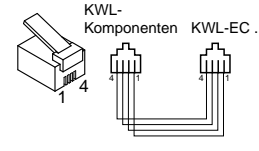


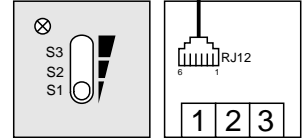
KWL-SL 6/3 (3 m im Lieferumfang inkl. RJ12-Stecker)
(5 m- SL6/5, 10 m- SL6/10, 20 m- SL6/20)

2) KWL-SL Leitungen bei Unterputz Verlegung min. in M25 Rohr verlegen.



KWL-SL 4/3 (3 m im Lieferumfang inkl. RJ10-Stecker)
(5 m- SL4/5, 10 m- SL4/10, 20 m- SL4/20)

Bedienelement
KWL-BE
Art.Nr. 4265



KWL-BE, Detailplan siehe [SS-1071](#)

2) KWL-SL 6/ 3 bis 20 bzw. max. Länge mit z.B. LiYY 6x0,34mm² = 200 m

alternativ zu KWL-BE:
auch GLT-Signal 0-10 V auf RJ-12, Pin 2: + 0-10V, Pin 3: +4,6V(Offset=0), Pin 6: GND möglich

Ethernet, TCP/IP, 100 Mbit/s,
- Festverlegung mit CAT7 max. 75 m und zusätzlich Patchkabel mit min. CAT5 max. 25 m

Analog-Steuerung

Helios-BUS

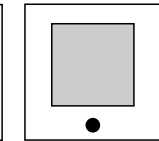
2) KWL-SL 4/ 3 bis 20 bzw. max. Länge siehe Tabelle [SS-1077](#)

Darstellung beispielhaft !

Bestückung der Komponenten "beliebig".

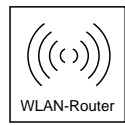
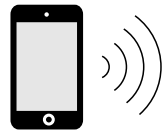
Wichtige Hinweise im Komponenten - BUS-Plan [SS-1077](#) und [SS-1079](#)

Bedienelement
KWL-BEC
Art.Nr. 4263

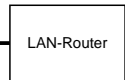


max. 8 Stück

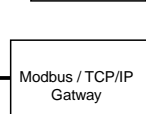
KWL-BEC, Detailplan siehe [SS-1072](#)



Internet

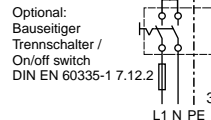
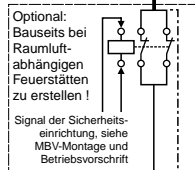


Modbus

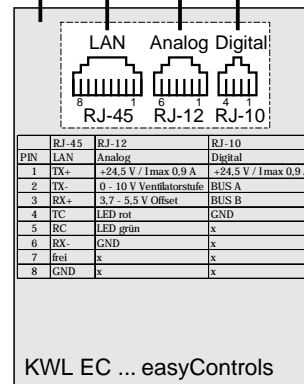


LAN-Leitung, Patch oder Crossover

2 m, 3 x 1,5mm²

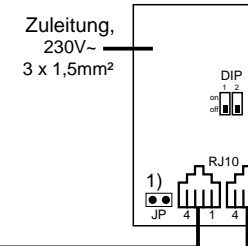


3) Schutzleiterstrom der 500er und 370er Type > 3,5 mA. Externe Zuleitung mit 2 x PE oder 1 x PE > 10 mm² nach DIN EN 50178



	RJ-45	RJ-12	RJ-10
PIN	LAN	Analog	Digital
1	TX+	+24,5 V / I _{max} 0,9 A	-24,5 V / I _{max} 0,9 A
2	TX-	0 - 10 V Ventilatorstufe	BUS A
3	RX+	3,7 - 5,5 V Offset	BUS B
4	TC	LED rot	GND
5	RC	LED grün	x
6	RX-	GND	x
7	frei	x	x
8	GND	x	x

