

Элементы управления IMVS2

Технические характеристики



По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Россия (495)268-04-70

Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Киргизия (996)312-96-26-47

Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Казахстан (7172)727-132

Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

General Application

IMVS2 is a smart device for predictive maintenance and safety able to perform partial and full stroke test without any impact to the process and provide SIL reliability.

Technical Data

Ambient Temperature:	-40 °C to 75 °C (-40 °F to 167 °F)
Power Supply:	24 - 48 V DC Two isolated circuits for ESD applications (controlling up to 2 external solenoid valves)
Max Device Power Consumption:	3 W
Environmental Protection:	IP66/68 (EN 60529) NEMA 4, 4X and 6 (NEMA 250)
Certification:	ATEX Directive 2014/34/UE PED Directive 2014/68/EU EMC Directive 2004/108/EC
Functional Safety:	Suitable for use in any SIL level applications according to IEC 61508

Approvals

- II 2GD
Ex db [ia] IIC (IIB with Beacon) T4 Gb
Ex tb IIIC T135 °C Db
- CSA
CSAus and CSAc Class and Division both available (please refer to IOM Section 2.5.1 for detail)
- IECEx
Ex d [ia] IIC (IIB with Beacon) T4 Gb
Ex tb IIIC T135 °C Db
- INMETRO
- EAC
- CCoE
- CCC
- CUTR
- UKCA

IMVS2 is a smart diagnostic device for low and high pressure application with BUS communication protocol capability.

Features

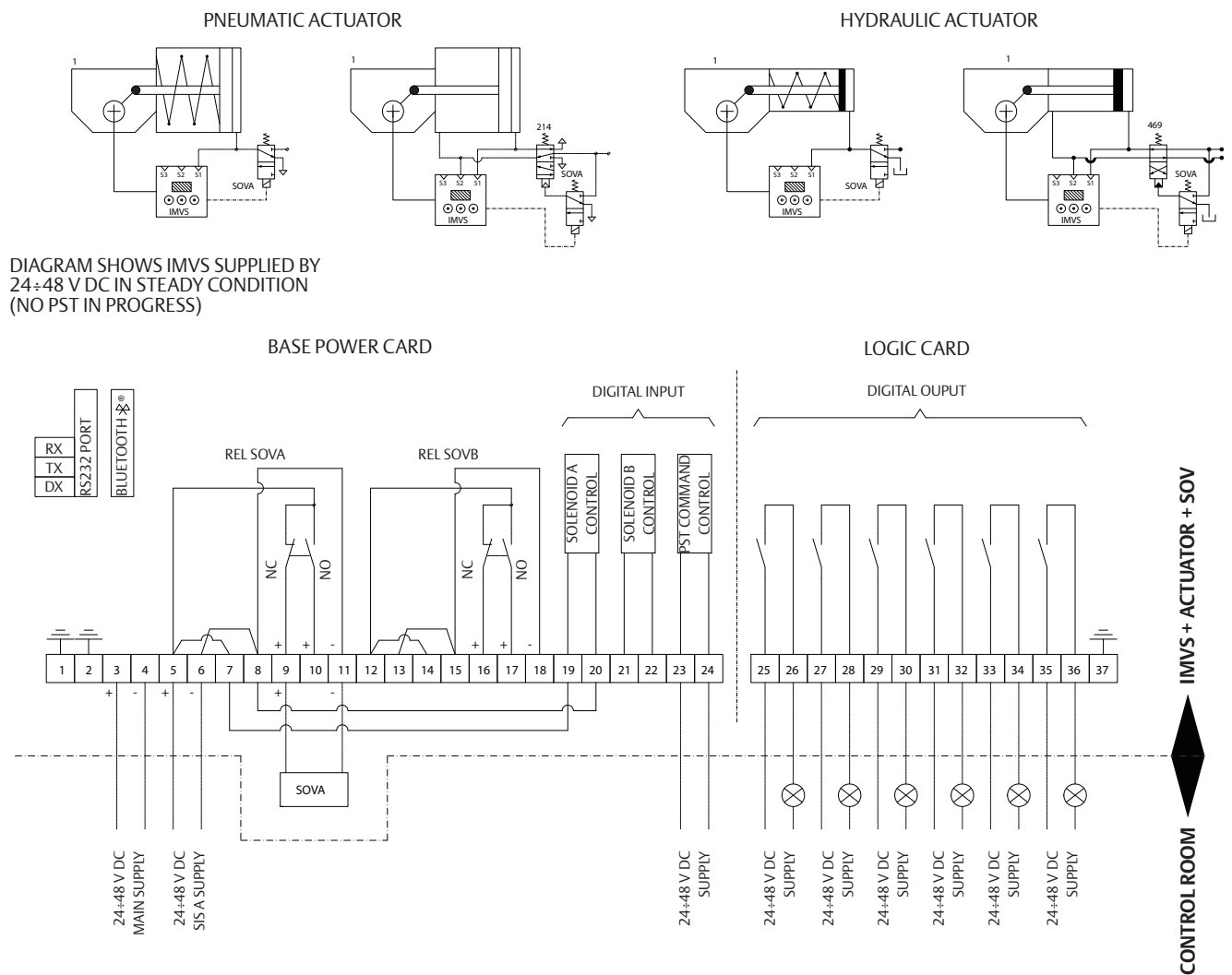
- Safety valve maintenance
- Full advanced diagnostic capability
- Full and partial stroke test
- SOV test
- Auto-calibration
- User friendly local/remote configuration
- Wireless configuration and data transmission via Bluetooth® Interface
- Biffi Assistant software configuration tool
- Login password with 4 different permission levels
- Digital input for remote control (PST and FST)
- Digital input rating: 19.2 - 57.6 V DC (current consumption 2 - 11 mA)
- Output contacts for position indication and diagnostics
 - 2 output contacts for position indication (NO/NC configurable)
 - 1 output contact for alarm indication (NO/NC configurable)
 - 3 output contacts for PST status (In Progress, Passed, Failed)
 - Output contacts rating: up to 57.6 V DC and 0.5 A
- Data transmission with hard-wired point-to-point connection:
 - Open and close limits
 - Common failure alarm
 - PST status (In Progress, Passed, Failed) contacts
- HART 7 with DD Files and FDT and DTM certified and Modbus communication protocols
- OLED display with 0 - 180° orientation

Wiring Diagrams

Configuration A

Figure 1.

