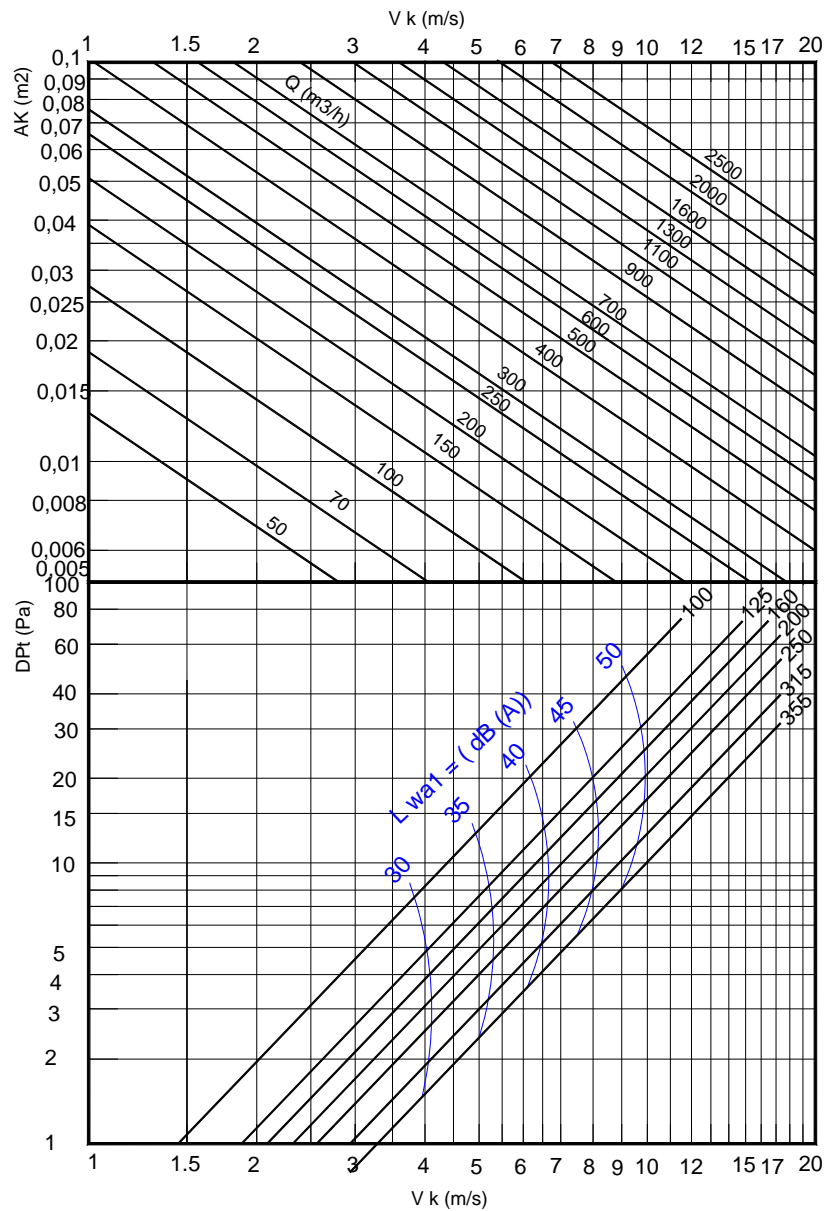
SEZIONE DEL COLLO m2..

| D   | Ak(m2) |
|-----|--------|
| 100 | 0,0078 |
| 125 | 0,0123 |
| 160 | 0,0201 |
| 200 | 0,0314 |
| 250 | 0,0491 |
| 315 | 0,0779 |
| 355 | 0,0962 |

