

**Sub-base Mounted 3/2, 5/2
and 5/3 Valves
Solenoid Actuated with Wireway
Ø6mm, G1/8**

- **Multipole for easy installation**
- **IP40, IP65 and Conduit entry models**
- **Diagnostic with power saving features**
- **From 12V up to 240V supply**
- **Fieldbus compatible**
- **Dedicated AS-Interface models**



Technical Data Wireway

Indication by red LED (d.c.) or neon (a.c.)

Flywheel diode for d.c.

Suppression by diode (d.c.) or VDR (a.c.)

Diagnostic:

Red LED = correct movement of armature

Orange LED = failed operation

50% power saving following correct armature movement

Valve Terminal pins to DIN 43650 table 'C'

Temperature Range:

-20°C to +50°C

*Consult our Technical Service for use below +2°C

Degree of protection:

IP40 'D' sub-connector

IP65 Round type plug

IP65 Conduit entry type

Materials

Glass fibre reinforced co-polymer mouldings for wireway housings and modules. Conduit end caps – zinc pressure die-cast. Aluminium alloy end plates and aluminium pressure die-cast sub-base modules.

Ordering Information

To order, quote model number and voltage code of Sub-base and Wireway, e.g. V09AAC12-XXX13 is a 12 station single pressure manifold and wireway with conduit connector to IP65 for use at 24 V d.c.

Valves and accessories can be ordered separately or consult our Technical Service for a ready built system.

**For further technical data on valves refer to sections 5.4.105
and 5.4.111**



General Information 3/2 Solenoid Actuated Valves

Symbol	Model	Manual Override	Solenoid Pilot	Operator	Return	Operating Pressure (bar)	Pilot Pressure (bar)	Weight (kg)	Spares kit
	V095416R-B200A	Screwdriver Bi-stable	Internal	Solenoid	Spring and Air	3 to 10	-	0,140	V10034-K04
	V095416R-B300A	Push Button Spring Return							
	V095426R-B200A	Screwdriver Bi-stable	External	Solenoid	Spring and Air	-0,9 to 10	1,5 + 0,5 x supply	0,140	V10034-K04
	V095426R-B300A	Push Button Spring Return							

5/2 Solenoid Actuated Valves

Symbol	Model	Manual Override	Solenoid Pilot	Operator	Return	Operating Pressure (bar)	Pilot Pressure (bar)	Weight (kg)	Spares kit
	V096516A-B21*A	Screwdriver Bi-stable	Internal	Solenoid	Spring and Air	3 to 10	-	0,155	V10034-K00
	V096516A-B31*A	Push Button Spring Return							
	V096526A-B21*A	Screwdriver Bi-stable	External	Solenoid	Spring and Air	-0,9 to 10	1,5 + 0,5 x supply	0,155	V10034-K00
	V096526A-B31*A	Push Button Spring Return							
	V096511A-B21*A	Screwdriver Bi-stable	Internal	Solenoid	Solenoid	2 to 10	-	0,198	V10034-K00
	V096511A-B31*A	Push Button Spring Return							
	V096522A-B21*A	Screwdriver Bi-stable	External	Solenoid	Solenoid	-0,9 to 10	2 to 10	0,198	V10034-K00
	V096522A-B31*A	Push Button Spring Return							
	V096513A-B21*A	Screwdriver Bi-stable	Internal	Solenoid	Air	1,5 to 10	-	0,155	V10034-K00
	V096513A-B31*A	Push Button Spring Return							

5/3 Solenoid Actuated Valves

Symbol	Model	Manual Override	Pilot Supply	Operator	Mid-Position	Return	Operating Pressure (bar)	Pilot Pressure (bar)	Weight (kg)	Spares kit	Mounting Option
	V096611A-B21*A	Screwdriver Bi-stable	Internal	Solenoid	APB	Solenoid	-0,9 to 10	-	0,205	V10034-K01	All Bases
	V096611A-B31*A	Push Button									
	V096622A-B21*A	Screwdriver Bi-stable	External	Solenoid	APB	Solenoid	-0,9 to 10	1,2 to 10	0,205	V10034-K01	Sub-base
	V096622A-B31*A	Push Button									
	V096711A-B21*A	Screwdriver Bi-stable	Internal	Solenoid	COE	Solenoid	-0,9 to 10	-	0,205	V10034-K02	All Bases
	V096711A-B31*A	Push Button									
	V096722A-B21*A	Screwdriver Bi-stable	External	Solenoid	COE	Solenoid	-0,9 to 10	1,2 to 10	0,205	V10034-K02	Sub-base
	V096722A-B31*A	Push Button									
	V096811A-B21*A	Screwdriver Bi-stable	Internal	Solenoid	COP	Solenoid	-0,9 to 10	-	0,205	V10034-K03	All Bases
	V096811A-B31*A	Push Button									
	V096822A-B21*A	Screwdriver Bi-stable	External	Solenoid	COP	Solenoid	-0,9 to 10	1,2 to 10	0,205	V10034-K03	Sub-base
	V096822A-B31*A	Push Button									

* Insert Voltage Code from table (see page 3.)
 APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure.



