





- Robust custom designed modules with IP65 rating*
- **Compatible with Norgren system Valve Islands**
- Available with all major protocols
- Remote output facility



Technical Data

Indication:

Red LED Power on

Green LED System running

Connection:

As defined by principle protocols or: 24V d.c. Power supply - M12 3 pin

Output to valve island - 25 way D type

Operating Temperature:

0 to +50°C

Vibration Tests:

To BS 2011 (IEC 68-2-6)

Degree of Protection:

IP40 when used with Nugget 30

IP65 when used with Nugget 40, Nugget 120 and Midi★Star system valves

EMC standards:

To EN50081-2 and EN50082-2

Materials:

Enclosure: compressed polyurethane foam with textured black paint finish

Ordering Information

To order quote model number from appropriate table, i.e. VE1DP00A-00160 for a PROFIBUS-DP output module.

^{*} Except when used with Nugget 30 Valve Islands (IP40)

General Information

| Protocol | Number of outputs in each output Module | Number of inputs in each input Module | Bus Topology | System Configuration | Communication | Max Baud rate | Cable length at max baud rate | Number of units per installation | Addressing | Cable | Page No. |
|--------------|--|---------------------------------------|-----------------|-------------------------------|---------------|-----------------|---|---|---|------------------------------|------------|
| PROFIBUS-DP | 16 | 16 | Line | Max 3 masters Multi slaves | RS 485 | 1,2 MBits/sec | 200m or 1000m with reapeater | Max 3 masters +121 slaves with repeaters | Range 1-125 by hand held addressing unit | 2 wires + screen | 6.4.020.04 |
| INTERBUS-S | 16 | 16 | Ring | Single master Multi slaves | RS 422 | 500 kBits/sec | 400m between modules. Max 13km for total bus | 64 + master | Automatic or software configurable | 4 wires + screen + ground | 6.4.020.06 |
| PROFIBUS-FMS | 16 | 16 | Line | Multi master Multi slaves | RS 485 | 500 kBits/sec | 200m | 63 incl. master and slaves with repeaters | Range 1-63 set by DIP switches | 2 wires + screen | 6.4.020.08 |
| DeviceNet | 16 | 16 | Line | Multi master Multi slaves | CAN | 500 kBits/sec | 100m | 64 nodes | Range 0-63 by DIP switches or over the network | 4 wires + screen | 6.4.020.10 |
| JETWay-R | 16 | 16 | Line | Single master Multi slaves | RS 485 | 115,2 kBits/sec | 1000m | 62 + master | Range 1-63 set by DIP switches | 2 wires + screen | 6.4.020.12 |
| Sysmac | 16 | 16 | Line | Single master Multi slaves | RS 485 | 187,5 kBits/sec | 200m | 32 + master 64 with repeaters | Range 0-31 set by DIP switches | 2 wires + screen | 6.4.020.14 |
| PneuBus | 16 | 16 | Line | Single master Multi slaves | RS 485 | 19,2 kBits/sec | 1200m | 1 master +31 slaves 190 0 + 190 I | Range 64-254 set by DIP switches | 2 wires + screen | 6.4.020.16 |

System Protection

| Valves and Connectors in Modules | IP40 protection class | IP65 protection class |
|----------------------------------|-----------------------|---------------------------|
| Nugget/Super 30 | Via cable | Not possible |
| Nugget/Super 40 | Integral | Integral |
| Nugget/Super 120 | Integral | Integral |
| Midi★Star | Via cable | Via cable with round plug |

Accessories

| Symbol | Description | Connection | Straight/Elbow | Cable Length | Part Number | Protocol † | Page |
|--------|--|---------------|----------------|--------------|----------------|------------|------------|
| | | size | | (metres) | | | Number |
| | Power supply cable and plug for Fieldbus input and output | ıt modules, o | oen end | | | | |
| | 3 pin, dual key connector | M12 | Straight | 1 | VE1FBCPS-M1210 | Α | 6.4.020.18 |
| | 3 pin, dual key connector | M12 | Straight | 3 | VE1FBCPS-M1230 | Α | 6.4.020.18 |
| | 3 pin, dual key connector | M12 | Straight | 5 | VE1FBCPS-M1250 | Α | 6.4.020.18 |
| | 3 pin, dual key connector | M12 | Elbow | 1 | VE1FBCPE-M1210 | Α | 6.4.020.18 |
| | 3 pin, dual key connector | M12 | Elbow | 3 | VE1FBCPE-M1230 | Α | 6.4.020.18 |
| | 3 pin, dual key connector | M12 | Elbow | 5 | VE1FBCPE-M1250 | Α | 6.4.020.18 |
| | Output M12 plug | | | | | | |
| | Wireable 5 pin male – screw termination | M12 | Straight | - | VE1FBCRS-M125P | A | 6.4.020.18 |
| | Output M12 plug and connecting cables for solenoid coils | · i | | • | | | |
| | 5 pin plug to valve connection – Type C (15mm coil) | M12 | Straight | 0,3 | VE1FBCSC-M1203 | Α | 6.4.020.18 |
| | 5 pin plug to valve connection – Type C (15mm coil) | M12 | Straight | 1,0 | VE1FBCSC-M1210 | Α | 6.4.020.18 |
| | 5 pin plug to valve connection – Industrial (22mm coil) | M12 | Straight | 0,3 | VE1FBCSB-M1203 | Α | 6.4.020.18 |
| | 5 pin plug to valve connection – Industrial (22mm coil) | M12 | Straight | 1,0 | VE1FBCSB-M1210 | Α | 6.4.020.18 |
| | 5 pin plug to valve connection – Type A (32mm coil) | M12 | Straight | 0,3 | VE1FBCSA-M1203 | Α | 6.4.020.18 |
| | 5 pin plug to valve connection – Type A (32mm coil) | M12 | Straight | 1,0 | VE1FBCSA-M1210 | Α | 6.4.020.18 |
| | 5 pin plug to 2 valve connections – Type C (15mm coil) | M12 | Straight | 0,3 | VE1FBCTC-M1203 | Α | 6.4.020.18 |
| الم | 5 pin plug to 2 valve connections – Type C (15mm coil) | M12 | Straight | 1,0 | VE1FBCTC-M1210 | Α | 6.4.020.18 |
| | 5 pin plug to 2 valve connections – Industrial (22mm coil) | M12 | Straight | 0,3 | VE1FBCTB-M1203 | Α | 6.4.020.18 |
| | 5 pin plug to 2 valve connections – Industrial (22mm coil) | M12 | Straight | 1,0 | VE1FBCTB-M1210 | Α | 6.4.020.18 |
| | 5 pin plug to 2 valve connections – Type A (32mm coil) | M12 | Straight | 0,3 | VE1FBCTA-M1203 | Α | 6.4.020.18 |
| | 5 pin plug to 2 valve connections – Type A (32mm coil) | M12 | Straight | 1,0 | VE1FBCTA-M1210 | Α | 6.4.020.18 |