VALORI DI CORREZIONE PER DPt : Kp

| α° | 0° | 15° | 30° | 45° | 60° |
|----|----|-----|-----|-----|-----|
| Kp | 1  | 1,5 | 8   | 20  | 140 |

$$DPt' = Kp \times DPt$$



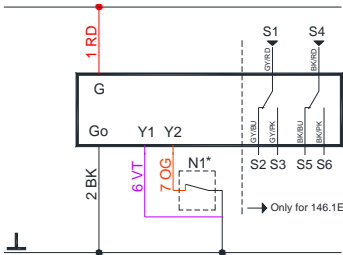
**SIEMENS Wiring diagrams**

**ON/OFF – 3P CONTROL.**

**GDB 14..1E**

Open-close, Single wire control

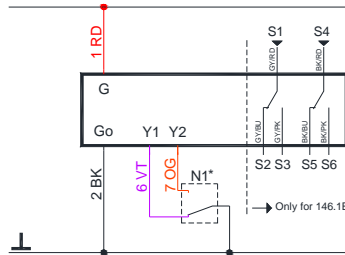
AC 24 V  
DC 24 V ... 48 V ...



**GDB 14..1E**

Open-close, Two wire control

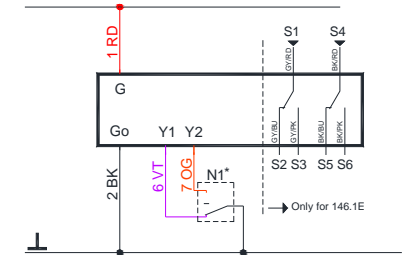
AC 24 V  
DC 24 V ... 48 V ...



**GDB 14..1E**

Three-position control

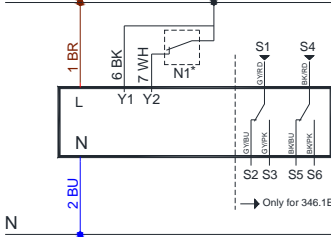
AC 24 V  
DC 24 V ... 48 V ...



**GDB 34..1E**

Open-close, Single wire control

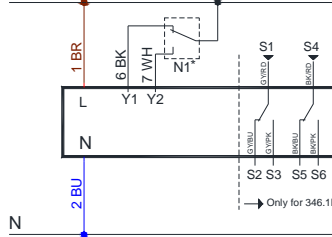
AC 100 ... 240 V



**GDB 34..1E**

Open-close, Two wire control

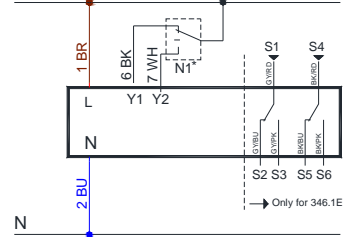
AC 100 ... 240 V



**GDB 34..1E**

Three-position control

AC 100 ... 240 V

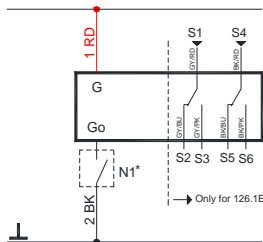


**SPRING RETURN - ON/OFF – Two-position control**

**GMA 121.1E**

Two-position control

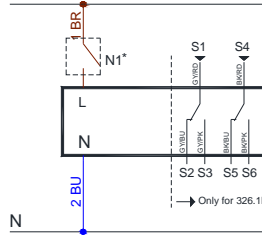
AC 24 V  
DC 24 V ... 48 V ...



**GMA 321.1E**

Two-position control

AC 100 ... 240 V



N1\*. Accessory control. See wiring diagrams accessories.