CONFIGURATION - A - SINGLE OR DOUBLE-ACTING ACTUATOR SINGLE SOLENOID VALVE SUPPLIED/CONTROLLED BY SIS



Mandatory Connections:

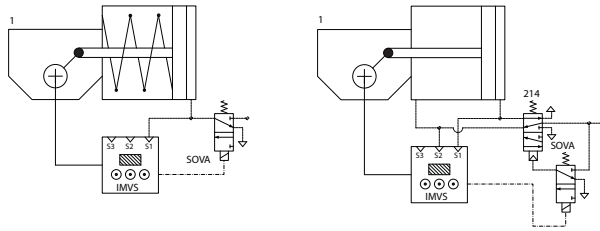
- MAIN SUPPLY (terminals 3-4)
- SIS A SUPPLY (terminals 5-6)
- SOVA (terminals 9-11)

Configuration B

Figure 2.

CONFIGURATION - B - SINGLE OR DOUBLE-ACTING ACTUATOR SINGLE SOLENOID VALVE SUPPLIED BY MAIN SUPPLY AND CONTROLLED BY SEPARATE SIGNAL

PNEUMATIC ACTUATOR



HYDRAULIC ACTUATOR

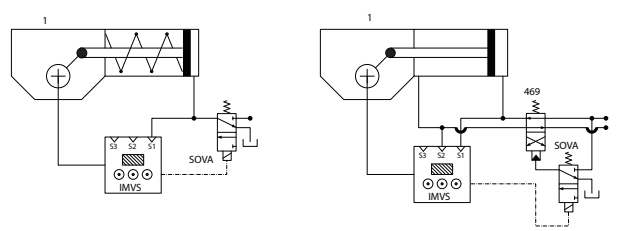
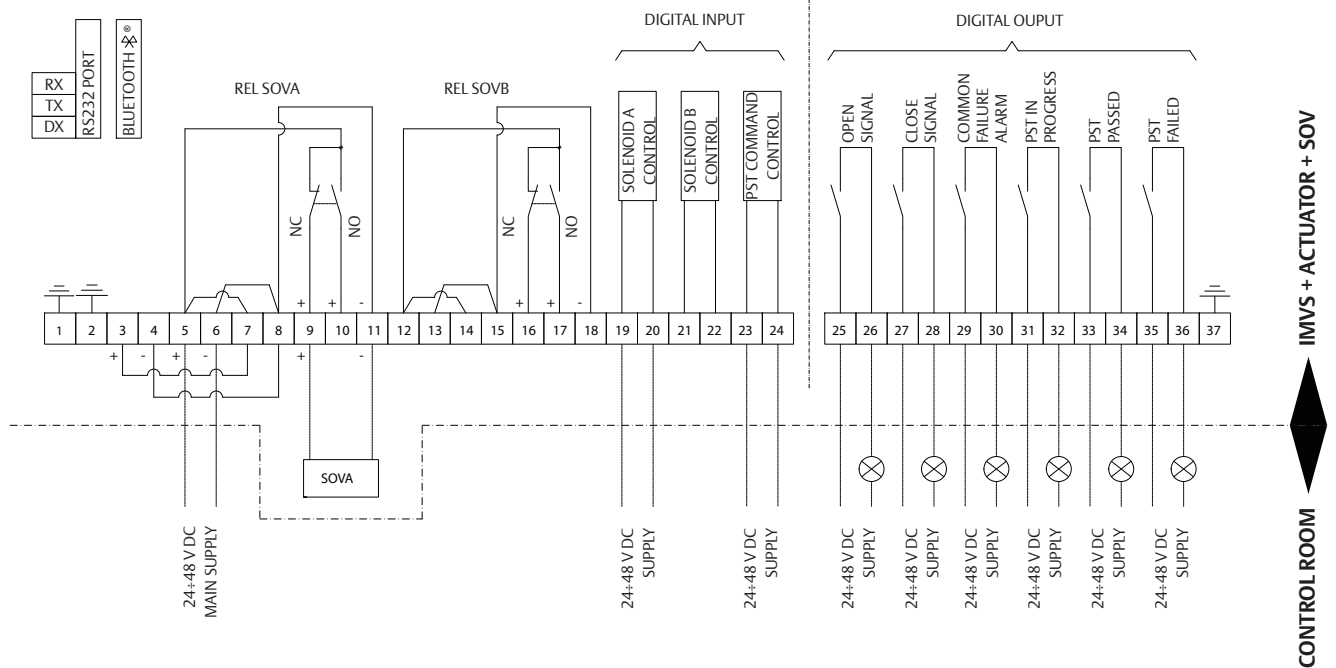


DIAGRAM SHOWS IMVS SUPPLIED BY
24±48 V DC IN STEADY CONDITION
(NO PST IN PROGRESS)

BASE POWER CARD

LOGIC CARD



Mandatory Connections:

- MAIN SUPPLY (terminals 5-6)
- SOVA (terminals 9-11)

Recommended Connections:

- SOLENOID A CONTROL (terminals 19-20)

Configuration C

Figure 3.