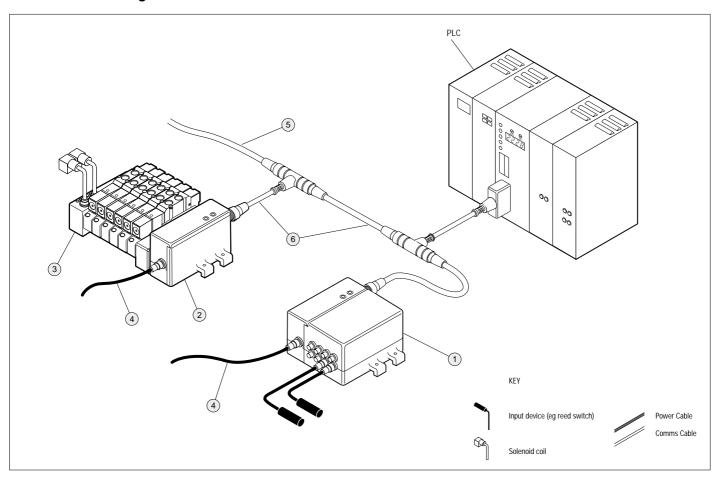
Accessories

| Symbol | Description | Connection size | Straight/Elbow | Cable Length (metres) | Part Number | Protocol † | Page |
|----------|---|--------------------|-------------------------------------|-----------------------|----------------------------------|------------|--------------------------|
| | Input M12 plug for sensors | | | | | | |
| | Wireable 4 pin male – solder termination | M12 | Straight | - | VE1FBCRS-M124P | A | 6.4.020.19 |
| | Input M12 connecting plug and cable assemblies for | r sensors | | | | | |
| | 3 pin plug to 3 pin socket | M12/Ø8 | Straight/Straight | 1 | VE1FBC8S-M1210 | A | 6.4.020.19 |
| | 3 pin plug to 3 pin socket | M12/Ø8 | Straight/Straight | 3 | VE1FBC8S-M1230 | A | 6.4.020.19 |
| | 3 pin plug to 3 pin socket | M12/Ø8 | Straight/Straight | 5 | VE1FBC8S-M1250 | A | 6.4.020.19 |
| | 3 pin plug to 3 pin socket | M12/Ø8 | Straight/Elbow | 1 | VE1FBC8E-M1210 | A | 6.4.020.19 |
| | 3 pin plug to 3 pin socket | M12/Ø8 | Straight/Elbow | 3 5 | VE1FBC8E-M1230 VE1FBC8E-M1250 | A | 6.4.020.19 |
| | 3 pin plug to 3 pin socket 4 pin plug to 4 pin socket | M12/Ø8 M12/M12 | Straight/Elbow Straight/Straight | 1 | VE1FBC8E-M1250 | A | 6.4.020.19 |
| | 4 pin plug to 4 pin socket | M12/M12 | Straight/Straight | 3 | VE1FBC0S-M1230 | A | 6.4.020.19 |
| | 4 pin plug to 4 pin socket | M12/M12 | Straight/Straight | 5 | VE1FBC0S-M1250 | A | 6.4.020.19 |
| | | WITZ/WITZ | - Straight Straight | | VE11 B000 W1200 | 177 | 0.1.020.17 |
| | Communication cable, for line in/line out | N412/N412 | Ctanialst/Ctanialst | 0.2 | VE1EDOMO M1202 | I p | (4 000 00 |
| | Male 4 pin dual key to female 4 pin dual key | M12/M12 | Straight/Straight | 0,3 5 | VE1FBCMS-M1203 VE1FBCMS-M1250 | В | 6.4.020.20 |
| | Male 4 pin dual key to female 4 pin dual key Male 4 pin dual key to female 4 pin dual key | M12/M12 M12/M12 | Straight/Straight Straight/Straight | 10 | VE1FBCMS-M1299 | В | 6.4.020.20 6.4.020.20 |
| | Male 4 pin dual key to female 4 pin dual key | M12/M12 | Elbow/Elbow | 0,3 | VE1FBCME-M1203 | В | 6.4.020.20 |
| | Male 4 pin dual key to female 4 pin dual key | M12/M12 | Elbow/Elbow | 5 | VE1FBCME-M1250 | В | 6.4.020.20 |
| 5 | Male 4 pin dual key to female 4 pin dual key | M12/M12 | Elbow/Elbow | 10 | VE1FBCME-M1299 | В | 6.4.020.20 |
| | T-Drop cable | | | | | | |
| | Female/male 4 pin dual key T to female plug | M12 | Straight | 0,3 | VE1FBCDS-M1203 | В | 6.4.020.20 |
| | Female/male 4 pin dual key T to female plug | M12 | Elbow | 0,3 | VE1FBCDE-M1203 | В | 6.4.020.20 |
| | Fieldbus to multipole, cable with plugs | | | | | | |
| | Nugget 30 in IP40 | D25 | Straight | 0,3 | VE1FB02C-IP403 | Α | 6.4.020.21 |
| | Midi★Star in IP40 | D25 | Straight | 0,3 | VE1FBMSC-IP403 | A | 6.4.020.21 |
| | Midi★Star in IP65 | D25/MIL | Straight | 0,3 | VE1FBMSC-IP653 | A | 6.4.020.21 |
| | Blanking plug | | | | | | |
| | For unused M12 conectors | M12 | | | VE1FBCBK-M1200 | A | 6.4.020.21 |
| | DIN-Rail mounting kit for Fieldbus output and input | modules | | | I. | - | |
| | Nugget 40 manifold (V08) to output module | | | | V10075-K31 | Α | 6.4.020.21 |
| 9 | Nugget 40 sub-base (V09) to output module | | | | V10075-K32 | A | 6.4.020.21 |
| | DIN-Rail kit for standalone output modules | | | | V10075-K30 | A | 6.4.020.21 |
| an I | (No kit required for use with Nugget 120) | | | | | | |
| | DIN-Rail kit for input modules | | | | V10075-K30 | A | 6.4.020.21 |
| | Sub-base remote output modules | | | | | | |
| | Nugget 40 endplate 2x2 outputs | M12 | | | VE1MP09B-00400 | A | 6.4.020.21 |
| | Nugget 120 end plate 2x2 outputs | M12 | | | VE1MP14B-00400 | A | 6.4.020.21 |
| N | RS232 to RS 485 Converter | | I | | | | |
| | | | | | 45401000 | В | 6.4.020.21 |