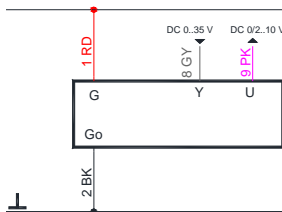
| Wiring                              | Code                   | Nº | Color     | Description               |                         |
|-------------------------------------|------------------------|----|-----------|---------------------------|-------------------------|
| Actuators<br>AC 24 V~<br>DC 24..48V | G                      | 1  | RD Red    | System potential 24 AC/DC |                         |
|                                     | G0                     | 2  | BK Black  | System Neutral            |                         |
|                                     | Y1                     | 6  | VT Purple | Positioning AC/DC 0V. cw  |                         |
|                                     | Y2                     | 7  | OG Orange | Positioning AC/DC 0V. ccw |                         |
|                                     | Y                      | 8  | GY Grey   | Signal in (0-10V)         |                         |
|                                     | U                      | 9  | PK Pink   | Signal out (0-10 V)       |                         |
|                                     | Actuators<br>AC 230 V~ | L  | 3         | BR Brown                  | Line 100 .. 240 AC      |
|                                     |                        | N  | 4         | BU Blue                   | Neutral conductor       |
|                                     |                        | Y1 | 6         | BK Black                  | Positioning AC 230V. cw |
| Y2                                  |                        | 7  | WH White  | Positioning AC 230V. ccw  |                         |
| G+                                  |                        | 1  | RD Red    | Potential aux. 24 AC/DC   |                         |
| G-                                  |                        | 2  | BK Black  | Neutral aux. 24 AC/DC     |                         |
| Auxiliary<br>contacts               | Q11                    | S1 | GY/RD     | Input switch A            |                         |
|                                     | Q12                    | S2 | GY/BU     | Contact NC switch A       |                         |
|                                     | Q14                    | S3 | GY/PK     | Contact NO switch A       |                         |
|                                     | Q21                    | S4 | BK/RD     | Input switch B            |                         |
|                                     | Q22                    | S5 | BK/BU     | Contact NC switch B       |                         |
|                                     | Q24                    | S6 | BK/PK     | Contact NO switch B       |                         |

**MODULATING control 0-10 V**

**GDB 16..1E**

Modulating control

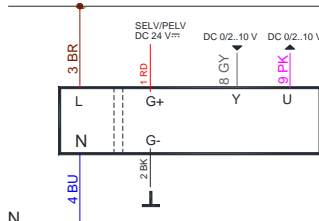
AC 24 V  
DC 24 V ... 48 V ...



**GDB 36..1E**

Modulating control

AC 100 ... 240 V



This information is provided by way of indication. Consult the manufacturer catalogue for all updated documentation.

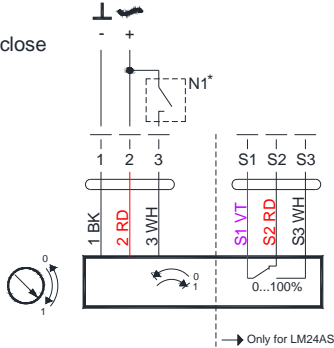
<https://www.buildingtechnologies.siemens.com/bt/global/en/products/HVAC-Products/Damper-actuators/Actuators-for-HVAC-applications/Pages/Actuators-for-HVAC-applications-default.aspx>