CONFIGURATION - C - SINGLE OR DOUBLE-ACTING ACTUATOR SINGLE SOLENOID VALVES SUPPLIED/CONTROLLED BY TWO INDEPENDENT SIS SIGNALS

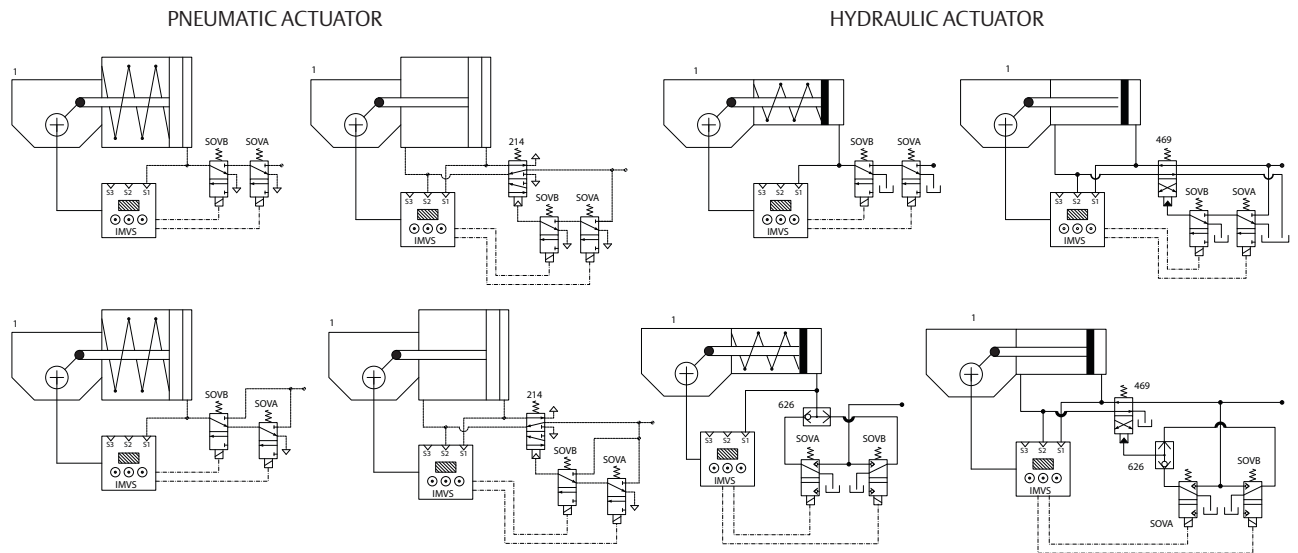
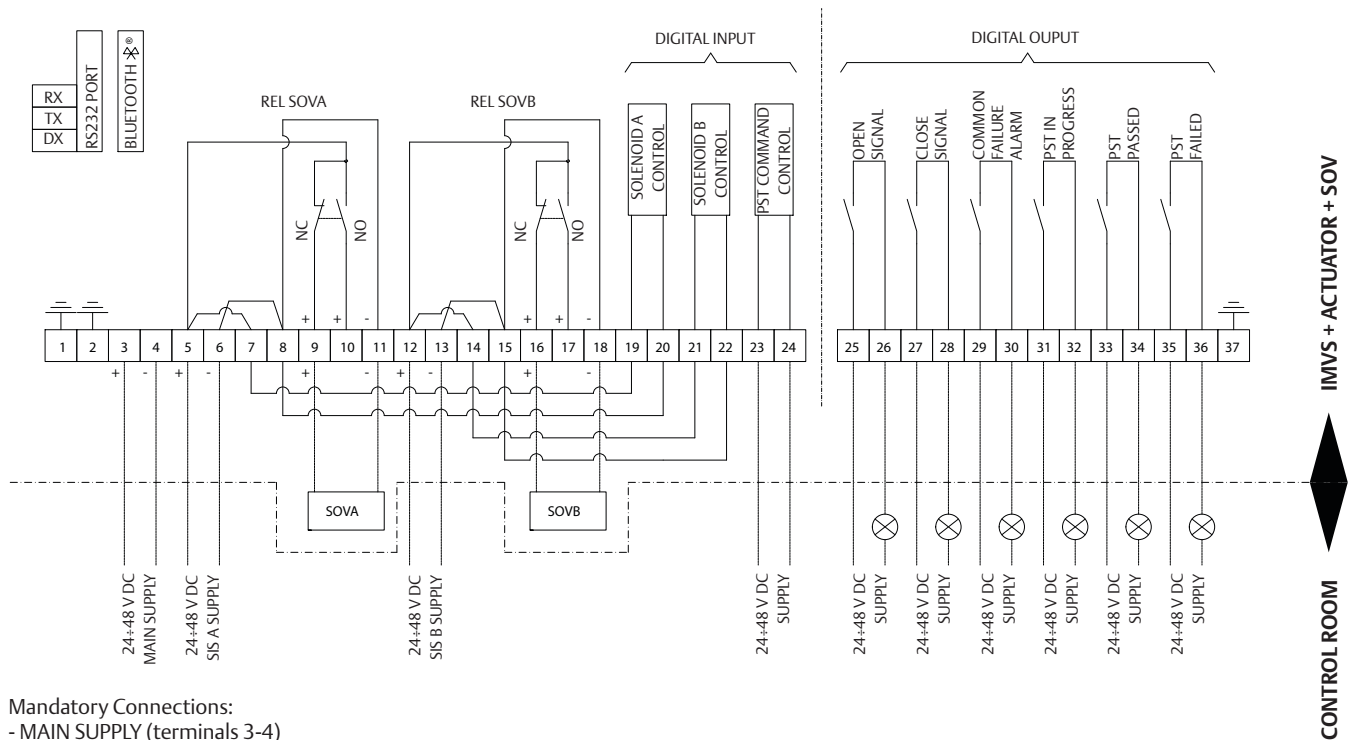


DIAGRAM SHOWS IMVS SUPPLIED BY
24÷48 V DC IN STEADY CONDITION
(NO PST IN PROGRESS)

BASE POWER CARD

LOGIC CARD



Mandatory Connections:

- MAIN SUPPLY (terminals 3-4)
- SIS A SUPPLY (terminals 5-6)
- SIS B SUPPLY (terminals 12-13)
- SOVA (terminals 9-11)
- SOVB (terminals 16-18)

Configuration D

Figure 4.