***Voltage Codes and Spare Coils**

Voltage	Codes	Power Inrush/Hold	Coil Part Number
6V d.c.	1	1,5 W	V10025-A11
12V d.c.	2	1,7 W	V10025-A12
24V d.c.	3	1,7 W	V10025-A13
12V 50/60Hz	1	4,1/2,9 VA	V10025-A11
24V 50/60Hz	4	4,1/2,9 VA	V10025-A14
48V 50/60Hz	6	4,1/2,9 VA	V10025-A16
110V 50/60Hz	8	3,5/2,5 VA	V10025-A18
240V 50/60Hz	9	3,5/2,5 VA	V10025-A19

Diagnostic with Power Savings

Voltage	24V d.c.
Suppression:	Flywheel diode
Diagnostic Indication:	Red LED correct armature movement Orange LED failed armature movement
Power Saving:	50% after armature has moved

† Electrical Details for Wireway

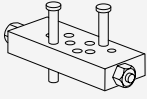
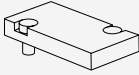
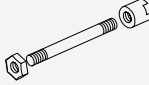
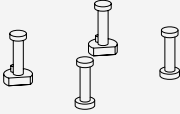
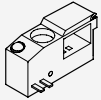
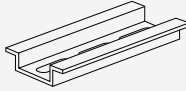
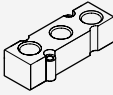
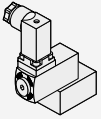
Voltage	Features	Indicator	† Codes	Colour Code
12 – 24 V d.c.	Surge suppression	LED (red)	3	Green
24V d.c.	Surge suppression, diagnostic with power saver	See right	B3	Red
24 – 48 V 50/60Hz	Surge suppression	Neon	6	Blue
110 – 120 V 50/60Hz	Surge suppression	Neon	8	Yellow
220 – 240V 50/60Hz	Surge suppression	Neon	9	Orange

Electrical Details for Solenoid Operators

Voltage Tolerances:	±10%
Rating:	100% E.D.
Inlet Orifice:	0,8 mm
Electrical Connection:	DIN 43650 Table "C"
Manual Override:	V0-----A-B21*A – Screwdriver Bi-stable V0-----A-B31*A – Push button, spring return
Protection Class:	IP65 (DIN 40050)

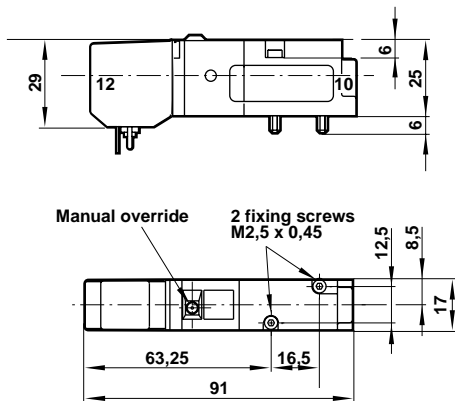
For details of connector plugs and light emitting seals see section 7.7.001.

Accessories

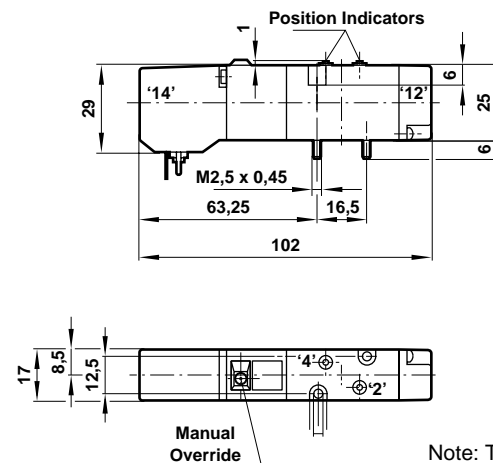
			
Sandwich Plate Flow Regulator	Blanking Plate	Tie Rod Kits	DIN Rail Mounting Kits
V095516A-Q1200	V095516A-Q1100	V085516A-Q0302 – 0316	V10007-K00 for V10006-G** bases V10008-K00 for V10039-G** bases
-	-	-	-
			
Multipole Module	DIN Rail	Intermediate Supply/Exhaust Plate	Pressure Switch Assembly
V085516R-Q091*	Standard with Indicator	V10009-C00 1 metre	V095516A-Q1700
V085516R-Q09B3	Diagnostic	-	-
V085516R-Q0953	Positive Common	-	-

V09 Valves for Modular Sub-base Mounting

V0954R Models
3/2 Single Solenoid Valves**



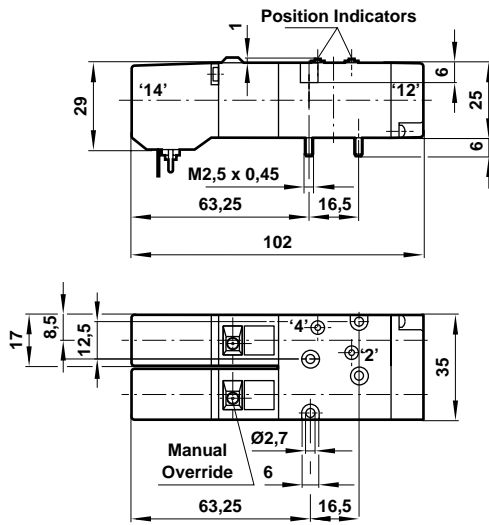
**V096516A Models
5/2 Single Solenoid Valve**