**BELIMO Wiring diagrams**

**ON/OFF – 3P CONTROL.**

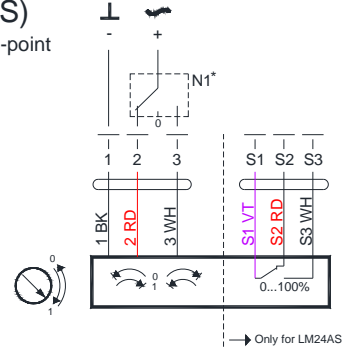
**LM-24A..(S)**

AC/DC 24 V, Open-close



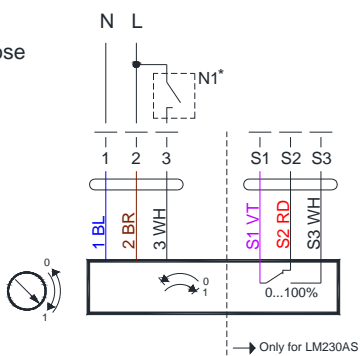
**LM-24A..(S)**

AC/DC 24 V, 3-point



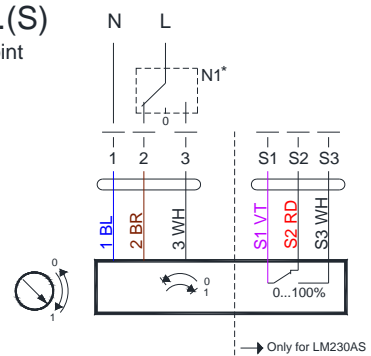
**LM-230A..(S)**

AC 230 V, Open-close



**LM-230A..(S)**

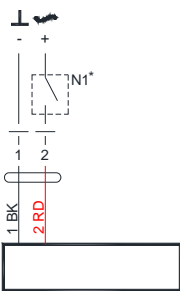
AC 230V, 3-point



**SPRING RETURN - ON/OFF – Two-position control**

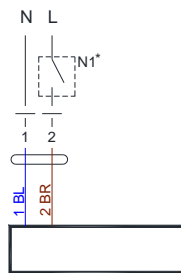
**LF24**

AC/DC 24 V, Open-close



**LF230**

AC 230 V, Open-close



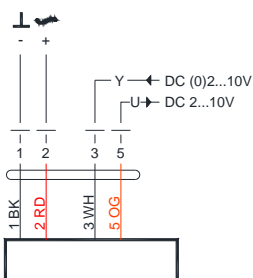
N1\*. Accessory control. See wiring diagrams accessories.

| Wiring  | Code | N°        | Color               | Description               |
|---|------|-----------|---------------------|---------------------------|
| Actuators<br>Open-close<br>AC 24 V~<br>DC 24..48V | -    | 1         | BK Black            | System Neutral            |
|   | +    | 2         | RD Red              | System potential 24 AC/DC |
|   |      | 3         | WH White            | Positioning AC/DC 0V.     |
| Actuators<br>modulating<br>AC-DC 24 V<br>AC 230V  | -    | 1         | BK Black            | System Neutral            |
|   | +    | 2         | RD Red              | System potential 24 AC/DC |
|   |      | 3         | WH White            | Signal in (0) 2-10V       |
|   |      | 5         | OG Orange           | Signal out 2-10V          |
| Actuators<br>AC 230 V~                            | L    | 1         | BU Blue             | Line 100 .. 240 AC        |
|   | N    | 2         | BR Brown            | Neutral conductor         |
|   | G+   | 1         | BK Black            | Neutral aux. 24 AC/DC     |
|   | G-   | 2         | RD Red              | SG..24                    |
|   | Y    | 3         | WH White            | Signal in (0-10V)         |
|   | 5    | OG Orange | Signal out (0-10 V) |                           |
| Auxiliary<br>contacts                             | S1   | S1        | VT Violet           | Input switch A            |
|   | S2   | S2        | RD Red              | Contact NC switch A       |
|   | S3   | S3        | WH White            | Contact NO switch A       |

**MODULATING control 0-10 V**

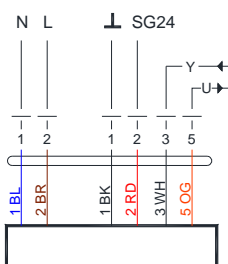
**LM24A-SR**

AC/DC 24 V, modulating



**LM230A-SR**

AC 230 V, Open-close



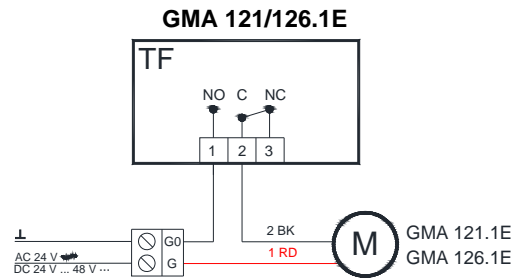
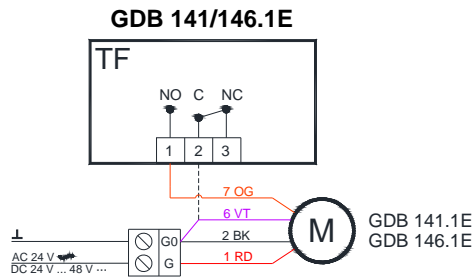
This information is provided by way of indication.  
Consult the manufacturer catalogue for all updated  
documentation.