CONFIGURATION - D - SINGLE OR DOUBLE-ACTING ACTUATOR REDUNDANT SOLENOID VALVES SUPPLIED BY MAIN SUPPLY AND CONTROLLED BY SEPARATE SIGNALS

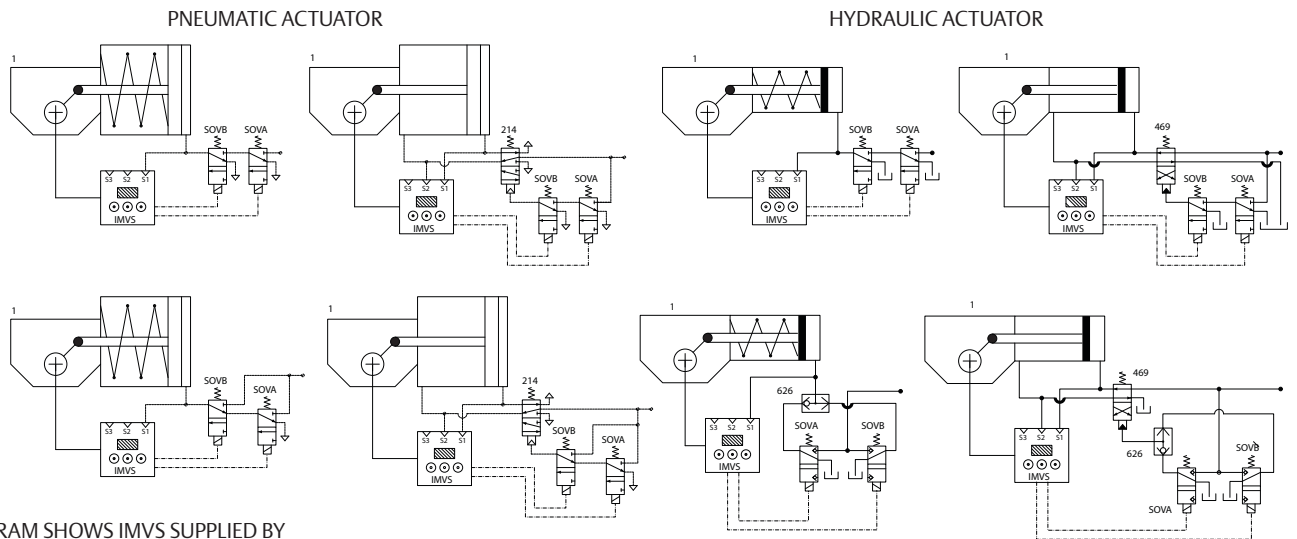
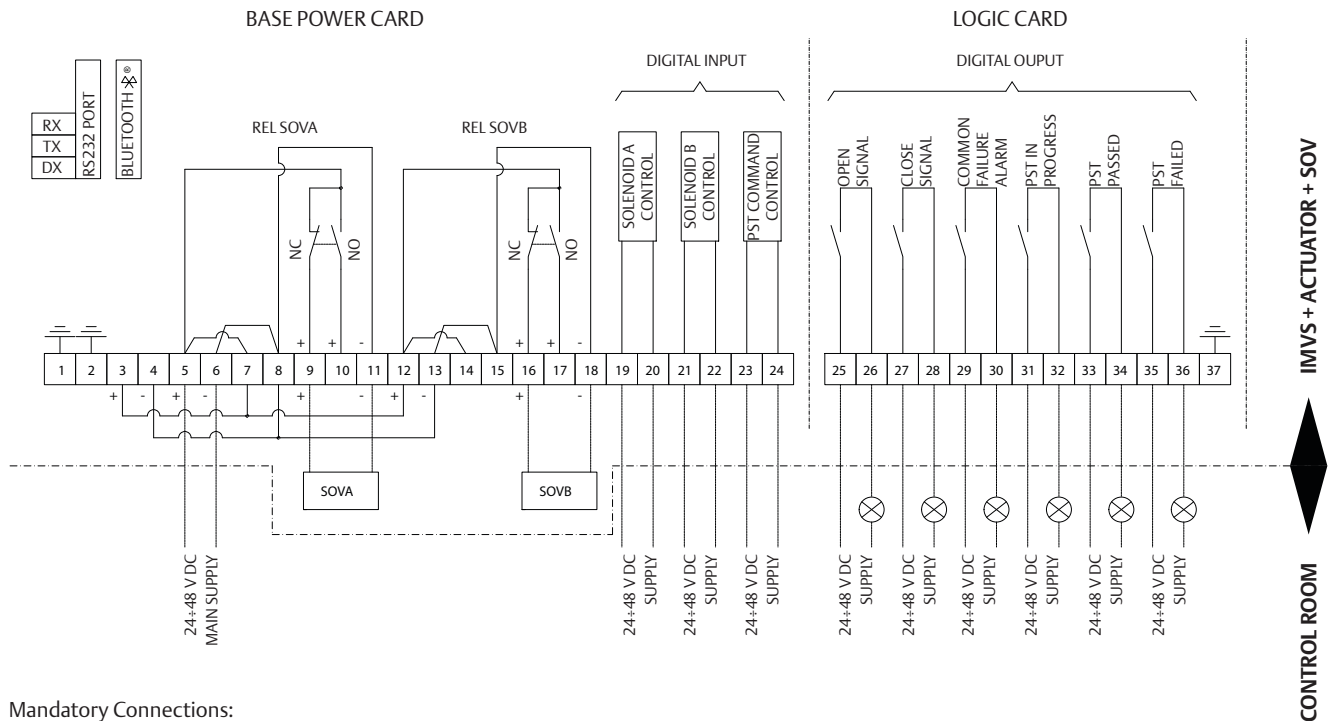