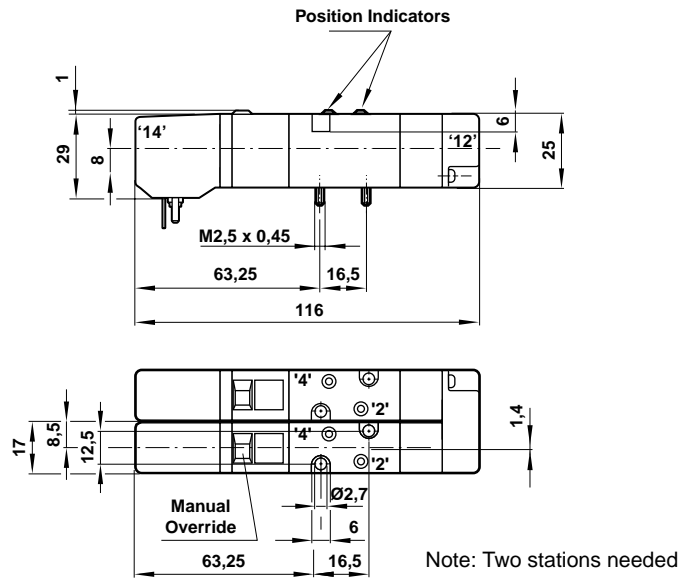
Note: Two stations needed



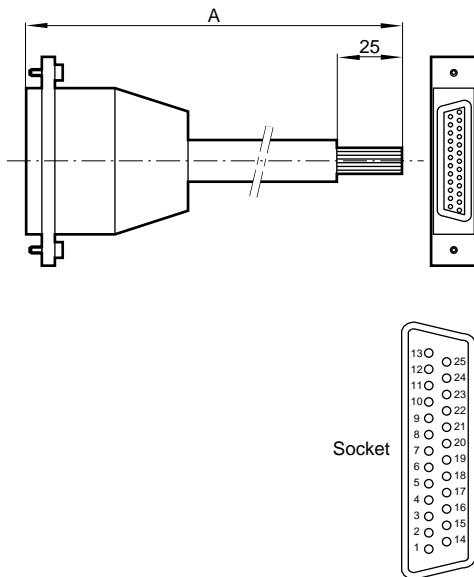
V096511P Models
5/2 Double Width Solenoid Valve



V096*P Models**
5/3 Double Width Solenoid Valve



IP40 D Sub-Connector



D-Sub Connector with Cable

Type: 25 pin IP 40 D-Sub connector. Cable size 0,52 mm²

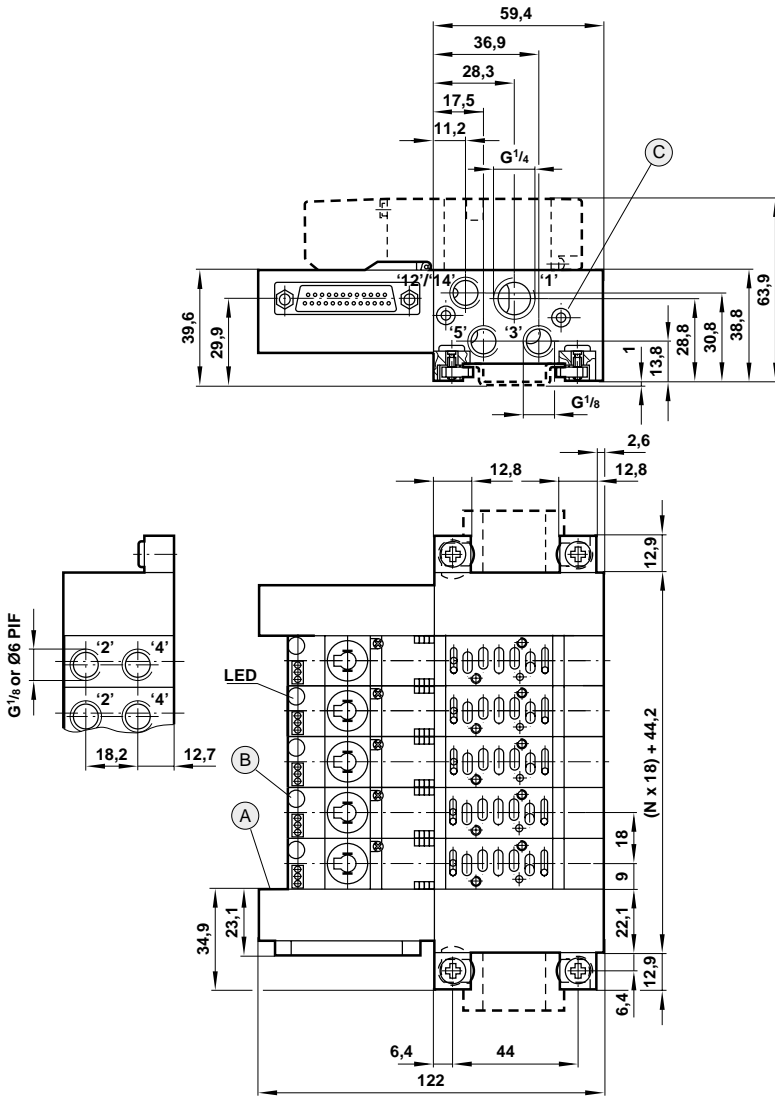
Model	A	Weight (Kg)
V10020-E01	1,0 m	0,276
V10020-E03	3,0 m	0,676
V10020-E05	5,0 m	1,076

Pin no.	Socket	Plug	Pin no.	Socket	Plug
1	Solenoid 1	Red	14	Solenoid 14	Green/red
2	Solenoid 2	Blue	15	Solenoid 15	Yellow/red
3	Solenoid 3	Green	16	Solenoid 16	White/red
4	Solenoid 4	Yellow	17	Solenoid 17	Red/black
5	Solenoid 5	White	18	Solenoid 18	Red/brown
6	Solenoid 6	Brown	19	Common, -Ve/neutral	Yellow/blue
7	Solenoid 7	Violet	20	Common, -Ve/neutral	White/blue
8	Solenoid 8	Orange	21	Common, -Ve/neutral	Blue/black
9	Solenoid 9	Pink	22	Common, -Ve/neutral	Orange/blue
10	Solenoid 10	Turquoise	23	Common earth	Yellow/green
11	Solenoid 11	Grey	24	Solenoid 19	White/green
12	Solenoid 12	Red/blue	25	Solenoid 20	Orange/green
13	Solenoid 13	Black			

Solenoid No. 1 is nearest to the connector on valve island



Modular Sub-base with IP40 D Sub-Connector Wireway for V09 valves



N = Number of stations

Modular Sub-base Assemblies

- V09AAA**–XXX1† Standard with indicator
- V09ABA**–XXXB3 Diagnostic

Sub-base assemblies for 2 to 20 stations
** = 02 to 20.