 $Protocol \uparrow \ A = \ PROFIBUS-DP, INTERBUS-S, PROFIBUS-FMS, DeviceNet, JETWay-R, SYSMAC \ Bus, PneuBus$

B = PROFIBUS-FMS, SYSMAC Bus, JETWay-R, PneuBus

PROFIBUS-DP configuration



Key

| Description | Part Number | Notes | See Page |
|-----------------------------|----------------------------------|---|------------|
| 1 PROFIBUS-DP Input module | VE1DP00A-16000 | Free standing. 16 x4 pin female M12 Input connectors | 6.4.020.05 |
| 2 PROFIBUS-DP Output module | VE1DP00A-00160 | 16 outputs to valve island | 6.4.020.05 |
| 3 Remote output module | VE1MP09B-00400 VE1MP14B-00400 | For V09 Series islands, 4 outputs (2 per M12 connector) For V14 Series islands, 4 outputs (2 per M12 connector) | 6.4.020.21 |
| 4 Power cable | VE1FBCP*-M12XX | Cable with M12 male plug and open ends, 1, 3 or 5 metres | 6.4.020.18 |
| 5 Communications cable | Local Stockist | To comply with PROFIBUS-DP standards DIN 19245 Part 3 | N/A |
| 6 Drop line cable | Local Stockist | 12 pin male coninver (PROFIBUS-DP standard) | N/A |

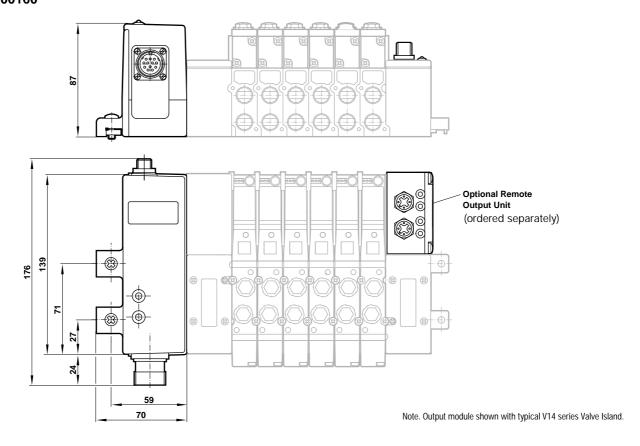
^{*} E=Elbow; S=Straight $\,$ XX= Cable length in 0,1 metres

System Connections

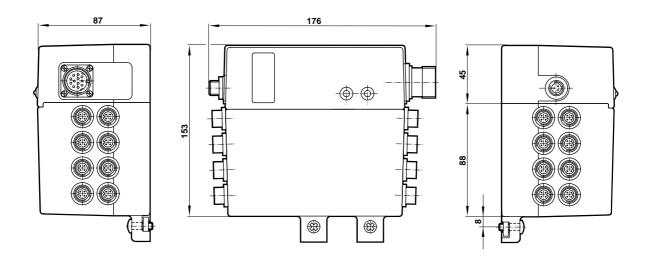
| | Connector Type | Notes |
|------------------------------------|---------------------------------|--|
| Input connectors | 16 x4 pin female M12 single key | PNP or simple switch signal. Total current 500mA or 30mA per connector |
| PROFIBUS-DP connector | 12 pin male Coninver (IP65) | See PROFIBUS-DP manual for pin configuration |
| Power connector | 3 pin male M12 dual key | 24V dc |
| Output connector to valve island | 25 pin D-sub connector | 24V dc outputs. Max 2W per output |
| Connectors for 2 x 2 remote output | 2 x 5 pin female M12 single key | 24V dc outputs. Max 2W per output |



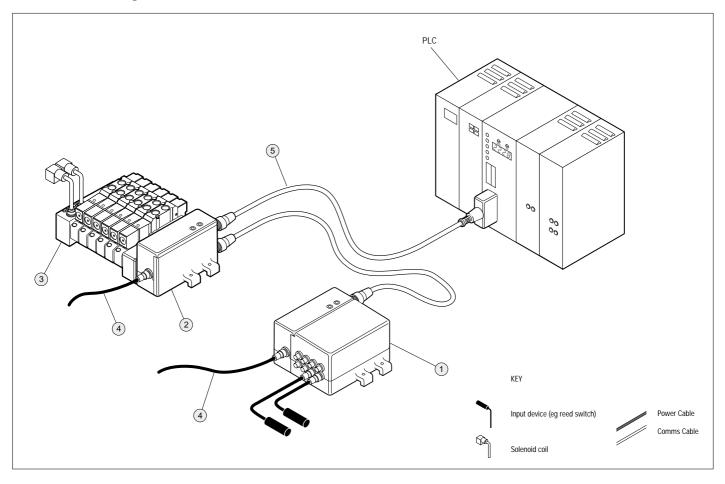
PROFIBUS-DP Output Module VE1DP00A-00160



PROFIBUS-DP Input Module VE1DP00A-16000



INTERBUS-S configuration



Key

| Description | Part Number | Notes | See Page |
|----------------------------|----------------------------------|---|------------|
| 1 INTERBUS-S input module | VE1IB00A-16000 | Free standing. 16 x4 pin female M12 Input connectors | 6.4.020.07 |
| 2 INTERBUS-S output module | VE1IB00A-00160 | 16 outputs to valve island | 6.4.020.07 |
| 3 Remote output module | VE1MP09B-00400 VE1MP14B-00400 | For V09 Series islands, 4 outputs (2 per M12 connector) For V14 Series islands, 4 outputs (2 per M12 connector) | 6.4.020.21 |
| 4 Power cable | VE1FBCP*-M12xx | Cable with M12 male plug and open ends, 1, 3 or 5 metres | 6.4.020.18 |
| 5 Communications cable | Local Stockist | 9 pin male and female Coninver (INTERBUS-S standard) | N/A |

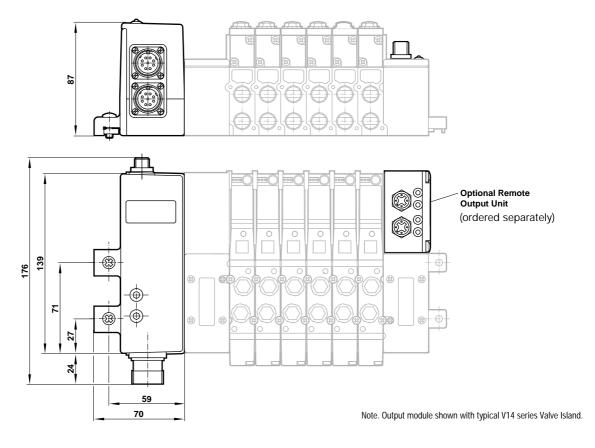
 $^{^{\}star}$ E=Elbow; S=Straight XX= Cable length in 0,1 metres