DIAGRAM SHOWS IMVS SUPPLIED BY
24:48 V DC IN STEADY CONDITION
(NO PST IN PROGRESS)



Mandatory Connections:

- MAIN SUPPLY (terminals 5-6)
- SOVA (terminals 9-11)
- SOVB (terminals 16-18)

Recommended Connections:

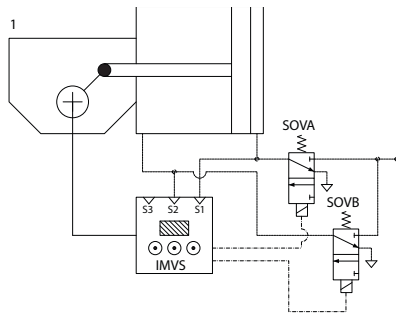
- SOLENOID A CONTROL (terminals 19-20)
- SOLENOID B CONTROL (terminals 21-22)

Configuration E

Figure 5.

CONFIGURATION - E - SINGLE OR DOUBLE-ACTING ACTUATOR DUAL SOLENOID VALVES SUPPLIED BY SIS AND CONTROLLED BY SEPARATE SIGNALS

PNEUMATIC ACTUATOR



HYDRAULIC ACTUATOR

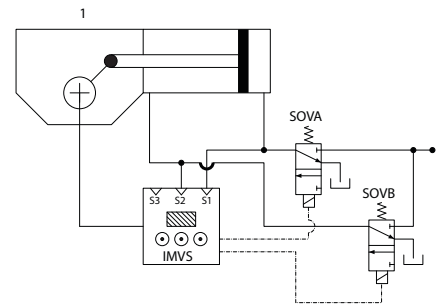
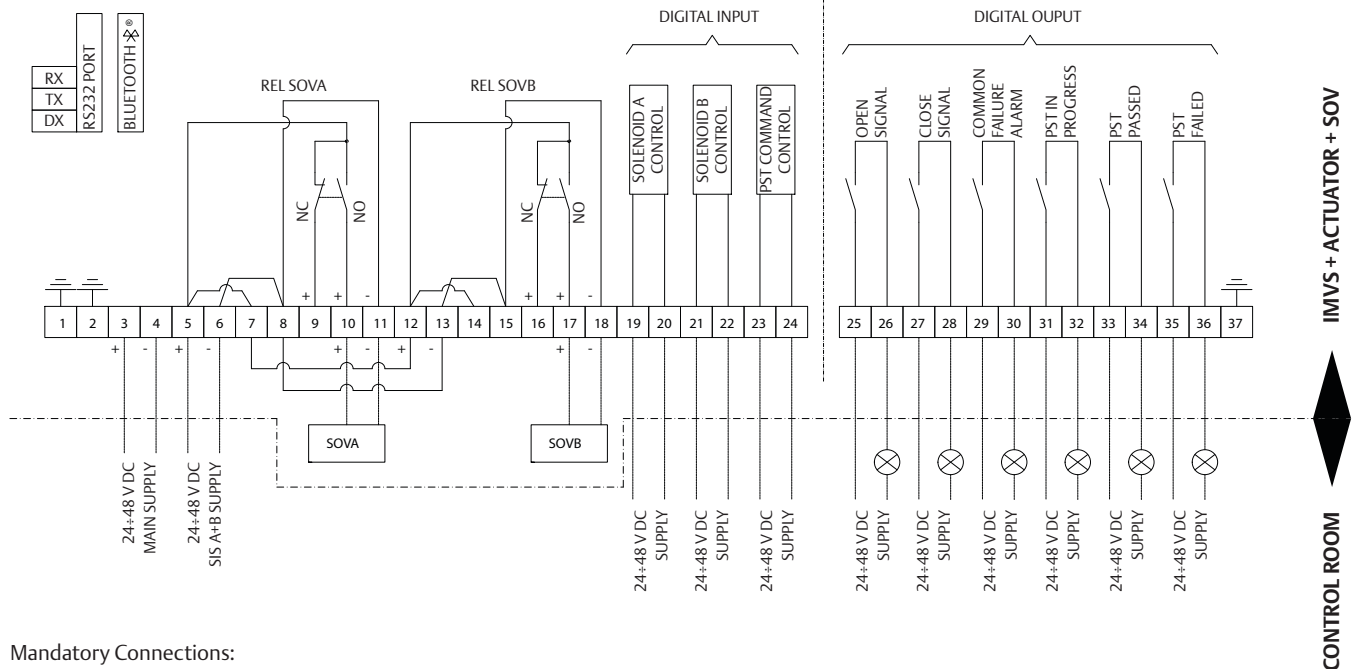


DIAGRAM SHOWS IMVS SUPPLIED BY
24±48 V DC IN STEADY CONDITION
(NO PST IN PROGRESS)

BASE POWER CARD

LOGIC CARD



Mandatory Connections:

- MAIN SUPPLY (terminals 3-4)
- SIS A SUPPLY (terminals 5-6)
- SOVA (terminals 9-11)
- SOVB (terminals 16-18)