Modular Sub-base Assemblies with Ø6 Push-in Fitting

- V096AA**–XXX1† Standard with indicator
- V096BA**–XXXB3 Diagnostic

Sub-base assemblies for 2 to 20 stations, ** = 02 to 20.

Dual Pressure Modular Sub-base Assemblies

- V09AAA**–**X1† Standard with indicator
- V09ABA**–**XB3 Diagnostic

Sub-base assemblies for 2 to 20 stations
** = 01 to 19 to indicate position of Dual Pressure Blanking Disks, e.g V09AAA03–07X1† indicates a 10 station base divided into groups of 3 and 7.

Dual Pressure Modular Sub-base Assemblies with Push-in Fittings

- V096AA**–**X1† Standard with indicator
- V096BA**–**XB3 Diagnostic

Sub-base assemblies for 2 to 20 stations
** = 01 to 19 to indicate position of Dual Pressure Blanking Disks, e.g V096AA03–07X1† indicates a 10 station base divided into groups of 3 and 7.

Dual Pressure Blanking Disk Set

V095516A–Q1900

End Plate and Harness with ‘D’ Connector (A)

Number of Stations	Model	Weight (Kg)
4	V095516A-Q0604	0,144
8	V095516A-Q0608	0,160
12	V095516A-Q0612	0,182
16	V095516A-Q0616	0,205
20	V095516A-Q0620	0,229

Multipole Module (B)

- V085516R–Q091† Standard with indicator 0.021 Kg
- V085516R–Q09B3 Diagnostic 0.021 Kg

Tie Rod Kits (C)

V085516A-Q03**

2 kits required for the sub-base assembly
** = 02 to 20 indicating the number of stations.
For the Wireway: 1 Kit required with number of stations minus 1.

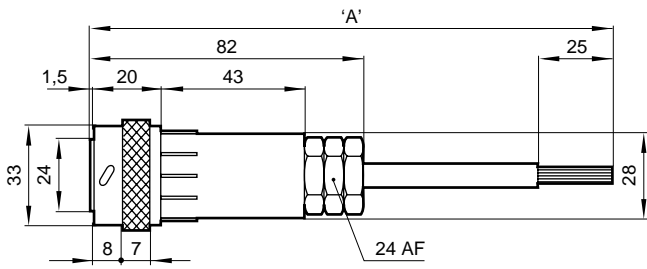
DIN-Rail Mounting Kit

V10319-K30 0.008 Kg
For mounting on DIN-Rail

† Insert Wireway Code.
See Electrical Details for Wireway on page 5.4.156.02.



IP65 'Round' Connector



Round Connector with Cable

Type: 23 pin IP65 'Round' connector. Cable size 0,52 mm²

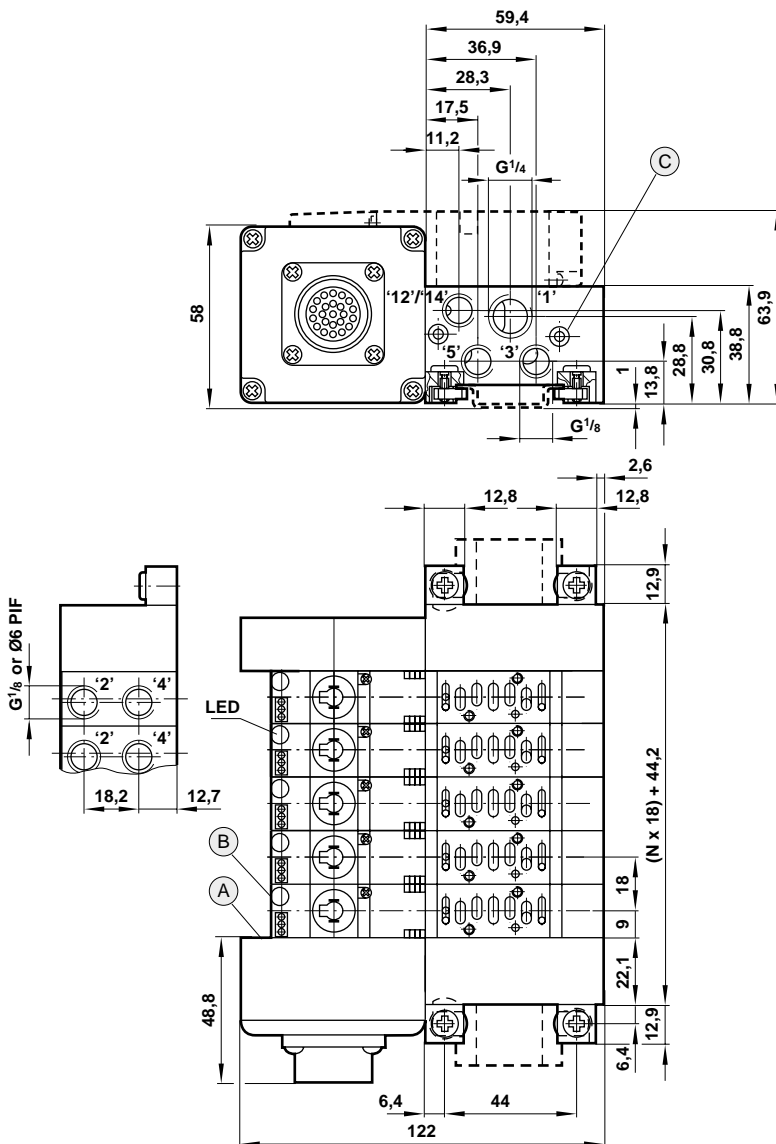
Model	A
V10021-E01	1,0 m
V10021-E03	3,0 m
V10021-E05	5,0 m

Pin.	Socket	Plug	Pin	Socket	Plug
A	Solenoid 1	Red	N	Solenoid 13	Black
B	Solenoid 2	Blue	P	Solenoid 14	Green/red
C	Solenoid 3	Green	R	Solenoid 15	Yellow/red
D	Solenoid 4	Yellow	S	Solenoid 16	White/red
E	Solenoid 5	White	T	Solenoid 17	Red/black
F	Solenoid 6	Brown	U	Solenoid 18	Red/brown
G	Solenoid 7	Violet	V	Common,-Ve/neutral	Yellow/blue
H	Solenoid 8	Orange	W	Common,-Ve/neutral	White/blue
J	Solenoid 9	Pink	X	Common,-Ve/neutral	Blue/black
K	Solenoid 10	Turquoise	Y	Common,-Ve/neutral	Orange/blue
L	Solenoid 11	Grey	Z	Common earth	Yellow/green
M	Solenoid 12	Red/blue			

Note: Solenoid no. 1 is nearest to the connector on the valve island.



