



- **Robust custom designed module with IP65 rating\***
- **Compatible with Norgren system Valve Islands**
- **Remote output facility**
- **Drives 62 external nodes via JETWay-R**

\* Except when used with Nugget 30 Valve Islands (IP40)



### Technical Specification

#### Indication

- Red LED Power on
- Green LED System running

#### Connection

- 24V d.c. Power supply – M12 male 3 pin dual keyway
- Display port: M12 female 5 pin dual keyway
- Programming port: M12 female 5 pin dual keyway
- Line out: M12 4 pin dual keyway

#### 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. VE1PL00A-16160 for an Integrated PLC.



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
Integrated PLC	16	16	Line	Single master Multi slaves	RS 485	115,2 kBits/sec	1000m	PLC + 62 slaves	Via PLC programming language

System Protection

Valves and Connectors in Modules	IP 40 protection class	IP 65 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 size	Straight/Elbow	Cable Length (metres)	Part Number	Page Number
<b>Power supply cable and plug for Fieldbus input and output modules, open end</b>						
	3 pin, dual key connector	M12	Straight	1	VE1FBCPS-M1210	6.4.030.06
	3 pin, dual key connector	M12	Straight	3	VE1FBCPS-M1230	6.4.030.06
	3 pin, dual key connector	M12	Straight	5	VE1FBCPS-M1250	6.4.030.06
	3 pin, dual key connector	M12	Elbow	1	VE1FBCPE-M1210	6.4.030.06
	3 pin, dual key connector	M12	Elbow	3	VE1FBCPE-M1230	6.4.030.06
	3 pin, dual key connector	M12	Elbow	5	VE1FBCPE-M1250	6.4.030.06
<b>Output M12 plug</b>						
	Wireable 5 pin male – screw termination	M12	Straight	-	VE1FBCRS-M125P	6.4.030.06
<b>Output M12 plug and connecting cables for solenoid coils</b>						
	5 pin plug to valve connection – Type C (15mm coil)	M12	Straight	0,3	VE1FBCSC-M1203	6.4.030.06
	5 pin plug to valve connection – Type C (15mm coil)	M12	Straight	1,0	VE1FBCSC-M1210	6.4.030.06
	5 pin plug to valve connection – Industrial (22mm coil)	M12	Straight	0,3	VE1FBCSB-M1203	6.4.030.06
	5 pin plug to valve connection – Industrial (22mm coil)	M12	Straight	1,0	VE1FBCSB-M1210	6.4.030.06
	5 pin plug to valve connection – Type A (32mm coil)	M12	Straight	0,3	VE1FBCSA-M1203	6.4.030.06
	5 pin plug to valve connection – Type A (32mm coil)	M12	Straight	1,0	VE1FBCSA-M1210	6.4.030.06
	5 pin plug to 2 valve connections – Type C (15mm coil)	M12	Straight	0,3	VE1FBCTC-M1203	6.4.030.06
	5 pin plug to 2 valve connections – Type C (15mm coil)	M12	Straight	1,0	VE1FBCTC-M1210	6.4.030.06
	5 pin plug to 2 valve connections – Industrial (22mm coil)	M12	Straight	0,3	VE1FBCTB-M1203	6.4.030.06
	5 pin plug to 2 valve connections – Industrial (22mm coil)	M12	Straight	1,0	VE1FBCTB-M1210	6.4.030.06
	5 pin plug to 2 valve connections – Type A (32mm coil)	M12	Straight	0,3	VE1FBCTA-M1203	6.4.030.06
	5 pin plug to 2 valve connections – Type A (32mm coil)	M12	Straight	1,0	VE1FBCTA-M1210	6.4.030.06
	<b>Input M12 plug for sensors</b>					
	Wireable 4 pin male – solder termination	M12	Straight	-	VE1FBCRS-M124P	6.4.030.07
<b>Input M12 connecting plug and cable assemblies for sensors</b>						
	3 pin plug to 3 pin socket	M12/Ø8	Straight/Straight	1	VE1FBC8S-M1210	6.4.030.07
	3 pin plug to 3 pin socket	M12/Ø8	Straight/Straight	3	VE1FBC8S-M1230	6.4.030.07
	3 pin plug to 3 pin socket	M12/Ø8	Straight/Straight	5	VE1FBC8S-M1250	6.4.030.07
	3 pin plug to 3 pin socket	M12/Ø8	Straight/Elbow	1	VE1FBC8E-M1210	6.4.030.07
	3 pin plug to 3 pin socket	M12/Ø8	Straight/Elbow	3	VE1FBC8E-M1230	6.4.030.07
	3 pin plug to 3 pin socket	M12/Ø8	Straight/Elbow	5	VE1FBC8E-M1250	6.4.030.07
	4 pin plug to 4 pin socket	M12/M12	Straight/Straight	1	VE1FBC0S-M1210	6.4.030.07
	4 pin plug to 4 pin socket	M12/M12	Straight/Straight	3	VE1FBC0S-M1230	6.4.030.07
	4 pin plug to 4 pin socket	M12/M12	Straight/Straight	5	VE1FBC0S-M1250	6.4.030.07