System Connections

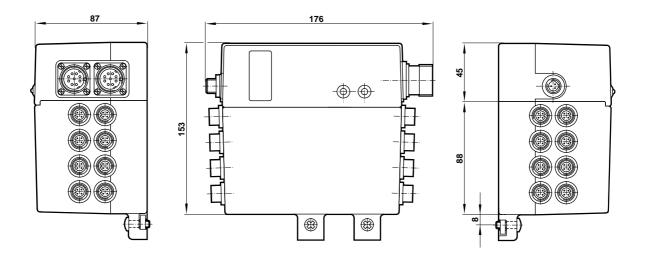
| | Connector Type | Notes |
|------------------------------------|---------------------------------|--|
| Input connectors | 16 x4 pin female M12 | PNP or simple switch signal. Total current 500mA or 30mA per connector |
| Line in connector | 9 pin male Coninver (IP65) | See INTERBUS-S manual for pin configuration |
| Line out connector | 9 pin female Coninver (IP65) | See INTERBUS-S manual for pin configuration |
| Power connector | 3 pin male M12 dual key | 24V dc |
| Output connector to Valve Island | 25 pin D-sub connector | 24V dc outputs. Max 2W per output |
| Connectors for 2 x 2 remote output | 2 x 5 pin female M12 single key | 24V dc outputs. Max 2W per output |



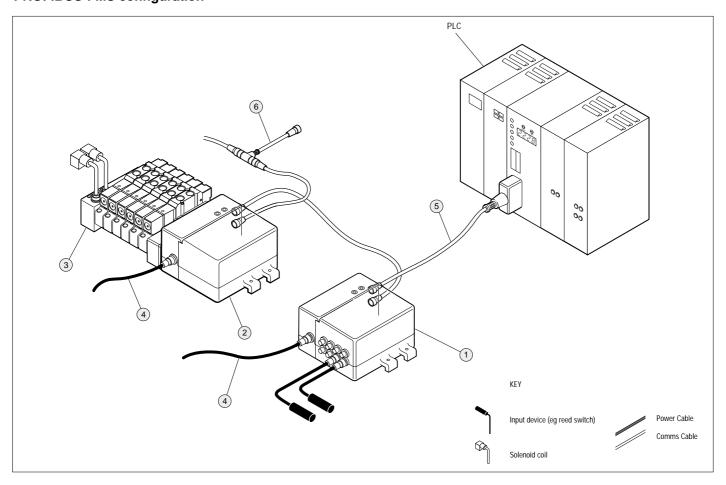
INTERBUS-S Output Module VE1IB00A-00160



INTERBUS-S Input Module VE1IB00A-16000



PROFIBUS-FMS configuration



Key

| Description | Part Number | Notes | See Page |
|-------------------------------|----------------------------------|---|------------|
| 1 PROFIBUS-FMS Input module | VE1FM00A-16000 | Free standing. 16 x4 pin female M12 Input connectors | 6.4.020.09 |
| 2 PROFIBUS-FMS Output module | VE1FM00A-00160 | 16 outputs to valve island | 6.4.020.09 |
| 3 Remote output module | VE1MP09B-00400 VE1MP14B-00400 | For V09 Series islands, 4 outputs (2 per M12 connector) For V14 Series islands, 4 outputs (2 per M12 connector) | 6.4.020.21 |
| 4 Power cable | VE1FBCP*-M12XX | 24V dc. Cable with M12 male plug and open ends, 1, 3 or 5 metres | 6.4.020.18 |
| 5 Communications cable | VE1FBCM*-M12XX | 4 pin dual key female to male screen twisted pair 0,3, 5,0 and 10m | 6.4.020.20 |
| 6 T-drop communications cable | VE1FBCD*-M1203 | 4 pin dual key female to male with 0,3m communication drop cable | 6.4.020.20 |

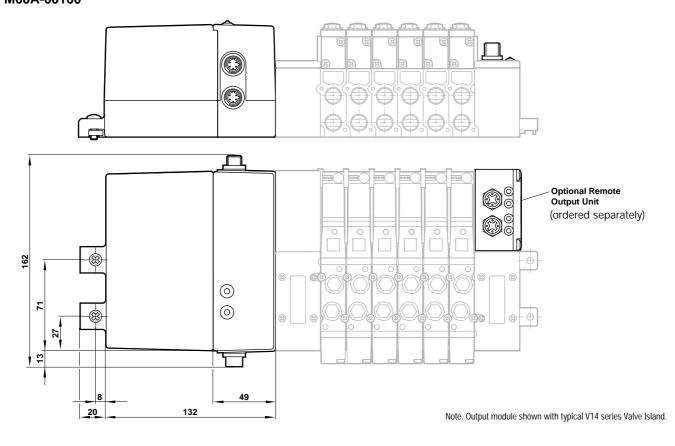
^{*} E=Elbow; S=Straight XX= Cable length in 0,1 metres

System Connections

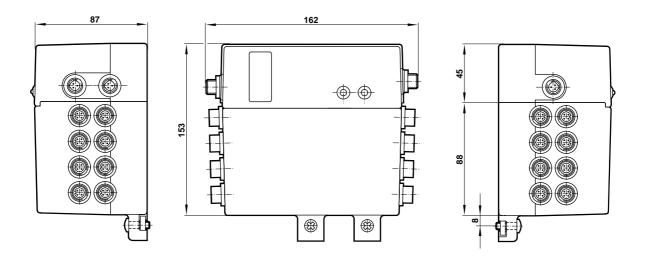
| | Connector Type | Notes |
|----------------------------------|---------------------------------|--|
| Input connectors | 4 pin female M12 single key | PNP or simple switch signal. Total current 500mA or 30mA per connector |
| Line in connector | 4 pin male M12 dual key | RS485 input – see manual for pin configuration |
| Line out connector | 4 pin female M12 dual key | RS485 output – see manual for pin configuration |
| Power connector | 3 pin male M12 dual key | 24V dc |
| Output connector | 25 pin D-sub connector | 24V dc outputs. Max 2W per output |
| Connectors for 2x2 remote output | 2 x 5 pin female M12 single key | 24V dc outputs. Max 2W per output |