Modular Sub-bases with IP65 Round Connector Wireway for V09 valves



Modular Sub-base Assemblies

V09AAB–XXX1†** Standard with indicator
V09ABB–XXXB3** Diagnostic
 Sub-base assemblies for 2 to 18 stations,
 ** = 02 to 18.

Modular Sub-base Assemblies with Ø6 Push-in Fitting

V096AB–XXX1†** Standard with indicator
V096BB–XXXB3** Diagnostic
 Sub-base assemblies for 2 to 18 stations,
 ** = 02 to 18.

Dual Pressure Modular Sub-base Assemblies

V09AAB–**X1†** Standard with indicator
V09ABB–**XB3** Diagnostic
 Sub-base assemblies for 2 to 18 stations,
 ** = 1 to 17 to indicate position of Dual Pressure Blanking Disks, e.g V09AAB08–04X1† indicates a 12 station base standard with indicator divided into groups of 8 and 4.

Dual Pressure Modular Sub-base Assemblies with Push-in Fittings

V096AB–**X1†** Standard with indicator
V096BB–**XB3** Diagnostic
 Sub-base assemblies for 2 to 18 stations
 ** = 01 to 17 to indicate position of Dual Pressure Blanking Disks, e.g V096AB03–07X1† indicates a 10 station base standard with indicator divided into groups of 3 and 7.

Dual Pressure Blanking Disk Set

Model Number: **V095516A–Q1900**

Number of Stations	Model	Weight (Kg)
4	V095516A-Q0704	0,144
8	V095516A-Q0708	0,160
12	V095516A-Q0712	0,182
16	V095516A-Q0716	0,205
18	V095516A-Q0718	0,229

End Plate and Harness with Round Connector (A)

Multipole Module (B)

V085516R–Q091† Standard with indicator
V085516R–Q09B3 Diagnostic

Tie Rod Kits (C)

V085516A-Q03**

2 kits required for the sub-base assembly
 ** = 02 to 18 indicating the number of stations.
 For the Wireway: 1 Kit required with number of stations minus 1.

