Plant Risk Assessments & Consulting
Machine Safety Guarding & Control
Mechanical, Electrical, Pneumatic & Hydraulic Safety Solutions
Power Press Safety Specialists
Monitored Valves
General Engineering & Fabrication
Industrial Electrical Contracting (REC 11659)
Winner of WorkSafe Award 2002

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Specialists in Machine Safety Integration

MONITORED VALVES

-INTERFACING FLUID POWER OPERATION WITH ELECTRICAL SAFETY CIRCUITS-

- Compliant fluid power control is achievable with our extensive range of approved Monitored Valves.
- Essential for fluid power systems interfaced with electrical safety circuits.
- The Monitored Valves are solenoid operated, pneumatic spool valves integrated to positive-opening electro-mechanical switches.

FEATURES

Product range available in a variety of:

- Port sizes.
- Flow rates.
- Spool configurations.

Product range available in both single and dual monitored configurations:

- *'Single units'* (suit Category 1 & 2)

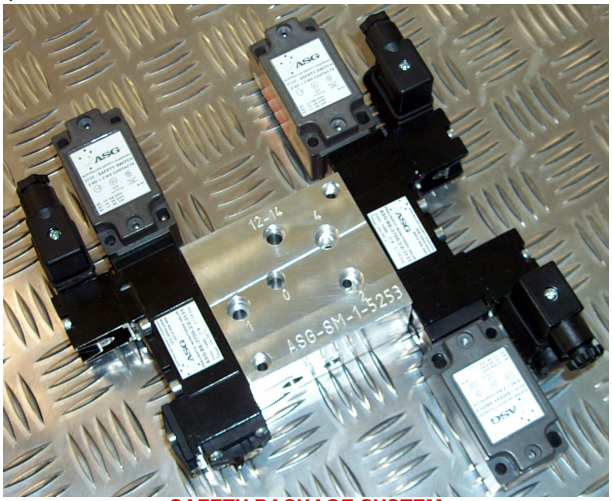
1 Monitored Valve on 1 sub-base

- '*Safety package systems'*

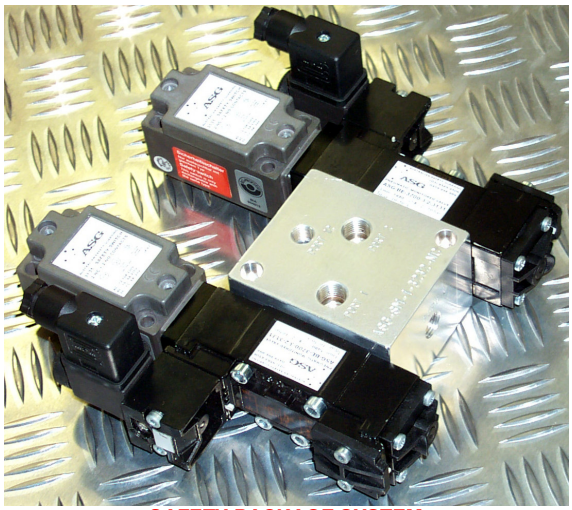
2 Monitored Valves on 1 series ported manifold (dual redundant)
(suit Category 3 & 4)

WHY USE MONITORED VALVES?

- Protect operator life/wellbeing, machinery and product quality.
- Enhance machinery, process reliability and safety integrity of systems and processes.
- Prevent un-detectable intermittent failure, permanent failure, failure to danger and a single fault leading to the loss of the safety function.
- Comply with regulations and requirements contained in the Australian Standards and the legal duty of controlling risks.
- Eliminate the exposure to risks and hazards associated with pneumatics.



SAFETY PACKAGE SYSTEM
ASG ISO 1 5/3 COMPONENT BLOCK



SAFETY PACKAGE SYSTEM
ASG ISO 1 3/2 SYSTEM DUMP

CE

Suitable for Category 4 applications in accordance with AS 4024.1 and EN 954.1

BENEFITS

- Compliant fluid power control.
- Produce a safety system where both fluid power and electrical systems meet their risk category requirements.
- Increase the safety integrity of fluid power systems.
- Safe control and isolation of pneumatic power.
- Comply with requirements in AS 4024 and AS 1219.
- Replace non-monitored valves/regular solenoid valves in safety circuits or in circumstances where they are controlling critical processes.
- Enhance existing systems which require a safety upgrade, by retro-fitting into the existing circuit.
- Integrate into new system designs.
- Use in conjunction with the latest technologies of programmable safety systems.