<http://www.belimo.ch/CH/EN/PDF/index.cfm>

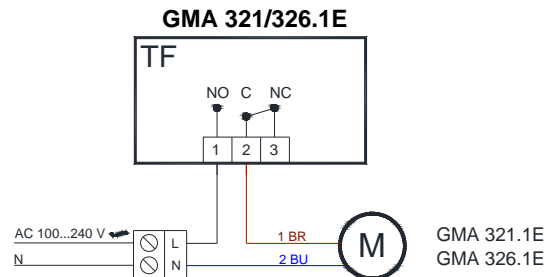
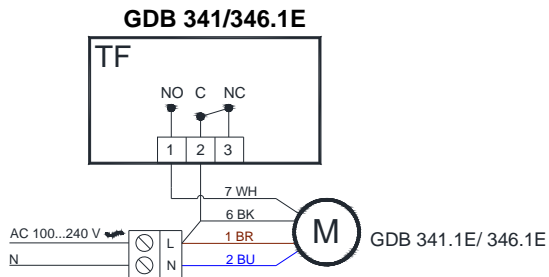
**TF Wiring diagrams**

**TF + SIEMENS actuators**

**AC/DC 24 V - ON/ OFF control**

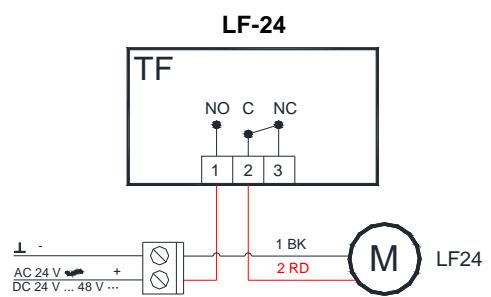
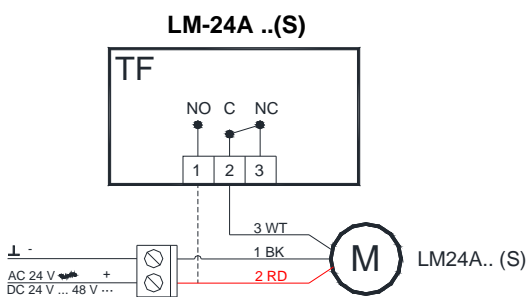


**AC 230 V - ON/ OFF control**

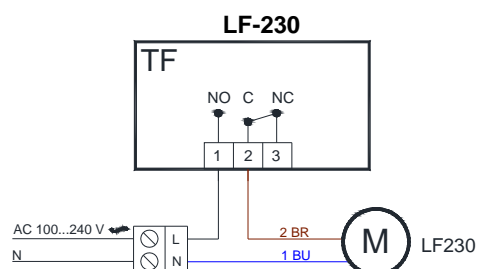
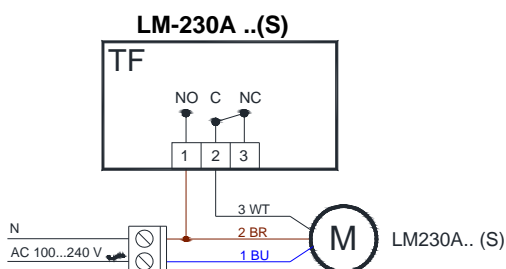