DIN-Rail Mounting Kit

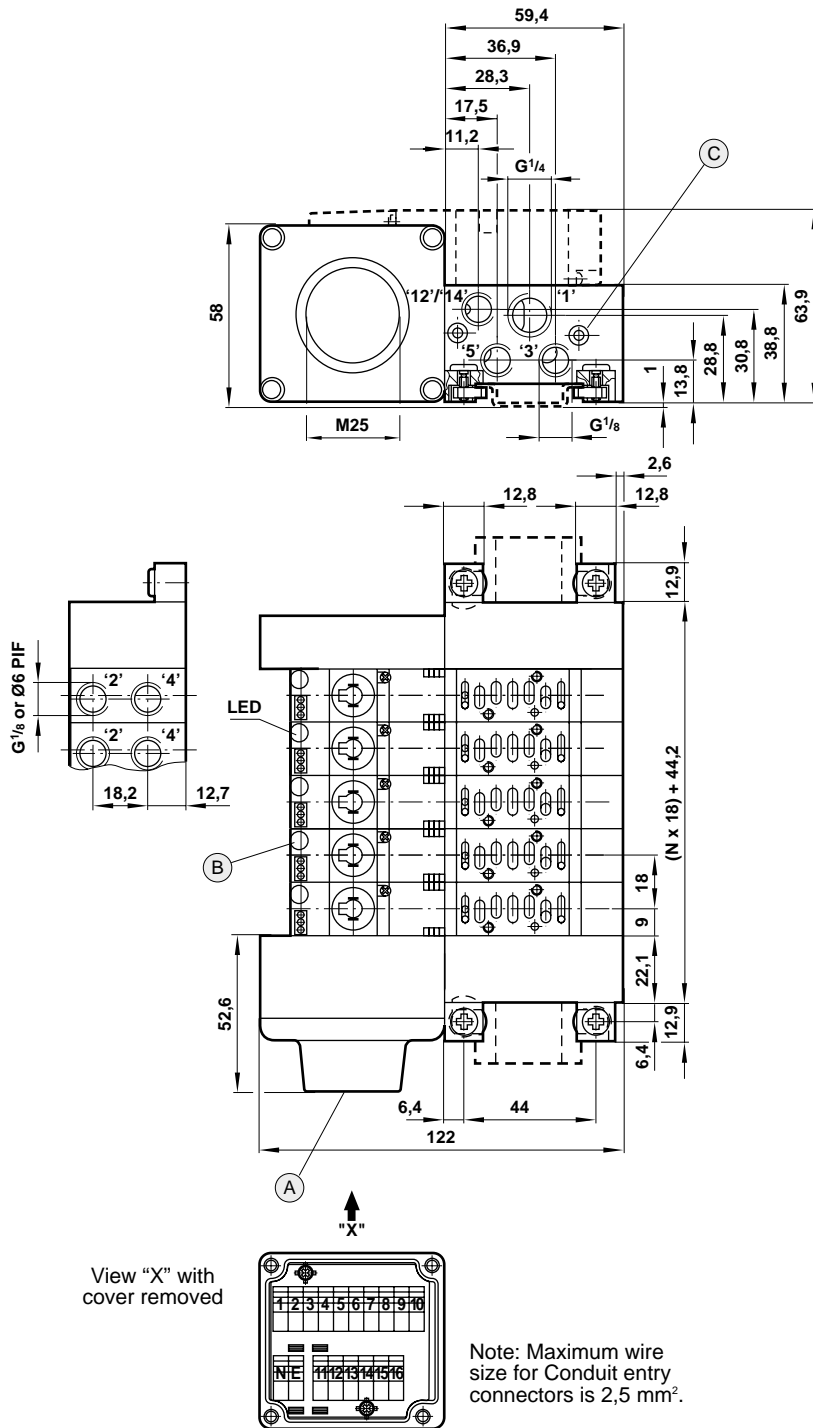
V10319-K30
 For mounting on DIN-Rail

0.008 Kg

† Insert Wireway Code.
 See Electrical Details for Wireway on page 5.4.156.02.



Modular Sub-base with IP65 Conduit entry Wireway for V09 valves



Modular Sub-base assemblies

- V09AAC**_XXX1† Standard with indicator
- V09ABC**_XXXB3 Diagnostic

Sub-base assemblies for 2 to 16 stations, ** = 02 to 16.

Modular Sub-base with Push-in Fitting assemblies

- V096AC**_XXX1† Standard with indicator
- V096BC**_XXXb3 Diagnostic

Sub-base assemblies for 2 to 16 stations, ** = 02 to 16.

Dual Pressure Modular Sub-base Assemblies

- V09AAC**_**X1† Standard with indicator
- V09ABC**_**XB3 Diagnostic

Sub-base assemblies for 2 to 16 stations, ** = 1 to 15 to indicate position of Dual Pressure Blanking Disks, e.g V09AAC11-03X1† indicates a 14 station base standard with indicator divided into groups of 11 and 3.

Dual Pressure Modular Sub-base Assemblies with Push-in Fittings

- V096AC**_**X1† Standard with indicator
- V096BC**_**XB3 Diagnostic

Sub-base assemblies for 2 to 16 stations ** = 01 to 15 to indicate position of Dual Pressure Blanking Disks, e.g V096AC03-07X1† indicates a 10 station base standard with indicator divided into groups of 3 and 7.

Dual Pressure Blanking Disk Set

V095516A-Q1900

Number of Stations	Model	Weight (Kg)
4	V095516A-Q1504	0,144
8	V095516A-Q1508	0,160
12	V095516A-Q1512	0,182
16	V095516A-Q1516	0,205

End Plate and Harness with Conduit Connector (A)

Multipole Module (B)

- V085516R-Q091† Standard with indicator 0,021 Kg
- V085516R-Q09B3 Diagnostic 0,021 Kg

Tie Rod Kits (C)

V085516A-Q03**

2 kits required for the sub-base assembly ** = 02 to 04 indicating the number of stations. For the Wireway: 1 Kit required with number of stations minus 1.

DIN-Rail Mounting Kit

V10319-K30

For mounting on DIN-Rail

0.008 Kg

† Insert Wireway Code.

See Electrical Details for Wireway on page 5.4.156.02.

Accessories

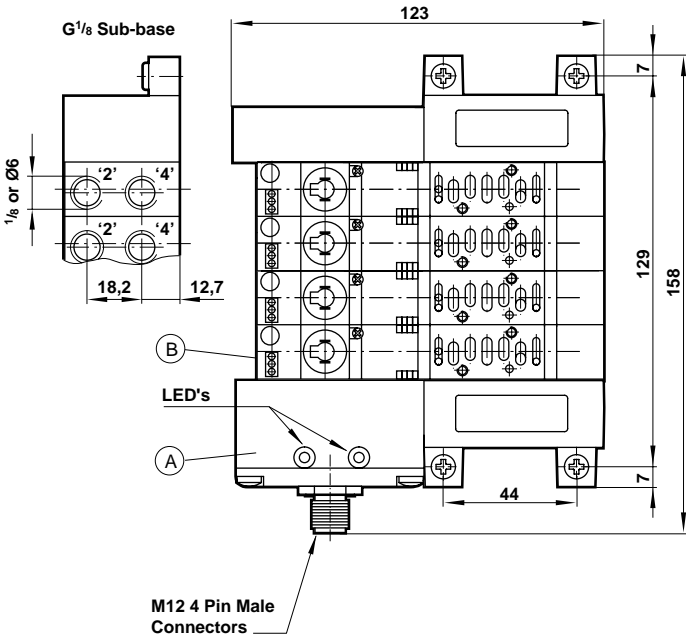
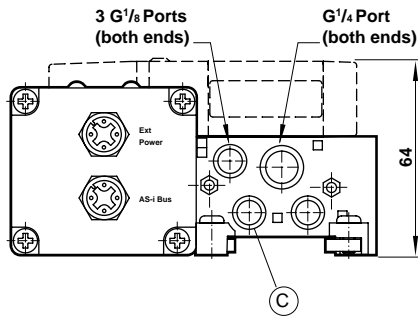
Blanking Plug (pack of 10), reference V10018-K00 for multipole module.

Coil Seal (pack of 10), reference V10024-K00 for coil terminal pins to multipole module.

Identification Kits – letters or numbers, reference V10022-K0* for multipole module. *Insert letter or number, A – Z, 0 – 9.



Modular Sub-base Assemblies with Dedicated AS-Interface for V09 valves – 4 Output Models



Valve Island Assemblies

V09AAG**–XXX13

Valve Island assemblies for up to 4 solenoids.
** = 02 to 04.