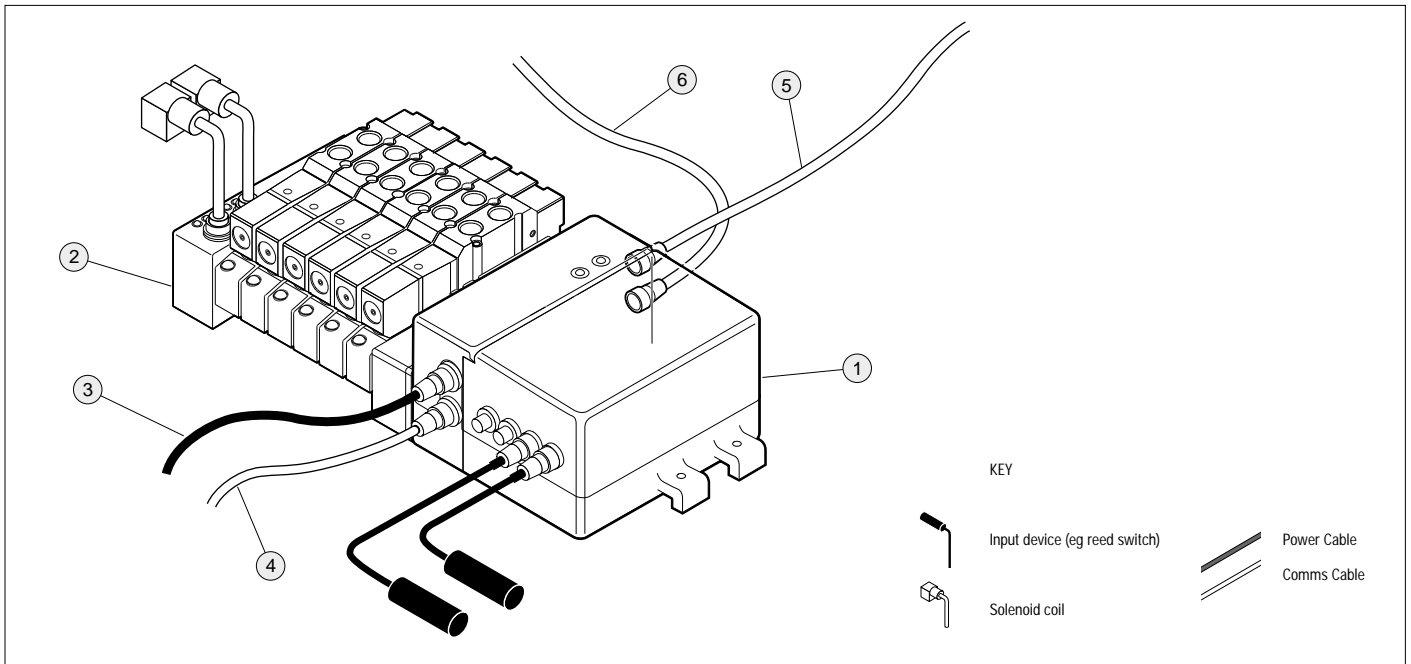


Accessories

Symbol	Description	Connection size	Straight/Elbow	Cable Length (metres)	Part Number	Page
	<b>Input M12 connecting plug and cable assemblies for sensors (continued)</b>					
	3 pin plug to 3 pin socket	M12/Ø8	Straight/Straight	1	VE1FBC8S-M121D	6.4.030.07
	3 pin plug to 3 pin socket	M12/Ø8	Straight/Straight	3	VE1FBC8S-M123D	6.4.030.07
	3 pin plug to 3 pin socket	M12/Ø8	Straight/Straight	5	VE1FBC8S-M125D	6.4.030.07
	3 pin plug to 3 pin socket	M12/Ø8	Straight/Elbow	1	VE1FBC8E-M121D	6.4.030.07
	3 pin plug to 3 pin socket	M12/Ø8	Straight/Elbow	3	VE1FBC8E-M123D	6.4.030.07
	3 pin plug to 3 pin socket	M12/Ø8	Straight/Elbow	5	VE1FBC8E-M125D	6.4.030.07
	4 pin plug to 4 pin socket	M12/M12	Straight/Straight	1	VE1FBC0S-M121D	6.4.030.08
	4 pin plug to 4 pin socket	M12/M12	Straight/Straight	3	VE1FBC0S-M123D	6.4.030.08
	4 pin plug to 4 pin socket	M12/M12	Straight/Straight	5	VE1FBC0S-M125D	6.4.030.08
	<b>Communication cable, for line in/line out</b>					
	Male 4 pin dual key to female 4 pin dual key	M12/M12	Straight/Straight	0,3	VE1FBCMS-M1203	6.4.030.08
	Male 4 pin dual key to female 4 pin dual key	M12/M12	Straight/Straight	5	VE1FBCMS-M1250	6.4.030.08
	Male 4 pin dual key to female 4 pin dual key	M12/M12	Straight/Straight	10	VE1FBCMS-M1299	6.4.030.08
	Male 4 pin dual key to female 4 pin dual key	M12/M12	Elbow/Elbow	0,3	VE1FBCME-M1203	6.4.030.08