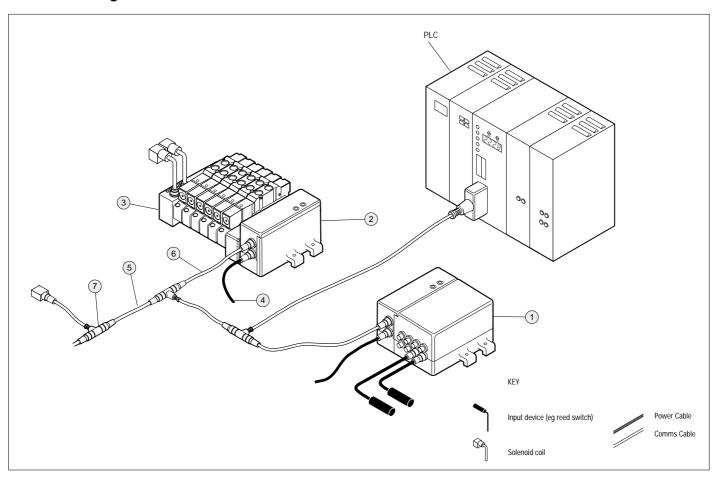
PROFIBUS-FMS Output Module VE1FM00A-00160



PROFIBUS-FMS Input Module VE1FM00A-16000



DeviceNet configuration



Key

| Description | Part Number | Notes | See Page |
|---------------------------|----------------------------------|---|------------|
| DeviceNet Input module | VE1DN00A-16000 | Free standing. 16 x4 pin female M12 Input connectors | 6.4.020.11 |
| 2 DeviceNet Output module | VE1DN00A-00160 | 16 outputs to valve island | 6.4.020.11 |
| 3 Remote output module | VE1MP09B-00400 VE1MP14B-00400 | For V09 Series islands, 4 outputs (2 per M12 connector) For V14 Series islands, 4 outputs (2 per M12 connector) | 6.4.020.21 |
| 4 Power cable | VE1FBCP*-M12XX | Cable with M12 male plug and open ends, 1, 3 or 5 metres | 6.4.020.18 |
| 5 Trunk cable | Local Stockist | | N/A |
| 6 Drop line cable | Local Stockist | To comply with PoviceNet standard | |
| 7 Box or T-tap | Local Stockist | To comply with DeviceNet standard | |
| 8 Terminator | Local Stockist | | |

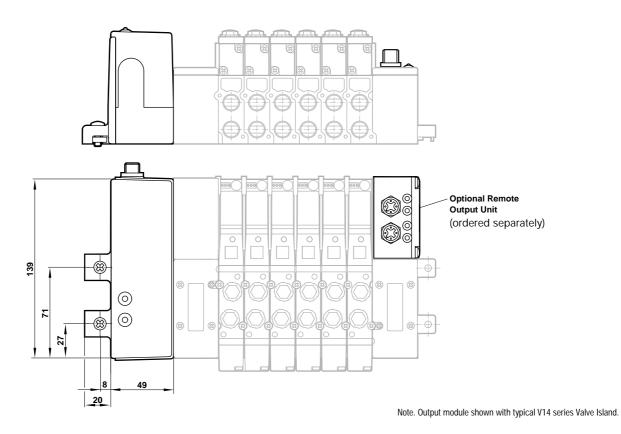
^{*} E=Elbow; S=Straight XX= Cable length in 0,1 metres

System Connections

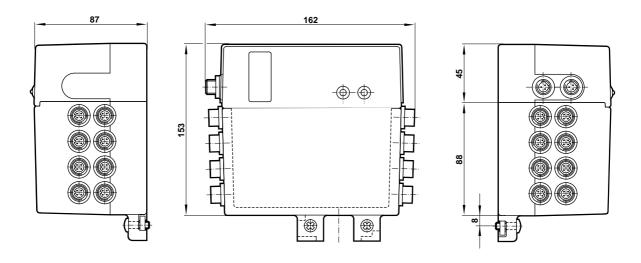
| | Connector Type | Notes |
|------------------------------------|-------------------------------|--|
| Input connectors | 4 pin female M12x1 single key | PNP or simple switch signal. Total current 500mA or 30mA per connector |
| DeviceNet connector | 5 pin male M12x1 single key | Standard DeviceNet Micro change connector |
| Power connector | 3 pin male M12x1 dual key | 24V dc |
| Output connector | 25 pin D-sub connector | 24V dc outputs. Max 2W per output |
| Connectors for 2 x 2 remote output | 5 pin female M12x1 single key | 24V dc outputs. Max 2W per output |



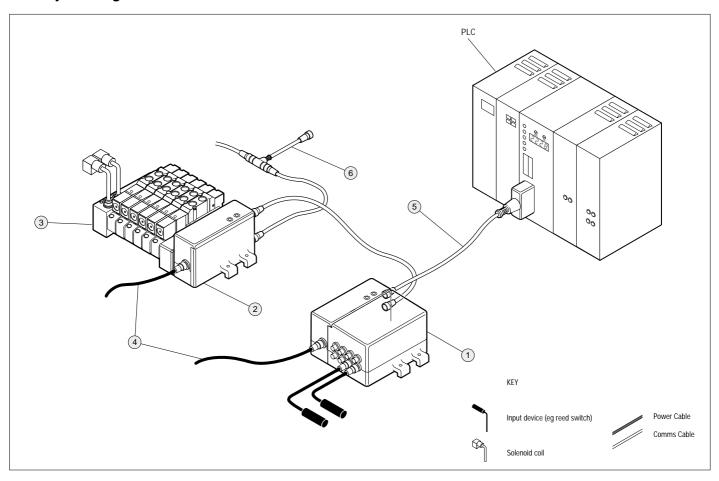
DeviceNet Output Module VE1DN00A-00160



DeviceNet Input Module VE1DN00A-16000



JETWay-R configuration



Key

| Description | Part Number | Notes | See Page |
|-------------------------------|----------------------------------|---|------------|
| 1 JETWay-R input module | VE1JB00A-16000 | Free standing. 16 x4 pin female M12 Input connectors | 6.4.020.13 |
| 2 JETWay-R output module | VE1JB00A-00160 | 16 outputs to valve island | 6.4.020.13 |
| 3 Remote output module | VE1MP09B-00400 VE1MP14B-00400 | For V09 Series islands, 4 outputs (2 per M12 connector) For V14 Series islands, 4 outputs (2 per M12 connector) | 6.4.020.21 |
| 4 Power cable | VE1FBCP*-M12XX | Cable with M12 male plug and open ends, 1, 3 or 5 metres | 6.4.020.18 |
| 5 Communications cable | VE1FBCM*-M12XX | 4 pin dual key female to male screen twisted pair 0,3, 5,0 and 10 metres | 6.4.020.20 |
| 6 T-drop Communications cable | VE1FBCD*-M1203 | 4 pin dual key female to male with 0,3m communication drop cable | 6.4.020.20 |