Dual Pressure Valve Island Assemblies

V09AAG**–**X13

Valve Island assemblies for up to 4 solenoids.
** = 01 to 03 to indicate position of Dual Pressure Blanking Disks, e.g V09AAG01–03X13 indicates a 4 station base divided into groups of 1 and 3.

Port Identification

Valve Island assemblies with alternative sub-base ports are available. Change 4th digit as shown:

V09AAG**–XXX13

- A = ISO G¹/₈
- G = ISO Rc¹/₈
- P = ISO 1/₈ NPT
- 6 = Ø6mm PIF

4 Output LHS AS-I Module (A)

VE1AS09A-00400 0,180 Kg

Multipole Module (B)

V085516R–Q0913 0,021 Kg

Tie Rod Kits (C)

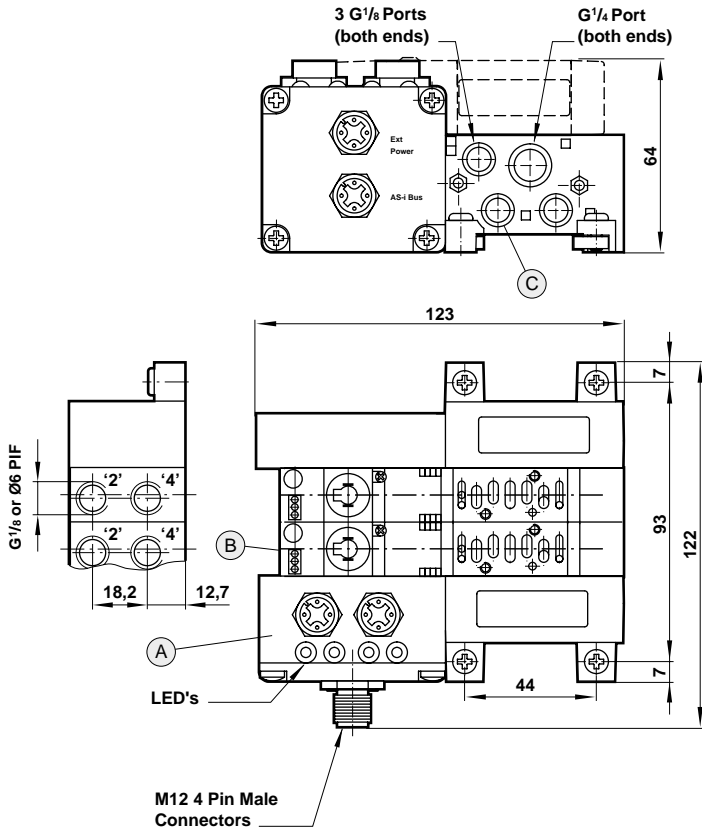
V085516A-Q03**

2 kits required for the sub-base assembly
** = 02 to 04 indicating the number of stations.
For the Wireway: 1 Kit required with number of stations minus 1.

See Electrical Details for Wireway on page 5.4.156.02.



Modular Sub-base Assemblies with Dedicated AS-Interface for V09 valves – 2 Output / 2 Input Models



Valve Island Assemblies

V09AAH02-XXX13

Valve Island assemblies for 2 solenoids.

Dual Pressure Valve Island Assemblies

V09AAH01-01X13

Valve island assemblies for 2 solenoids fitted with dual pressure disks between stations.

Port Identification

Valve Island assemblies with alternative sub-base ports are available. Change 4th digit as shown:

V09AAH-XXX13**

- A = ISO G¹/₈
- G = ISO Rc¹/₈
- P = ISO 1/8 NPT
- 6 = Ø6mm PIF

2 Output / 2 Input LHS AS-I Module (A)

VE1AS09A-20200

0,180 Kg

Multipole Module (B)

V085516R-Q0913

0,021 Kg

Tie Rod Kits (C)