	Male 4 pin dual key to female 4 pin dual key	M12/M12	Elbow/Elbow	5	VE1FBCME-M1250	6.4.030.08
	Male 4 pin dual key to female 4 pin dual key	M12/M12	Elbow/Elbow	10	VE1FBCME-M1299	6.4.030.08
	<b>T-Drop cable</b>					
	Female/male 4 pin dual key T to female plug	M12	Straight	0,3	VE1FBCDS-M1203	6.4.030.08
	Female/male 4 pin dual key T to female plug	M12	Elbow	0,3	VE1FBCDE-M1203	6.4.030.08
<b>Integrated PLC to multipole, cable with plugs</b>						
	Nugget 30 in IP40	D25	Straight	0,3	VE1FB02C-IP403	6.4.030.09
	Midi★Star in IP40	D25	Straight	0,3	VE1FBMSC-IP403	6.4.030.09
	Midi★Star in IP65	D25/MIL	Straight	0,3	VE1FBMSC-IP653	6.4.030.09
	<b>Programming cable</b>					
	Male 5 pin dual key to female 9 way D-type	M12/D9	Straight/Straight	0,2	VE1PLPRG-M1220	6.4.030.09
<b>External display cable</b>						
	Male 5 pin dual key to male 15 way D-type	M12/D15	Straight/Straight	0,3	VE1PLDPY-M1230	6.4.030.09
<b>Blanking plug</b>						
	For unused M12 connectors	M12			VE1FBCBK-M1200	6.4.030.09
<b>DIN-Rail mounting kits</b>						
	Nugget 40 manifold (V08) to Integrated PLC				V10075-K31	6.4.030.09
	Nugget 40 sub-base (V09) to Integrated PLC				V10075-K32	6.4.030.09
	DIN-Rail kit for standalone unit (No kit required for use with Nugget 120)				V10075-K30	6.4.030.09
<b>Sub-base remote output modules</b>						
	Nugget 40 endplate 2x2 outputs	M12			VE1MP09B-00400	6.4.030.10
	Nugget 120 end plate 2x2 outputs	M12			VE1MP14B-00400	6.4.030.10