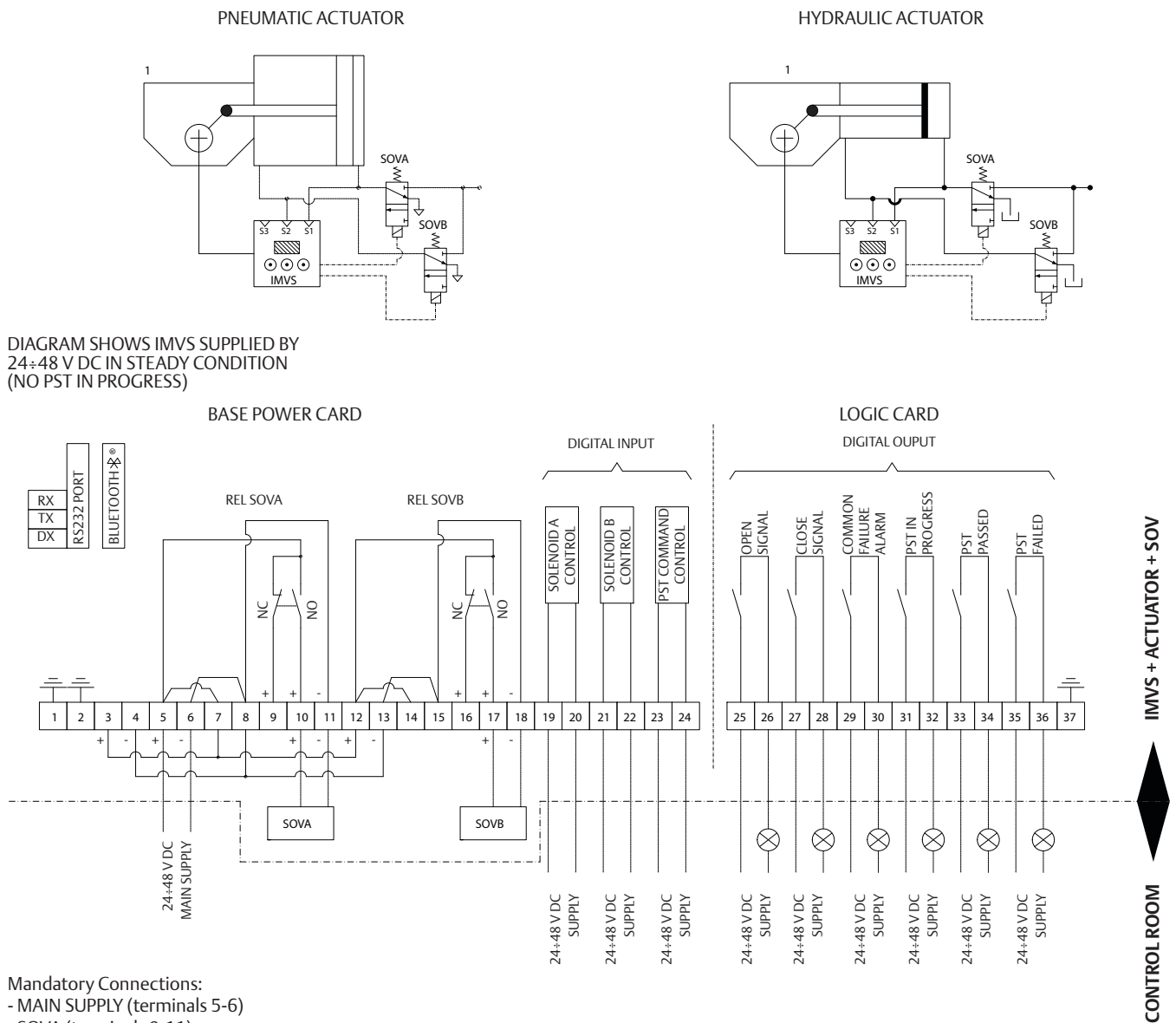
Recommended Connections:

- SOLENOID A CONTROL (terminals 19-20)
- SOLENOID B CONTROL (terminals 21-22)

Configuration F

Figure 6.

CONFIGURATION - F - DOUBLE-ACTING ACTUATOR DUAL SOLENOID VALVES SUPPLIED BY MAIN SUPPLY AND/CONTROLLED BY SEPARATE SIGNALS



Mandatory Connections:

- MAIN SUPPLY (terminals 5-6)
- SOVA (terminals 9-11)
- SOVB (terminals 16-18)

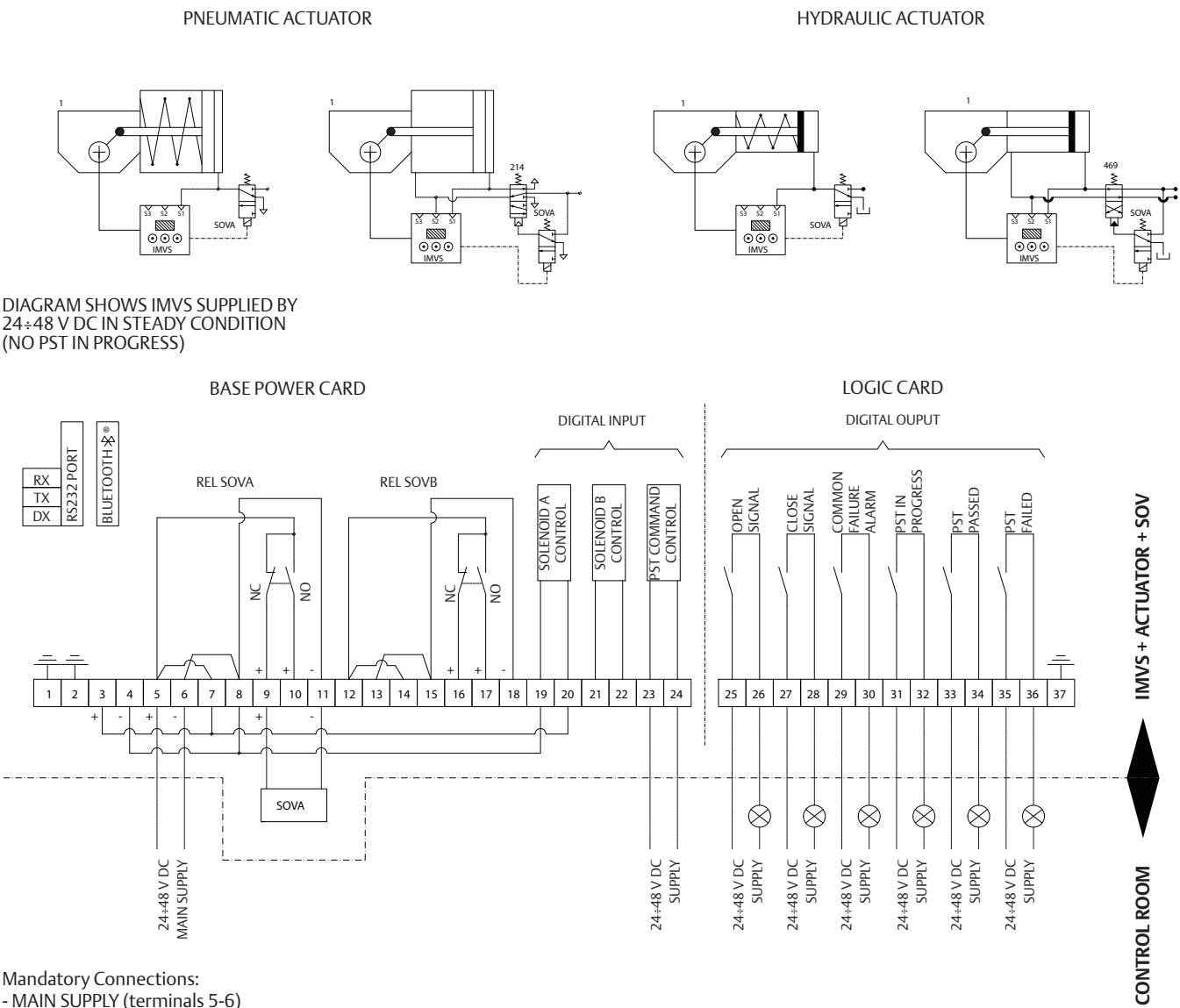
Recommended Connections:

- SOLENOID A CONTROL (terminals 19-20)
- SOLENOID B CONTROL (terminals 21-22)

Configuration G

Figure 7.

**CONFIGURATION - G -
SINGLE OR DOUBLE-ACTING ACTUATOR
SINGLE SOLENOID VALVE SUPPLIED AND CONTROLLED BY MAIN SUPPLY**

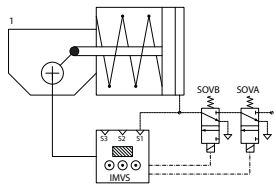


Configuration H

Figure 8.

CONFIGURATION - H - SINGLE OR DOUBLE-ACTING ACTUATOR REDUNDANT SOLENOID VALVES SUPPLIED/CONTROLLED BY SIS

PNEUMATIC ACTUATOR



HYDRAULIC ACTUATOR

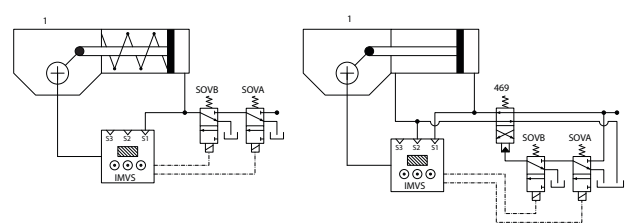
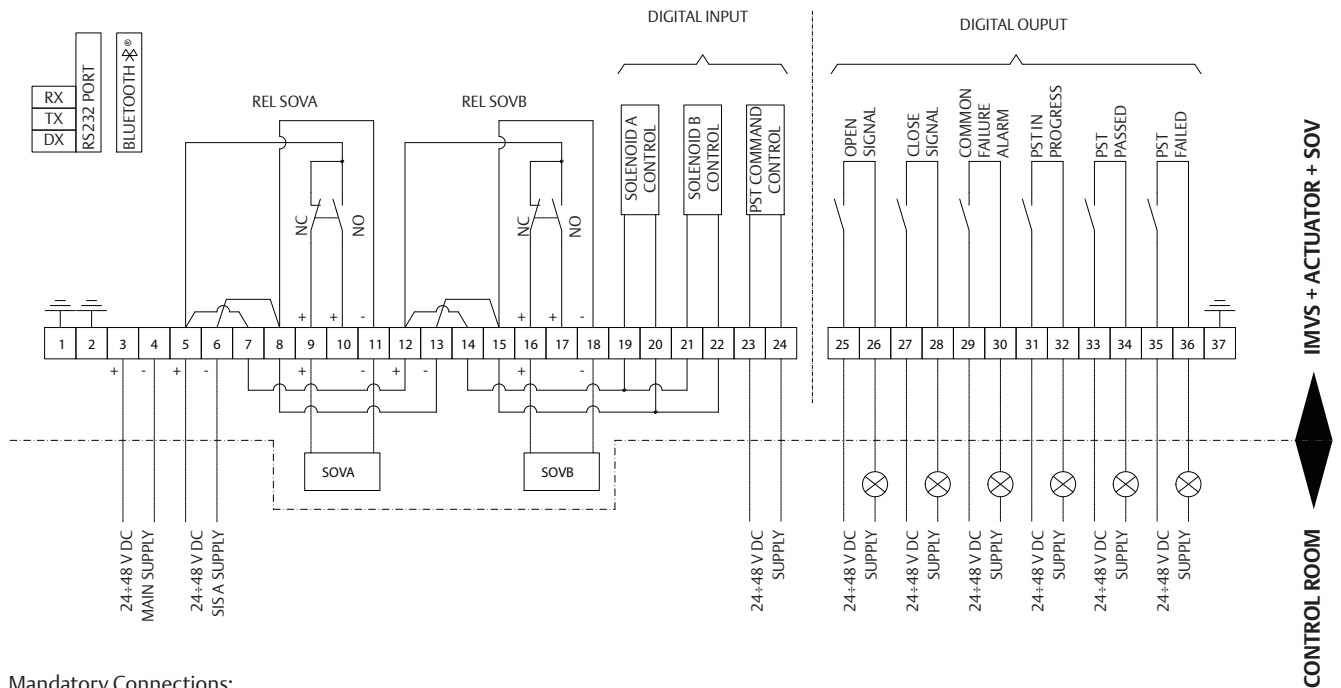