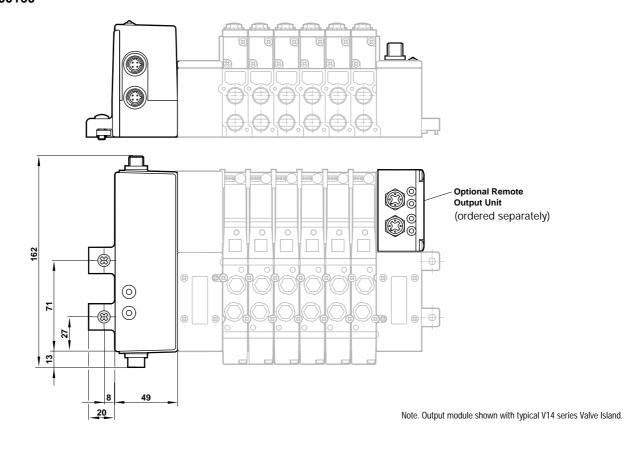
^{*} E=Elbow; S=Straight XX= Cable length in 0,1 metres

System Connections

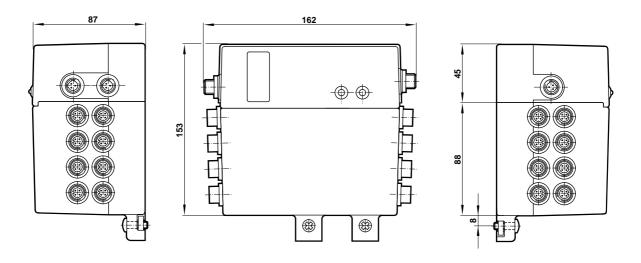
| | Connector Type | Notes |
|------------------------------------|---------------------------------|--|
| Input connectors | 4 pin female M12 single key | PNP or simple switch signal. Total current 500mA or 30mA per connector |
| Line in connector | 4 pin male M12 dual key | RS485 input – see manual for pin configuration |
| Line out connector | 4 pin female M12 dual key | RS485 output – see manual for pin configuration |
| Power connector | 3 pin male M12 dual key | 24V dc |
| Output connector | 25 pin D-sub connector | 24V dc outputs. Max 2W per output |
| Connectors for 2 x 2 remote output | 2 x 5 pin female M12 single key | 24V dc outputs. Max 2W per output |



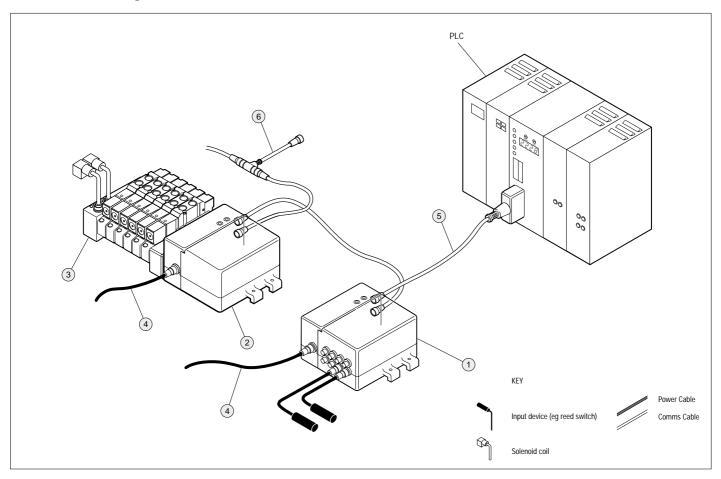
JETWay-R Output Module VE1JB00A-00160



JETWay-R Input Module VE1JB00A-16000



SYSMAC Bus configuration



Key

| Description | Part Number | Notes | See Page |
|-------------------------------|----------------------------------|---|------------|
| 1 Sysmac input module | VE1SY00A-16000 | Free standing. 16 x4 pin female M12 Input connectors | 6.4.020.15 |
| 2 Sysmac output module | VE1SY00A-00160 | 16 outputs to valve island | 6.4.020.15 |
| 3 Remote output module | VE1MP09B-00400 VE1MP14B-00400 | For V09 Series islands, 4 outputs (2 per M12 connector) For V14 Series islands, 4 outputs (2 per M12 connector) | 6.4.020.21 |
| 4 Power cable | VE1FBCP*-M12XX | 24V d.c. Cable with M12 male plug and open ends, 1, 3 or 5 metres | 6.4.020.18 |
| 5 Communications cable | VE1FBCM*-M12XX | 4 pin dual key female to male screen twisted pair 0,3, 5,0 and 10 metres | 6.4.020.20 |
| 6 T-drop communications cable | VE1FBCD*-M1203 | 4 pin dual key female to male with 0,3m communication drop cable | 6.4.020.20 |

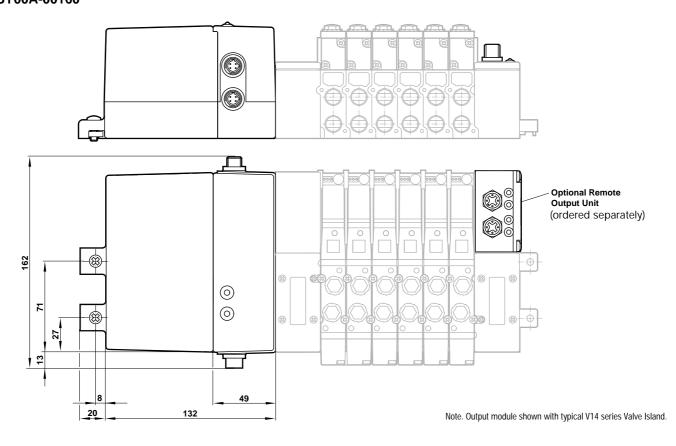
^{*} E=Elbow; S=Straight XX= Cable length in 0,1 metres

System Connections

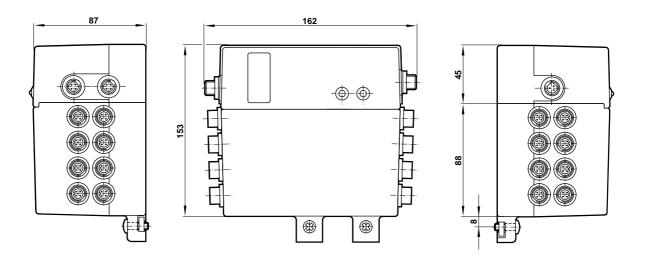
| | Connector Type | Notes |
|------------------------------------|--------------------------------|--|
| Input connectors | 4 pin female M12 single key | PNP or simple switch signal. Total current 500mA or 30mA per connector |
| Line in connector | 4 pin male M12 dual key | RS485 input – see manual for pin configuration |
| Line out connector | 4 pin female M12 dual key | RS485 output – see manual for pin configuration |
| Power connector | 3 pin male M12 dual key | 24V dc |
| Output connector | 25 pin D-sub connector | 24V dc outputs. Max 2W per output |
| Connectors for 2 x 2 remote output | 2 x5 pin female M12 single key | 24V dc outputs. Max 2W per output |