### Configuration



### Key

Description	Part Number	Notes	See Page
1 Integrated PLC	VE1PL00A-16160	PLC with local 16 inputs and 16 outputs	6.4.030.05
2 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)	6.4.030.21
3 Power cable	VE1FBCP*-M12XX	24V d.c. cable with M12 male plug and open ends, 1,3 or 5 metres	6.4.030.18
4 Communications cable	VE1FBCME-M12XX	4 pin dual key female to male screen twisted pair 0,3, 5,0 and 10m	6.4.030.08
5 Programming cable	VE1PLPRG-M1220	9 pin D sub connector to M12 male 5 pin dual key	6.4.030.09
6 Display cable	VE1PLDPY-M1230	15 pin D sub connector to M12 male 5 pin dual key	6.4.030.09

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

### System Connections

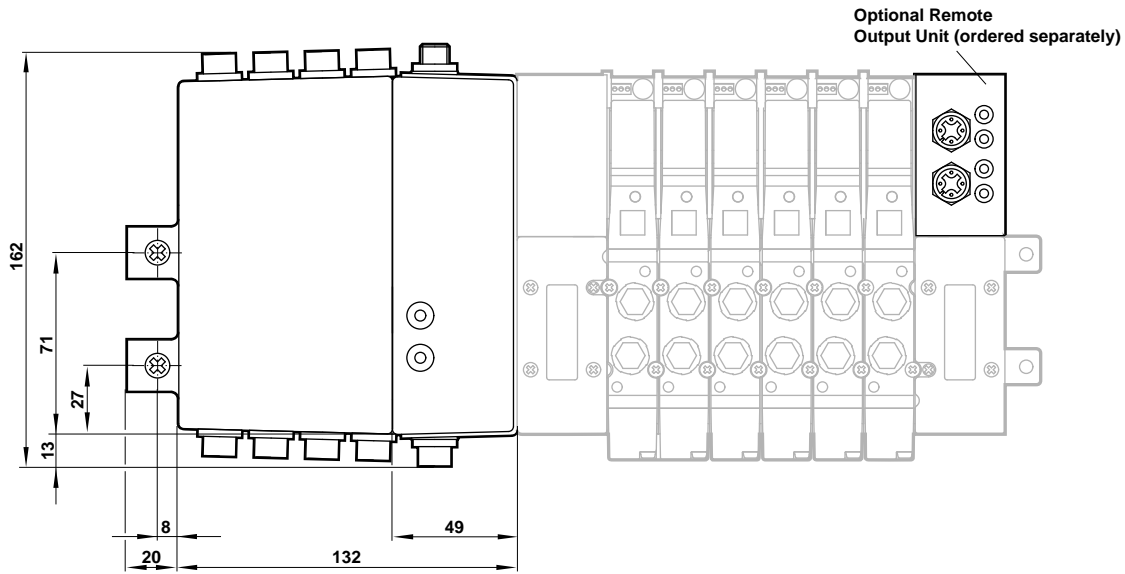
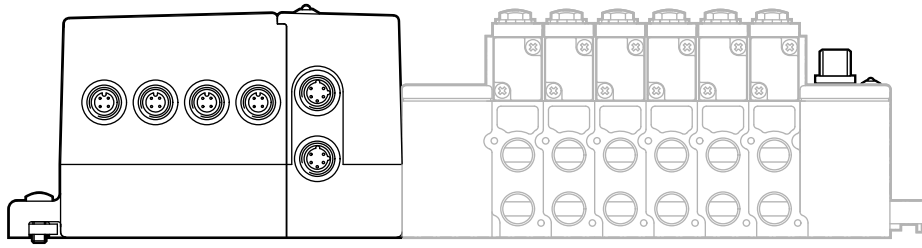
	Connector Type	Notes
Programming connector	5 pin female M12 dual key	RS232 – see manual for pin configuration
Display connector	5 pin female M12 dual key	RS232 – see manual for pin configuration

Consult our Technical service for details of suitable display modules.