**TF + BELIMO actuators**

**AC/DC 24 V - ON/ OFF control**



**AC 230 V - ON/ OFF control**



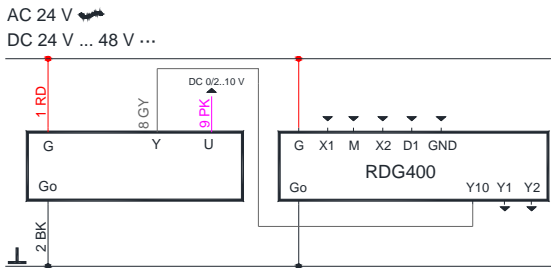


## RDG400 Wiring diagrams

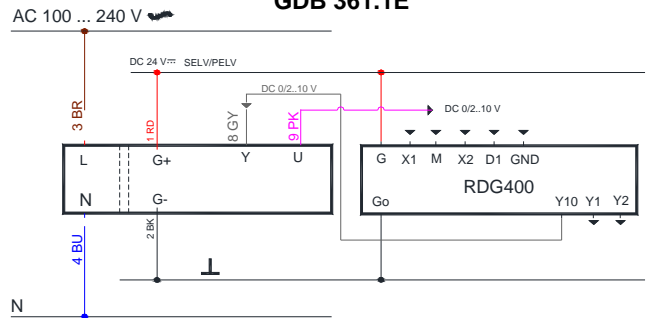
### RDG 400 + SIEMENS actuators

#### Modulating control + manual changeover

##### GDB 161.1E



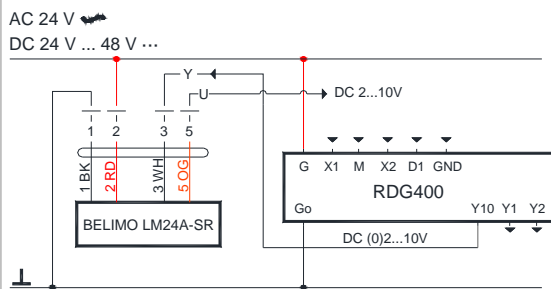
##### GDB 361.1E



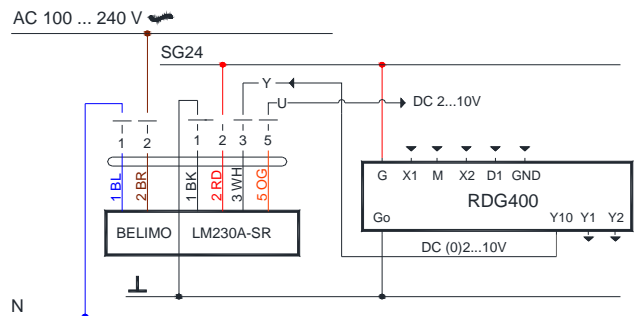
### RDG 400 + BELIMO actuators

#### Modulating control + manual changeover

##### LM-24A -SR



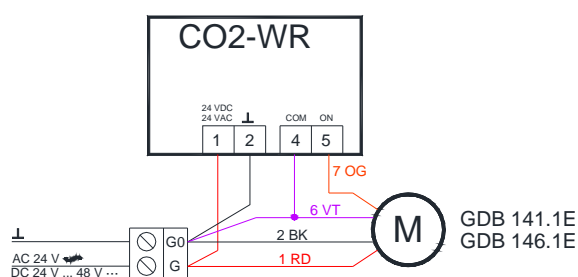
##### LM230A-SR



## CO2-WR Wiring diagrams

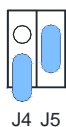
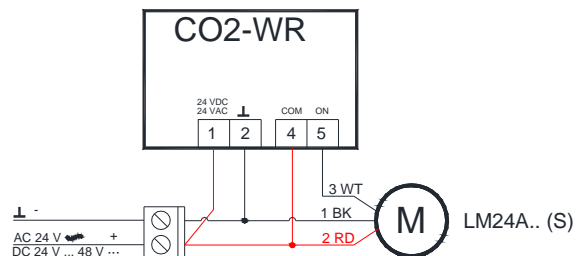
### CO2-WR+ SIEMENS GDB 141.1E