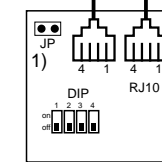
- 1) JP-Jumper Abschlusswiderstand
- offen ohne Abschlusswiderstand, nicht letzter BUS-Teilnehmer
- gesteckt Abschlusswiderstand 120 Ohm aktiv, letzter Teilnehmer im BUS



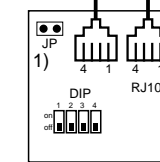
Erweiterungsmodul
KWL-EM
Art.Nr. 4269

- Prinzipplan Heizungsanschluss [SS-1078](#)
- Elektro-Heizung siehe [SS-1145](#)
- Warm Wasser Heizung bzw. L/SEWT siehe [SS-1145](#)

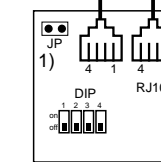
Adressierung mit DIP beachten !
max. 2 Stück



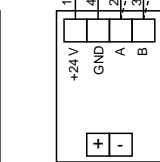
Sensor
KWL-CO₂
Art.Nr. 4272
Detailplan [SS-1073](#)
max. 8 Stück



Sensor
KWL-FTF
Art.Nr. 4273
Detailplan [SS-1074](#)
max. 8 Stück



Sensor
KWL-VOC
Art.Nr. 4274
Detailplan [SS-1075](#)
max. 8 Stück

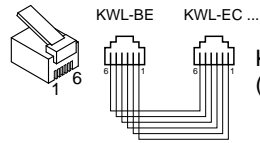


KNX/EIB Modul
KWL-KNX
Art.Nr. 4275
Detailplan [SS-1076](#)
Adresse intern Fest

Adressierung mit DIP beachten !

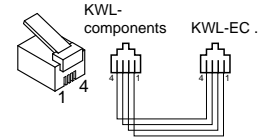
Bauseits zu erstellen
120 Ohm Abschlusswiderstand wenn letzter Teilnehmer





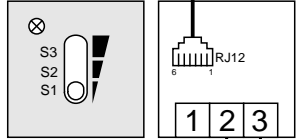
KWL-SL 6/3 (3 m and RJ12-Plug are included in the scope of supply)
(5 m- SL6/5, 10 m- SL6/10, 20 m- SL6/20)

2) KWL-SL cables for flush-mounted Installation min. placed in M25 pipe.



KWL-SL 4/3 (3 m and RJ10-Plug are included in the scope of supply)
(5 m- SL4/5, 10 m- SL4/10, 20 m- SL4/20)

Slide switch controller
KWL-BE
Art.Nr. 4265



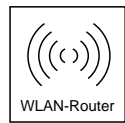
KWL-BE, detailed plan see [SS-1071](#)

2) KWL-SL 6/3 to 6/20 resp.
max. length with e.g. LiYY 6x0,34mm² = 200 m

alternative to KWL-BE:
GLT-Signal 0-10 V to RJ-12, Pin 2: + 0-10V, Pin 3: +4,6V(Offset=0), Pin 6: GND

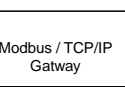
Ethernet, TCP/IP, 100 Mbit/s,
- fixed installation with CAT7 max. 75 m and patch cable with min. CAT5 max. 25 m in addition

LAN-cable Patch or Crossover

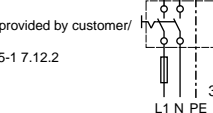
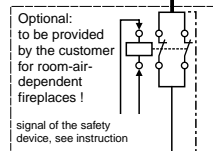


Internet

Modbus



2 m, 3 x 1,5mm²



Optional:
disconnecter provided by customer/
On/off switch
DIN EN 60335-1 7.12.2

supply, 230V~
3 x 1,5mm²

3) protective conductor current of type 500 and 370 > 3,5 mA. External supply with 2 x PE or 1 x PE > 10 mm² according to EN 50178

analog-control

Helios-BUS

2) KWL-SL 4/3 to 4/20 resp.
max. length see table [SS-1077](#)

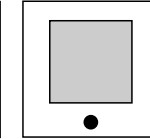
exemplary illustration !