To order see page 6.4.030.02



VE1PL00A-16160



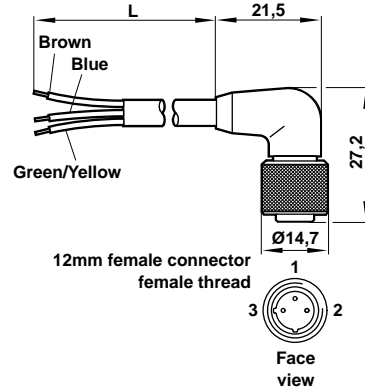
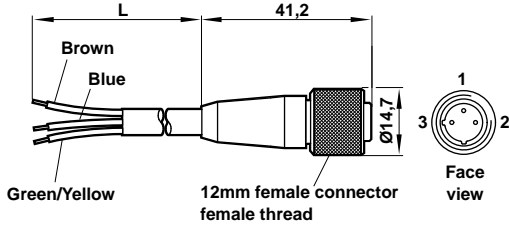
Note. Integrated PLC shown with typical V14 Series Valve Island.



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



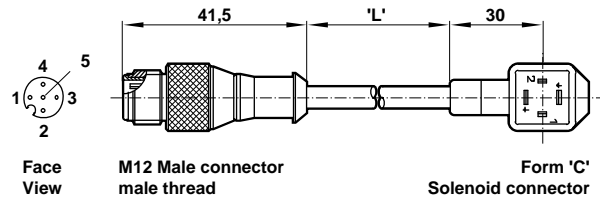
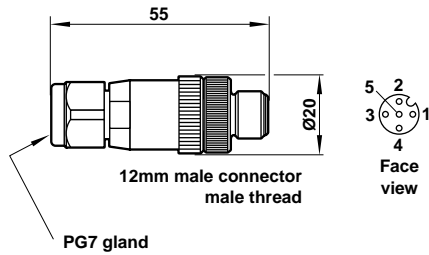
- VE1FBCPS-M1210 L = 1 metre length
- VE1FBCPS-M1230 L = 3 metre length
- VE1FBCPS-M1250 L = 5 metre length

- 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

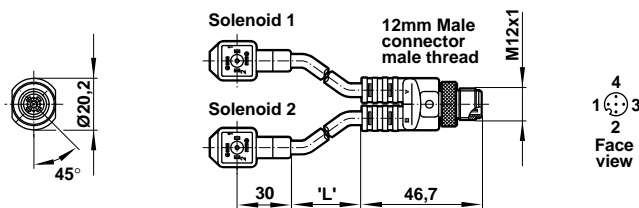
5 pin plug to valve connection



VE1FBCRS-M125P

- 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
- VE1FBCSB-M1210 L = 1m cable, Industrial connector
- VE1FBCSA-M1203 L = 0,3 cable, Type 'A' connector
- VE1FBCSA-M1210 L = 1m cable, Type 'A' connector

5 pin plug to 2 valve connections



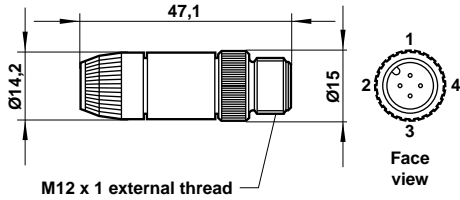
Form 'C' solenoid connector shown

- 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



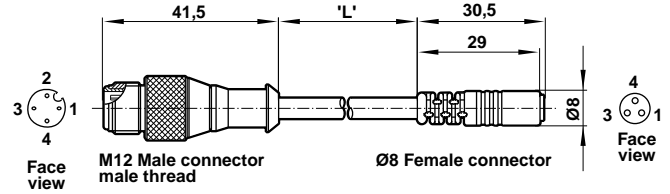
Input M12 plug and cable assemblies for sensors