#### On/OFF control



### CO2-WR+ BELIMO LM24A.. (S)

#### On/OFF control



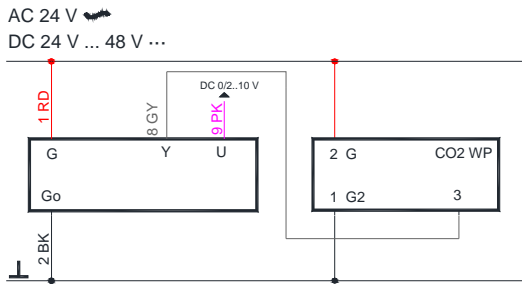
|                    | J4           | J5           | Relay   |
|--------------------|--------------|--------------|---|
| 800 ppm            | disconnected | disconnected | CO2> 900 ppm. Relay ON; CO2 < 700 ppm Relay OFF   |
| 1000 ppm           | connected    | disconnected | CO2> 1100 ppm. Relay ON; CO2 < 900 ppm Relay OFF  |
| 1200 ppm (default) | disconnected | connected    | CO2> 1200 ppm. Relay ON; CO2 < 1100 ppm Relay OFF |
| 1400 ppm           | connected    | connected    | CO2> 1500 ppm. Relay ON; CO2 < 1300 ppm Relay OFF |

## CO2-WP Wiring diagrams

### CO2-WP + SIEMENS actuators

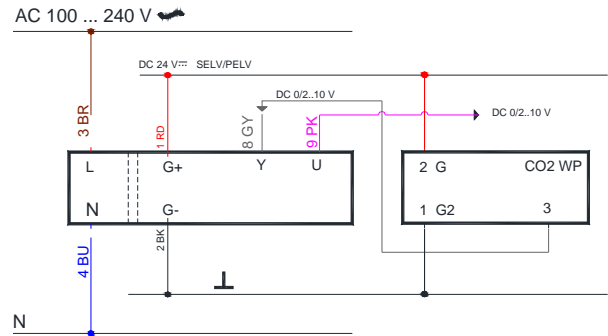
#### AC/DC 24 V – Modulating control

##### GDB 161.1E



#### AC 230 V – Modulating control

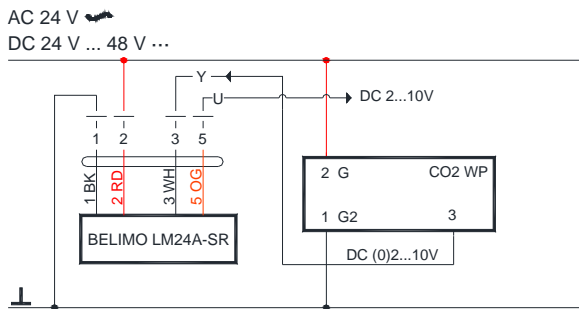
##### GDB 361.1E



### CO2-WP + BELIMO actuators

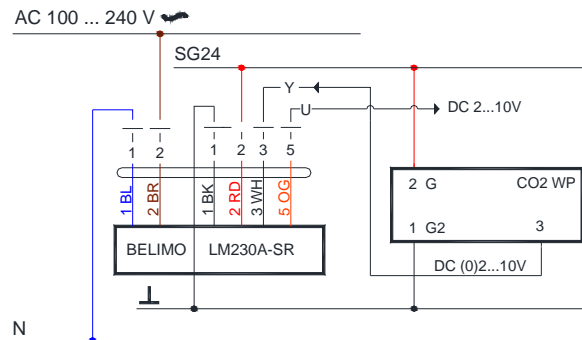
#### AC/DC 24 V – Modulating control

##### LM24A-SR



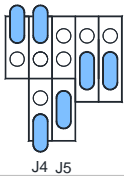
#### AC 230 V – Modulating control

##### LM230A - SR



### CO2-WP Setting

J3 J1 J2 S1 S2



|                   | J1           | J2           |
|-------------------|--------------|--------------|
| 0-10 VDC(default) | disconnected | disconnected |
| 2-10 VDC          | connected    | disconnected |

|                       | J3           |
|-----------------------|--------------|
| PID out put (default) | disconnected |
| Linear output         | connected    |

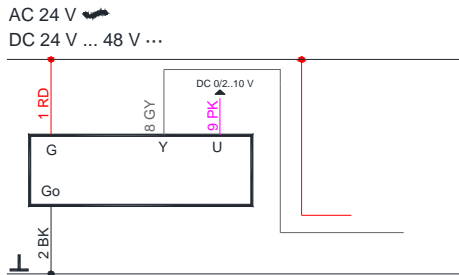
|                   | J4           | J5           |
|-------------------|--------------|--------------|
| 350 ppm           | disconnected | disconnected |
| 500 ppm           | connected    | disconnected |
| 800 ppm (default) | disconnected | connected    |
| 1200 ppm          | connected    | connected    |