APPLICATIONS

Monitored Valves can be used in any application:

- Where control system integrity is dependent upon valve operation.
- Wherever safety and reliability are concerned.
- All pneumatic safety applications.

Emergency stop	Two hand control	Light curtains
Safety gates	Guard lockout	Pinch point
Presses	Palletizers	Access gates
Robot cells	Process control	Packing

Technical Specifications

	Models	Single valves and Dual redundant valve systems in 4 ISO sizes and a number of spool configurations and flowrates. (Refer to 'Technical Handbook' for complete details such as part no.'s and descriptions).		
	Configurations	2/2, 3/2, 4/2, 5/3 (open & closed centres)		
	Design	Solenoid operated, monitored, floating spool system valves.		
	Approvals	EC Machinery Directive 98/37/EC (CE compliance). Suitable for use with Category 4 control system in accordance with AS 4024 and EN 954.1		
	Mounting	Manifold (single or dual redundant)		
	Connection (Port sizes)	**Size**	**Pilot Port**	**Port Size**
		1	G ⅛	G ¼
		2	G ⅛	G ⅜
		3	G ⅛	G ½
		4	G ⅛	G ¾
Pneumatic data - Valve				
Performance	**Medium**	Compressed air, filtered (50µm) and lubricated		
	Valve operating pressure	1 – 10 bar		
	Pilot pressure	4 – 10 bar		
	Ambient temperature	-10°C – +50°C		
	Fluid temperature	-20°C – +50°C		
	Flowrates	**Size**	**Q_N (Nl/min)**	**C_V (Gl/min)**
		1	1480	1.5
		2	2300	2.4
		3	4200	4.4
		4	6600	6.9
	Response time range (on/off)	17 – 74 (ms) (For individual response times refer to 'Technical handbook').		
	Life	Long life – 10 million operations		
Materials	**Housing**	Die-cast aluminium		
	Body	Acetalic resin		
	Endcap	Anodised aluminium		
	Spool	Hard anodised aluminium		
	Seals	Nitrile rubber		
	Lubricant	Shell Alvania RL2		
	Manifold	**Single**	**Dual Redundant**	
		Zamak	Aluminium	
Electrical data - Switch				
	Design	Euchner 4 pole positive driven plunger type safety switch pre approved to Category 4 applications.		
Performance	**Ambient temperature**	-25°C – +80°C		
	Switching principle	Slow-action contact element		
	Mechanical service life	$30x10^6$ switching cycles		
	Protection	IP 67		
	Rated impulse withstand voltage U_{imp}	4 kV		
	Rated insulation voltage U_i	250 V≅		
	Short-circuit protection (control circuit fuse)	slow 10/fast 20 A		
	Utilisation category to IEC 947-5-1	AC	AC-15 U_e 230 V I_e 6 A	
		DC	DC-13 U_e 24 V I_e 6 A	
Wiring	**Cable entry**	M20		
	Connection type	Screw terminal		
	Cable cross-section max.	$1.5mm^2$		
	Contacts	2 Normally Closed (positively driven) + 2 Normally Open contacts		
	Terminals	**21-22**	**41-42**	**13-14** / **33-34**
		N/C	N/C	N/O / N/O
Materials	**Housing**	Anodized die-cast light alloy		
	Contact	Silver alloy, gold flashed		
Electrical data - Coil				
Performance	**Rated voltage**	AC	24, 110, 220 V AC / 50 – 60 Hz	
		DC	12, 24 V DC	
	Consumption	AC	5 VA	
		DC	3,5 W	
	Tolerance (tension)	± 10%		
	Ambient temperature	-10°C – +50°C		
	Coil winding	H class		
	Protection class	IP 65		