Wireable 4 pin male – solder termination



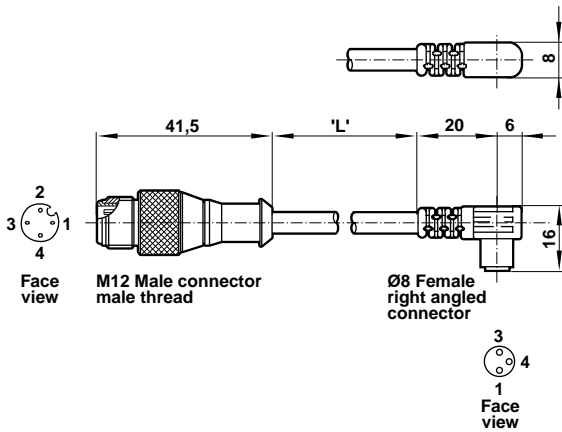
VE1FBCRS-M124P

3 pin plug to 3 pin socket – straight connectors



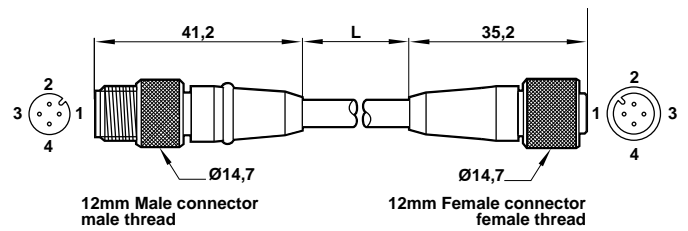
VE1FBC8S-M1210 L = 1 metre length  
 VE1FBC8S-M1230 L = 3 metre length  
 VE1FBC8S-M1250 L = 5 metre length

3 pin plug to 3 pin socket



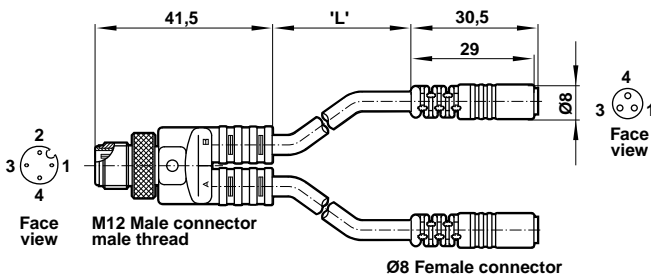
VE1FBC8E-M1210 L = 1 metre length  
 VE1FBC8E-M1230 L = 3 metre length  
 VE1FBC8E-M1250 L = 5 metre length

4 pin plug to 4 pin socket straight connector



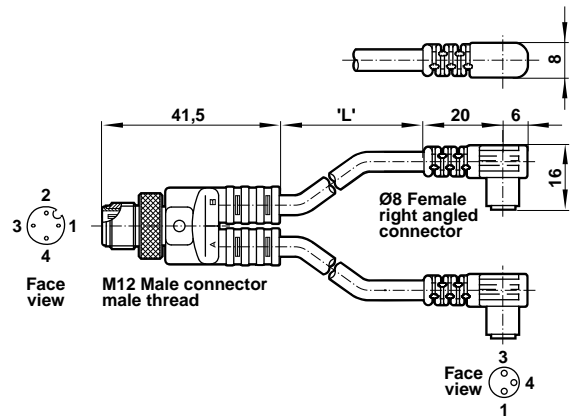
VE1FBC0S-M1210 L = 1 metre length  
 VE1FBC0S-M1230 L = 3 metre length  
 VE1FBC0S-M1250 L = 5 metre length

3 pin plug to 2x3 pin socket straight connector



VE1FBC8S-M121D L = 1 metre length  
 VE1FBC8S-M123D L = 3 metre length  
 VE1FBC8S-M125D L = 5 metre length