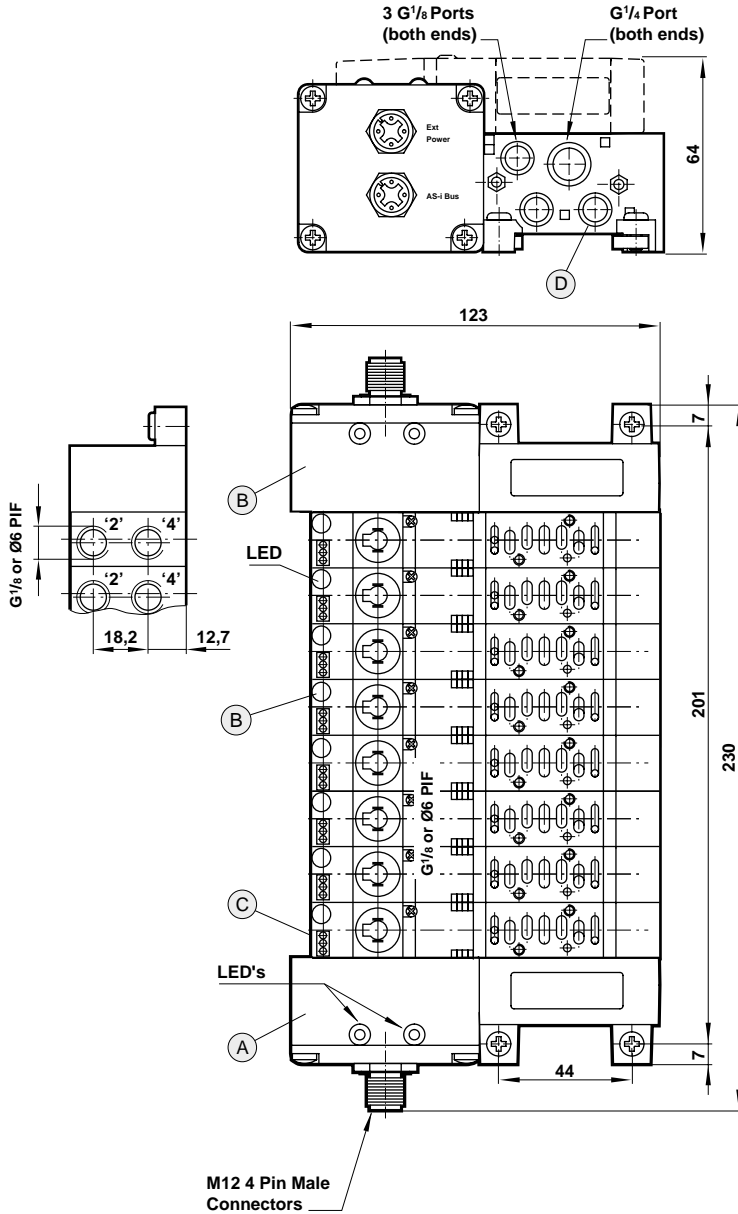
V085516A-Q03**

2 kits required for the sub-base assembly
 ** = 02 to 04 indicating the number of stations.
 For the Wireway: 1 Kit required with number of stations minus 1.

See Electrical Details for Wireway on page 5.4.156.02.



Modular Sub-base Assemblies with Dedicated AS-Interface for V09 valves – 8 Output Models



Valve Island Assemblies

V09AAJ–XXX13**

Valve Island assemblies for up to 8 solenoids.
** = 02 to 08.

Dual Pressure Valve Island Assemblies

V09AAJ_**X13**

Valve Island assemblies for up to 8 solenoids.
** = 01 to 07 to indicate position of Dual Pressure Blanking Disks, e.g V09AAJ03–05X13 indicates an 8 station base divided into groups of 3 and 5.

Port Identification

Valve Island assemblies with alternative sub-base ports are available. Change 4th digit as shown:

V09AAJ–XXX13**

- A = ISO G¹/₈
- G = ISO Rc¹/₈
- P = ISO 1/₈ NPT
- 6 = Ø6mm PIF

4 Output LHS AS-I Module (A)

VE1AS09A-00400

0,180 Kg

4 Output RHS AS-I Module (B)

VE1AS09B-00400

0,180 Kg

Multipole Module (C)

V085516R–Q0913

0,021 Kg

Tie Rod Kits (D)

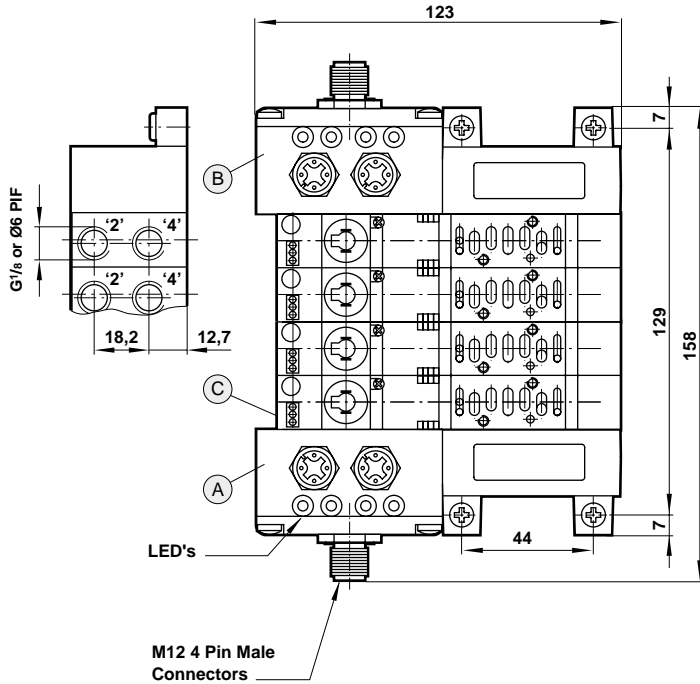
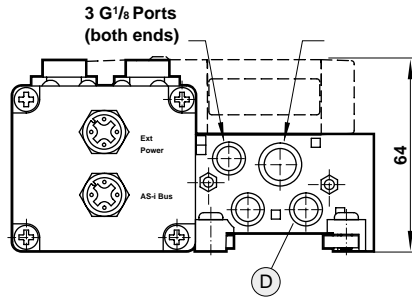
V085516A-Q03**

2 kits required for the sub-base assembly
** = 02 to 08 indicating the number of stations.
For the Wireway: 1 Kit required with number of stations minus 1.

See Electrical Details for Wireway on page 5.4.156.02.



Modular Sub-base Assemblies with Dedicated AS-Interface for V09 valves – 4 Output / 4 Input Models



Valve Island Assemblies

V09AAK**-XXX13

Valve Island assemblies for up to 4 solenoids.
** = 02 to 04.

Dual Pressure Valve Island Assemblies

V09AAK**-**X13

Valve Island assemblies for up to 4 solenoids.
** = 01 to 03 to indicate position of Dual Pressure Blanking Disks, e.g V09AAK01-03X13 indicates a 4 station base divided into groups of 1 and 3.

Port Identification

Valve Island assemblies with alternative sub-base ports are available. Change 4th digit as shown:

V09AAK**-XXX13

- A = ISO G¹/₈
- G = ISO Rc¹/₈
- P = ISO 1/₈ NPT
- 6 = Ø6mm PIF

2 Output LHS AS-I Module (A)

VE1AS09A-20200

0,190 Kg

2 Output LHS AS-I Module (B)

VE1AS09B-20200

0,190 Kg

Multipole Module (C)

V085516R-Q0913

0,021 Kg

Tie Rod Kits (D)

V085516A-Q03**

2 kits required for the sub-base assembly
** = 02 to 04 indicating the number of stations.
For the Wireway: 1 Kit required with number of stations minus 1.

See Electrical Details for Wireway on page 5.4.156.02.

Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under 'Technical Data'.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult NORGREN.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes. The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.