Components can be equipped as required.

important notes in the BUS-Plan for components [SS-1077](#) and [SS-1079](#)

supply,
230V~
3 x 1,5mm²

Comfort controller
KWL-BEC
Art.Nr. 4263



max. 8 pieces

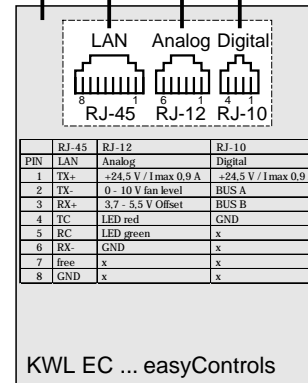
KWL-BEC, detailed plan see [SS-1072](#)

Extension module
KWL-EM
Art.Nr. 4269

KWL-EM, detailed plan for
- principle plan heating system [SS-1078](#)
- electric heater, see [SS-1145](#)
- warm water heater resp. L/SEWT see [SS-1145](#)

Note addressing with DIP !
max. 2 pieces

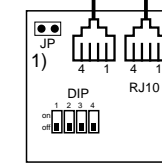
To be provided by customer
120 Ohm termination resistor,
if last participant



	RJ-45	RJ-12	RJ-10
PIN	LAN	Analog	Digital
1	TX+	+24,5 V / I max 0.9 A	+24,5 V / I max 0.9 A
2	TX-	0 - 10 V fan level	BUS A
3	RX+	3,7 - 5,5 V Offset	BUS B
4	TC	LED red	GND
5	RC	LED green	x
6	RX-	GND	x
7	free	x	x
8	GND	x	x

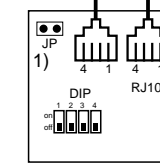
KWL EC ... easyControls

1) JP-Jumper	terminating resistor
open <input type="checkbox"/>	without terminating resistor, if not last BUS-participant
plugged in <input checked="" type="checkbox"/>	terminating resistor 120 Ohm active, if last participant at BUS

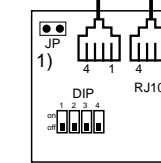


Sensor
KWL-CO₂
Art.Nr. 4272
detailed plan [SS-1073](#)
max. 8 pieces

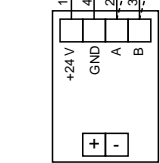
Note addressing with DIP !



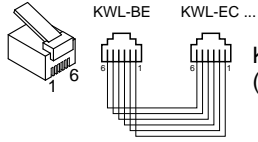
Sensor
KWL-FTF
Art.Nr. 4273
detailed plan [SS-1074](#)
max. 8 pieces



Sensor
KWL-VOC
Art.Nr. 4274
detailed plan [SS-1075](#)
max. 8 pieces

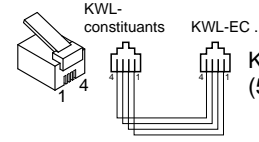


KNX/EIB Modul
KWL-KNX
Art.Nr. 4275
detailed plan [SS-1076](#)
fixed internal address



KWL-SL 6/3 (3 m et RJ12-connecteur inclus dans la livraison)
(5 m- SL6/5, 10 m- SL6/10, 20 m- SL6/20)

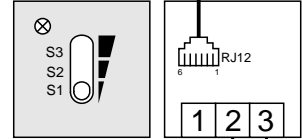
2) KWL-SL pose des câbles min. dans un tube M25 pour montage encastré.