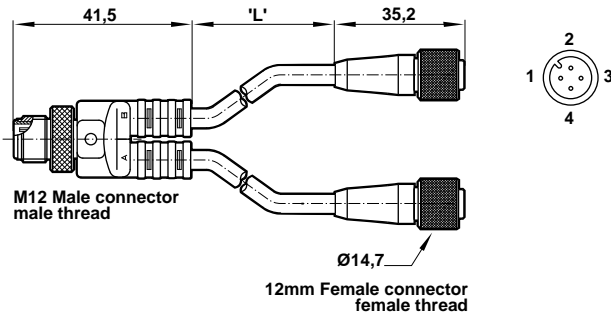
3 pin plug to 2x3 pin socket right angle connector



VE1FBC8E-M121D L = 1 metre length  
 VE1FBC8E-M123D L = 3 metre length  
 VE1FBC8E-M125D L = 5 metre length



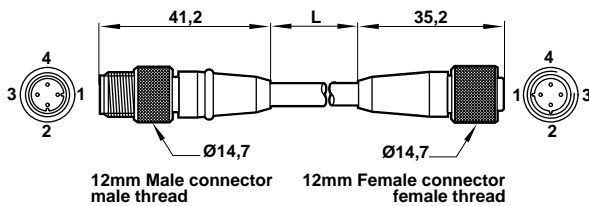
4 pin plug to 2x4 pin socket straight connector



- VE1FBCOS-M121D L = 1 metre length
- VE1FBCOS-M123D L = 3 metre length
- VE1FBCOS-M125D L = 5 metre length

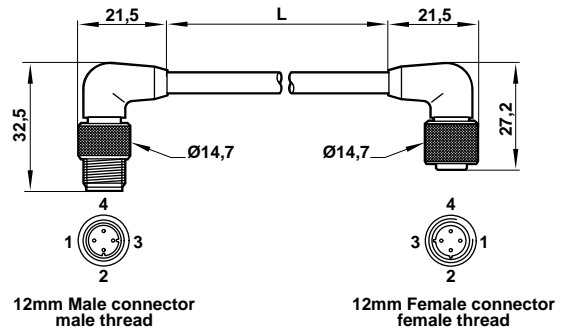
Communication cable, for line in/line out

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

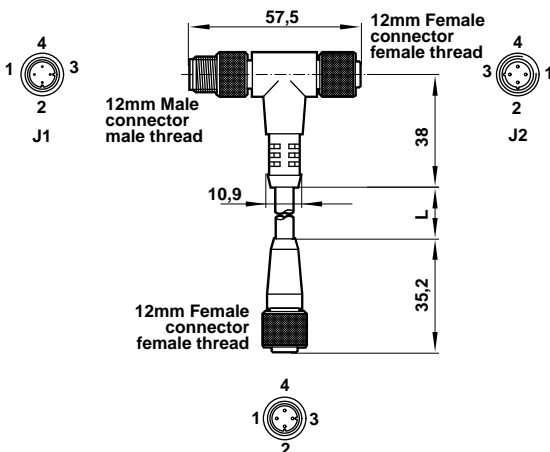
Male 4 pin dual key to female right angle connectors



- VE1FBCME-M1203 L = 0,3 metre length
- VE1FBCME-M1250 L = 5 metre length
- VE1FBCME-M1299 L = 10 metre length