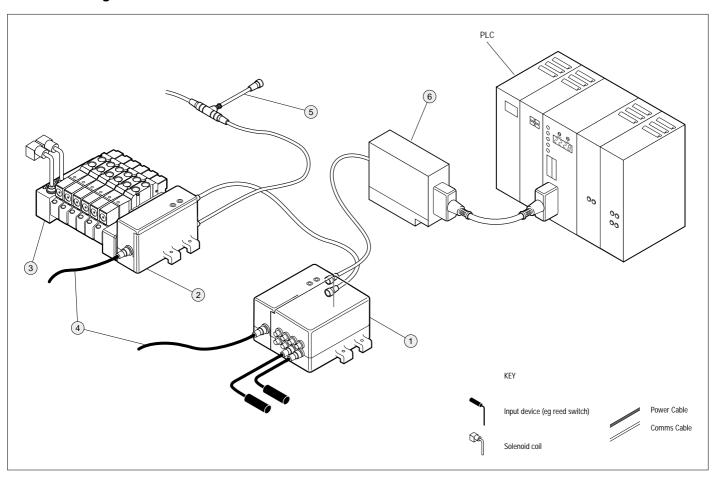
SYSMAC Bus Output Module VE1SY00A-00160



SYSMAC Bus Input Module VE1SY00A-16000



PneuBus configuration



Key

| Description | Part Number | Notes | See Page |
|------------------------------|----------------------------------|---|------------|
| 1 PneuBus input module | VE1PB00A-16000 | Free standing. 16 x4 pin female M12 Input connectors | 6.4.020.17 |
| 2 PneuBus output module | VE1PB00A-00160 | 16 outputs to valve island | |
| 3 Remote output module | VE1MP09B-00400 VE1MP14B-00400 | For V09 Series islands, 4 outputs (2 per M12 connector) For V14 Series islands, 4 outputs (2 per M12 connector) | 6.4.020.21 |
| 4 Power cable | VE1FBCP*-M12XX | 24V dc. Cable with M12 male plug and open ends, 1, 3 or 5 metres | 6.4.020.18 |
| 5 Communications cable | VE1FBCM*-M12XX | 4 pin dual key female to male screen twisted pair 0,3, 5,0 and 10metres | 6.4.020.20 |
| 6 RS 232 to RS 485 converter | 45401000 | | 6.4.020.20 |

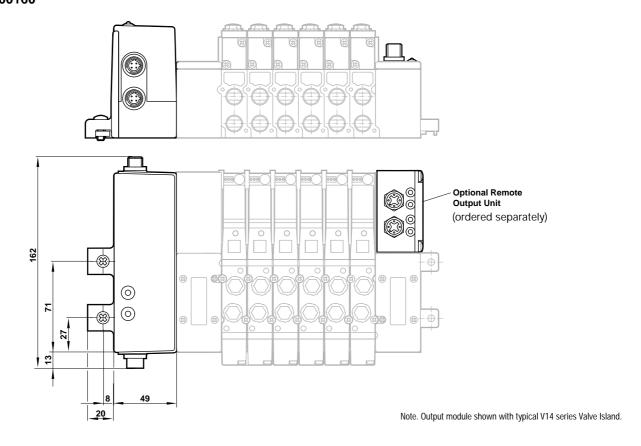
^{*} E=Elbow; S=Straight XX= Cable length in 0,1 metres

System Connections

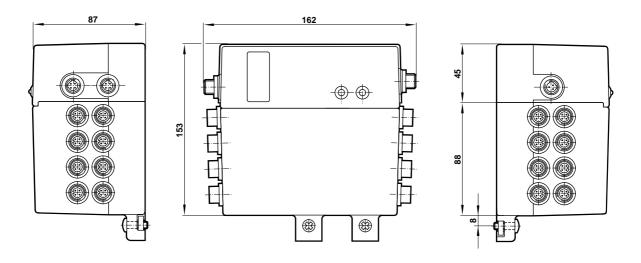
| | Connector Type | Notes |
|------------------------------------|---------------------------------|--|
| Input connectors | 4 pin female M12 single key | PNP or simple switch signal. Total current 500mA or 30mA per connector |
| Line in connector | 4 pin male M12 dual key | RS485 input – see manual for pin configuration |
| Line out connector | 4 pin female M12 dual key | RS485 output – see manual for pin configuration |
| Power connector | 3 pin male M12 dual key | 24V dc |
| Output connector | 25 pin D-sub connector | 24V dc outputs. Max 2W per output |
| Connectors for 2 x 2 remote output | 2 x 5 pin female M12 single key | 24V dc outputs. Max 2W per output |



PneuBus Output Module VE1PB00A-00160



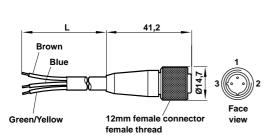
PneuBus Input Module VE1PB00A-16000



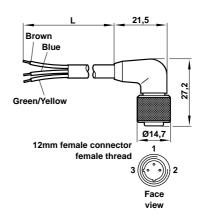


Power supply cable and plug for fieldbus input and output modules, open end

3 pin, dual key straight connector



3 pin, dual key elbow connector

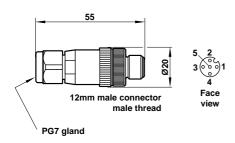


 $\begin{array}{lll} \mbox{VE1FBCPS-M1210} & \mbox{$L=1$ metre length} \\ \mbox{VE1FBCPS-M1230} & \mbox{$L=3$ metre length} \\ \mbox{VE1FBCPS-M1250} & \mbox{$L=5$ metre length} \\ \end{array}$

VE1FBCPE-M1210 L = 1 metre length VE1FBCPE-M1230 L = 3 metre length VE1FBCPE-M1250 L = 5 metre length

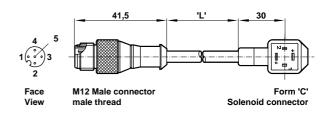
Output M12 plug and cable assemblies for solenoid coils

Wireable 5 pin male plug - screw termination



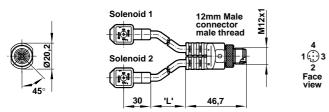
VE1FBCRS-M125P

5 pin plug to valve connection



 $\begin{tabular}{lll} VE1FBCSC-M1203 & L=0,3 \ cable, Type 'C' \ connector \\ VE1FBCSC-M1210 & L=1m \ cable, Type 'C' \ connector \\ VE1FBCSB-M1203 & L=0,3 \ cable, Industrial \ connector \\ VE1FBCSA-M1203 & L=0,3 \ cable, Type 'A' \ connector \\ VE1FBCSA-M1210 & L=1m \ cable, Type 'A' \ connector \\ \end{tabular}$