J4 J5

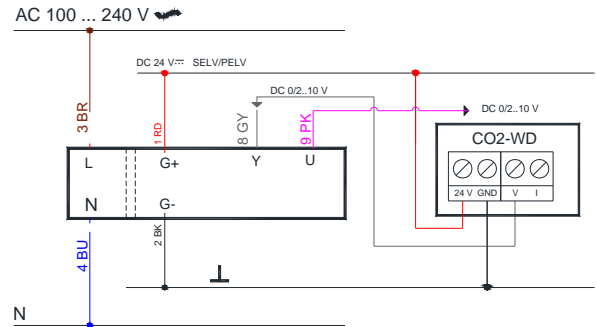
## CO2-D Wiring diagrams

### CO2-WD + SIEMENS actuators

#### AC/DC 24 V – Modulating control GDB 161.1E

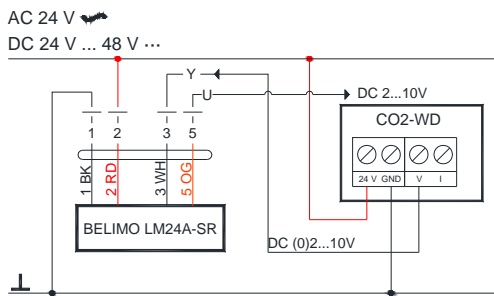


#### AC 230 V – Modulating control GDB 361.1E

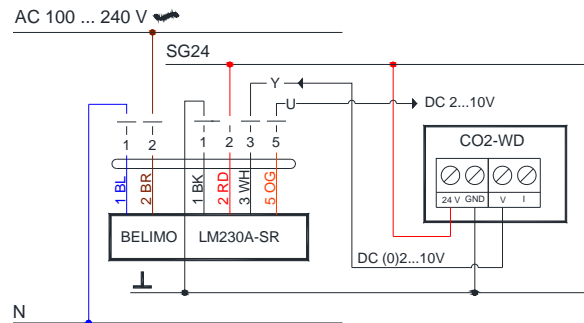


### CO2-WD + BELIMO actuators

#### AC/DC 24 V – Modulating control LM24A-SR



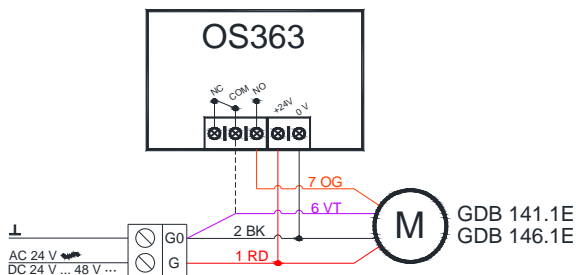
#### AC 230 V – Modulating control LM230A - SR



## OS-360 Wiring diagrams

### OS360+ SIEMENS GDB 141.1E

#### On/OFF control

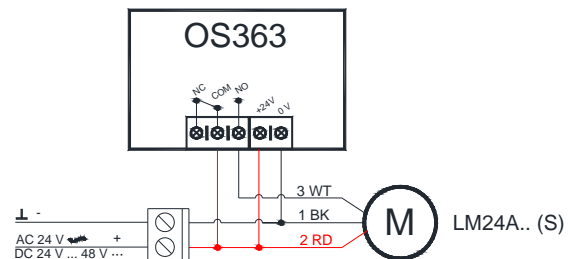


#### DELAY SETTING



### OS360+BELIMO LM24A.. (S)

#### On/OFF control



|     | A      | B      | C      | D      | E      | F      |
|-----|--------|--------|--------|--------|--------|--------|
| ON  | 0 sec  | 10 sec | 30 sec | 1 min  | 5 min  | 10 min |
| OFF | 10 sec | 1 min  | 5 min  | 10 min | 20 min | 30 min |