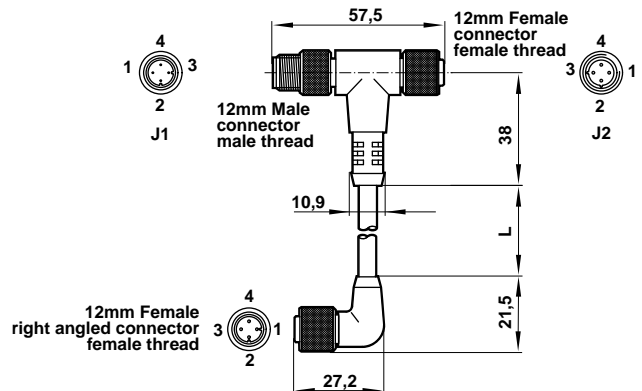
T-drop cable

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



- VE1FBCDS-M1203 L = 0,3 metre length

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

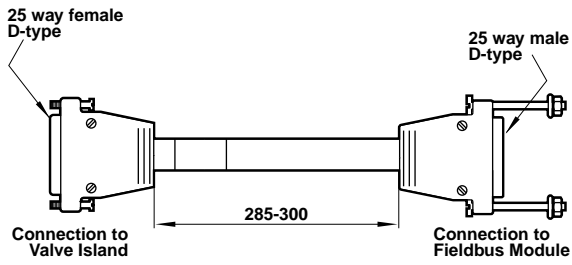


- VE1FBCDE-M1203 L = 0,3 metre length

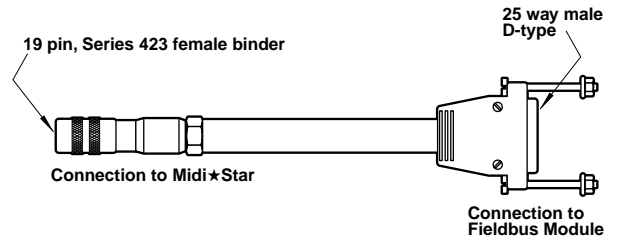




**Fieldbus to multipole, cable with plugs**

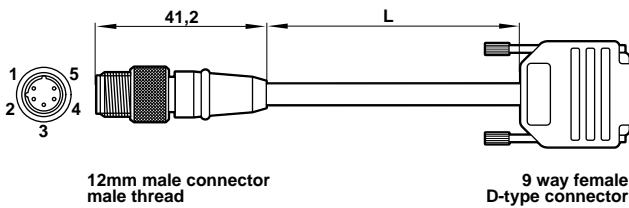


Nugget 30 (IP40) VE1FB02C-IP403  
 Midi★Star (IP40) VE1FBMSC-IP403



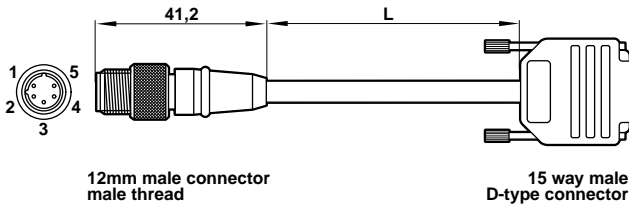
Midi★Star (IP65) VE1FBMSC-IP653

**Programming Cable**



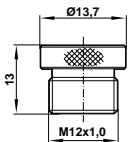
VE1PLPRG-M1220 L = 2 metres ± 50mm

**External Display Cable**



VE1PLDPY-M1230 L = 3 metres ± 50mm

**Blanking Plug**

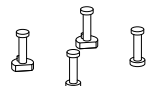


VE1FBCBK-M1200

**DIN Rail Mounting Kits**

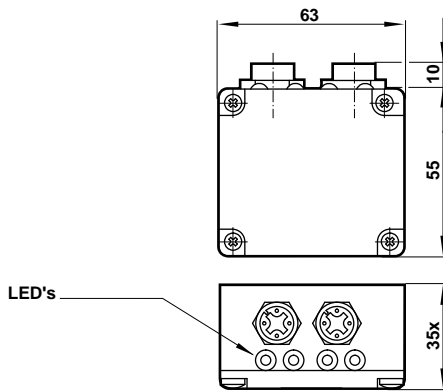
- V10075-K31 For use with V08 Nugget 40 series Valve Islands
- V10075-K32 For use with V09 Nugget 40 series Valve Islands
- V10075-K30 Standalone module (used with Nugget 30 or Midi★ Star)

DIN-Rail Mounting Kit





## Remote Output Modules



### 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.

Nugget 40 endplate 4 outputs VE1MP09B-00400

Nugget 120 endplate 4 outputs VE1MP14B-00400

## 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.