DIAGRAM SHOWS IMVS SUPPLIED BY
24±48 V DC IN STEADY CONDITION
(NO PST IN PROGRESS)

BASE POWER CARD

LOGIC CARD

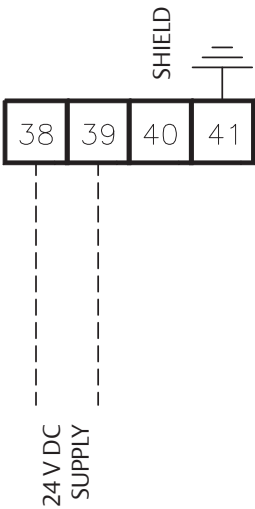


- Mandatory Connections:
- MAIN SUPPLY (terminals 3-4)
 - SIS A SUPPLY (terminals 5-6)
 - SOVA (terminals 9-11)
 - SOVB (terminals 16-18)

HART Card

Figure 9.

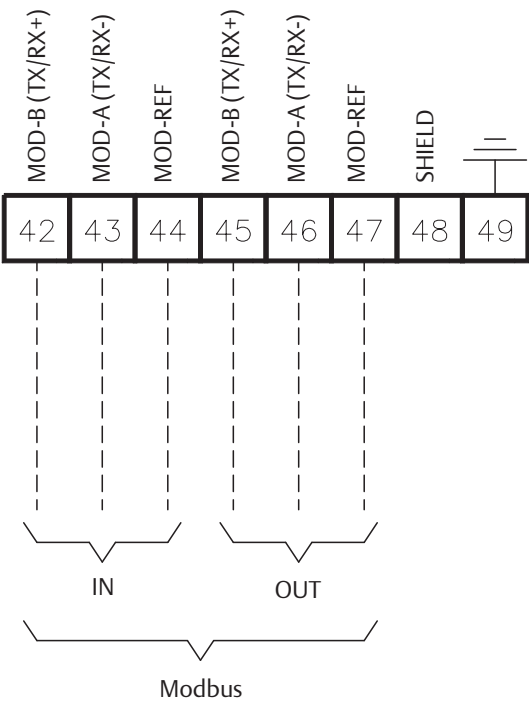
4 - 20 mA + HART CARD
POSITION OR PRESSURE
FEEDBACK SIGNAL
(OPTIONAL)



NOTE:
The HART Card is optional.

Modbus Card

Figure 10.



NOTE:
The Modbus Card is optional.

IMVS Selection Guide

Example:		234IMV	C	A	0	0	0	0	0	0	B
Base Model											
234IMV IMVS2 SS316 ESD/PST capability											
Pressure sensor configuration											
A	Single-acting actuator up to 10 barg (145 psig) *										
B	Double-acting actuator up to 10 barg (145 psig) *										
C	Single-acting actuator up to 100 barg (1450 psig)										
D	Double-acting actuator up to 100 barg (1450 psig)										
E	Single-acting actuator up to 200 barg (2900 psig)										
F	Double-acting actuator up to 200 barg (2900 psig)										
G	Single-acting actuator up to 400 barg (5800 psig) **										
H	Double-acting actuator up to 400 barg (5800 psig) **										
Wiring Diagram configuration											
A	Single solenoid valve supplied/controlled by SIS Signal										
B	Single solenoid valve supplied by main supply and controlled by separate signal										
C	Redundant series/parallel solenoid valves supplied/controlled by two independent SIS signals										
D	Redundant series/parallel solenoid valves supplied by main supply controlled by separate signals										
E	Dual solenoid valves supplied by SIS and controlled by separate signals										
F	Dual solenoid valves supplied by main supply and controlled by separate signals										
G	Single solenoid valve supplied and controlled by main supply										
H	Redundant series/parallel solenoid valves supplied controlled by single SIS signal										
BUS Interface card											
0	Without BUS interface										
1	HART+ 4 - 20 mA Output Interface										
2	Modbus Interface										
3	HART + 4 - 20 mA Output Interface - IMVS2000 replacement ***										
Material											
0	Full enclosure in SS 316 L										
1	Full enclosure in SS 316 L + Anticorrosive paint										
Beacon indicator											
0	Standard indicator										
1	Black/yellow Beacon indicator										
2	Red/green Beacon indicator										
Additional pressure sensor											
0	Not Installed										
1	Sensor S3 10 barg (1450 psig) *										
2	Sensor S3 100 barg (1450 psig)										
3	Sensor S3 200 barg (2900 psig)										
4	Sensor S3 400 barg (5800 psig) **										
Certification											
0	ATEX/IECEX										
1	CCOE - IP66/68 and nema 4, 4X and 6 (based on ATEX/IECEX)										
2	EAC - IP66/68 and nema 4, 4X and 6 (based on ATEX/IECEX)										
3	INMETRO - IP66/68 and NEMA 4, 4X and 6										
4	CSAc (please refer to IOM Section 2.5.1 for detail)										
5	CSAus (please refer to IOM Section 2.5.1 for detail)										
6	CCC according to the certification in the Biffi website										
7	UKCA (for UK final destination)										
Shaft											
B	Shaft Standard Biffi										
N	Shaft Namur Type										

NOTES:

Mounting kit when required, must be ordered separately by specifying the type of actuator (rotary of linear) and dimension of the interface.

* Consult factory for availability

** Consult factory for availability (over 345 barg)

*** Option to be used only to replace an IMVS2000 device

По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Россия (495)268-04-70

Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Киргизия (996)312-96-26-47

Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Казахстан (7172)727-132

Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93