KWL-SL 4/3 (3 m et RJ10-connecteur inclus dans la livraison)
(5 m- SL4/5, 10 m- SL4/10, 20 m- SL4/20)

Commutateur à 3 positions

KWL-BE
Art.Nr. 4265



KWL-BE, plan détaillé [SS-1071](#)

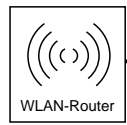
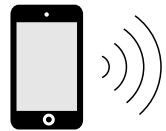
2) KWL-SL 6/3 jusqu'à 20 ou longueur max. avec p.ex. LiYY 6x0,34mm² = 200 m

alternative à KWL-BE:
aussi signal externe 0-10 V sur RJ-12, Pin 2: +0-10V, Pin 3: +4,6V(Offset=0), Pin 6: GND possible

Ethernet, TCP/IP, 100 Mbit/s,
- installation fixe avec CAT7 max. 75 m et câble de ethernet supplémentaire avec min. CAT5 max. 25 m

câble LAN: Patch ou Crossover

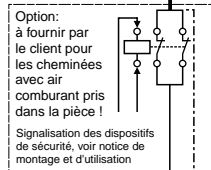
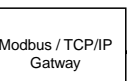
2 m, 3 x 1,5mm²



Internet



Modbus



Option:
disjoncteur (fourniture client)/ On/off commutateur
DIN EN 60335-1 7.12.2

3) alimentation, 230V~
3 x 1,5mm²

3) Courant de fuite des types 500 et 370 > 3,5 mA. Conduite d'alimentation avec 2 x PE ou 1 x PE > 10 mm² selon DIN EN 50178

commande analogique

Helios-BUS

2) KWL-SL 4/3 jusqu'à 20 ou longueur max. voir tableau [SS-1077](#)

exemple:

Les composants peuvent être équipés selon les besoins.

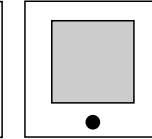
Remarques importantes
sont dans le plan BUS des composants [SS-1077](#) et [SS-1079](#)

OU

OU

Commande à distance

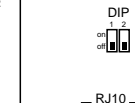
KWL-BEC
Art.Nr. 4263



max. 8 unités

KWL-BEC, plan détaillé [SS-1072](#)

alimentation, 230V~
3 x 1,5mm²



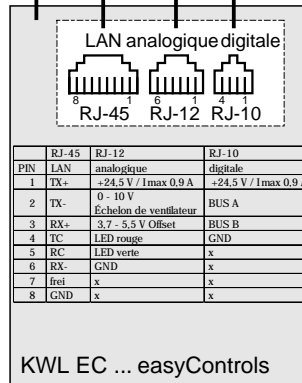
Module d'extension
KWL-EM
Art.Nr. 4269

KWL-EM, plan détaillé pour
- schéma de principe en mode chauffage [SS-1078](#)
- Chauffage électrique [SS-1145](#)
- Chauffage à eau chaude ou L/SEWT [SS-1145](#)

Adressage par interrupteur DIP !

max. 2 unités

à créer par le client
120 Ohm résistance terminale, si dernier composant



	RJ-45	RJ-12	RJ-10
PIN	LAN	analogique	digitale
1	TX+	+24,5 V / I _{max} 0,9 A	+24,5 V / I _{max} 0,9 A
2	TX-	0 - 10 V	BUS A
3	RX+	3,7 - 5,5 V Offset	BUS B
4	TC	LED rouge	GND
5	RC	LED verte	x
6	RX-	GND	x
7	frei	x	x
8	GND	x	x

KWL EC ... easyControls

1) JP-Jumper	résistance terminale
ouvert <input type="checkbox"/>	sans résistance terminale, pas le dernier composant du BUS
branché <input type="checkbox"/>	résistance terminale 120 Ohm active, le dernier composant du BUS

Senseur
KWL-CO₂
Art.Nr. 4272
plan détaillé [SS-1073](#)
max. 8 unités

Adressage par interrupteur DIP !

Senseur
KWL-FTF
Art.Nr. 4273
plan détaillé [SS-1074](#)
max. 8 unités

Senseur
KWL-VOC
Art.Nr. 4274
plan détaillé [SS-1075](#)
max. 8 unités

KNX/EIB Modul
KWL-KNX
Art.Nr. 4275
plan détaillé [SS-1076](#)
adresse interne fixe