5 pin plug to 2 valve connections



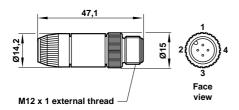
Form 'C' solenoid connector shown

| VE1FBCTC-M1203 | L = 0,3 cable, Type 'C' connector |
|----------------|-------------------------------------|
| VE1FBCTC-M1210 | L = 1m cable, Type 'C' connector |
| VE1FBCTB-M1203 | L = 0,3 cable, Industrial connector |
| VE1FBCTB-M1210 | L = 1m cable, Industrial connector |
| VE1FBCTA-M1203 | L = 0,3 cable, Type 'A' connector |
| VE1FBCTA-M1210 | L = 1m cable. Type 'A' connector |



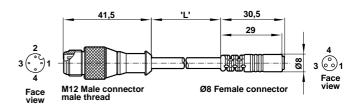
Input M12 plug and cable assemblies for sensors

Wireable 4 pin male – solder termination



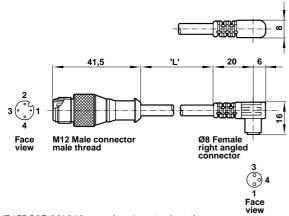
VE1FBCRS-M124P

3 pin plug to 3 pin socket – straight connectors



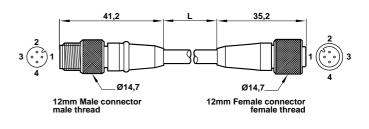
 $\begin{array}{ll} \text{VE1FBC8S-M1210} & \text{L} = 1 \text{ metre length} \\ \text{VE1FBC8S-M1230} & \text{L} = 3 \text{ metre length} \\ \text{VE1FBC8S-M1250} & \text{L} = 5 \text{ metre length} \\ \end{array}$

3 pin plug to 3 pin socket



 $\begin{array}{lll} \text{VE1FBC8E-M1210} & \text{L} = 1 \text{ metre length} \\ \text{VE1FBC8E-M1230} & \text{L} = 3 \text{ metre length} \\ \text{VE1FBC8E-M1250} & \text{L} = 5 \text{ metre length} \\ \end{array}$

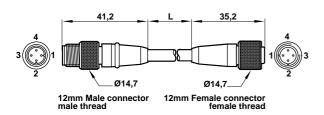
4 pin plug to 4 pin socket straight connector



 $\begin{array}{ll} \mbox{VE1FBCOS-M1210} & \mbox{$L=1$ metre length} \\ \mbox{VE1FBCOS-M1230} & \mbox{$L=3$ metre length} \\ \mbox{VE1FBCOS-M1250} & \mbox{$L=5$ metre length} \\ \end{array}$

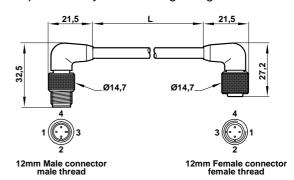
Communication cable, for line in/line out

Male 4 pin dual key to female straight connectors



VE1FBCMS-M1203 L = 0.3 metre length VE1FBCMS-M1250 L = 5 metre length VE1FBCMS-M1299 L = 10 metre length

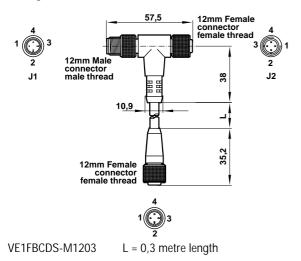
Male 4 pin dual key to female right angle connectors



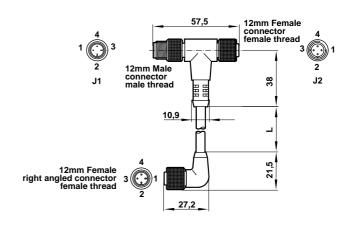
VE1FBCME-M1203 L = 0.3 metre length VE1FBCME-M1250 L = 5 metre length VE1FBCME-M1299 L = 10 metre length

T-drop cable

Female/male 4 pin dual key T to female plug Straight connector

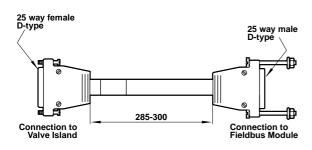


Female/male 4 pin dual key T to female plug Right angled connector

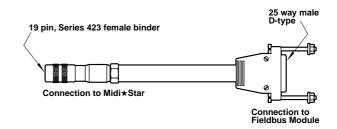


VE1FBCDE-M1203 L = 0.3 metre length

Fieldbus to multipole, cable with plugs



Nugget 30 (IP40) VE1FB02C-IP403 Midi★Star (IP40) VE1FBMSC-IP403



Midi★Star (IP65) VE1FBMSC-IP653



Blanking Plug



VE1FBCBK-M1200

DIN Rail Mounting Kit for Fieldbus Output and Input Modules

V10075-K31 All output modules to V08 series V10075-K32 All output modules to V09 series

V10075-K30 Standalone output modules (used with Nugget 30 or

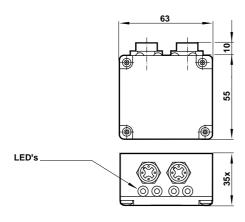
Midi★ Star)

V10075-K30 All input modules

DIN-Rail Mounting Kit



Remote Output Modules

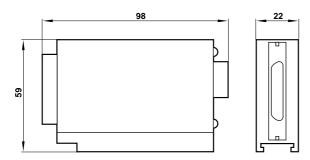


Nugget 40 endplate 4 outputs VE1MP09B-00400 Nugget 120 endplate 4 outputs VE1MP14B-00400

Application:

Remote output modules are used with Nugget 40 and Nugget 120 valve islands to provide up to 4 outputs to remote devices such as Soft Start and Monitored Dump Valves. Harness assemblies should be increased by the relevant number of stations.

RS 232 to RS 485 Converter



45401000

Single wide range power supply: 7V to 24V d.c. Operation independent of RS232 RTS and CTS lines.

Selectable baud rates: 1200, 2400, 4800, 9600, 19200, 38400 baud.

Selectable word length: 9, 10 and 11 bits/byte. Switchable RS232 transmit and receive lines. Selectable RS232 data echo test feature.

Selectable RS485 transmission line pull up, pull down and balance

resistors.

LED indication of power and data transmission.



Warning

These products are intended for use in industrial control systems only. Do not use these products where *voltage, current* and *temperatures* can exceed those listed under 'Technical Data'.

Before using these products 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 control 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.